ATTACHMENT E

SUBSURFACE INVESTIGATIONS
AND
LABORATORY TESTING

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SUBSURFACE INVESTIGATIONS and LABORATORY TESTING

1. Reconnaissance Study Investigations. During November 2001, twenty-two (22) borings were drilled to depths of 30 to 70 feet and samples were obtained to investigate alternative alignments associated with the reconnaissance studies for James Island. Laboratory testing included grain size analyses for basic soil classification, and tests to determine shear strength and compressibility characteristics of the fine-grained (clay and silt) soils. Field testing included cone penetrometer and vane shear tests at several locations. The grain size analyses on sandy soils provided information about the location, quantity, and quality of potential borrow materials for dike construction. Logs for all of the borings and results of laboratory testing are presented in the Geotechnical Reconnaissance Study for James Island, Chesapeake Bay, Maryland, dated August 2002. The report was prepared by E2CR, Inc., for Gahagan and Bryant Associates, Inc. under contract to the Maryland Port Administration.

During September and October 2001, eighteen (18) borings were drilled to depths of 35 to 70 feet and samples were obtained to investigate alternative alignments associated with the reconnaissance studies for Barren Island. Laboratory testing included grain size analyses for basic soil classification, and tests to determine shear strength and compressibility characteristics of the fine-grained soils. The grain size analyses on sandy soils provided information about the location, quantity, and quality of potential borrow materials for dike construction. Logs for all of the borings and results of the laboratory testing are presented in the Geotechnical Reconnaissance Study for Barren Island, Chesapeake Bay, Maryland, dated February 2002. The report was prepared by E2CR, Inc., for Roy F. Weston, Inc. under contract to the Maryland Port Administration.

2. Feasibility Study Investigations. The current feasibility study considered the potential for creating an island in a manner similar to the schemes presented in the reconnaissance study. During Summer 2004, sixty-one (61) borings were completed at James Island to investigate subsurface conditions along the proposed dike alignments, proposed channel alignments, and in the potential borrow areas. The borings were typically drilled to a depth of 25-40 feet from the mudline. Eight undisturbed samples of soft clay and silt were obtained and laboratory testing of the samples included consolidated-undrained triaxial shear testing, unconfined compression testing, and consolidation testing of selected samples. Two consolidated-undrained triaxial tests and two consolidation tests were performed by Geosystems Consultants, Inc. The remaining tests were performed by the Materials and Instrumentation Unit, Baltimore District, at Fort McHenry. Grain size analyses, Atterberg Limits, and water contents were also performed on selected samples.

During May 2004, twenty-seven (27) borings were completed at Barren Island to investigate subsurface conditions along the proposed dike alignments and in the potential

borrow areas. Testing consisted of grain size analyses, Atterberg Limits, and water contents for material classification. Strength data was estimated based on blow counts from drilling, and pocket penetrometer tests of some of the samples.

2.1 James Island Undisturbed Testing. During Fall and Winter 2004, a series of unconfined compression tests, consolidation tests, and consolidated-undrained triaxial tests were performed to better characterized the strength and compressibility properties of soft deposits near and within the proposed footprint of the containment dikes at James Island. These test results were used in the slope stability and settlement analyses, which are included as Attachment C of the Engineering Appendix. Logs of the completed borings and results of laboratory testing are presented at the end of this section. As can be seen from the following tables, some of the test specimens had very low shear strengths and high compressibilities.

TABLE 2-1 JAMES ISLAND UNCONFINED COMPRESSION TESTS

Boring Number	Depth of Sample	Corres-ponding N-Value	Classi-fication	Liquid Limit & Plasticity Index (LL & PI)	Water Content (w_c)	Dry Density (pcf)	Initial Void Ratio (e_0)	Undrained Shear Strength (psf)
212A	18-20 ft	2	CH	64/39	52.4 %	70.4	1.262	S_u = 80 PSF
215A	9-11 ft	WH	CL	29/11	26.6 %	97.4	.685	S_u = 580 PSF
217A	6-8 ft	WH	CL	44/24	38.5 %	82.3	.964	S_u = 420 PSF
218A	8-10 ft	WH	CL	42/23	35.7 %	86.4	.842	S_u = 480 PSF
229A	6-8 ft	WH	SC	38/22	32.2 %	88.7	.787	S_u = 320 PSF
AVG				**43/24**	**37.1 %**	**85.0**	**0.91**	**376 PSF**

TABLE 2-2 JAMES ISLAND CONSOLIDATED-UNDRAINED TRIAXIAL TESTS

Boring Number	Depth of Sample	Corres-ponding N-Value	Classi-fication	Liquid Limit & Plasticity Index (LL & PI)	Dry Density (pcf)*	Percentage Passing No.200 Sieve	Shear Strength Envelope (ϕ deg. & c=psf)
203A	3-5 ft	WH	CH	101/70	54.8	NA	ϕ_u=15.5°, C_u=112 psf
204A	15-17 ft	WH	CL	48/26	91.7	84.0	ϕ_u=15.8°, C_u=0psf
AVG				**75/48**	**73.3**	**NA**	**15.7°, 56 psf**

* Dry density is average of 3 shear test specimens

TABLE 2-3 JAMES ISLAND CONSOLIDATION TESTS

Boring Number	Depth of Sample	Corres-ponding N-Value	Classi-fication	Dry Density (pcf)	Water Content (w_c)	Initial Void Ratio (e_0)	Liquid Limit & Plasticity Index (LL & PI)	Compression Index (C_c)
203A	3-5 ft	WH	CH	54.8	77.1 %	2.603	101/70	C_C = 0.96
204A	15-17 ft	WH	CL	91.7	48.0 %	1.115	48/26	C_C = 0.66
212A	18-20 ft	2	CH	70.4	52.4 %	1.615	64/39	C_C = 0.80
215A	9-11 ft	WH	CL	97.4	26.6 %	0.67	29/11	C_C = 0.116
217A	6-8 ft	WH	CL	82.3	38.5 %	1.111	44/24	C_C = 0.33
218A	8-10 ft	WH	CL	86.4	35.7 %	1.151	42/23	C_C = 0.40
229A	6-8 ft	WH	SC	88.7	32.2 %	0.948	38/22	C_C = 0.263

2.2 Borrow Area Investigations. Approximately half of the borings drilled at the James Island site were completed in order to investigate borrow material locations. Borrow materials were also investigated at Barren Island. However, once the recommended plan did not include creation of a containment island with sand dikes, borrow analyses at Barren Island ceased.

Sand is found over much of the proposed James Island project site. The larger and higher quality deposits of sand are located in the northern section of the site. Much of the borrow area has sand deposits which start at the Bay surface and extend down to thicknesses of 10 feet and greater. As discussed in Attachment A—Borrow Analysis, the upland portion of the site was chosen to be sited above the largest sand deposits in the north. Also, based on the gradations performed, the sand in the borrow areas is relatively good sand for dike construction. The average fines content (material passing No. 200 sieve) is approximately 16%. Material with a fines content less than 20% is considered very good for dike construction, with up to 30% fines generally being acceptable. When material has more than 30% fines, the fines start to govern the strength and compressibility properties, which greatly lowers the material shear strength.

MID-BAY FEASIBILITY STUDY
BARREN ISLAND, DORCHESTER COUNTY, MD.

SUBSURFACE EXPLORATION NOTES

1. EXPLORATION WAS PERFORMED DURING MAY 2004.

2. DRILL HOLES (DH) WERE ACCOMPLISHED BY A BARGE MOUNTED RIG USING STANDARD PENETRATION TEST PROCEDURE (SPT, ASTM - 1586) WITH A 1-3/8"ID SPLIT SPOON SAMPLER. SAMPLE SPOONS WERE ADVANCED BY A 140# HAMMER FALLING 30". THESE HOLES WERE ADVANCED BETWEEN SAMPLES BY WATER JETTING WITH BAY WATER. BLOW COUNTS SHOWN ARE FOR 0.5' OF DRIVE, UNLESS OTHERWISE INDICATED.

   WH – DENOTES WEIGHT OF HAMMER

   WR – DENOTES WEIGHT OF ROD

3. BLOW COUNTS REQUIRED TO ADVANCE SAMPLE SPOON ARE SHOWN IN COLUMN (a). ALSO SHOWN IN THIS COLUMN ARE UNCONFINED COMPRESSION STRENGTH (tsf) READINGS FROM POCKET PENETROMETER (PPR). DASHES ARE SHOWN WHEN PART OF A SAMPLE DRIVE IS NOT SUITABLE FOR POCKET PENETROMETER READINGS. NOTHING IS SHOWN IF THE ENTIRE SAMPLE IS NOT SUITABLE FOR PPR READINGS

4. COLUMN (b) SHOWS THE NATURAL WATER CONTENTS IN PERCENT OF DRY WEIGHT OF THOSE SAMPLES TESTED.

5. SOIL DESCRIPTIONS ARE SHOWN IN COLUMN (c).

6. SOIL DESCRIPTIONS ARE LABORATORY CLASSIFICATIONS BASED ON THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487/2488).

7. NO GROUNDWATER READINGS WERE TAKEN AS THESE BORINGS WERE DRILLED IN THE BAY.

8. THE STARTING DEPTH OF BORINGS (0.0), REPRESENTS THE BOTTOM OF BAY.

9. THE DEPTH OF BAY WATER SHOWN ON EACH BORING LOG WAS DETERMINED BY SOUNDING WITH WEIGHTED TAPE MEASURE TO TOP OF SEDIMENT PRIOR TO SAMPLING.

   HORIZONTAL DATUM: NAD83 MARYLAND STATE PLANE COORDINATE SYSTEM.

10. FOR LOCATIONS OF SUBSURFACE EXPLORATIONS, SEE BORING LOCATION PLAN.

STA. MID-BAY FEASIBILITY STUDY N 235174.3 **G-103**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1527109.9 **1 of 1**

TOP ELEV: COMPLETED: May 17, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, silty med. - fine SAND w/trace of shell frags. (SM)		WH-WH-WH	
2.00				23.8
	V. moist, grayish brown, silty med. - fine SAND w/trace of shell frags. (SM)		1-3-4	
4.50				
	Moist, lt. brownish gray, lean CLAY w/sand (CL) PPR 5.0'-6.5': 0.25, 0.0, 0.25	5	WH-WH-1	31.5
7.00				
	Moist, lt. brownish gray, fat CLAY w/sand (CH)		1-1-1	
9.50				
	Wet, lt. gray, sandy lean CLAY (CL)	10	WH-WH-WH	
12.00				
	Wet, lt. browinsh gray, silty med. - fine SAND (SM)		1-3-1	
		15	1/1.0-1	25.3
17.00				
	Wet, grayish brown, silty fine SAND (SM)		1/1.0-1	
		20	1-3-1	29.0
22.00				
	Wet, gray, silty fine SAND (SM)		1/1.0-1	
		25	2-11-24	26.4
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 6.2' @ 1342 Hrs.			

Preliminary

G-103
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 235675.9 **G-104**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 157831.2 **1 of 1**

TOP ELEV: COMPLETED: May 17, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, grayish brown, silty fine SAND w/trace of shell frags. (SM)		4-4-4	
2.00				21.7
	Wet, brown, silty med. to fine SAND w/trace of shell frags. (SM)		8-6-6	
4.50				
	Wet, lt. olive brown, poorly graded med. to fine SAND w/silt (SP-SM)	5	WH/.75-1/.75	20.4
7.00				
	V. moist, gray, sandy lean CLAY w/sand (CL)		WH-WH-WH	35.4
9.50				
	V. moist, gray, sandy lean to fat CLAY (CL/CH)	10	WH-WH-WH	
12.00				
	V. moist, gray clayey fine SAND (SC)		WH-WH-WH	
14.50				30.0
	Wet, gray clayey fine SAND (SC)	15	WH-WH-1	
17.00				
	V. moist, grayish brown, sandy fat CLAY (CH)		WH-WH-1	
19.50				
	Wet, gray, clayey med. to fine SAND (SC)	20	1-2-4	
22.00				
	V. moist, gray, sandy lean CLAY (CL) PPR 22.5'-24.0': 0.5, 0.25, 0.50		WH-WH-11	
24.50				
	Wet, grayish brown, silty med. to fine SAND (SM)	25	9-18-19	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 5.5' @ 1518 Hrs.			

Preliminary

G-104
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 236092.7 **G-106**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1525603.9 **1 of 1**

TOP ELEV: COMPLETED: May 17, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, grayish brown, poorly graded coarse to med. SAND (SP)		WH-WH-WH	
2.00				
	Wet, gray, silty med. to fine SAND (SM)		WH-WH-WH	
4.50				22.8
	Wet, dk. gray, silty med. to fine SAND (SM)		5	
5.90			WH-WH-2	
	Moist, lt. brownish gray, lean CLAY w/sand (CL) PPR 5.9'-6.5': 0.75, 0.75, 0.35 PPR 7.5'-9.0': 2.0, 1.5, 2.5			22.5
			2-4-7	
9.50				
	Wet, gray, silty med. to fine SAND (SM)		10	
			2-2-2	
12.00				25.3
	Wet, lt. olive gray, silty fine SAND (SM)		1/1.0-4	
14.50				
	Wet, gray, silty fine SAND (SM)		15	
			1-2-3	
			WH-4-7	22.4
			20	
			3-5-4	
			1-1/1.0	
			25	
26.50			WH-1-1	
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 7.0' @ 1100 Hrs.			

Preliminary

G-106
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 236796.1 **G-108**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1521254.3 **1 of 1**

TOP ELEV: COMPLETED: May 22, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded SAND w/silt & trace of shell frags. (SP-SM)		WH-WH-1	
2.00				
	Moist, dk. gray, poorly graded SAND w/silt & trace of shell frags. (SP-SM)		WH-2-2	29.2
4.50				
	Wet, dk. gray, poorly graded SAND w/silt & trace of shell frags. (SP-SM)	5	2-1-2	
7.00				
	Moist, dk. gray, poorly graded SAND w/silt (SP-SM)		5-8-10	
9.50				22.4
	Moist, grayish brown, poorly graded SAND w/silt (SP-SM)	10	1-4-5	
12.00				
	Moist, brown poorly graded SAND (SP)		8-9-10	
		15	1-2-4	20.0
			5-1-1	
19.50				
	Moist, brown & gray, poorly graded SAND w/silt & clay (SP-SM)	20	WH-WH-WH	
22.00				
	V. moist, dk. gray, clayey SAND w/trace of shell frags. (SC-H)		5-3-3	
24.50				
	V. moist, dk. gray, clayey SAND (SC)	25	WH-4-18	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 8.2' @ 1323 Hrs.			

Preliminary

G-108
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 236468.9 **G-109**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1523345.2 **1 of 1**

TOP ELEV: COMPLETED: May 22, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded SAND w/silt & trace of shell frags. (SP-SM)		WH-WH-WH	
2.00				
	Wet, dk. gray, clayey SAND w/trace of shell frags. (SC)		WR-WH-WH	
4.50				
	Moist, gray, soft, silty CLAY w/sand (CL-ML)		1-2-4	20.9
7.00				
	Wet, gray, clayey SAND (SC)		1-1-3	
9.50				
	Wet, gray, silty SAND (SM)		1-2-1	
				23.2
			1-3-3	
			1-2-3	
			1-3-2	
20.00				
	V. moist, dk. gray, clayey SAND (SC)		3-1-1	
22.00				
	Moist, lt. yellowish brown, poorly graded SAND w/trace of gravel (SP)		1-4-13	
24.50				
	Moist, dk. gray, poorly graded SAND w/silt (SP-SM)		9-12-12	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 8.8' @ 1700 Hrs.			

5 10 15 20 25

Preliminary

G-109
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY FEASIBILITY STUDY N 237174.4 **G-110**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1524264.1 **1 of 1**

TOP ELEV: COMPLETED: May 17, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray & yellowish brown, silty SAND w/trace of shell frags. (SM)		WH-1-2	23.4
2.00	V. moist, yellowish brown, silty SAND w/trace of clay (SM)		2-3-5	20.6
4.50	Wet, brown, silty fine SAND (SM)	5	1-1-1	
			1-1-1	24.2
		10	1-1-1	
12.00	Wet, brown & gray, silty fine SAND (SM)		WH-1/1.0	
		15	1-2-2	
17.00	Wet, dk. gray, silty fine SAND (SM)		1/1.0-1	
		20	2-3-2	
22.55	Moist, dk. gray, sandy CLAY (CL) PPR 23.6'-24.0': 0.25, 0.0, 0.0		1/1.0-1	
24.50	Wet, grayish brown, poorly graded SAND w/silt (SP-SM)	25	1/1.0-1	
26.50	BOTTOM OF HOLE			

Depth of bay water @ start of boring 6.5' @ 0855 Hrs.

Preliminary

G-110
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 237129.5 **G-111**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1526209.2 **1 of 1**

TOP ELEV: COMPLETED: May 16, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, grayish brown, silty, med. to coarse SAND (SC)		WH-2-1	
			WH-1/1.0	20.2
		5	WH-2-2	
7.00				
	Wet, lt. yellowish brown, poorly graded med. to coarse SAND w/silt (SP-SM)		1-2-3	
		10	WH-WH-WH	18.7
12.00				
	Wet, grayish brown, poorly graded med. SAND (SP)		1-1-1	
14.50				
	V. moist, dk. gray, clayey, fine to med. SAND (SC)	15	WH-WH-WH	
17.00				
	V. moist, dk. gray, silty, fine to med. SAND (SM)		3-7-6	
		20	2-2-1	
			3-2-1	
24.50				
	Moist, grayish brown, poorly graded med. to fine SAND (SP)	25	WH-1-1	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 6.6' @ 1048 Hrs.			

Preliminary

G-111
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY FEASIBILITY STUDY N 238304.9 **G-112**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1522700.8 **1 of 1**

TOP ELEV: COMPLETED: May 16, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	EMPTY JAR		WR-WH-WH	
2.00	Moist, gray, soft lean CLAY w/sand (CL) PPR 2.5'-4.0': 2.0, 0.0, 0.5 PPR 5.0'-6.5': 2.0, 0.0, 0.5		WH-1-3	25.5
			WH-3-2	
7.00	Wet, gray, silty fine SAND w/trace of clay (SM)		5-4-6	21.6
9.50	Moist, grayish brown, silty fine SAND (SM)		8-4-8	
12.00	V. moist, gray, soft fat CLAY (CH)			
13.25	V. moist, grayish brown, silty SAND (SM)		2-1-1	
14.50	Moist, grayish brown, poorly graded med. SAND w/silty (SP-SM)		2-1-3	
			5-6-8	
26.50	BOTTOM OF HOLE			

Day 1: Depth of bay water @ start of boring 9.5' @ 1057 Hrs.
Day 2: Depth of bay water @ start of boring 8.6' @ 0849Hrs.

Preliminary

G-112
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

GEO-2 BARRENISL.GPJ 2/10/05 08:35

STA. MID-BAY FEASIBILITY STUDY N 238137.6 **G-113**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1520749.4 **1 of 1**

TOP ELEV: COMPLETED: May 22, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	EMPTY JAR		WH-WH-WH	
2.00	Wet, dk. gray, poorly graded, silty, fine to med. SAND (SM)		1-1-2	24.0
4.50	Wet, dk. gray, silty, fine SAND w/clay lense (SM)	5	1-1-1	
7.00	Wet, dk. grayish brown, silty, fine SAND (SM)		WH-2-4	
		10	1-1-2	25.5
12.00	Wet, brown, poorly graded, fine SAND w/silt (SP-SM)		2-3-2	
14.50	Wet, yellowish brown & gray, silty, fine SAND w/trace of clay (SM)	15	4-4-4	
17.00	Moist, yellowish brown, poorly graded, med. to fine SAND w/silt (SP-SM)		2-5-6	
19.50	Wet, yellowish brown, poorly graded, med. to fine SAND w/silt (SP-SM)	20	2-3-4	23.8
			1-2-1	
		25	1/1.0-1	
27.00	Wet, yellowish brown, silty, fine SAND w/trace of clay (SM)		1/1.0-1	
29.50	Wet, dk. gray, silty, fine SAND (SM)	30	1/1.5	
			1-1-1	
		35	1/1.0-1	
37.00	V. moist, dk. gray, silty, fine SAND (SM)		1/1.0-2	
39.50	Wet, dk. gray, clayey, med. to coarse SAND w/shell frags. (SC)	40	2-2-1	
41.50	BOTTOM OF HOLE Depth of bay water @ start of boring 9.3' @ 0940 Hrs.			

Preliminary

G-113
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY FEASIBILITY STUDY N 239034.9 **G-114**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1520367.7 **1 of 1**

TOP ELEV: COMPLETED: May 21, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded, fine SAND w/silt & trace of shell frags. (SP-SM)		WH-WH-WH	
				27.7
			WH-1-2	
4.50				
	Wet, dk. gray, silty, fine SAND (SM)	5	WH-3-4	
7.00				
	Wet, lt. olive brown, poorly graded, fine SAND w/silt (SP-SM)		1-2-4	
9.50				
	V. moist, lt. olive brown, poorly graded, fine SAND w/silt (SP-SM)	10	1-3-3	
12.00				
	Wet, lt. yellowish brown, poorly graded, fine to med. SAND w/silt (SP-SM)		1-2-1	
		15	1-2-3	22.7
17.00				
	Wet, lt. yellowish brown, poorly graded, fine to med. SAND w/silt & trace of gravel (SP-SM)		1-6-3	
19.50				
	Moist, grayish brown, poorly graded, med. SAND w/silt & trace of gravel (SP-SM)	20	6-13-9	
22.50				
	Moist, dk. gray, fine sandy lean CLAY (CL) PPR 23.5'-24.0': 0.0, 0.5, 0.5		1-2-2	
24.50				
	Moist, dk. gray, lean CLAY w/v. fine sand (CL)	25	8-6-6	
27.00	PPR 25.0-26.5': 0.5, 0.5, 0.5			
	Moist, dk. gray, lean CLAY w/fine to med. sand (CL)		WH-3-3	
29.50	PPR 27.5'-29.0': 1.0, 1.0, 1.0			
	Moist, dk. gray, firm fat CLAY w/silt (CH)	30	2-4-5	
	PPR 30.0'-31.5': 1.0, 1.5, 1.5			
	PPR 32.5'-34.0': 1.0, 1.0, 1.0		2-4-6	
34.00				
	BOTTOM OF HOLE	35		
	Depth of bay water @ start of boring 11.0' @ 1440 Hrs.			

Preliminary

G-114
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 239130.1 **G-115**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1524662.7 **1 of 1**

TOP ELEV: COMPLETED: May 15, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, lt. olive brown, silty fine SAND (SM)		WH-2-1	
2.00				
	Wet, olive yellow, silty fine SAND (SC)		WR-WH/1.0	
				25.7
		5	WH-WH-WH	
7.00				
	Wet, lt. brownish gray, soft lean CLAY (CL)		WR/1.0-WH	
9.50				
	V. moist, gray, soft fat clayey SAND (SC)	10	WR-WH/1.0	47.3
12.00				
	Wet, dk. gray, silty fine SAND (SM)		2-7-7	27.0
		15	3-2-3	
17.00				
	V. moist, olive brown, silty fine SAND (SM)		4-6-5	
19.50				
	Wet, dk. gray, silty fine SAND (SM)	20	1-2-4	
22.00				
	V. moist, dk. gray, poorly graded, fine SAND w/silt (SP-SM)		2-6-11	
24.50				
	Wet, dk. grayish brown, poorly graded, med. SAND w/silt (SP-SM)	25	1-1-3	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 8.5' @ 0830 Hrs.			

Preliminary

G-115
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY FEASIBILITY STUDY N 240178.9 **G-116**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1524255.7 **1 of 1**

TOP ELEV: COMPLETED: May 14, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, lt. olive brown, silty, v. fine SAND (SM)		1-1/1.0	
2.00				
	Wet, lt. brownish gray, soft lean CLAY w/sand (CL)		WH-WH-WH	33.8
4.50				
	Wet, lt. gray & olive yellow, soft lean CLAY w/sand (CL)	5	WH/1.0-1	
			WH/1.0-1	
9.50				
	V. moist, dk. gray, soft lean to fat CLAY (CL)	10	WH/1.0-1	
12.00				
	V. moist, dk. gray, poorly graded SAND w/silt (SP-SM)		1-6-5	
14.50				24.4
	Wet, lt. brownish gray, poorly graded SAND w/silt (SP-SM)	15	WH-1-1	
17.00				
	Wet, dk. gray, poorly graded, fine SAND w/silt (SP-SM)		2-2-4	
		20	1-2-2	
22.00				
	V. moist, dk. grayish brown, silty, fine SAND w/trace of gravel (SM)		2-5-11	
24.50				
	Wet, dk. gray, poorly graded, fine SAND w/silt & gravel (SP-SM)	25	12-14-12	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 9.5' @ 1103 Hrs.			

Preliminary

G-116
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 239932.7 **G-117**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1522576.1 **1 of 1**

TOP ELEV: COMPLETED: May 14, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	V. moist, yellowish brown & gray, soft lean CLAY (CL)		WH-WH-WH	
2.00	Wet, yellowish brown, silty fine SAND w/clay lense (SM)		WH-WH-WH	
4.50	Wet, yellowish brown, silty fine SAND (SM)		5	25.1
			WR/1.0-3	
7.00	Wet, reddish yellow, poorly graded, med. SAND w/silt (SP-SM)		6-7-6	22.2
9.50	Wet, lt. yellowish brown, poorly graded, fine SAND w/silt (SP-SM)		10	
			1-1-1	
12.00	Wet, dk. gray & brownish yellow, poorly graded, fine SAND w/silt (SP-SM)		WH-3-3	
14.50	Wet, dk. gray, poorly graded, fine SAND w/silt (SP-SM)		15	
			1-3-1	
			1-3-4	25.3
			20	
			3-10-10	
			1-2-3	
			25	
26.50			1-2-2	

BOTTOM OF HOLE

Depth of bay water @ start of boring 10.5' @ 0846 Hrs.

Preliminary

G-117
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 240156.7 **G-118**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1520231.3 **1 of 1**

TOP ELEV: COMPLETED: May 13, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, grayish brown, silty fine SAND (SM)		WH/1.0-1	
				24.3
			5-2-3	
4.50				
	Wet, olive brown, poorly graded, fine SAND w/silt (SP-SM)	5	2-2-5	
			21-5-4	
9.50				
	Wet, yellowish brown, poorly graded, silty fine SAND (SM)	10	1-1-2	
12.00				
	Wet, olive brown, poorly graded, silty fine SAND (SM)		1/1.0-1	24.6
		15	2-2-3	
17.00				
	V. moist, lt. olive brown, poorly graded, med. SAND w/silt (SP-SM)		28-106-21	
20.10		20		
	V. moist, dk. greenish gray, soft fat CLAY w/sand lense (CH)		1-1-2	
22.00				
	V. moist, dk. greenish gray, firm fat CLAY (CH)			
	PPR 22.5'-24.0': 0.75, 1.0, 1.0		4-6-4	
	PPR 25.0'-26.5': 1.0, 1.75, 1.0	25	1-2-4	
	PPR 27.5'-29.0': 0.75, 1.5, 1.25		2-3-5	
29.50				
	V. moist, dk. gray, firm SILT (ML)	30		
	PPR 30.0'-31.5': 0.75, 0.75, 1.25		1-2-2	
31.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 12.2' @ 1319 Hrs.			

Preliminary

G-118
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 240333.5 **G-119**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1518269.4 **1 of 1**

TOP ELEV: COMPLETED: May 13, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded, fine SAND w/silt (SP-SM)		WH-WH-WH	
			4-WH-1	27.1
5			WH/1.0-1	
			WH-2-3	
10			2-2-1	
			1-2-1	
14.50	Wet, dk. gray, silty, med. SAND (SM)			
15			3-4-4	
17.00	V. moist, dk. gray, firm, fat CLAY w/sand lense (CH) PPR 17.5'-19.0': 1.5, 1.0, 0.5		8-2-3	
19.50	V. moist, dk. greenish gray, firm, fat CLAY (CH) PPR 20.0'-21.5': 2.0, 0.5, 1.0			
20			2-2-2	
	PPR 22.5'-24.0': 1.0, 0.5, 0.5		3-3-5	
25	PPR 25.0'-26.5': 1.5, 1.5, 1.5		1-3-3	
	PPR 27.5'-29.0': 1.5, 1.5, 1.5		2-3-3	
30	PPR 30.0'-31.5': 1.0, 1.5, 1.25		2-4-4	
31.50	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 13.3' @ 0842 Hrs.			

Preliminary

G-119
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY FEASIBILITY STUDY N 241672.4 **G-120**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1518729.1 **1 of 1**

TOP ELEV: COMPLETED: May 12, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded, fine SAND w/silt (SP-SM)		WH-WH-WH	
2.00				
	Wet, dk. gray, poorly graded, fine SAND w/silt & shells (SP-SM)		WH-WH-WH	27.1
4.50				
	Wet, dk. gray, poorly graded, fine SAND w/silt & trace of shells (SP-SM)	5	1-4-2	
			5-12-4	
9.50				
	Wet, olive brown, poorly graded, fine SAND w/silt (SP-SM)	10	1-2-3	
			1-8-2	
15.05				
	V. moist, dk. gray, soft, sandy lean CLAY (CL)	15	6-7-8	
17.00				
	Wet, strong brown, poorly graded, med. SAND w/silt (SP-SM)		12-8-3	10.3
18.50				
19.50	Wet, dk. gray, poorly graded GRAVEL w/silt & sand (GP-GM)			
	V. moist, dk. greenish gray, firm, fat CLAY (CH) PPR 20.0'-21.5': 0.0, 1.0, 0.5	20	2-3-3	
22.00				
23.30	V. moist, dk. gray, gravelly, fat CLAY w/sand (CH)		5-4-4	
	V. moist, dk. greenish gray, firm, fat CLAY (CH) PPR 23.3'-24.0': 1.0, 0.0, 0.0 PPR 25.0'-26.5': 1.0, 1.0, 1.0	25	3-3-4	
	PPR 27.5'-29.0': 1.0, 0.5, 0.5		1-2-4	
29.50				
	V. moist, v. dk. greenish gray, firm SILT (ML) PPR 30.0'-31.5': 2.5, 1.25, 2.25	30	1-2-3	
32.00				
	V. moist, dk. greenish gray, firm, fat CLAY (CH) PPR 32.5'-34.0': 1.5, 1.0, 1.0		2-2-4	
	PPR 35.0'-36.5': 1.5, 1.0, 1.0	35	1-2-6	
	PPR 37.5'-39.0': 1.5, 1.0, 1.0		2-4-6	
	PPR 40.0'-41.5': 1.5, 1.5, 1.5	40	2-2-5	
41.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 13.9' @ 1021 Hrs.			

Preliminary

G-120
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill **Auger** **SPT** **RB**
Cored **300 lb** **Tubex** **Hand**
Fish Tail **Vibra Core** **Water Jet** **Odex**

STA. MID-BAY FEASIBILITY STUDY N 241613.2 **G-121**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1520195.8 **1 of 1**

TOP ELEV: COMPLETED: May 18, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, v. dk. gray, silty, fine SAND (SM)		WH-WH-WH	
2.00				29.9
	Wet, dk. gray, silty, fine SAND (SM)		WH-WH-WH	
4.50				
	V. moist, dk. gray, soft fat CLAY (CH)	5	WH-WH-WH	
				54.7
			WH-WH-WH	
9.50				
	V. moist, dk. gray, soft, elastic SILT (MH)	10	WH-WH-WH	
12.00				
	Wet, v. dk. gray, soft, sandy fat CLAY (CH)		WH-4-2	
14.50				
	Wet, gray, silty, fine to med. SAND (SM)	15	5-13-10	
17.00				23.1
	Wet, dk. gray, silty, fine to med. SAND (SM)		2-2-4	
19.50				
	Wet, dk. gray, poorly graded, fine to med. SAND w/silt (SP-SM)	20	WH-1-3	
22.00				18.2
	V. moist, dk. gray, poorly graded, fine to med. SAND w/silt (SP-SM)		4-14-17	
25.05				
	V. moist, dk. greenish gray, firm, fat CLAY w/sand (CH) PPR 26.1'-26.5': 1.5, --, --	25	5-4-5	
27.00				
	Moist, dk. greenish gray, firm, fat CLAY (CH) PPR 27.5'-29.0': 1.0, 1.0, 1.0		2-2-2	
	PPR 30.0'-31.5': 1.0, 2.0, 2.0	30	3-2-3	
	PPR 32.5'-34.0': 1.0, 1.0, 1.0		3-4-4	
	PPR 35.0'-36.5': 0.5, 0.0, 0.5	35	1-3-3	
36.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 8.7' @ 0850 Hrs.			

Preliminary

G-121
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 241590.8 **G-122**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1522459.2 **1 of 1**

TOP ELEV: COMPLETED: May 18, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
0.80	Wet, black, clayey, fine SAND (SC)		WH-1/1.0	30.0
2.00	V. moist, dk. greenish gray, clayey SAND (SC)			
4.50	V. moist, dk. greenish gray, soft, sandy, lean CLAY (CL)		WH-WH-WH	
7.00	V. moist, dk. greenish gray, soft, sandy, lean CLAY (CL/SC)	5	WH-WH-WH	
9.50	Wet, dk. greenish gray, silty, med. SAND (SC)		WH-1-1	
12.00	V. moist, dk. greenish gray, silty, med. SAND (SC)	10	WR/1.0-WH	30.7
14.50	Wet, dk. greenish gray, silty, fine SAND (SM)		1-6-4	
17.00	Wet, dk. greenish gray, silty, fine to med. SAND (SM)	15	2-2-5	27.5
19.50	Wet, dk. greenish gray, silty, fine SAND (SM)		1-1-1	
22.00	V. moist, gray, silty, med. SAND (SM)	20	WH-4-5	
26.50	Wet, dk. gray, poorly graded, fine SAND w/silt (SP-SM)	25	7-9-11	
			2-3-2	

BOTTOM OF HOLE

Depth of bay water @ start of boring 10.0' @ 1233 Hrs.

Preliminary

G-122
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 241664.8 **G-123**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1524108.2 **1 of 1**

TOP ELEV: COMPLETED: May 18, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, v. dk. gray, sandy SILT (ML)		WR/1.0-WH	
2.00				31.4
	Wet, dk. gray, sandy SILT (ML)		WH-WH-WH	
4.50				
	Wet, dk. gray, soft, lean CLAY (CL)	5	WH-WH-WH	37.5
7.00				
	Wet, dk. gray, silty, fine to med. SAND (SM)		WH-WH-WH	
9.50				
	Wet, dk. greenish gray, clayey, fine SAND (SC/CL)	10	WH-WH-WH	
12.00				
	Wet, dk. greenish gray, soft, lean CLAY w/sand (CL)		WH-1-2	
14.50				
	Wet, dk. greenish gray, poorly graded, med. SAND w/silt (SP-SM)	15	2-6-5	
17.00				
	V. moist, dk. greenish gray, soft, sandy, lean CLAY (CL/SC)		WH-WH-WH	
19.50				
	V. moist, dk. gray, silty, fine to med. SAND (SM)	20	WH-1/1.0	
22.00				
	Wet, dk. gray, silty, fine SAND (SM)		1-1-1	
		25		
26.50			WH-WH-WH	
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 8.4' @ 1433 Hrs.			

Preliminary

G-123
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 241628.5 **G-124**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1522108.3 **1 of 1**

TOP ELEV: COMPLETED: May 19, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	V. moist, gray, silty, fine SAND (SM)		WH-WH-WH	
2.00				
	Wet, dk. greenish gray, clayey SAND (SC)		WH-WH-WH	
				30.3
		5	WH/1.0-1	
7.00				
	Wet, dk. greenish gray, silty, fine SAND (SM)		WH-1-7	
9.50				
	Wet, gray, silty, fine SAND (SM)	10	1-2-4	25.2
			1-2-3	
		15	1-2-1	
17.00				
	Wet, gray, poorly graded, fine to med. SAND (SP-SM)		3-6-4	
19.50				
	Wet, dk. gray, silty, fine SAND (SM)	20	2-5-5	
			1-3-3	
		25	2-2-2	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 9.5' @ 0840 Hrs.			

Preliminary

G-124
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 243107.0 **G-125**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1519761.6 **1 of 1**

TOP ELEV: COMPLETED: May 20, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. grayish brown, poorly graded, fine SAND w/silt (SP)		WH/1.0-1	
2.00				25.6
	Wet, dk. gray, poorly graded, fine SAND w/silt & trace of shells (SP)		WH-WH-WH	
4.50				
	V. moist, dk. gray, soft, lean CLAY w/sand (CL)	5	WH-WH-WH	
7.00				33.5
	V. moist, greenish gray, soft, lean CLAY w/sand (CL) PPR 7.5'-9.0': 0.25, 0.0, 0.0		2-3-4	
		10	1-2-1	
12.00				
	Wet, dk. gray, silty, fine SAND (SM)		1-1-1	
		15	1-2-2	23.6
17.00				
	Wet, dk. gray, poorly graded, fine to med. silty SAND (SM)		2-5-8	
		20	1-1-6	20.4
22.00				
	V. moist, grayish brown, poorly graded, med. SAND w/silt (SP-SM)		30-33-49	
24.50				
	Wet, grayish brown, poorly graded SAND w/silt & gravel (GP-GM)	25	13-9-7	
27.00				
	V. moist, dk. greenish gray, firm, fat CLAY (CH) PPR 27.5'-29.0': 1.5, 1.5, 1.0		2-2-3	
	PPR 30.0'-31.5': 1.5, 1.0, 1.5	30	2-2-4	
	PPR 32.5'-34.0': 1.75, 1.5, 1.75		1-3-3	
34.50				
	V. moist, dk. greenish gray, soft to firm SILT (ML) PPR 35.0'-36.5': 1.5, 1.5, 1.0	35	2-3-3	
36.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 8.2' @ 1012 Hrs.			

Preliminary

G-125
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 242842.7 **G-126**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1518313.4 **1 of 1**

TOP ELEV: COMPLETED: May 20, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	NO SAMPLE		WH-WH-WH	
2.00	Wet, grayish brown, poorly graded, fine silty SAND (SM)		1-2-2	
		5	1-1-2	25.8
			1-4-6	
9.50	V. moist, lt. olive brown, poorly graded SAND w/silt (SP-SM)	10	4-2-1	21.7
12.00	Wet, olive brown, poorly graded, med. SAND w/silt (SP-SM)		8-16-20	
14.50	V. moist, dk. yellowish brown, poorly graded, med. SAND w/silt & gravel (SP-SM)	15	18-23-41	
17.00	V. moist, dk. yellowish brown, poorly graded, med. SAND w/silt (SP-SM)		13-20-7	
19.50	Moist, dk. greenish gray, firm, fat CLAY w/trace of sand (CH)	20	6-6-3	
22.00	Moist, dk. greenish gray, firm, fat CLAY w/sand (CH) PPR 22.5'-24.0': 1.0, 0.5, 0.5		1-4-5	
24.50	Moist, dk. gray, soft to firm, lean CLAY w/fine sand (CL) PPR 25.0'-26.5': 2.0, 2.5, 2.5	25	1-3-5	
27.00	Moist, dk. gray, fine, sandy SILT (ML) PPR 27.5'-29.0': 2.0, 1.0, 2.0		1-2-3	
29.50	Moist, dk. gray, firm, fat CLAY (CH) PPR 30.0'-31.5': 1.25, 1.0, 0.5	30	2-2-3	
31.50	BOTTOM OF HOLE			

Depth of bay water @ start of boring 14.5' @ 1538 Hrs.

Preliminary

G-126
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 242709.0 **G-127**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1516752.6 **1 of 1**

TOP ELEV: COMPLETED: May 21, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Mostly empty jar with a trace of sand		WH/1.0-1	
2.00				
	Wet, dk. gray, poorly graded, silty med. SAND (SM)		WH-1-2	26.0
4.50				
	Wet, dk. gray, silty, fine SAND (SM)	5	1-5-5	26.9
7.00				
	Wet, dk. gray, poorly graded, silty, fine SAND (SM)		3-7-8	
		10	1-2-4	25.1
			5-4-4	
14.50				
	Wet, dk. gray, poorly graded, silty, fine SAND w/trace of shell frags. (SM)	15	1-1-2	
17.00				
	Moist, dk. grayish brown, poorly graded, silty, med. SAND (SM)		5-40-103	12.1
19.50				
	Moist, dk. greenish gray, SILT w/fine sand (ML)	20	2-2-3	
	PPR 21.2'-21.5': 0.25, --, --			
			1-1-2	
24.50				
	Moist, dk. gray, firm, fat CLAY w/fine sand (CH)	25	1-2-5	
	PPR 25.0'-26.5': 1.0, 1.0, 0.5			
	PPR 27.5'-29.0': 1.0, 1.25, 1.5		1-2-4	
	PPR 30.0'-31.5': 1.0, 1.0, 1.0	30	2-3-5	
31.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 14.1' @ 0832 Hrs.			

Preliminary

G-127
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 244248.0 **G-128**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1565522.6 **1 of 1**

TOP ELEV: COMPLETED: May 21, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded, med. SAND w/silt (SP-SM)			
2.00				
	Wet, dk. gray & brown, silty, med. SAND (SM)			
4.50				
	Wet, yellowish brown, poorly graded, med. SAND (SP)		5	
9.50				
	Wet, yellowish brown, silty, fine SAND (SM)		10	
14.50				
	Wet, yellowish brown, silty, med. to coarse SAND w/gravel (SM)		15	
19.85				
	Moist, dk. gray, fine, sandy, lean CLAY (CL) PPR 20.7'-21.5': 2.0, 1.75, 1.75		20	
22.00				
	Moist, dk. gray, firm, fat CLAY w/fine sand (CH) PPR 22.5'-24.0': 1.0, 1.0, 1.5			
24.50				
	Moist, dk. gray, firm, fat CLAY w/trace of fine sand (CH) PPR 25.0'-26.5': 1.0, 1.0, 1.0 PPR 27.5'-29.0': 1.25, 1.25, 1.5		25	
29.50				
	Moist, dk. gray, firm, fat CLAY (CH) PPR 30.0'-31.5': 1.5, 1.25, 1.25		30	
31.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 14.5' @ 1117 Hrs.			

Preliminary

G-128
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY FEASIBILITY STUDY N 243975.3 **G-129**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1523348.5 **1 of 1**

TOP ELEV: COMPLETED: May 19, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, olive gray, silty, fine SAND (SM)		WH-1-2	
				24.8
			WH/1.0-1	
4.50				
	Wet, olive yellow, silty, fine SAND (SM)		WH-WH-WH	
7.00				27.1
	Wet, gray, silty, fine SAND (SM)		1/1.0-1	
9.50				
	Wet, dk. gray, silty, fine SAND (SM)		WH/1.0-1	
				29.0
			WH-WH-WH	
14.50				
	V. moist, dk. gray, soft, sandy, fat CLAY (CH)		WH/1.0-3	
17.00				
	V. moist, dk. gray, silty, fine SAND (SM)		1/1.0-1	
19.50				
	V. moist, dk. gray, soft, fat CLAY w/sand (CH)		5-14-15	
22.00				
	Wet, dk. gray, silty, fine SAND (SM)		3-9-9	
24.50				
	Wet, gray, poorly graded, fine SAND w/silt (SP-SM)		3-6-7	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 7.5' @ 1057 Hrs.			

5 10 15 20 25

Preliminary

G-129
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY FEASIBILITY STUDY N 245008.2 **G-130**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1522216.6 **1 of 1**

TOP ELEV: COMPLETED: May 19, 2004

DEPTH(ft)	(c)	(a)	(b)
	Wet, olive, silty, fine SAND (SM)	WH-1/1.0	
2.00			27.6
	Wet, dk. olive gray, silty, fine SAND (SM)	WH/1.0-1	
4.50			
	Wet, gray & yellowish brown, soft, sandy, lean CLAY (CL)	WH-WH-WH	36.0
7.00			
	V. moist, dk. gray, silty, fine to med. SAND (SC)	WH/1.0-1	31.0
9.50			
	V. moist, dk. gray, soft, sandy, lean CLAY (CL)	WH-1-3	43.5
12.00			
	Wet, dk. gray, silty, fine to med. SAND (SM)	1-7-4	26.2
14.50			
	V. moist, dk. gray, silty, v. fine SAND (SM) PPR 15.0'-16.5': 0.5, 0.0, 0.0	1/1.0-1	
17.00			
	Moist, dk. gray, sandy SILT (ML/SM)	WH-1-1	
20.05			
	V. moist, dk. gray, silty, fine SAND (SM)	1-1-2	
22.00			
	V. moist, dk. gray, silty, v. fine SAND w/many shells (SM)	1-1-2	
24.50			
	Wet, dk. gray, silty, v. fine SAND w/50% shells (SM)	1-1-2	
26.50			
	BOTTOM OF HOLE Depth of bay water @ start of boring 10.7' @ 1325 Hrs.		

5 10 15 20 25

Preliminary

G-130
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY FEASIBILITY STUDY N 246866.5 **G-131**

OFFSET: BARREN ISLAND, DORCHESTER COUNTY, MD. E 1521819.3 **1 of 1**

TOP ELEV: COMPLETED: May 20, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, olive brown & gray, poorly graded, fine SAND w/silt (SP-SM)		WH/1.0-1	
2.00				
	Wet, olive, poorly graded, silty, fine SAND w/silt (SM)		1/1.0-2	
				28.5
5			WH/1.0-1	
7.00				
	Wet, gray, poorly graded, med. SAND w/silt (SP-SM)		WH-4-3	23.3
9.50				
	V. moist, gray, silty, med. SAND (SC)			
10			1-1-3	34.0
12.00				
	Wet, dk. gray, silty, fine SAND (SM)		WH/1.0-2	
15			2-3-3	21.4
			3-2-6	
19.50				
	V. moist, dk. gray, soft-firm, fat CLAY (CH)			
	PPR 20.0'-21.5': 1.5, 1.0, 1.0			
20			2-3-4	
	PPR 22.5'-24.0': 1.75, 1.5, 1.5		1-3-3	
24.50				
	V. moist, dk. gray, soft-firm, SILT (ML)			
	PPR 25.0'-26.5': 1.5, 1.0, 1.0			
25			2-3-3	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 10.0' @ 0823 Hrs.			

Preliminary

G-131
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** Estes

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-103			
JAR-1	0.0-1.5	wet dk gry silty sand ①②	(SM)
-2	2.5-4.0	very moist gry brn ditto ①②	(SM)
-3	5.0-6.5	moist lt brn gry sandy fat clay	(CH)
-4	7.5-9.0	moist lt brn gry fat clay w/sand	(CH)
-5	10.0-11.5	wet lt gry sandy lean clay	(CL)
-6	12.5-14.0	wet lt brn gry silty sand ①	(SM)
-7	15.0-16.5	ditto ①	(SM)
-8	17.5-19.0	wet gry brn ditto ③	(SM)
-9	20.0-21.5	ditto ③	(SM)
-10	22.5-24.0	wet gry ditto ③	(SM)
-11	25.0-26.5	ditto ③	(SM)
		① medium to fine sand	
		② trace of shell fragments	
		③ fine sand	

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** Estes

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G - 104			
JAR -1	0.0 - 1.5	wet gry brn silty sand ①②	(SM)
-2	2.5 - 4.0	wet brn ditto ②③	(SM)
-3	5.0 - 6.5	wet lt olive brn poorly graded sand ③ w/silt	(SP-SM)
-4	7.5 - 9.0	very moist gry sandy fat clay	(CH)
-5	10.0 - 11.5	very moist gry sandy lean to fat clay	CL/CH
-6	12.5 - 14.0	very moist gry clayey sand ①	(SC)
-7	15.0 - 16.5	wet ditto ①	(SC)
-8	17.5 - 19.0	very moist gry brn sandy fat clay	(CH)
-9	20.0 - 21.5	wet gry clayey sand ③	(SC)
-10	22.5 - 24.0	very moist gry sandy lean clay	(CL)
-11	25.0 - 26.5	wet gry brn silty sand ③	(SM)
		① fine sand	
		② trace of shell fragments	
		③ medium to fine sand	

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** Estes

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G - 106			
Small Sample JAR-1	0.0-1.5	wet gry brn poorly graded sand ①	(SP)
-2	2.5-4.0	wet gry silty sand ②	(SM)
-3	5.0-5.9	wet dk gry ditto ②	(SM)
-4	5.9-6.5	moist lt brn gry lean clay w/sand	(CL)
-5	7.5-9.0	ditto	(CL)
-6	10.0-11.5	wet gry silty sand ②	(SM)
-7	12.5-14.0	wet lt olive gry silty sand ③	(SM)
-8	15.0-16.5	wet gry ditto ③	SM/SP-SM
-9	17.5-19.0	ditto ③	(SM)
-10	20.0-21.5	ditto ③	(SM)
-11	22.5-24.0	ditto ③	(SM)
-12	25.0-26.5	ditto ③	(SM)
		① coarse to medium sand	
		② medium to fine sand	
		③ fine sand	

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-108			
JAR-1	0.0-1.5	Wet, Dark Gray, Poorly Graded SAND ①	(SP)
-2	2.5-4.0	Moist, Dark Gray, Poorly Graded SAND ①	(SP)
-3	5.0-6.5	Wet, Dark Gray, Poorly Graded SAND	(SP)
-4	7.5-9.0	Moist, Dark Gray, Poorly Graded SAND with Silt	(SP-SM)
-5	10.0-11.5	Moist, Grayish Brown, Poorly Graded SAND with Silt	(SP-SM)
-6	12.5-14.0	Moist, Brown, Poorly Graded SAND	(SP)
-7	15.0-16.5	Ditto	(SP)
-8	17.5-19.0	Ditto	(SP)
-9	20.0-21.5	Moist, Brown & Gray, Poorly Graded SAND with Silt & Clay	(SP-SM)
-10	22.5-24.0	Very Moist, Dark Gray, clayey SAND ①	SC-H/CH
-11	25.0-26.5	Very Moist, Dark Gray, clayey, SAND	SC/SM

NOTE: ① Trace of Shell Fragments

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
very small sample G -	109		
JAR - 1	0.0 – 1.5	Wet, Dark Gray, Poorly Graded SAND (1) with Silt	(SP-SM)
Small sample - 2	2.5 – 4.0	Wet, Dark Gray, Clayey, SAND (1)	(SC)
- 3	5.0 – 6.5	Moist, Gray, SOFT FAT CLAY with Sand	(CH)
small sample - 4	7.5 – 9.0	Wet, Gray, clayey, SAND	(SC)
- 5	10.0 – 11.5	Wet, Gray, Silty, SAND	(SM)
- 6	12.5 – 14.0	Ditto	(SM)
- 7	15.0 – 16.5	Ditto	(SM)
- 8	17.5 – 19.0	Ditto	(SM)
small sample - 9	21.0 – 21.5	Very Moist, Dark Gray, Clayey, SAND	(SC)
-10	22.5 – 24.0	Moist, Lt yellowish Brown, Poorly Graded SAND trace of Gravel	(SP)
-11	25.0 – 26.5	Moist, Dark Gray, Poorly Graded SAND with Silt	(SP-SM)

Note:

(1) Trace of Shell Fragments

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-110			
JAR-1	0.0-1.5	Wet, Dark Gray & Yellowish Brown, silty, SAND (1)	(SM)
-2	2.5-4.0	V. Moist, Yellowish Brown, silty, SAND Trace of Clay	(SM)
-3	5.0-6.5	Wet, Brown, silty, Fine SAND	(SM)
-4	7.5-9.0	Ditto	(SM)
-5	10.0-11.5	Ditto	(SM)
-6	12.5-14.0	Wet, Brown & Gray, Silty, Fine SAND	(SM)
-7	15.0-16.5	Ditto	(SM)
-8	17.5-19.0	Wet, Dark Gray, silty, Fine SAND	(SM)
-9	20.0-21.5	Ditto	(SM)
-10	23.6-24.0	Moist, Dark Gray, sandy, CLAY	(CL)
-11	25.0-26.5	Wet, Grayish Brown, Poorly Graded SAND with Silt	(SP-SM)

Note:

(1) Trace of Shell Fragments

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-111			
JAR-1	0.0-1.5	Wet, Grayish Brown, Clayey, Med to Coarse SAND	(SC)
-2	2.5-4.0	Ditto	(SC)
-3	5.0-6.5	Ditto	(SC)
-4	7.5-9.0	Wet, Lt. Yell. Brown, Poorly Graded Med to Coarse SAND w/silt	(SP-SM)
-5	10.0-11.5	Ditto	(SP-SM)
-6	12.5-14.0	Wet, Grayish Brown, Poorly Graded Med SAND	(SP)
-7	15.0-16.5	Very Moist, Dark Gray, Clayey, fine to Med SAND	(SC)
-8	17.5-19.0	V. Moist, Dark Gray, Silty, fine to Med SAND	(SM)
-9	20.0-21.5	Ditto	(SM)
-10	23.5-24.0	Ditto	(SM)
-11	25.0-26.5	Moist, Grayish Brown, Poorly Graded Med-Fine SAND	(SP)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-112			
JAR-1	0.0-1.5	EMPTY JAR	—
-2	2.5-4.0	Moist, Gray, Soft FAT CLAY with Sand	(CH)
-3	5.0-6.5	Ditto " "	(CH)
-4	7.5-9.0	Wet, Gray, Silty, Fine SAND Trace of CLAY	(SM)
-5	10.0-11.5	Moist, Grayish Brown, Silty, Fine SAND	(SM)
-6	12.5-14.0	50% V. Moist, Gray, Soft FAT CLAY (CH) 50% V. Moist, Grayish Brn, Silty SAND	(SM)
-7	15.0-16.5	Moist, Grayish Brown, Poorly Graded Med SAND with Silt	(SP-SM)
-8	17.5-19.0	Ditto	(SP-SM)
-9	20.0-21.5	Ditto	(SP-SM)
-10	22.5-24.0	Ditto	(SP-SM)
-11	25.0-26.5	Ditto	(SP-SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-113			
JAR-1	0.0-1.5	EMPTY JAR	—
-2	2.5-4.0	Wet, Dark Gray, Poorly Graded Fine-Med SAND w/silt	(SP-SM)
-3	5.0-6.5	Wet, Dark Gray, Silty, Fine SAND with Clay Lense	(SM)
-4	7.5-9.0	Wet, Dark Grayish Brown, Silty, Fine SAND	(SM)
-5	10.0-11.5	Ditto	(SM)
-6	12.5-14.0	Wet, Brown, Poorly Graded Fine SAND with Silt	(SP-SM)
-7	15.0-16.5	Wet, yell. Brn & Gray, Silty, Fine SAND Trace of Clay	(SM)
-8	17.5-19.0	Moist, Yell. Brown, Poorly Graded Med-Fine SAND w/silt	(SP-SM)
-9	20.0-21.5	Wet, Ditto	(SP-SM)
-10	22.5-24.0	Wet, Ditto	(SP-SM)
-11	25.0-26.5	Wet, Ditto	(SP-SM)
-12	27.5-29.0	Wet, yell. Brown, Silty, Fine SAND Trace of CLAY	(SM)
-13	30.0-31.5	Wet, Dark Gray, Silty, Fine SAND	(SM)
-14	32.5-34.0	Ditto	(SM)
-15	35.0-36.5	Ditto	(SM)
-16	37.5-39.0	V. Moist. Ditto	(SM)
-17	40.0-41.5	Wet, Dark Gray, Clayey, Med-Coarse SAND w/ Shell Frags.	(SC)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-114			
JAR-1	0.0-1.5	Wet, Dark Gray, Poorly Graded Fine SAND w/silt (1)	(SP-SM)
-2	2.5-4.0	Ditto (1)	(SP-SM)
-3	5.0-6.5	Wet, Dark Gray, Silty, Fine SAND	(SM)
-4	7.5-9.0	Wet, Lt. Olive Brown, Poorly Graded Fine SAND w/silt	(SP-SM)
-5	10.0-11.5	V. Moist, Ditto	(SP-SM)
-6	12.5-14.0	Wet, Lt. yell. Brown, Poorly Graded fine-Med SAND	(SP)
-7	15.0-16.5	Ditto	(SP)
-8	17.5-19.0	Ditto Trace of Gravel	(SP)
-9	20.0-21.5	Moist, Grayish Brown, Poorly Graded Med SAND w/silt, TR/Gravel	(SP-SM)
Small Sample -10	23.5-24.0	Moist, Dark Gray fine Sandy, Lean CLAY	(CL)
-11	25.0-26.5	Moist, Dark Gray, LEAN CLAY with very Fine Sand	(CL)
-12	27.5-29.0	Ditto with fine-Med Sand	(CL)
-13	30.0-31.5	Moist, Dark Gray, Firm FAT CLAY with silt	(CH)
-14	32.5-34.0	Ditto	(CH)

Note:

(1) Trace of Shell Fragments

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G - 115			
JAR - 1	0.0 - 1.5	Wet lt. olive brown silty fine sand	(SM)
- 2	2.5 - 4.0	Wet olive yellow clayey fine sand	(SC)
- 3	5.0 - 6.5	- ditto -	(SC)
- 4	7.5 - 9.0	Wet lt. brownish gray soft lean clay	(CL)
- 5	10.0 - 11.5	V. moist gray soft fat clay w/ sand	(CH)
- 6	12.5 - 14.0	Wet dk gray silty fine sand	(SM)
- 7	15.0 - 16.5	Wet dk gray silty fine sand	(SM)
- 8	17.5 - 19.0	V. moist olive brown silty fine sand	(SM)
- 9	20.0 - 21.5	Wet dk gray silty fine sand	(SM)
- 10	22.5 - 24.0	V. moist dk gray poorly graded fine sand w/ silt	(SP-SM)
small sample 11	25.0 - 26.5	Wet dk grayish brn poorly graded med sand w/ silt	(SP-SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-116			
JAR-1	0.0-1.5	Wet lt. olive brn silty v. fine sand	(SM)
-2	2.5-4.0	Wet lt. brownish gray soft lean clay	(CL)
-3	5.0-6.5	Wet lt gray & olive yell soft lean clay w/ sand	(CL)
-4	7.5-9.0	-Ditto-	(CL)
-5	10.0-11.5	V. moist dk gray soft lean to fat clay	CL/CH
-6	12.5-14.0	V. moist dk gray silty med sand	(SM)
-7	15.0-16.5	Wet lt brn gray silty fine-med sand	(SM)
-8	17.5-19.0	Wet dk gray poorly graded fine sand w/ silt	(SP-SM)
-9	20.0-21.5	-Ditto-	(SP-SM)
-10	22.5-24.0	V. moist dk grayish brn silty fine sand (Tr grav)	(SM)
-11	25.0-26.5	Wet dk gray poorly graded fine sand w/ silt + grav.	(SP-SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-117			
JAR-1	0.0-1.5	V. moist yellowish brn + gray soft lean clay	(CL)
-2	2.5-4.0	Wet yellowish brn silty fine sand w/ clay lense	(SM)
-3	5.0-6.5	Wet yellowish brn silty fine sand	(SM)
-4	7.5-9.0	Wet reddish yellow poorly graded med sand w/ silt	(SP-SM)
-5	10.0-11.5	Wet lt. yell. brn poorly graded fine sand w/ silt	(SP-SM)
-6	12.5-14.0	Wet dk gray + brn yell -ditto-	(SP-SM)
-7	15.0-16.5	Wet dk gray silty fine - med sand	(SM)
-8	17.5-19.0	-ditto-	(SM)
-9	20.0-21.5	-ditto-	(SM)
-10	22.5-24.0	-ditto-	(SM)
-11	25.0-26.5	-ditto-	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-118			
JAR-1	0.0-1.5	Wet grayish brn silty fine sand	(SM)
-2	2.5-4.0	- ditto -	(SM)
-3	5.0-6.5	Wet olive brown poorly graded fine sand w/ silt	(SP-SM)
-4	7.5-9.0	- ditto -	(SP-SM)
-5	10.0-11.5	Wet yellowish brn poorly graded fine sand w/ silt	(SP-SM)
-6	12.5-14.0	olive brown - ditto -	(SP-SM)
-7	15.0-16.5	" " - ditto -	(SP-SM)
-8	17.5-19.0	V. moist lt. olive brown poorly graded med sand w/ silt	(SP-SM)
-9	21.2-21.5	V. moist dk greenish gray soft fat clay w/ sd lenses	(CH)
-10	22.5-24.0	V. moist dk greenish gray firm fat clay	(CH)
-11	25.0-26.5	- ditto -	(CH)
-12	27.5-29.0	- ditto -	(CH)
-13	30.0-31.5	V. moist dk gray firm silt	(ML)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-119			
JAR-1	0.0-1.5	Wet dk gray poorly graded fine sand w/ silt	(SP-SM)
-2	2.5-4.0	-ditto-	(SP-SM)
-3	5.0-6.5	-ditto-	(SP-SM)
-4	7.5-9.0	-ditto-	(SP-SM)
-5	10.0-11.5	-ditto-	(SP-SM)
-6	12.5-14.0	-ditto-	(SP-SM)
-7	15.0-16.5	Wet dk gray silty med sand	(SM)
-8	17.5-19.0	V. moist dk gray firm fat clay w/ sand lense	(CH)
-9	20.0-21.5	V. moist dk greenish gray firm fat clay	(CH)
-10	22.5-24.0	-ditto-	(CH)
-11	25.0-26.5	-ditto-	(CH)
-12	27.5-29.0	-ditto-	(CH)
-13	30.0-31.5	-ditto-	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-120			
JAR-1	0.0-1.5	Wet dk gray poorly graded fine sand w/ silt	(SP-SM)
-2	2.5-4.0	-ditto- (w/ shells)	(SP-SM)
-3	5.0-6.5	-ditto- (Tr. shells)	(SP-SM)
-4	7.5-9.0	-ditto- "	(SP-SM)
-5	10.0-11.5	Wet olive brown poorly graded fine sand w/ silt	(SP-SM)
-6	12.5-14.0	-ditto-	(SP-SM)
small sample 7	16.1-16.5	V. moist dk gray soft sandy lean clay	(CL)
-8	17.5-18.5	Wet strong brn poorly graded med sand w/ silt	(SP-SM)
-9	18.5-19.0	Wet dk gray silty gravel w/ sand	(GM)
-10	20.0-21.5	V. moist dk greenish gray firm fat clay	(CH)
-11	22.5-23.3	V. moist dk gray gravelly fat clay w/ sand	(CH)
-12	23.3-24.0	V. moist dk greenish gray firm fat clay	(CH)
-13	25.0-26.5	-ditto-	(CH)
-14	27.5-29.0	-ditto-	(CH)
-15	30.0-31.5	V. moist v. dk greenish gray firm silt	(ML)
-16	32.5-34.0	V. moist dk greenish gray firm fat clay	(CH)
-17	35.0-36.5	-ditto-	(CH)
-18	37.5-39.0	-ditto-	(CH)
-19	40.0-41.5	-ditto-	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-121			
JAR-1	0.0-1.5	Wet v. dark gray poorly graded fine sand	(SP-SM)
-2	2.5-4.0	Wet dark gray poorly graded fine sand	(SP-SM)
-3	5.0-6.5	V. moist dark gray soft fat clay	(CH)
-4	7.5-9.0	- ditto -	(CH)
-5	10.0-11.5	V. moist dk gray soft elastic silt	(MH)
-6	12.5-14.0	Wet v. dk gray soft sandy fat clay	(CH)
-7	15.0-16.5	Wet gray silty fine-med sand	(SM)
-8	17.5-19.0	Wet dk gray silty fine-med sand	(SM)
-9	20.0-21.5	Wet dk gray poorly graded fine-med sand	(SP-SM)
-10	22.5-24.0	V. moist - ditto -	(SP-SM)
Small Sample 11	26.1-26.5	V. moist dk greenish gray firm fat clay w/sand	(CH)
-12	27.5-29.0	Moist dk greenish gray firm fat clay	(CH)
-13	30.0-31.5	- ditto -	(CH)
-14	32.5-34.0	- ditto -	(CH)
-15	35.0-36.5	- ditto -	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-122			
JAR-1	0.0-0.8	Wet black silty fine sand	(SM)
-2	0.8-1.5	V. moist dk greenish gray soft fat-lean clay	CH/CL
-3	2.5-4.0	V. moist dk greenish gray soft sandy lean clay	(CL)
-4	5.0-6.5	ditto	CL/SC
-5	7.5-9.0	Wet dk greenish gray clayey med sand	(SC)
-6	10.0-11.5	V. moist -ditto-	(SC)
-7	12.5-14.0	Wet dk greenish gray silty fine sand	(SM)
-8	15.0-16.5	-ditto- (fine-med)	(SM)
-9	17.5-19.0	ditto (fine)	(SM)
-10	20.0-21.5	V. moist gray silty med sand	(SM)
-11	22.5-24.0	Wet dk gray poorly graded fine sand w/silt	(SP-SM)
-12	25.0-26.5	ditto	(SP-SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G - 123			
JAR- 1	0.0 - 1.5	Wet v. dk gray silty v. fine sand	(SM)
- 2	2.5 - 4.0	Wet dk gray silty v. fine sand	(SM)
- 3	5.0 - 6.5	Wet dk gray soft lean clay	(CL)
- 4	7.5 - 9.0	Wet dk gray silty fine - med sand	(SM)
- 5	10.0 - 11.5	Wet dk greenish gray clayey fine sand	SC/CL
- 6	12.5 - 14.0	Wet dk greenish gray soft lean clay w/sand	(CL)
- 7	15.0 - 16.5	Wet dk greenish gray poorly graded med sand w/ silt	(SP-SM)
- 8	17.5 - 19.0	V. moist dk greenish gray soft sandy lean clay	CL/SC
- 9	20.0 - 21.5	V. moist dk gray silty fine - med sand	(SM)
- 10	22.5 - 24.0	Wet dk gray silty fine sand	(SM)
- 11	25.0 - 26.5	- Little -	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-124			
JAR-1	0.0-1.5	V. moist gray silty fine sand	(SM)
-2	2.5-4.0	Wet dk greenish gray soft lean clay w/ sand	(CL)
-3	5.0-6.5	Wet dk greenish gray soft sand lean clay	(CL)
-4	7.5-9.0	Wet dk greenish gray silty fine sand	(SM)
-5	10.0-11.5	Wet gray silty fine sand	(SM)
-6	12.5-14.0	- ditto -	(SM)
-7	15.0-16.5	- ditto -	(SM)
-8	17.5-19.0	Wet gray poorly graded fine-med sand	(SP-SM)
-9	20.0-21.5	Wet dk gray silty fine sand	(SM)
-10	22.5-24.0	- ditto -	(SM)
-11	25.0-26.5	- ditto -	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-125			
JAR-1	0.0-1.5	Wet dk grayish brn poorly graded fine sand w/ silt	(SP-SM)
-2	2.5-4.0	Wet dk gray poorly graded fine sand w/ silt (tr shells)	(SP-SM)
-3	5.0-6.5	V. moist dk gray soft fat clay (tr sand)	(CH)
-4	7.5-9.0	V. moist greenish gray soft fat clay	(CH)
-5	10.0-11.5	ditto	
-6	12.5-14.0	Wet dk gray silty fine sand	(SM)
-7	15.0-16.5	-ditto-	(SM)
-8	17.5-19.0	Wet dk gray poorly graded fine-med sand w/ silt	(SP-SM)
-9	20.0-21.5	-ditto-	(SP-SM)
-10	22.5-24.0	V. moist grayish brn poorly graded med sand w/ silt	(SP-SM)
-11	25.0-26.5	Wet grayish brn poorly graded sand w/ silt + gravel	(GP-GM)
-12	27.5-29.0	V. moist dk greenish gray firm fat clay	(CH)
-13	30.0-31.5	-ditto-	(CH)
-14	32.5-34.0	-ditto-	(CH)
-15	35.0-36.5	V. moist dk greenish gray soft-firm silt	(ML)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-126			
JAR-1	0.0-1.5	- NO SAMPLE -	—
-2	2.5-4.0	Wet grayish brn poorly graded fine sand w/ silt	(SP-SM)
-3	5.0-6.5	- ditto -	(SP-SM)
-4	7.5-9.0	- ditto -	(SP-SM)
-5	10.0-11.5	V. moist lt. olive brn silty fine sand	(SM)
small sample -6	12.5-14.0	Wet olive brown poorly graded med sand w/ silt	(SP-SM)
-7	15.0-16.5	V. moist dk yell brn poorly graded med sand w/ silt + gravel	(SP-SM)
-8	17.5-19.0	- ditto - (w/o grav.)	(SP-SM)
-9	21.0-21.5	Moist dk greenish gray firm fat clay (+ sand)	(CH)
-10	22.5-24.0	- ditto - w/ sand	(CH)
-11	25.0-26.5	Moist dk gray soft-firm lean clay w/ fine sand	(CL)
-12	27.5-29.0	Moist dk gray fine sandy silt	(ML)
-13	30.0-31.5	Moist dk gray firm fat clay	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANIKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G - 127			
JAR - 1	0.0 - 1.5	Mostly Empty Jar with a trace of Sand	—
- 2	2.5 - 4.0	Wet, Dark Gray, Poorly Graded Med SAND w/ Silt	(SP-SM)
- 3	5.0 - 6.5	Wet, Dark Gray, Silty, Fine SAND	(SM)
- 4	7.5 - 9.0	Wet, Dark Gray, Poorly Graded Fine SAND w/ Silt	(SP-SM)
- 5	10.0 - 11.5	Ditto	(SP-SM)
- 6	12.5 - 14.0	Ditto	(SP-SM)
- 7	15.0 - 16.5	Ditto Trace of Shell Frags.	(SP-SM)
- 8	17.5 - 19.0	Moist, Dk. Grayish Brown, Poorly Graded Med SAND w/ Silt & Gravel	(SP-SM)
- 9	20.0 - 21.2	Moist, Dk Greenish Gray, SILT w/ Fine Sand	(ML)
- 10	22.5 - 24.0	Ditto w/ Fine Sand	(ML)
- 11	25.0 - 26.5	Moist, Dk. Gray, Firm FAT CLAY w/ Fine Sand	(CH)
- 12	27.5 - 29.0	Ditto " " "	(CH)
- 13	30.0 - 31.5	Ditto " " "	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-128			
JAR-1	0.0-1.5	Wet, Dark Gray, Poorly Graded MED SAND w/silt	(SP-SM)
-2	2.5-4.0	Wet, Dark Gray & Brown, Silty, MED SAND	(SM)
-3	5.0-6.5	Wet, Yellowish Brown, Poorly Graded Med SAND w/silt	(SP-SM)
-4	7.5-9.0	Ditto	SP-SM/SM
-5	10.0-11.5	Wet, Yellowish Brown, Silty, Fine SAND	(SM)
-6	12.5-14.0	Ditto	(SM)
-7	15.0-16.5	Wet, yellowish Brown, Silty, MED-Coarse SAND w/Gravel	(SM)
-8	17.5-19.0	Ditto w/Gravel	(SM)
-9	20.7-21.5	Moist, Dark Gray, Fine Sandy, LEAN CLAY	(CL)
-10	22.5-24.0	Moist, Dark Gray, Firm FAT CLAY with Fine Sand	(CH)
-11	25.0-26.5	Ditto Trace of Fine Sand	(CH)
-12	27.5-29.0	Ditto " " " "	(CH)
-13	30.0-31.5	Ditto	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-129			
JAR-1	0.0-1.5	Wet olive gray silty fine sand	(SM)
-2	2.5-4.0	-ditto-	(SM)
-3	5.0-6.5	Wet olive yellow clayey fine sand	(SC)
-4	7.5-9.0	Wet gray clayey fine sand	(SC)
-5	10.0-11.5	Wet dk gray silty fine sand	(SM)
-6	12.5-14.0	-ditto-	(SM)
-7	15.0-16.5	V. moist dk gray soft sandy fat clay	(CH)
-8	17.5-19.0	V. moist dk gray silty fine sand	(SM)
-9	20.0-21.5	V. moist dk gray soft fat clay w/ sand	(CH)
-10	22.5-24.0	Wet dk gray silty fine sand	(SM)
-11	25.0-26.5	Wet gray poorly graded fine sand w/ silt	(SP-SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-130			
JAR-1	0.0-1.5	Wet olive silty fine sand	(SM)
-2	2.5-4.0	Wet dark olive gray silty fine sand	(SM)
-3	5.0-6.5	Wet gray + yell. brn soft sandy lean clay	(CL)
-4	7.5-9.0	V. moist dk gray clayey fine-med sand	(SC)
-5	10.0-11.5	V. moist dk gray soft sandy lean clay	(CL)
-6	12.5-14.0	Wet dk gray clayey fine-med sand	SC/SM
-7	15.0-16.5	V. moist dk gray silty v. fine sand	(SM)
-8	17.5-19.0	Moist dk gray sandy silt	ML/SM
-9	21.1-21.5	V. moist dk gray silty fine sand	(SM)
-10	22.5-24.0	V. moist dk gray silty v. fine sand w/ many shells	(SM)
-11	25.0-26.5	Wet dk gray silty v. fine sand w/ 50% shells	(SM)

VISUAL-MANUAL CLASSIFICATION

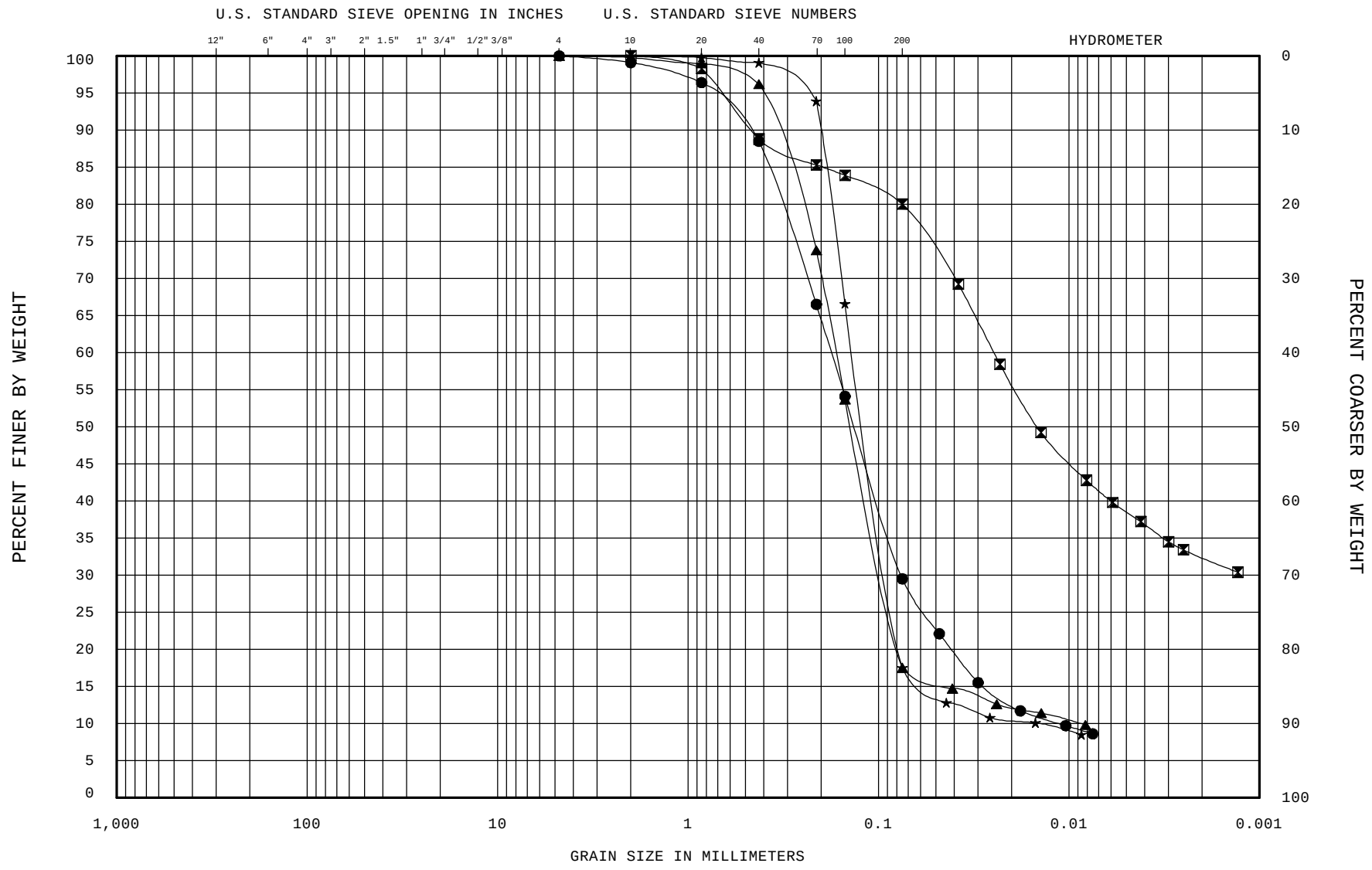
(Test method: ASTM D 2488)

PROJECT: Barren Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
G-131			
JAR-1	0.0-1.5	Wet olive brn + gray poorly graded fine sand w/ silt	(SP-SM)
-2	2.5-4.0	Wet olive poorly graded fine sand w/ silt	(SP-SM)
-3	5.0-6.5	Wet olive poorly graded fine sand w/ silt	(SP-SM)
-4	7.5-9.0	Wet gray poorly graded med sand w/ silt	(SP-SM)
-5	10.0-11.5	V. moist gray clayey med sand	(SC)
-6	12.5-14.0	Wet dk gray silty fine sand	(SM)
-7	15.0-16.5	-ditto-	(SM)
-8	17.5-19.0	-ditto-	(SM)
-9	20.0-21.5	V. moist dk gray soft-firm fat clay	(CH)
-10	22.5-24.0	-ditto-	(CH)
-11	25.0-26.5	V. moist dk gray soft-firm silt	(ML)



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SILTY SAND	SM	23.8			
—⊠—	Jar-3	5.0-6.5	LEAN CLAY with SAND	CL	31.5	38	17	21
—▲—	Jars 6&7	12.5-16.5	SILTY SAND	SM	25.3			
—★—	Jars 8&9	17.5-21.5	SILTY SAND	SM	29.0			

Remarks:

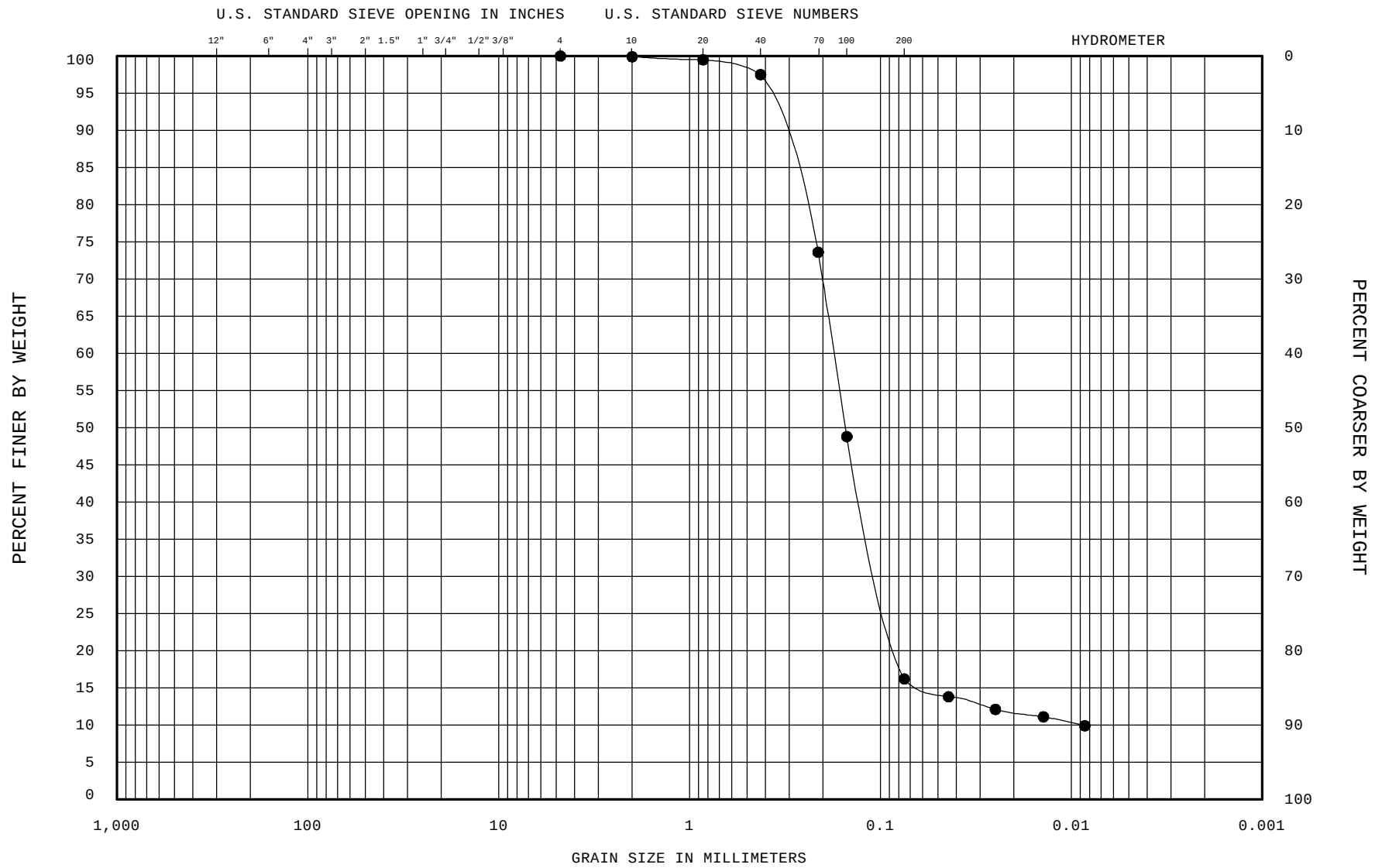
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-103*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 10&11	22.5-26.5	SILTY SAND	SM	26.4			
— —								
— —								
— —								

Remarks:

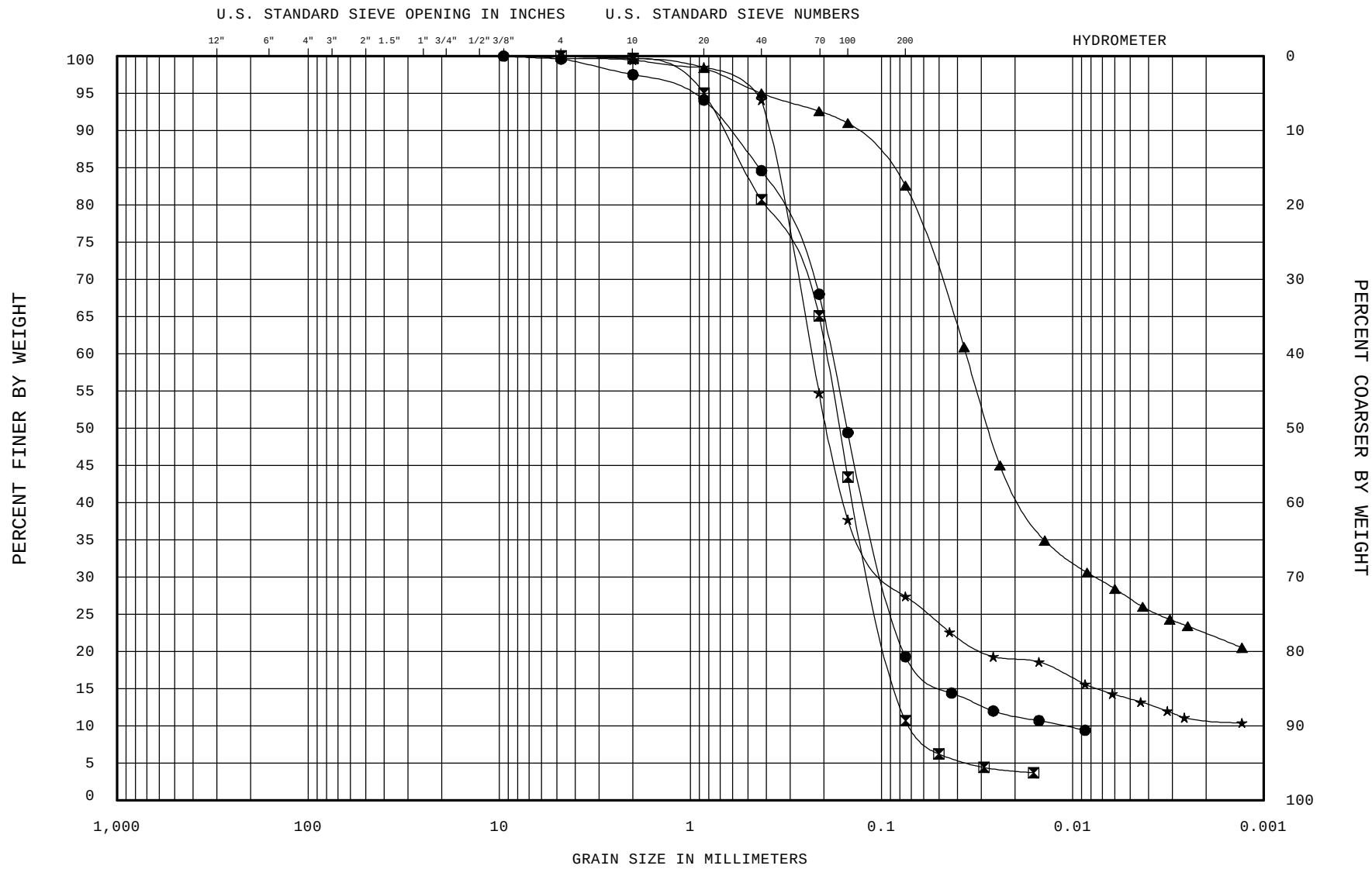
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-103*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SILTY SAND	SM	21.7			
—⊠—	Jar-3	5.0-6.5	POORLY GRADED SAND with SILT	SP-SM	20.4			
—▲—	Jar-4	7.5-9.0	LEAN CLAY with SAND	CL	35.4	34	19	15
—★—	Jars 6&7	12.5-16.5	CLAYEY SAND	SC	30.0	29	17	12

Remarks:

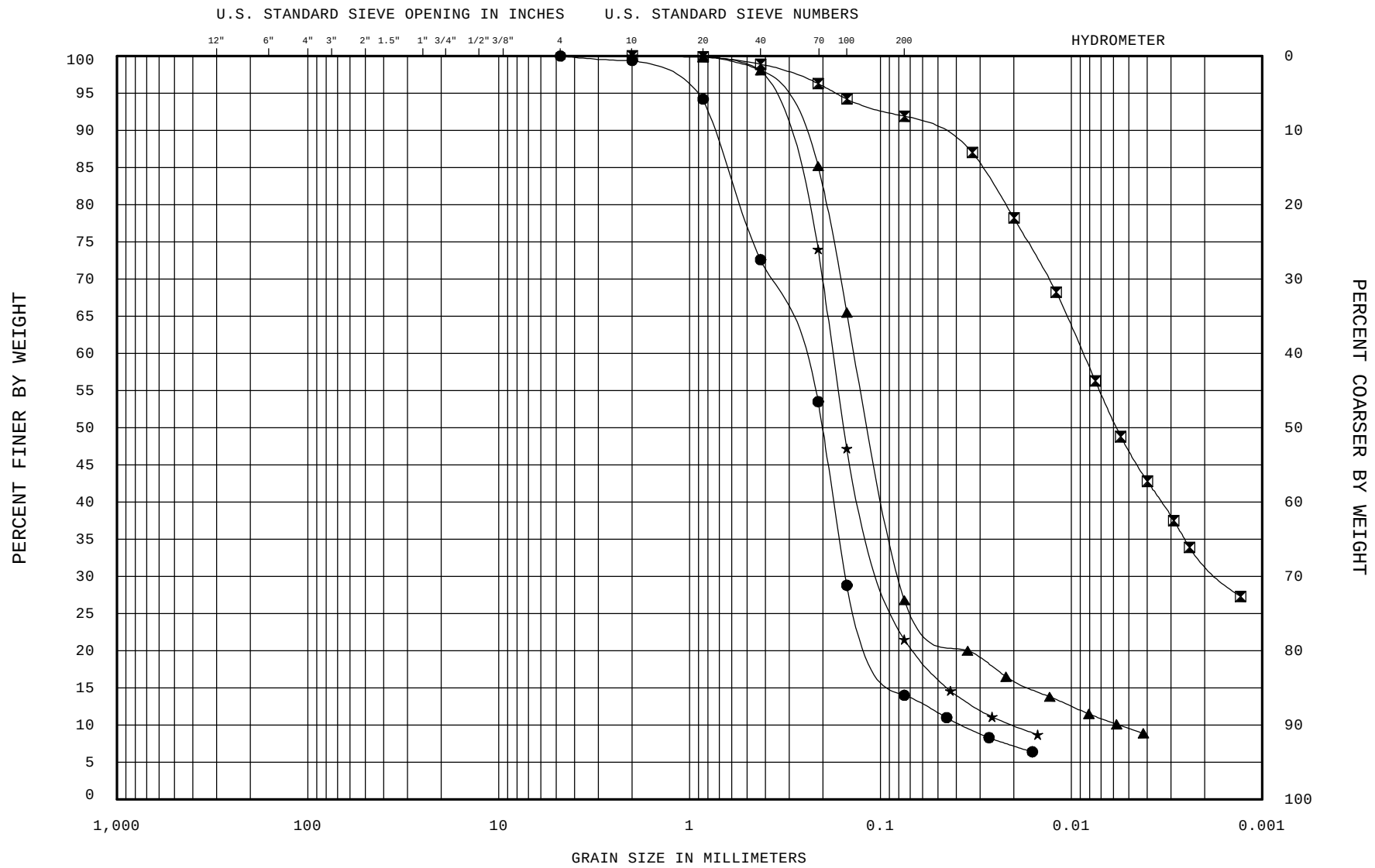
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-104*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-5.9	SILTY SAND	SM	22.8			
—⊠—	Jars 4&5	5.9-9.0	LEAN CLAY	CL	22.5	30	18	12
—▲—	Jars 6&7	10.0-14.0	SILTY SAND	SM	25.3			
—★—	Jars 8-10	15.0-21.5	SILTY SAND	SM	22.4			

Remarks:

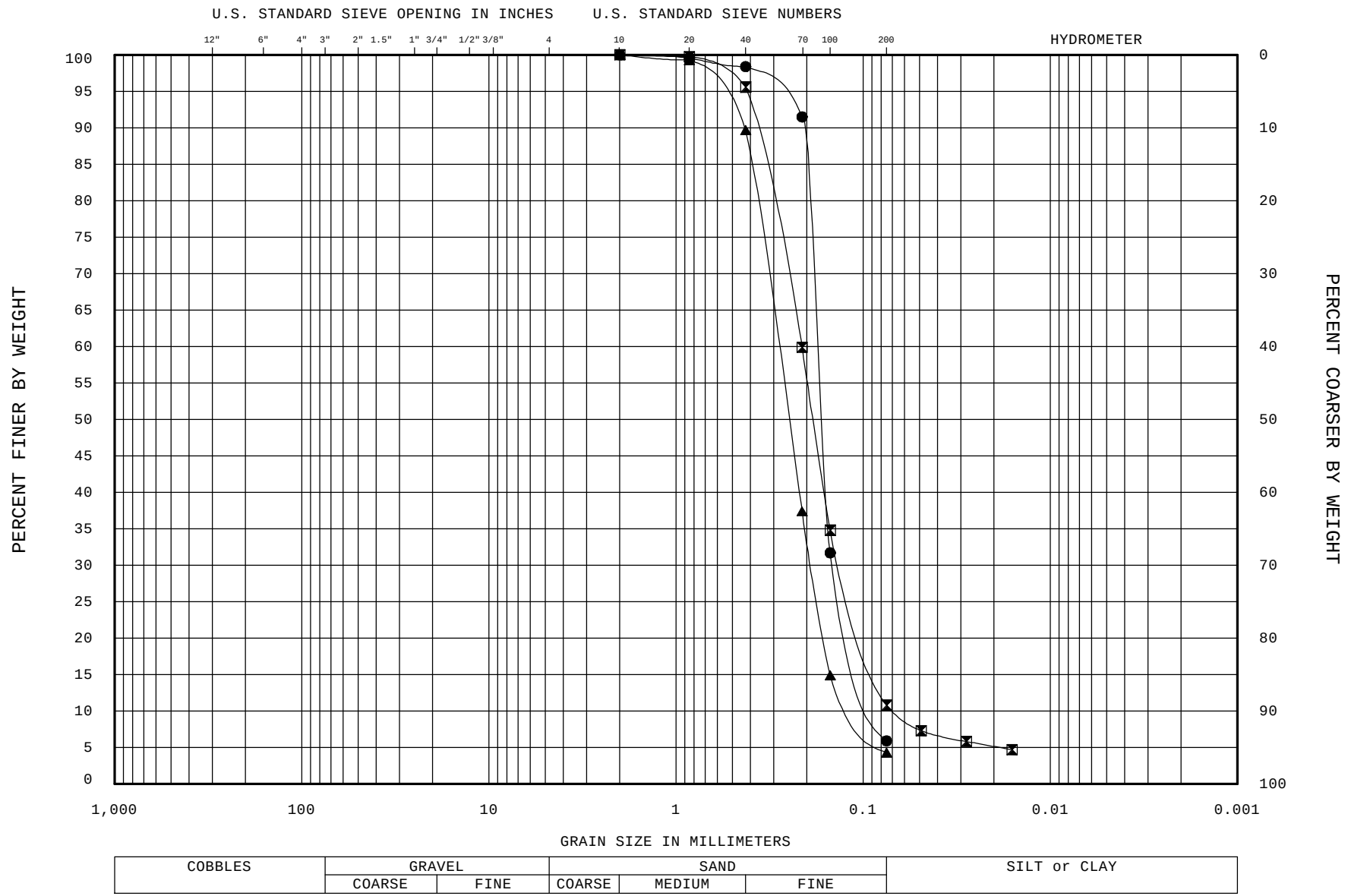
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-106*

DATE: *Jul 2004*



Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1-3	0.0-6.5	POORLY GRADED SAND with SILT	SP-SM	29.2			
—⊠—	Jars 4&5	7.5-11.5	POORLY GRADED SAND with SILT	SP-SM	22.4			
—▲—	Jars 6-8	12.5-19.0	POORLY GRADED SAND	SP	20.0			
— —								

Remarks:

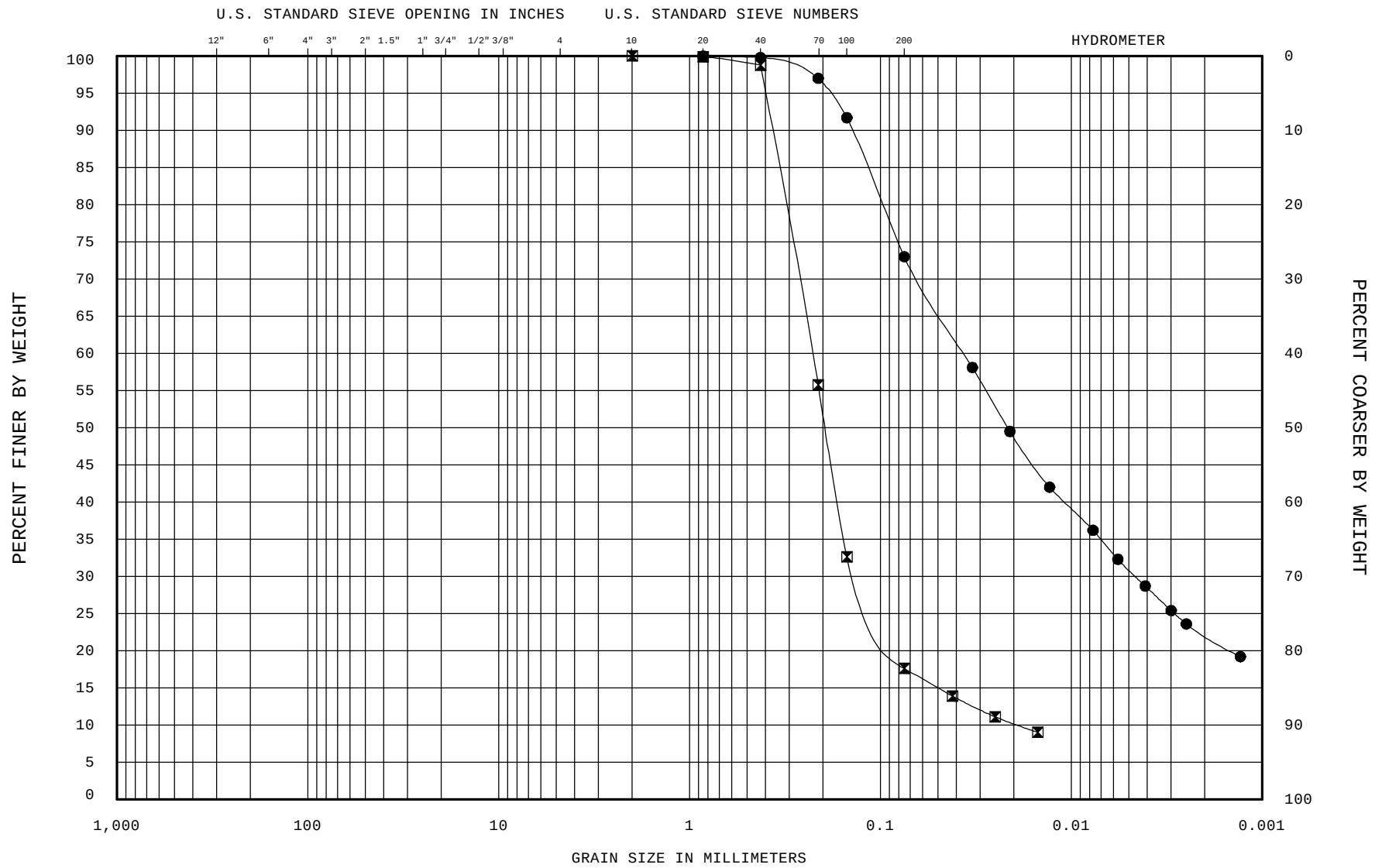
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-108*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-3	5.0-6.5	SILTY CLAY with SAND	CL-ML	20.9	21	15	6
—⊠—	Jars 5&6	10.0-14.0	SILTY SAND	SM	23.2			
— —								
— —								

Remarks:

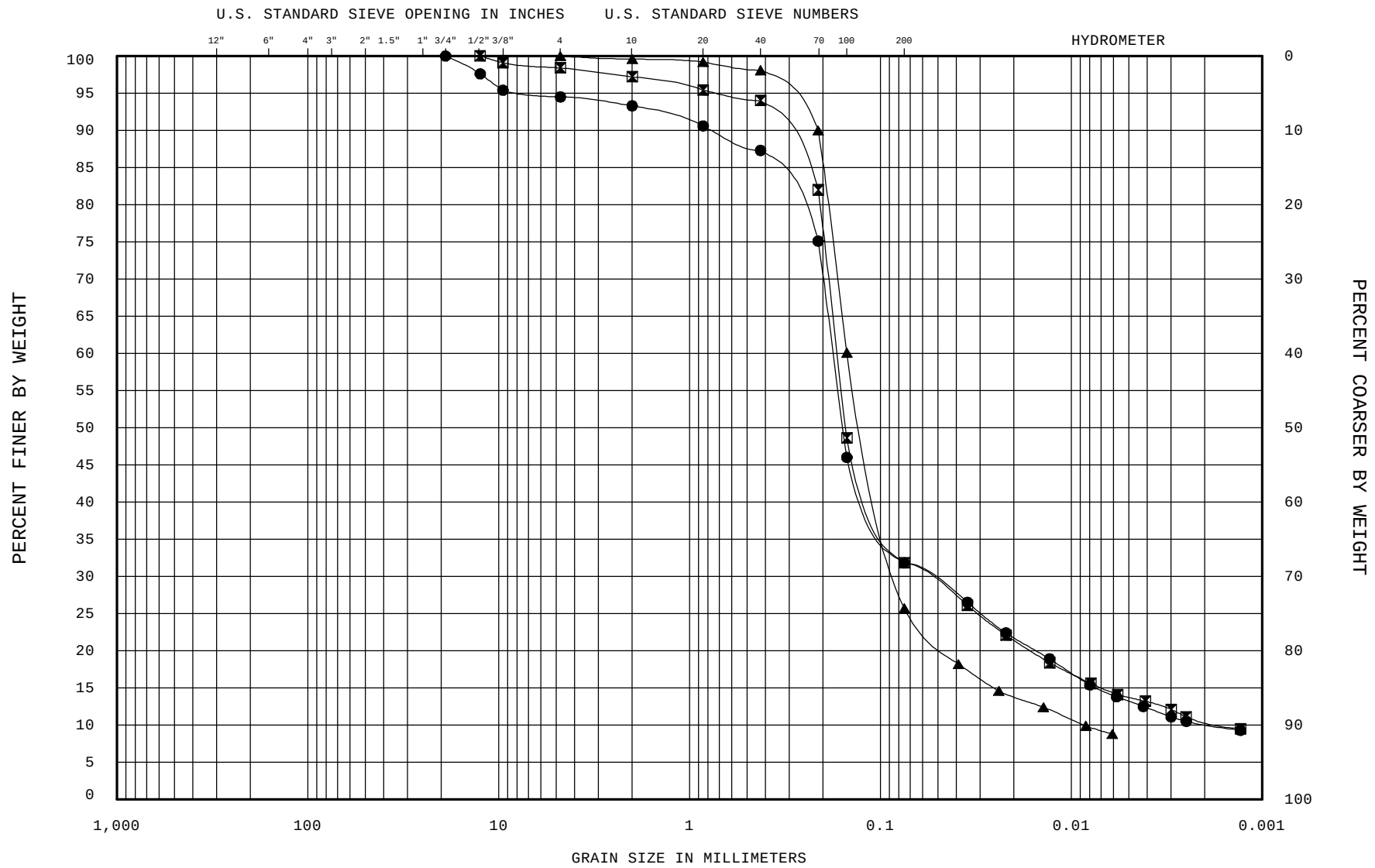
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-109*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-1	0.0-1.5	SILTY SAND	SM	23.4			
—⊠—	Jar-2	2.5-4.0	SILTY SAND	SM	20.6			
—▲—	Jars 3-5	5.0-11.5	SILTY SAND	SM	24.2			
— —								

Remarks:

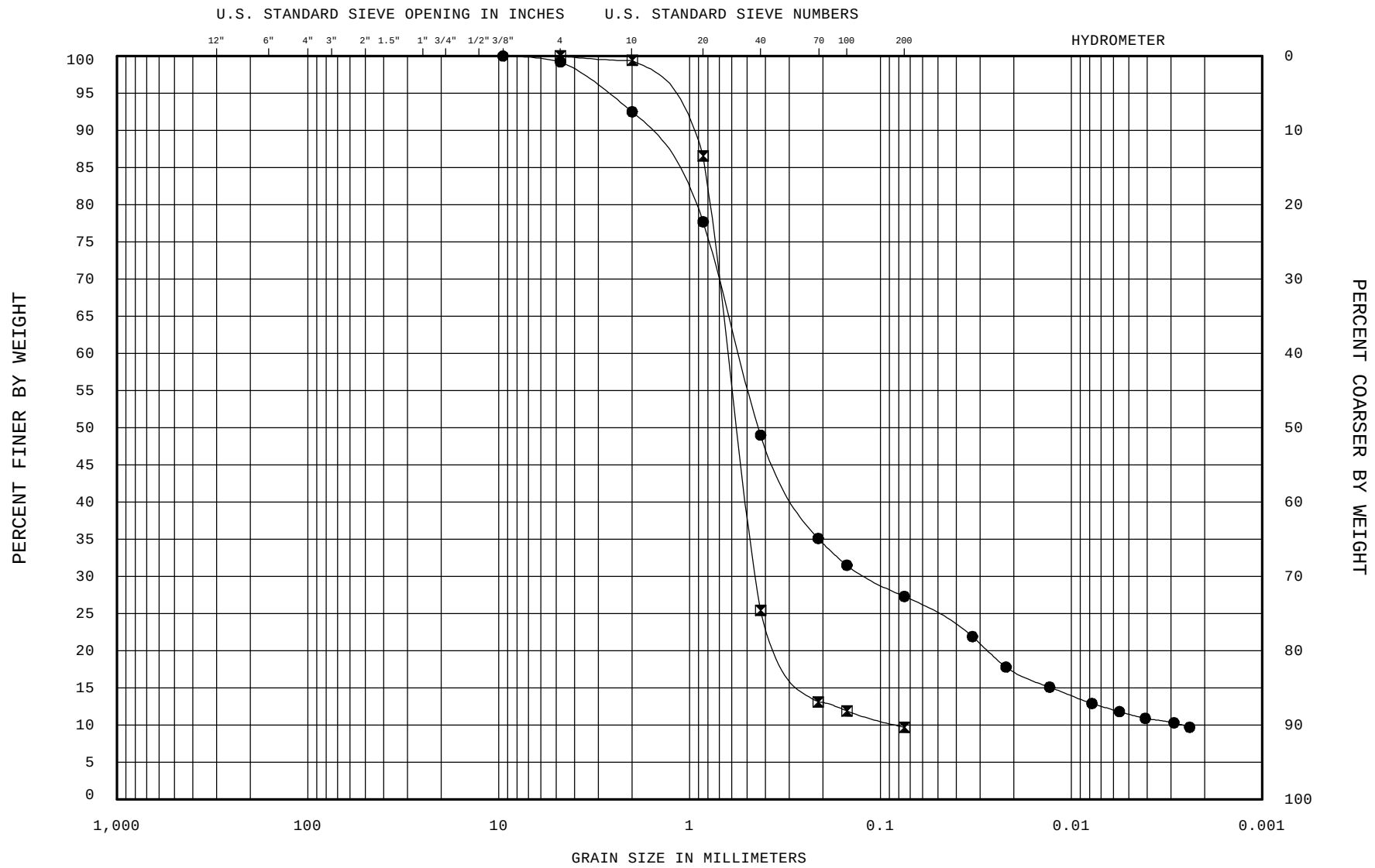
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-110*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1-3	0.0-6.5	SILTY SAND	SC	20.2			
—⊠—	Jars 4&5	7.5-11.5	POORLY GRADED SAND with SILT	SP-SM	18.7			
— —								
— —								

Remarks:

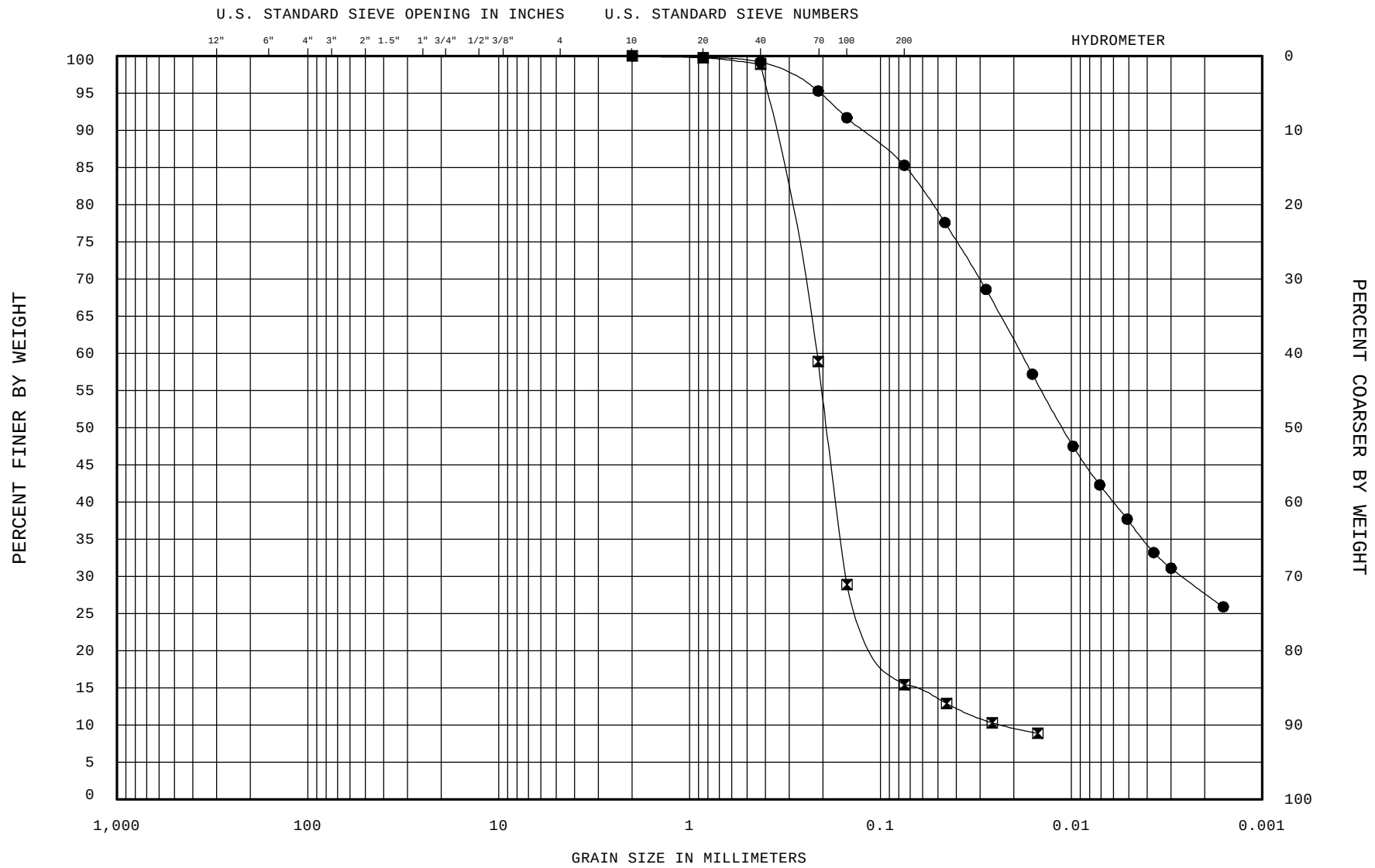
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-111*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	LEAN CLAY	CL	25.5	28	16	12
—⊠—	Jars 4&5	7.5-11.5	SILTY SAND	SM	21.6			
— —								
— —								

Remarks:

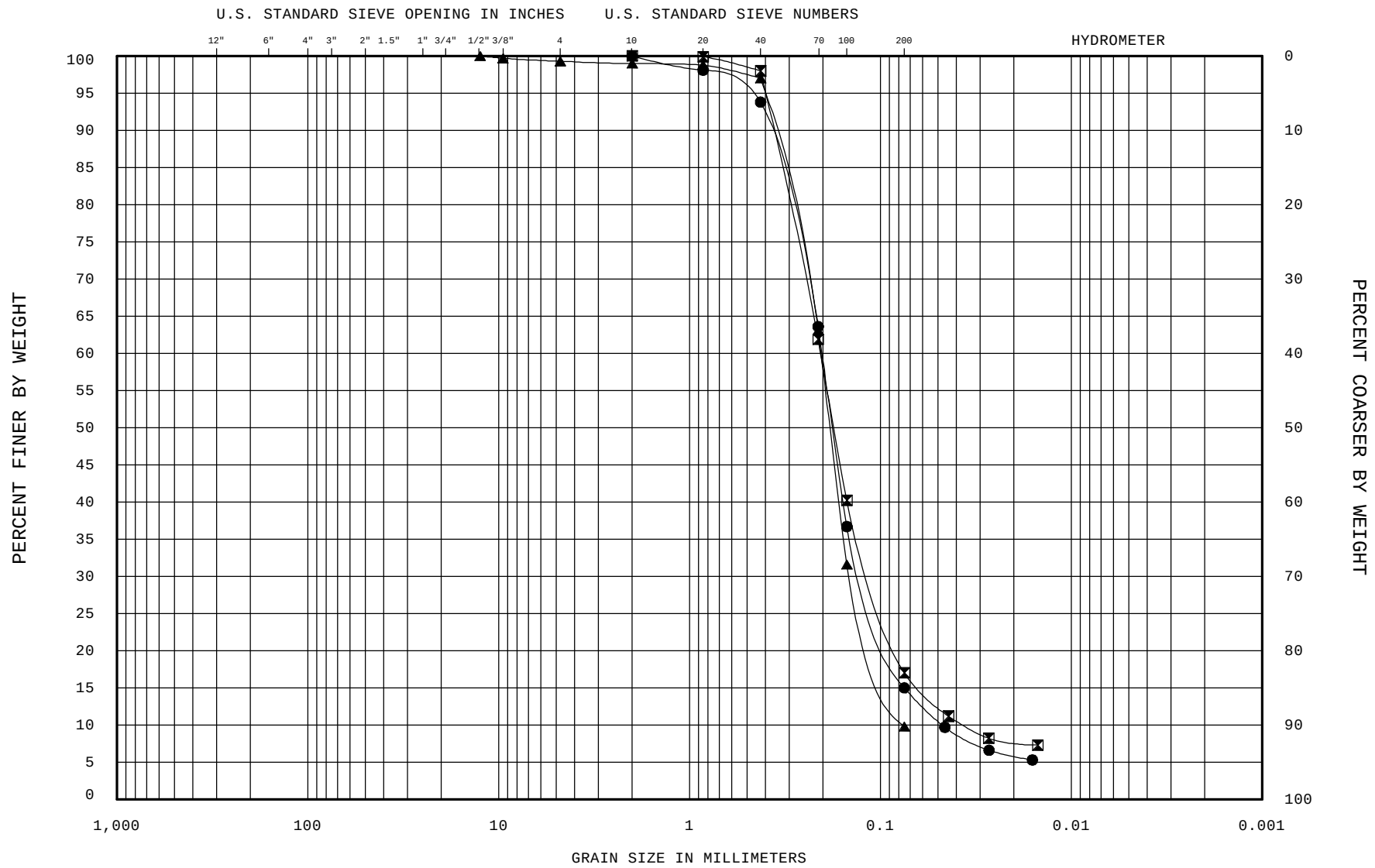
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-112*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	SILTY SAND	SM	24.0			
—⊠—	Jars 4&5	7.5-11.5	SILTY SAND	SM	25.5			
—▲—	Jars 8-10	17.5-24.0	POORLY GRADED SAND with SILT	SP-SM	23.8			
— —								

Remarks:

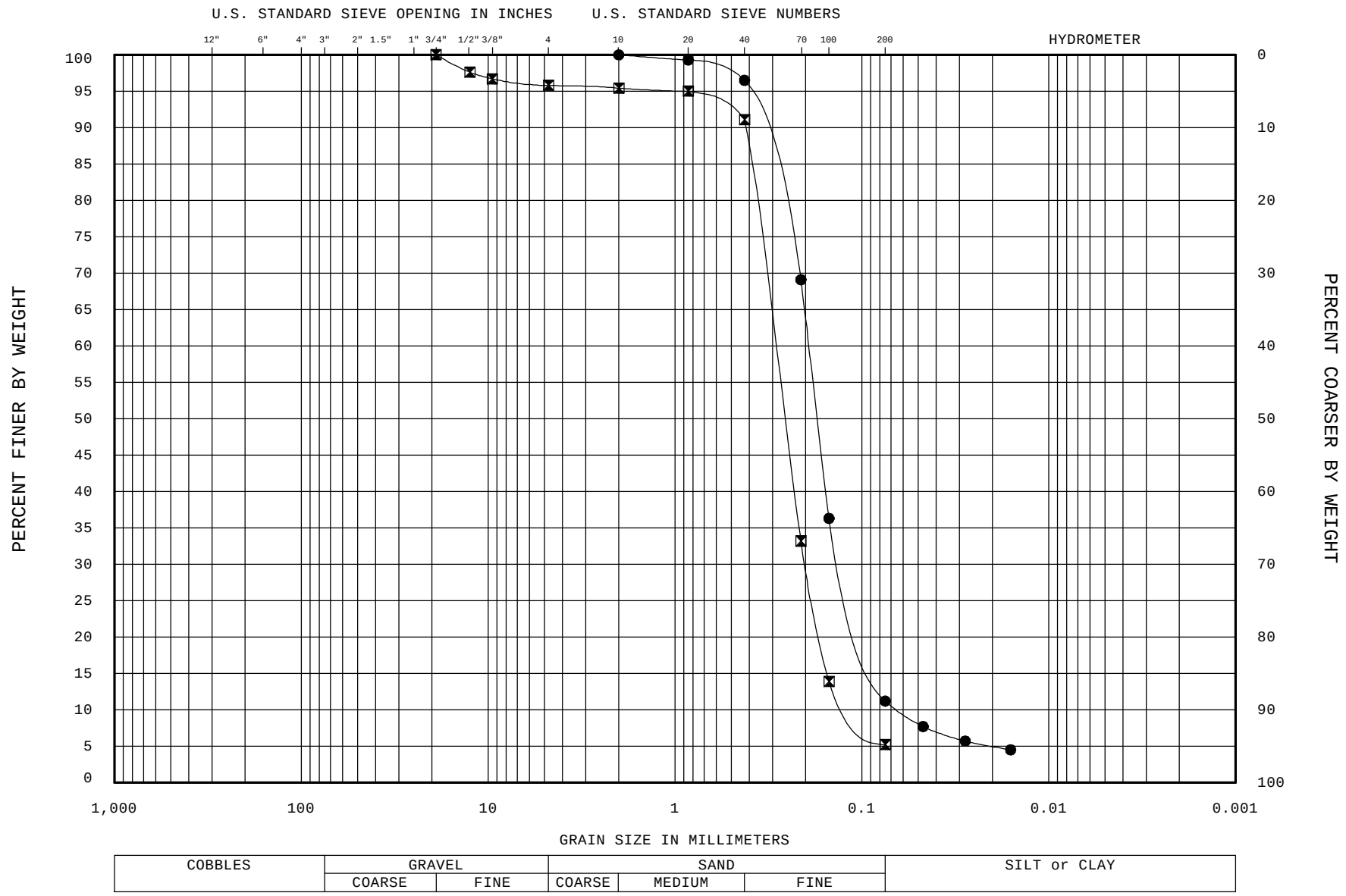
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-113*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	POORLY GRADED SAND with SILT	SP-SM	27.7			
—⊠—	Jars 6-8	12.5-19.0	POORLY GRADED SAND with SILT	SP-SM	22.7			
— —								
— —								

Remarks:

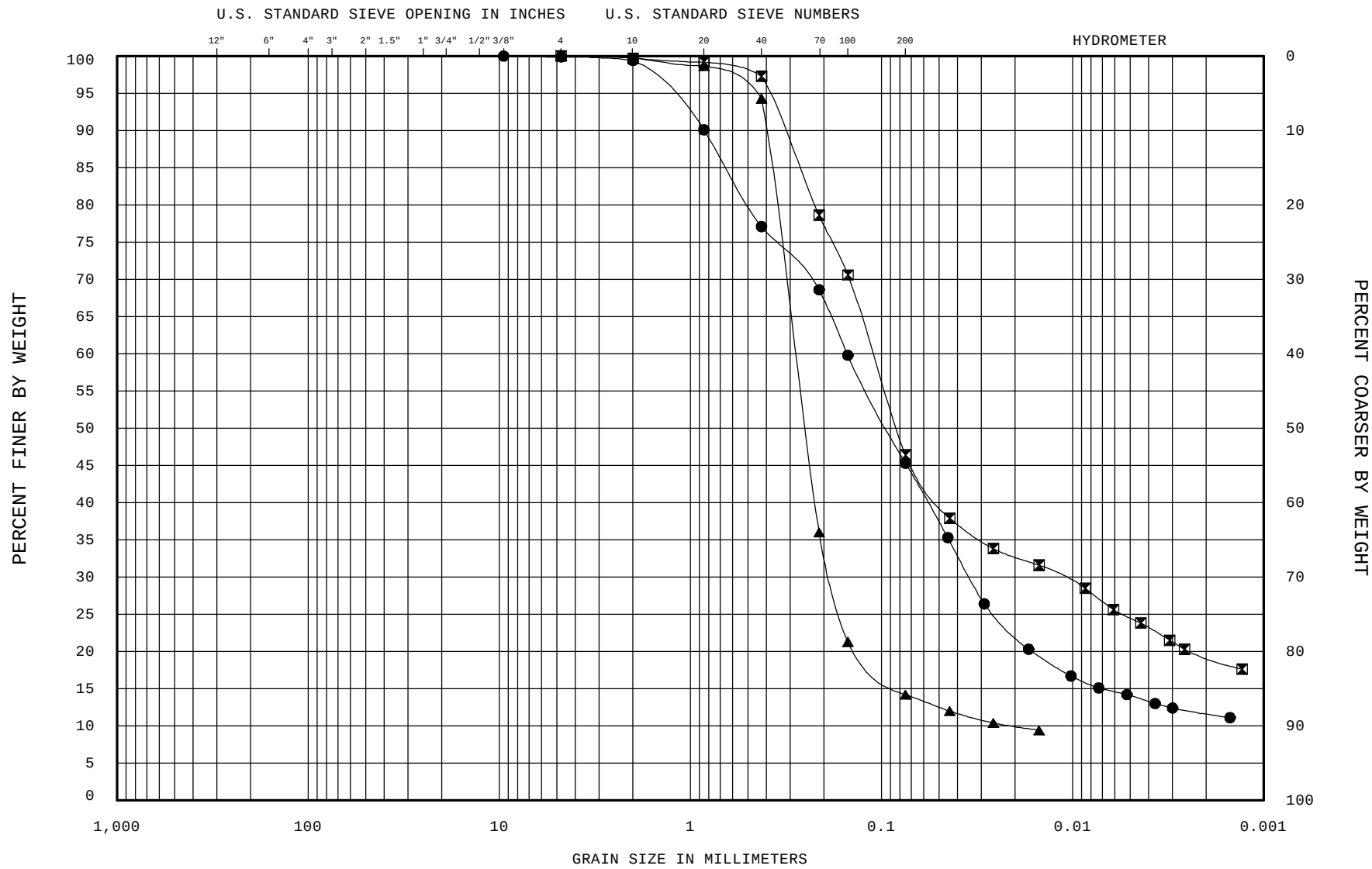
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-114*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	SILTY SAND	SC	25.7			
—⊠—	Jar-5	10.0-11.5	CLAYEY SAND	SC	47.3	52	18	34
—▲—	Jar-6	12.5-14.0	SILTY SAND	SM	27.0			
— —								

Remarks:

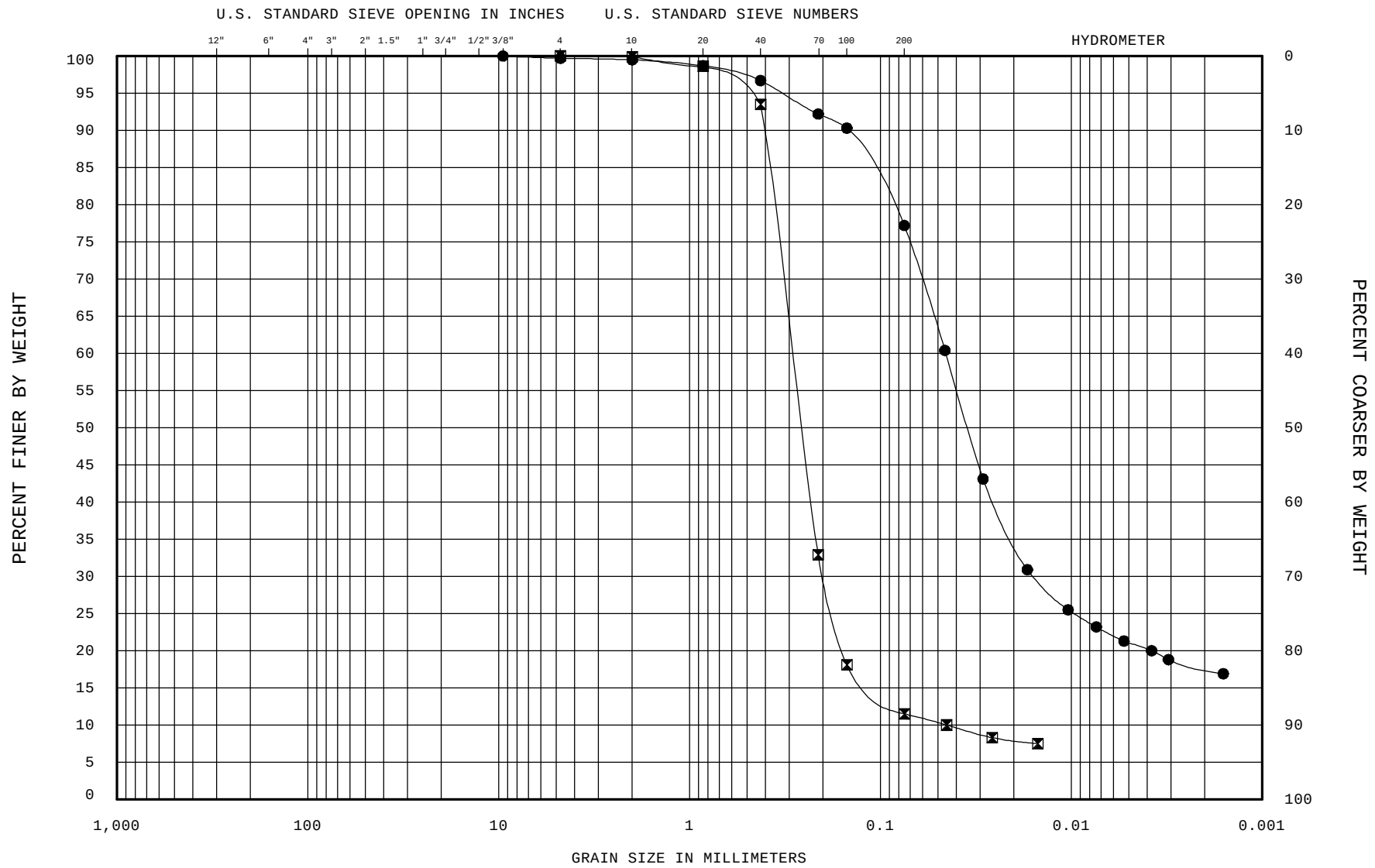
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-115*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	LEAN CLAY with SAND	CL	33.8	30	17	13
—⊠—	Jars 6&7	12.5-16.5	POORLY GRADED SAND with SILT	SP-SM	24.4			
— —								
— —								

Remarks:

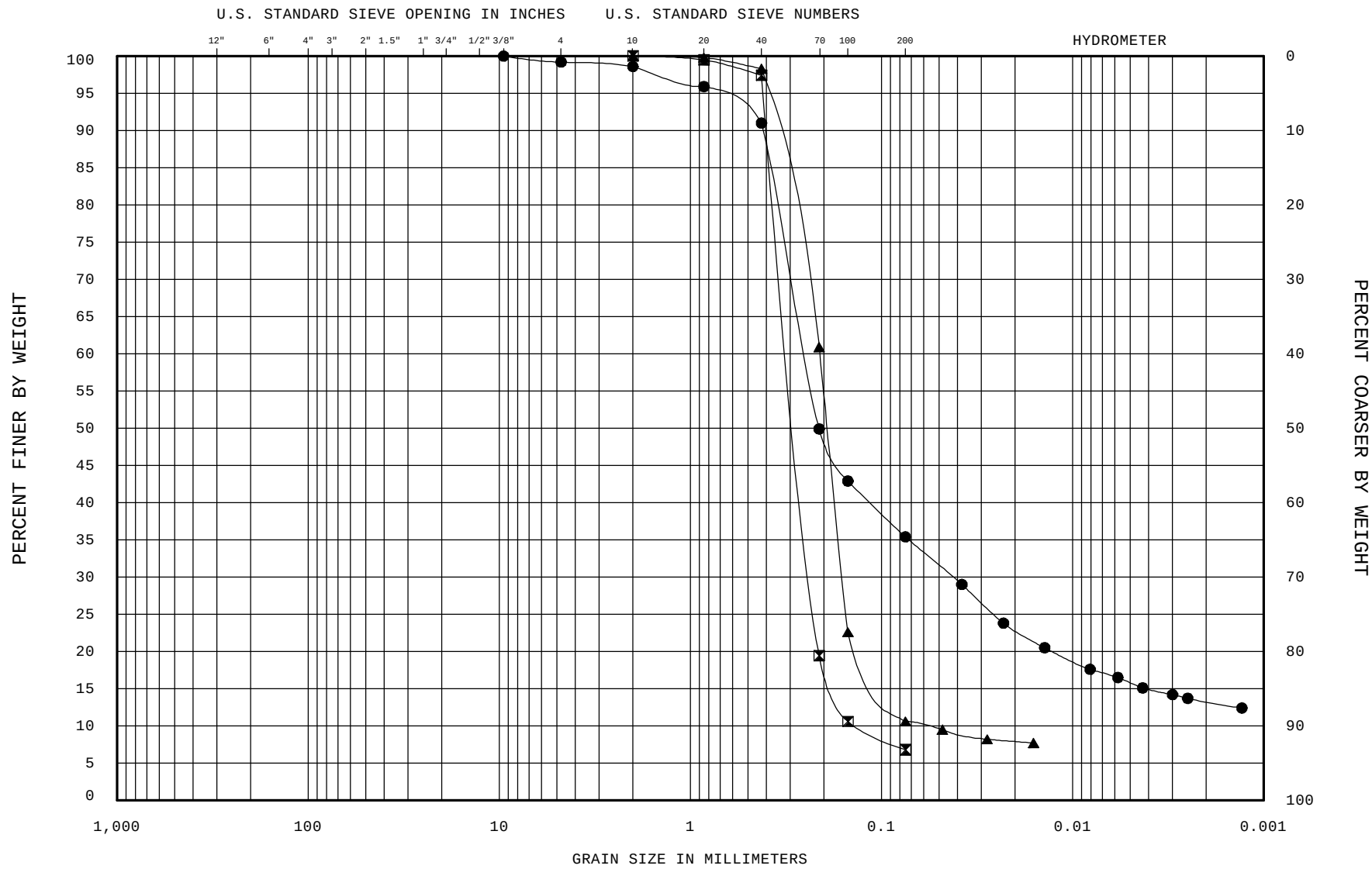
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-116*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	SILTY SAND	SM	25.1			
—⊠—	Jar-4	7.5-9.0	POORLY GRADED SAND with SILT	SP-SM	22.2			
—▲—	Jars 7-9	15.0-21.5	POORLY GRADED SAND with SILT	SP-SM	25.3			
— —								

Remarks:

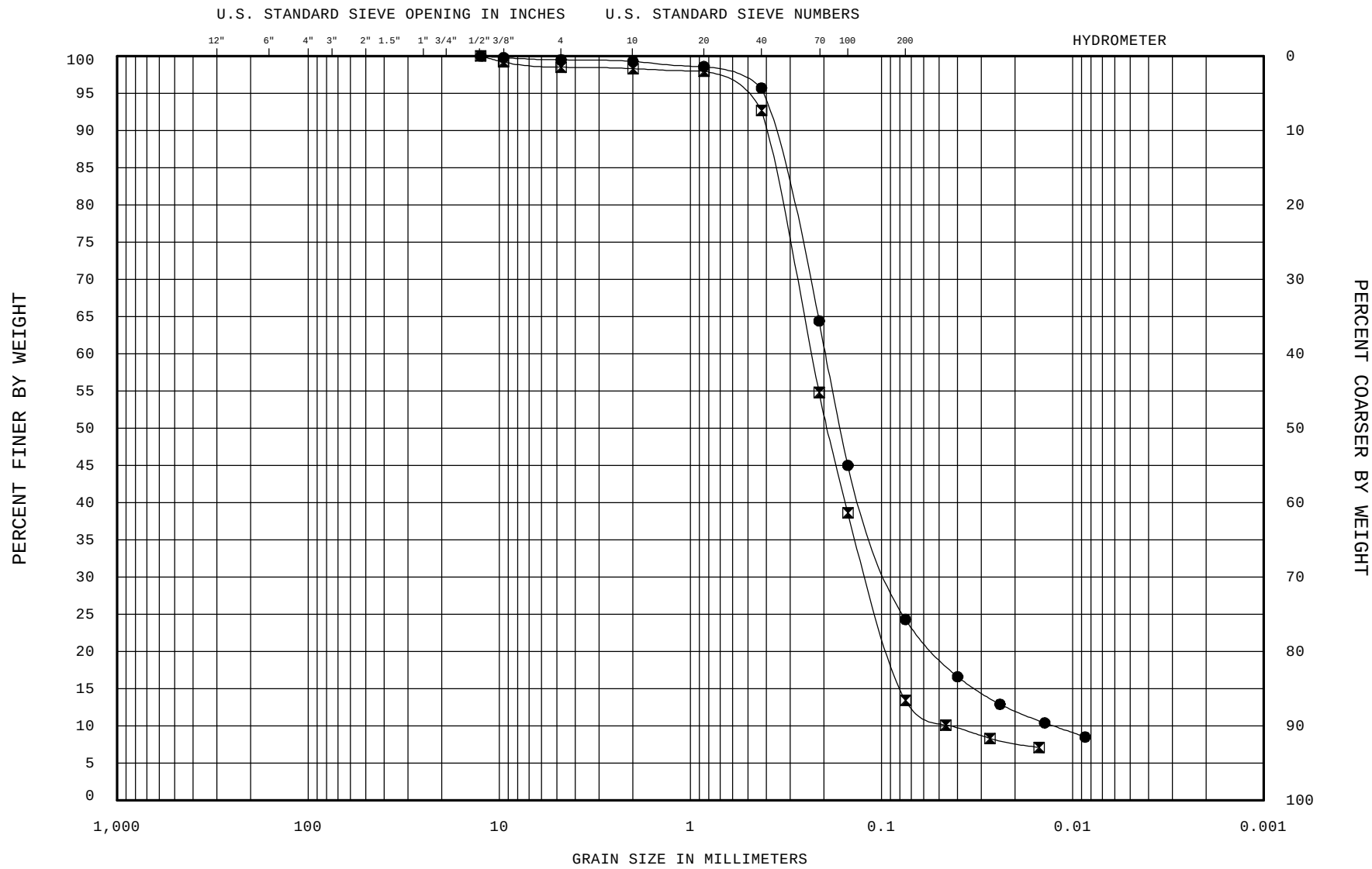
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-117*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SILTY SAND	SM	24.3			
—⊠—	Jars 5-7	10.0-16.5	SILTY SAND	SM	24.6			
— —								
— —								

Remarks:

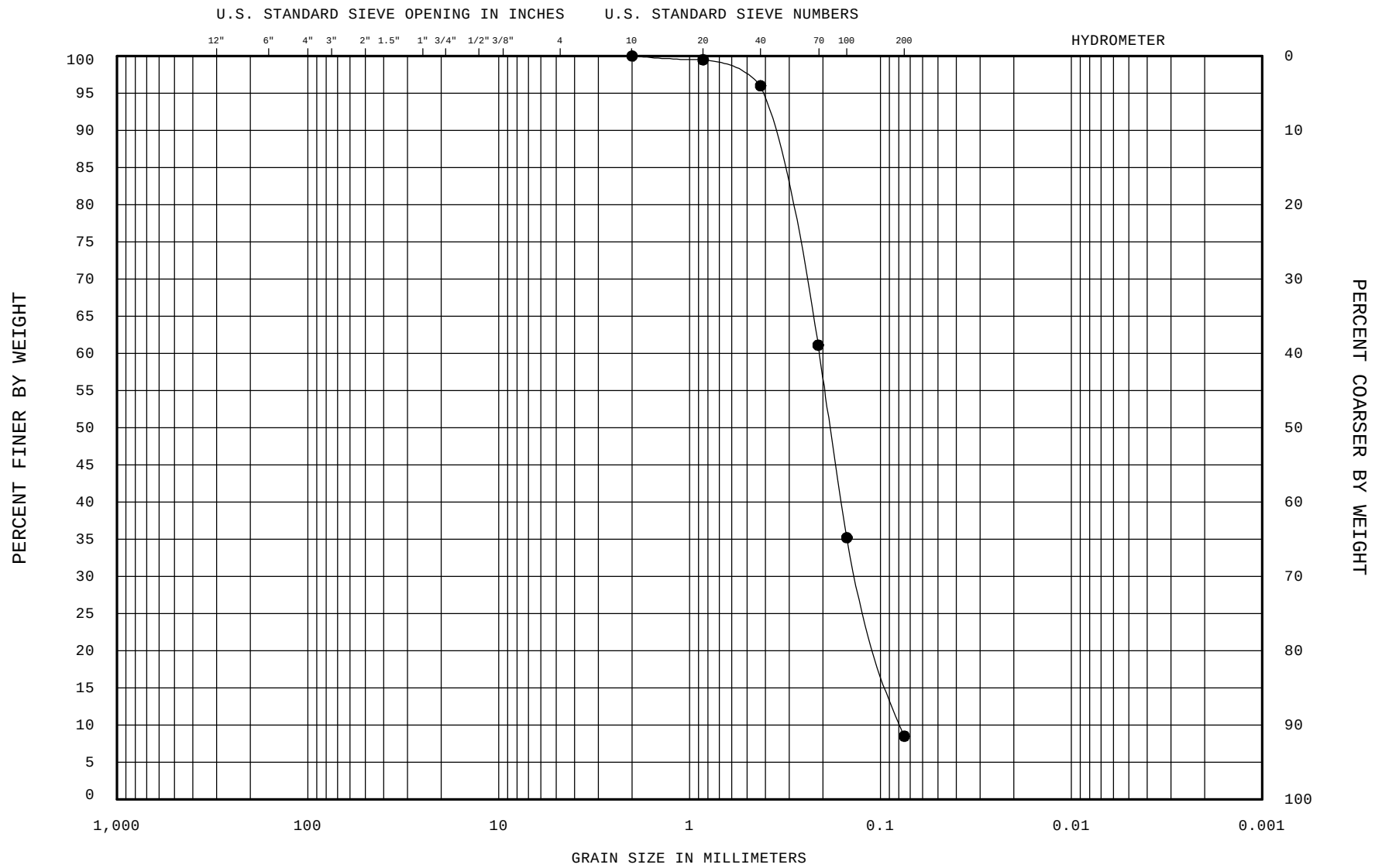
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-118*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1-3	0.0-6.5	POORLY GRADED SAND with SILT	SP-SM	27.1			

Remarks:

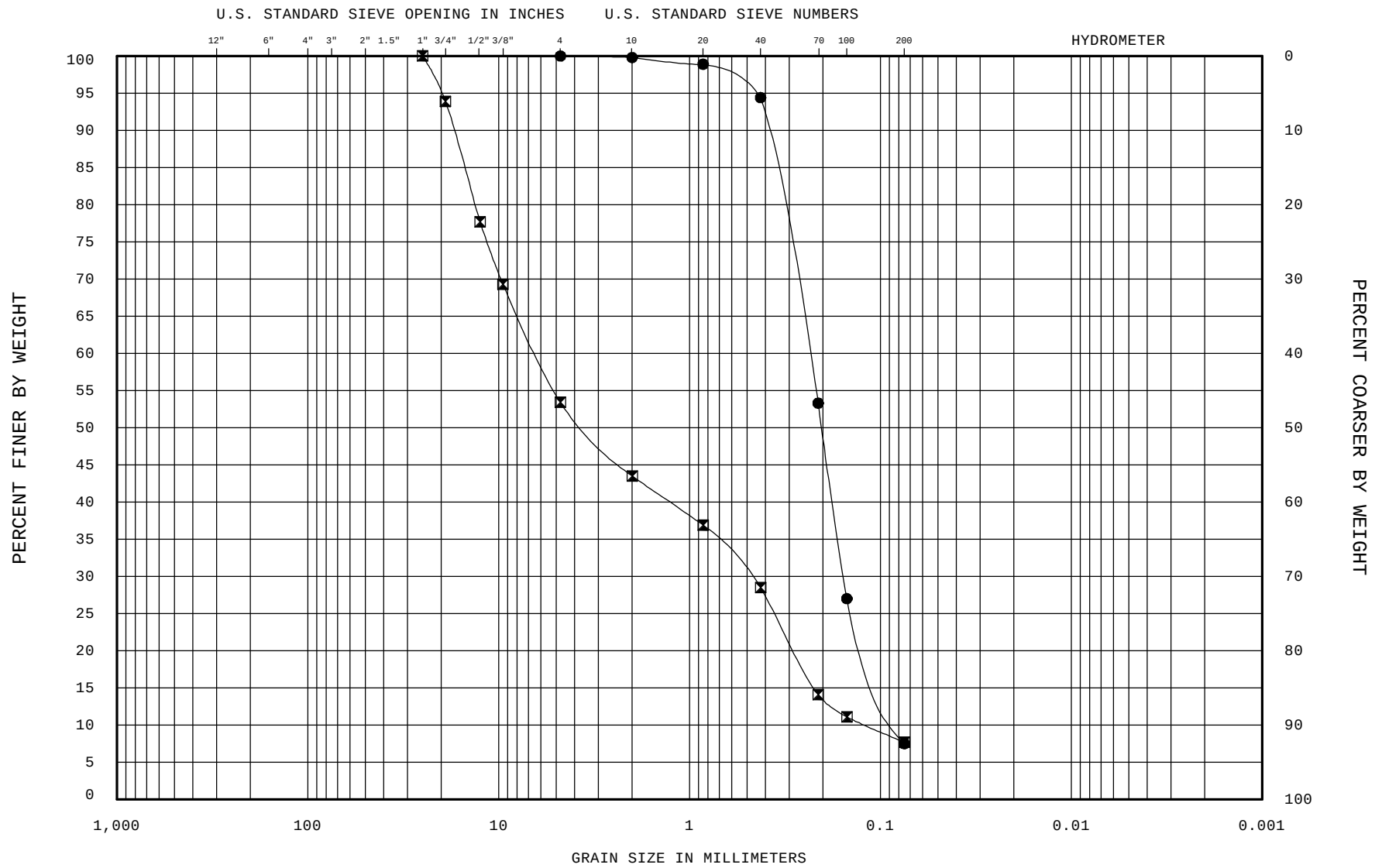
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-119*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1-3	0.0-6.5	POORLY GRADED SAND with SILT	SP-SM	27.1			
—⊠—	Jar-9	18.5-19.0	POORLY GRADED GRAVEL with SILT and SAND	GP-GM	10.3			
— —								
— —								

Remarks:

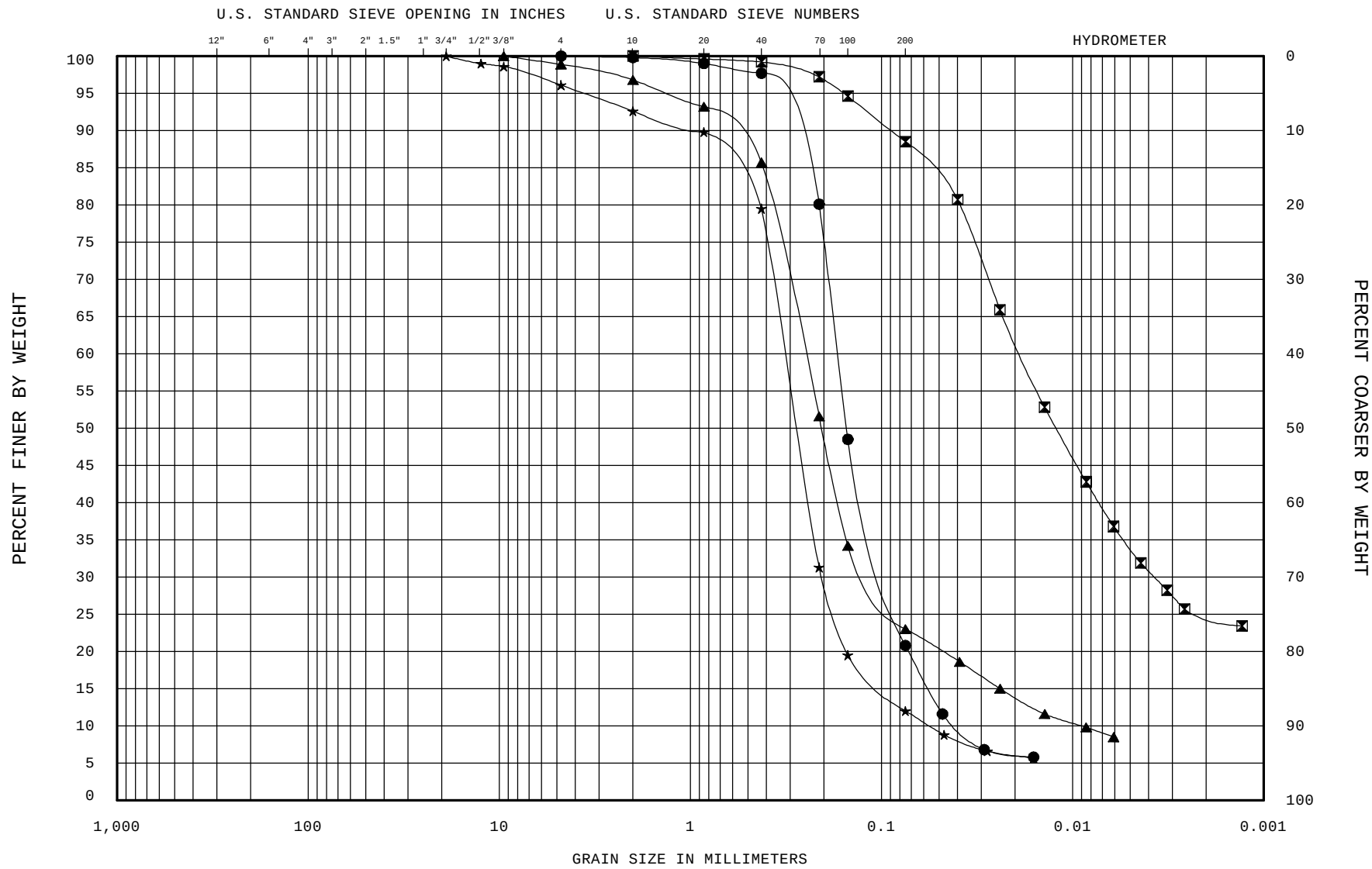
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-120*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SILTY SAND	SM	29.9			
—⊠—	Jars 3&4	5.0-9.0	FAT CLAY	CH	54.7	60	25	35
—▲—	Jars 7&8	15.0-19.0	SILTY SAND	SM	23.1			
—★—	Jars 9&10	20.0-24.0	POORLY GRADED SAND with SILT	SP-SM	18.2			

Remarks:

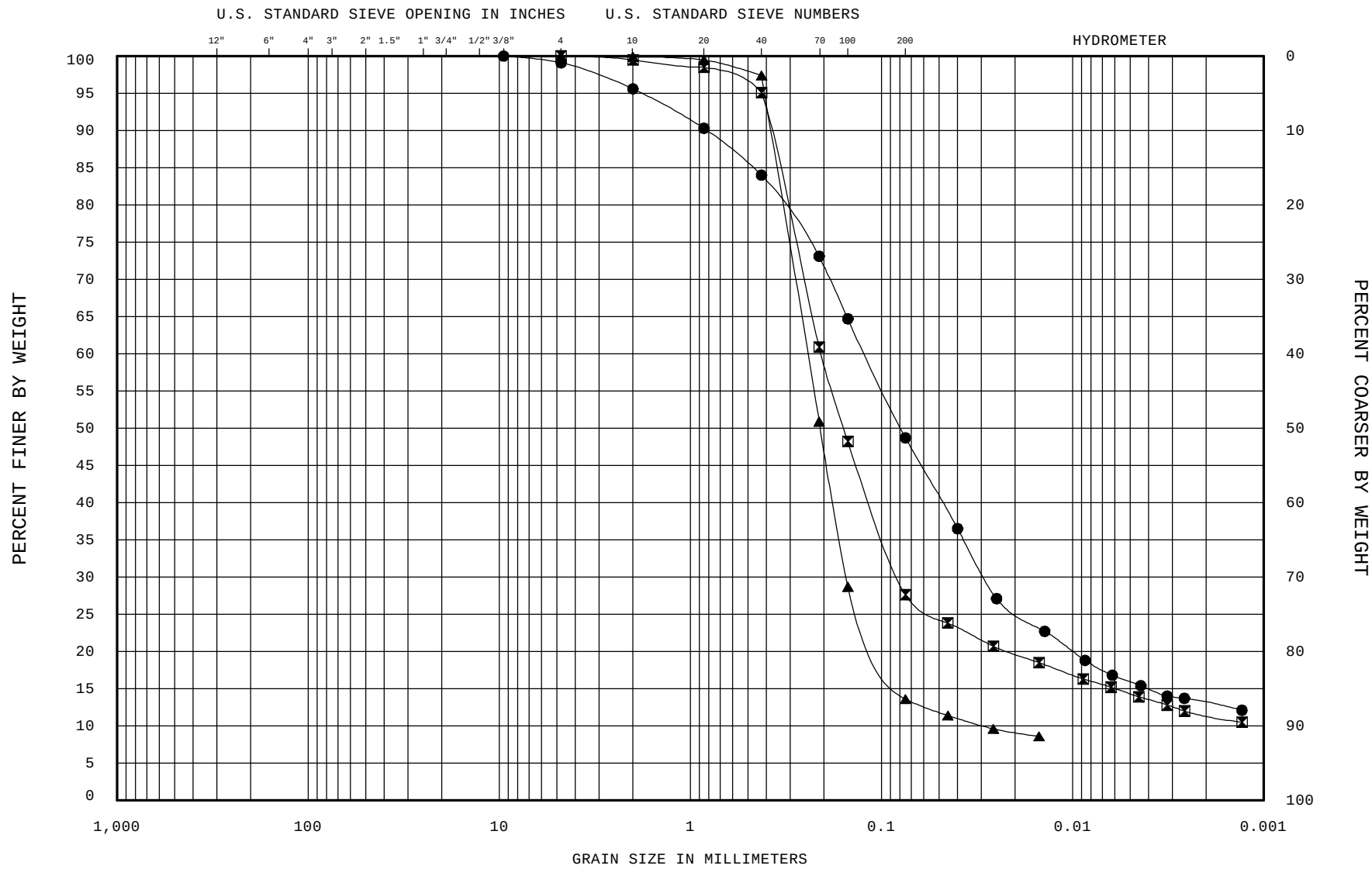
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-121*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-1.5	CLAYEY SAND	SC	30.0	30	18	12
—⊠—	Jars 5&6	7.5-11.5	SILTY SAND	SC	30.7			
—▲—	Jars 7-9	12.5-19.0	SILTY SAND	SM	27.5			
— —								

Remarks:

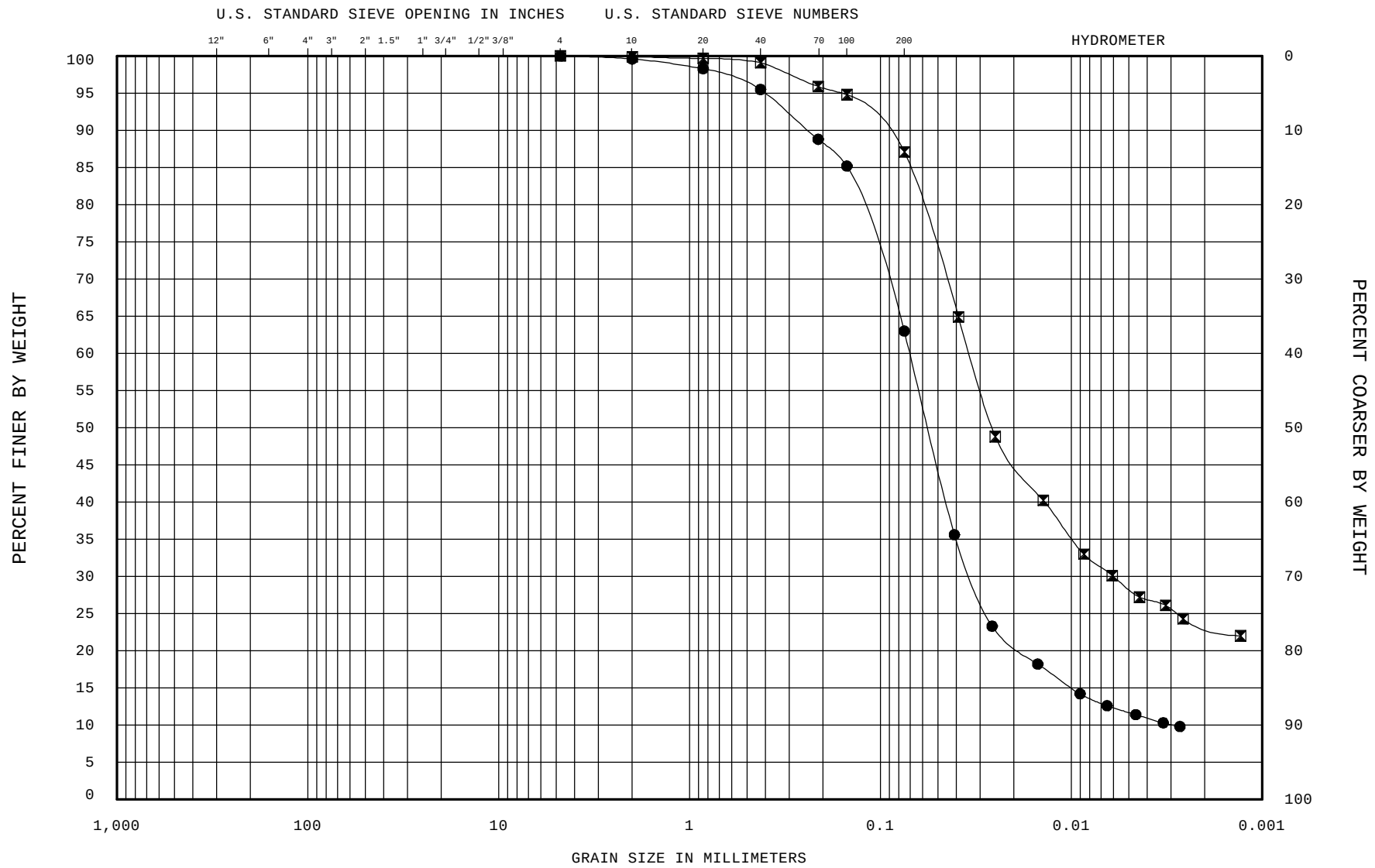
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-122*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SANDY SILT	ML	31.4			
—⊠—	Jar-3	5.0-6.5	LEAN CLAY	CL	37.5	36	19	17
— —								
— —								

Remarks:

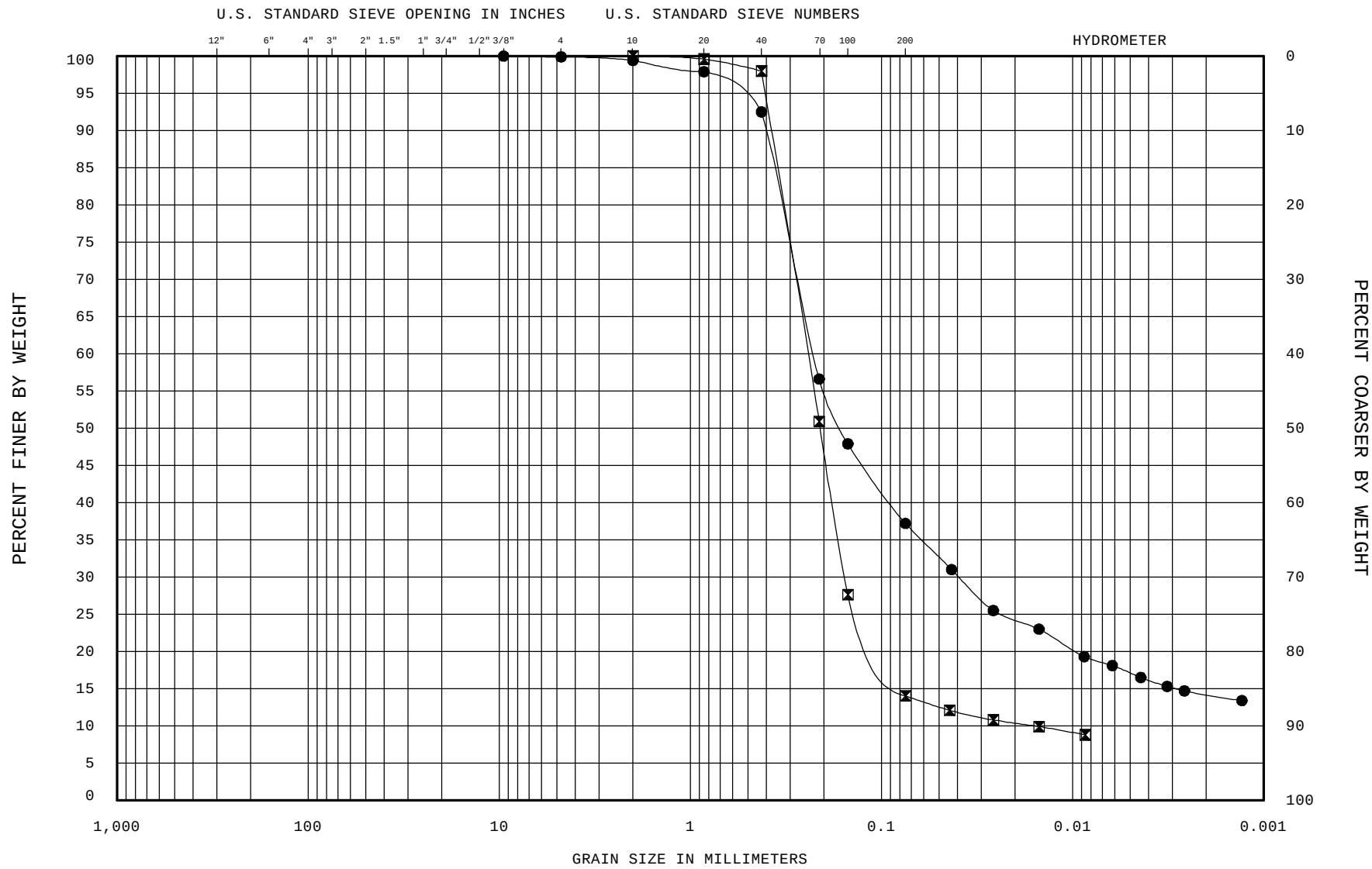
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-123*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	CLAYEY SAND	SC	30.3	31	14	17
—⊠—	Jars 4-6	7.5-14.0	SILTY SAND	SM	25.2			
— —								
— —								

Remarks:

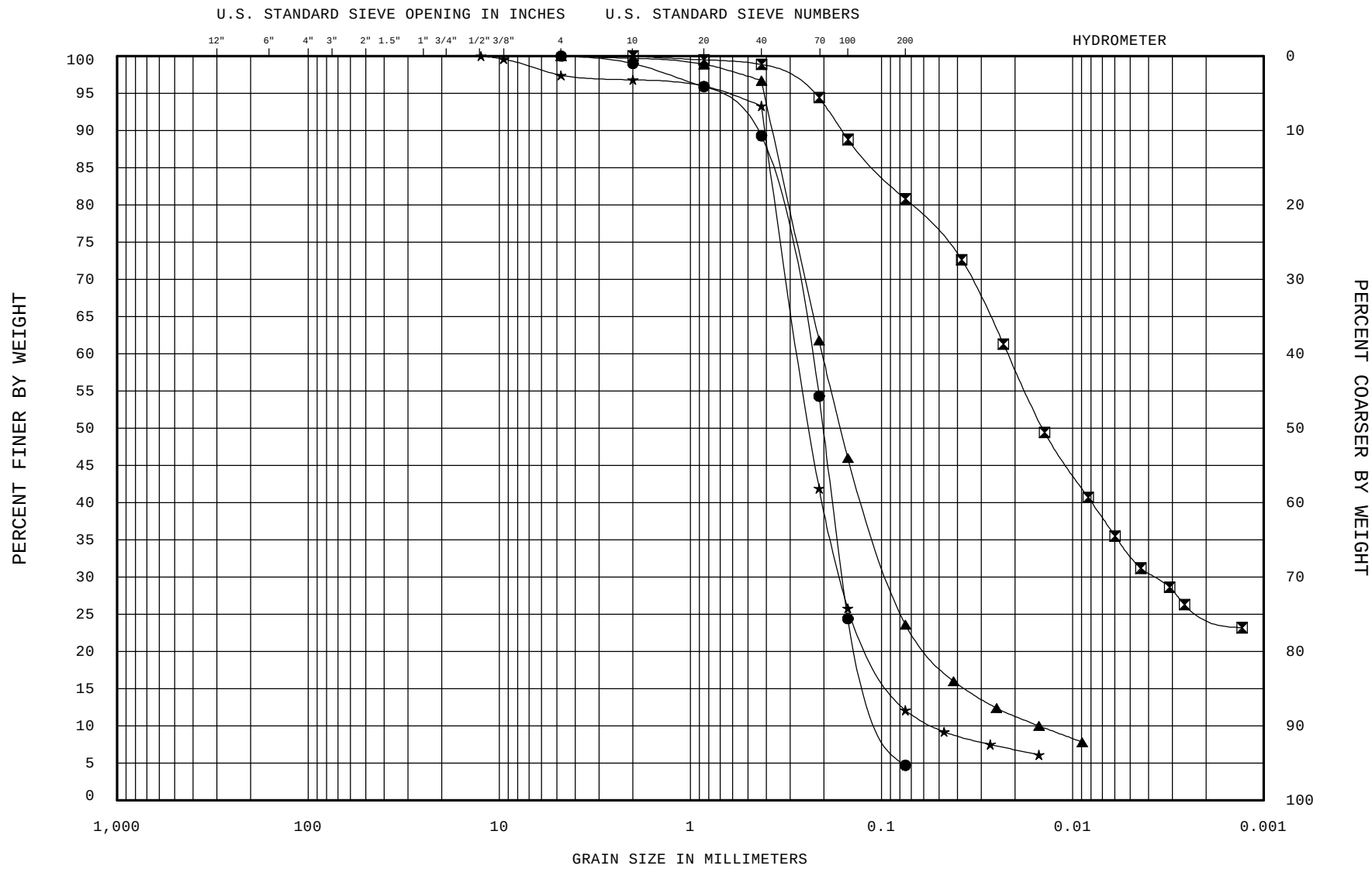
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-124*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	POORLY GRADED SAND	SP	25.6			
—⊠—	Jars 3&4	5.0-9.0	LEAN CLAY with SAND	CL	33.5	39	19	20
—▲—	Jars 6&7	12.5-16.5	SILTY SAND	SM	23.6			
—★—	Jars 8&9	17.5-21.5	SILTY SAND	SM	20.4			

Remarks:

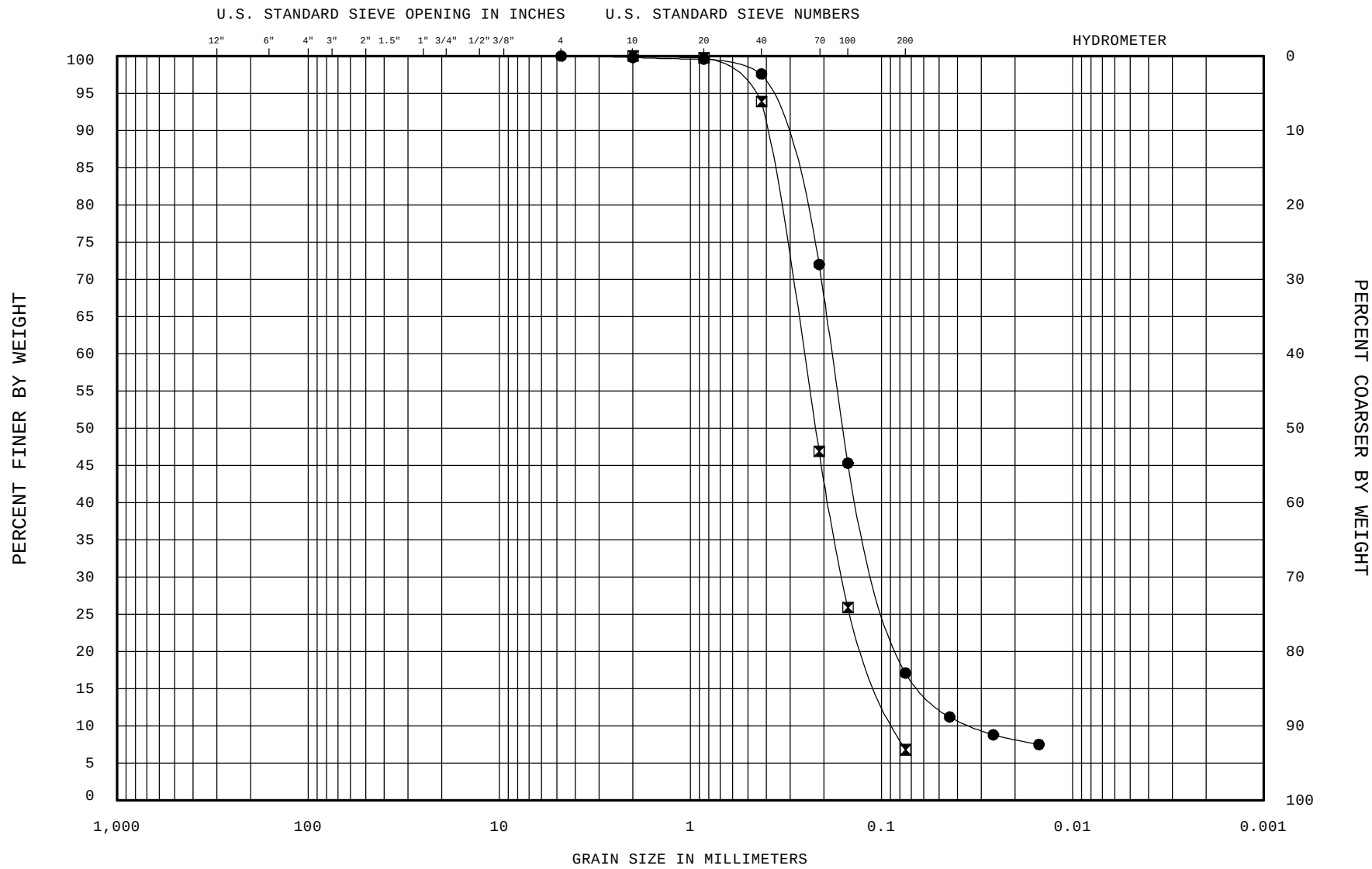
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-125*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2-4	2.5-9.0	SILTY SAND	SM	25.8			
—⊠—	Jar-5	10.0-11.5	POORLY GRADED SAND with SILT	SP-SM	21.7			
— —								
— —								

Remarks:

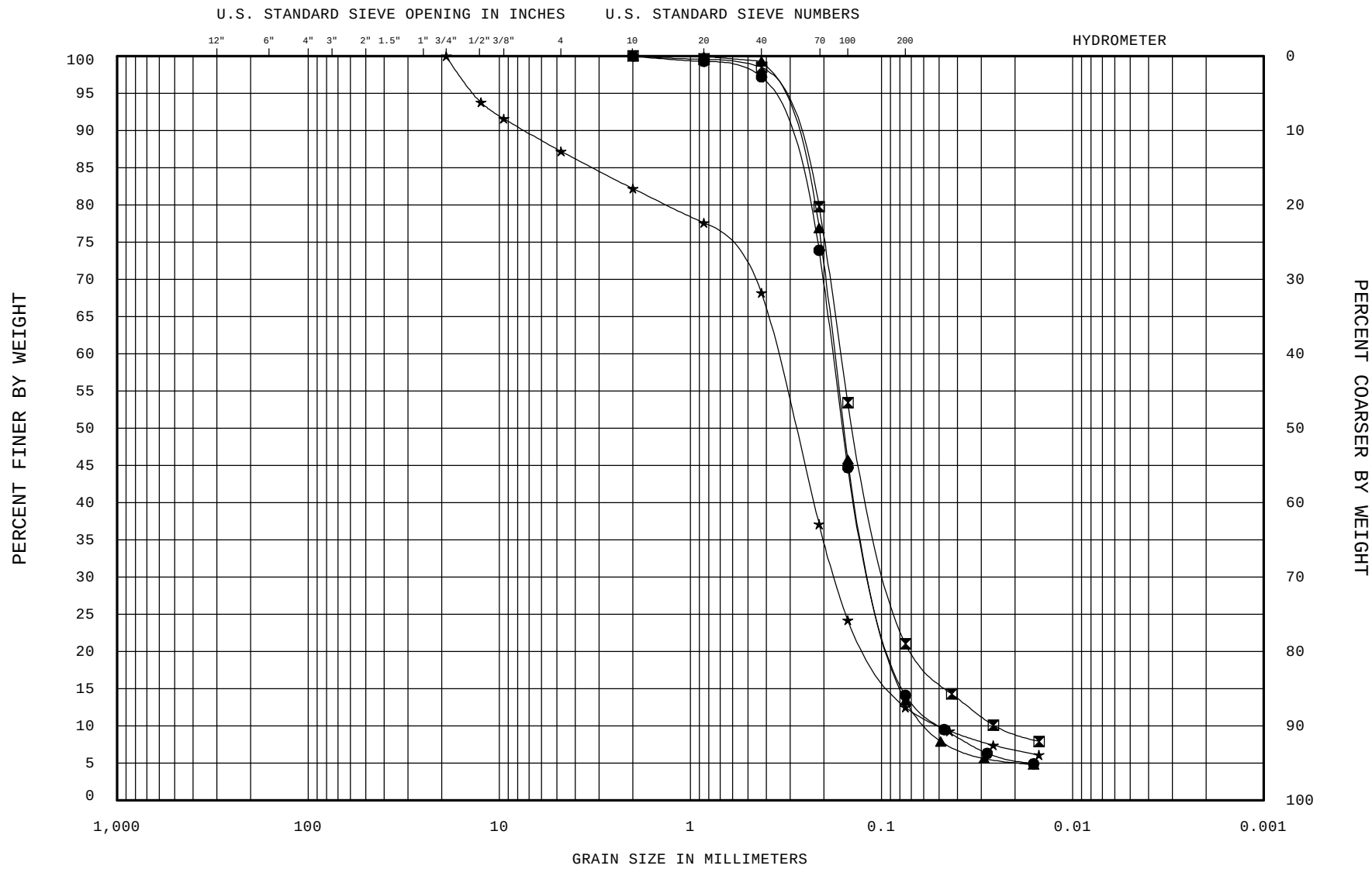
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-126*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	SILTY SAND	SM	26.0			
—⊠—	Jar-3	5.0-6.5	SILTY SAND	SM	26.9			
—▲—	Jars 4-6	7.5-14.0	SILTY SAND	SM	25.1			
—★—	Jar-8	17.5-19.0	SILTY SAND	SM	12.1			

Remarks:

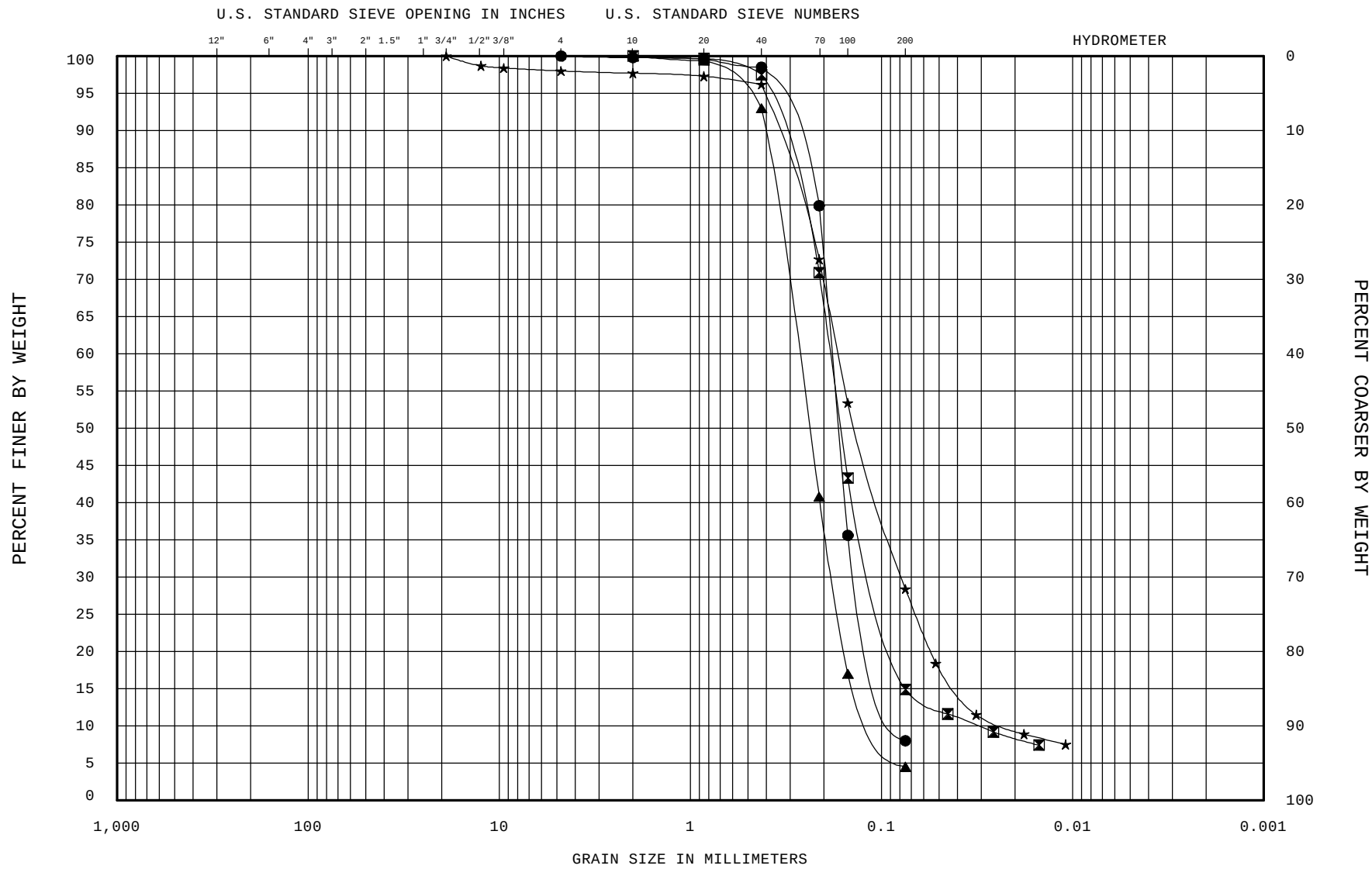
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-127*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-1	0.0-1.5	POORLY GRADED SAND with SILT	SP-SM	29.9			
—⊠—	Jar-2	2.5-4.0	SILTY SAND	SM	26.8			
—▲—	Jar-3	5.0-6.5	POORLY GRADED SAND	SP	24.3			
—★—	Jars 5&6	10.0-14.0	SILTY SAND	SM	26.2			

Remarks:

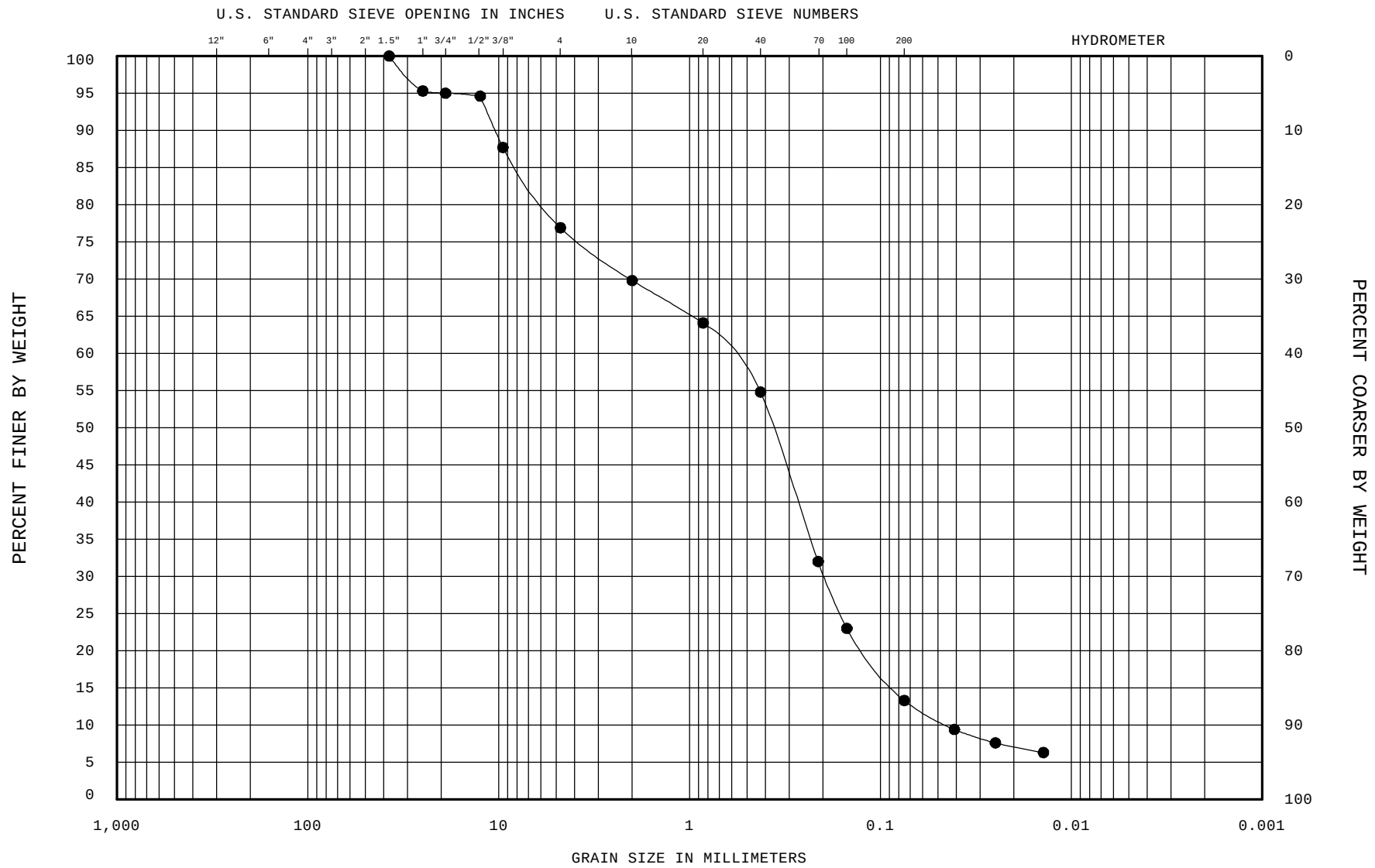
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-128*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 7&8	15.0-19.0	SILTY SAND with GRAVEL	SM	13.2			
— —								
— —								
— —								

Remarks:

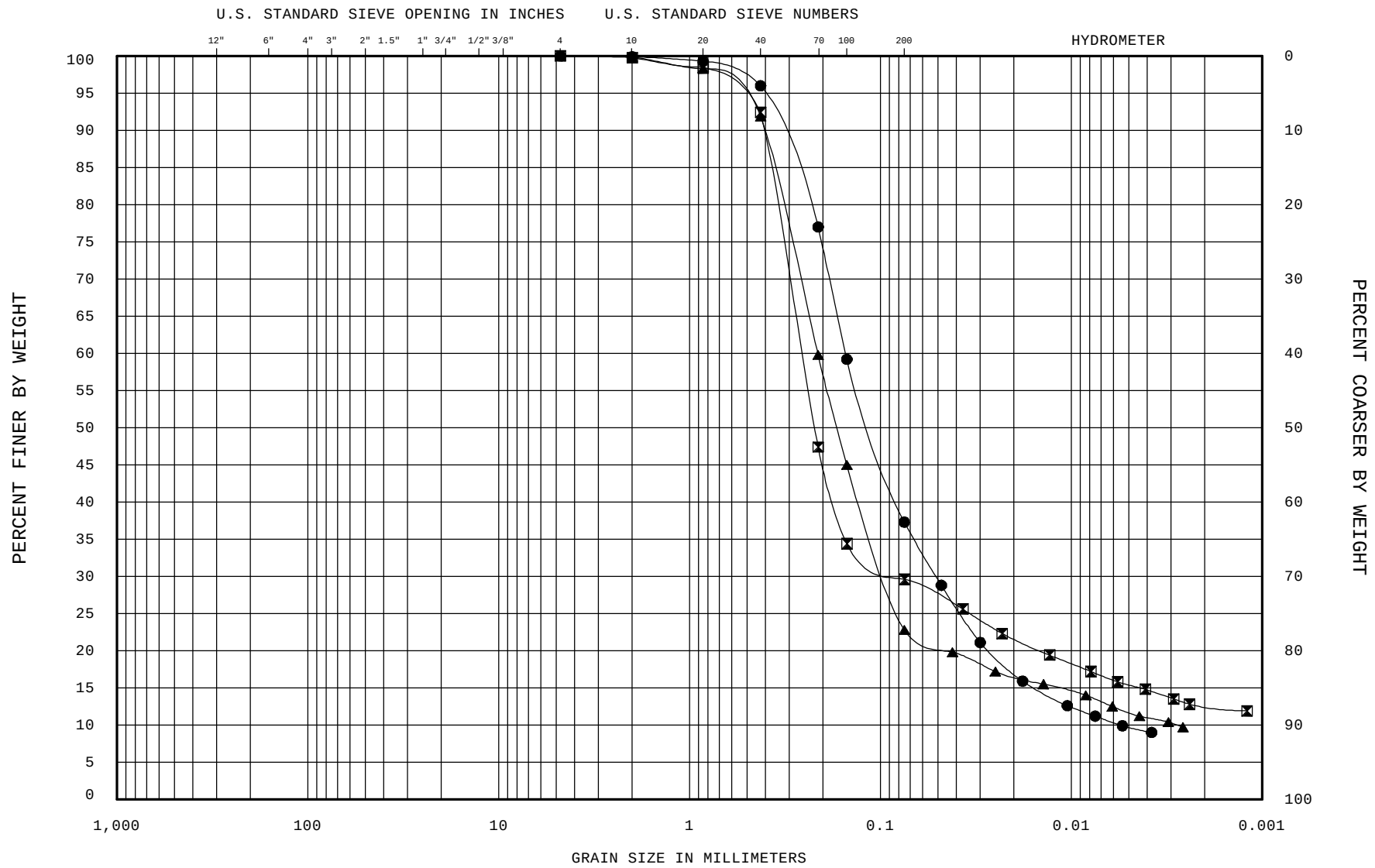
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-128*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SILTY SAND	SM	24.8			
—⊠—	Jars 3&4	5.0-9.0	SILTY SAND	SM	27.1			
—▲—	Jars 5&6	10.0-14.0	SILTY SAND	SM	29.0			
— —								

Remarks:

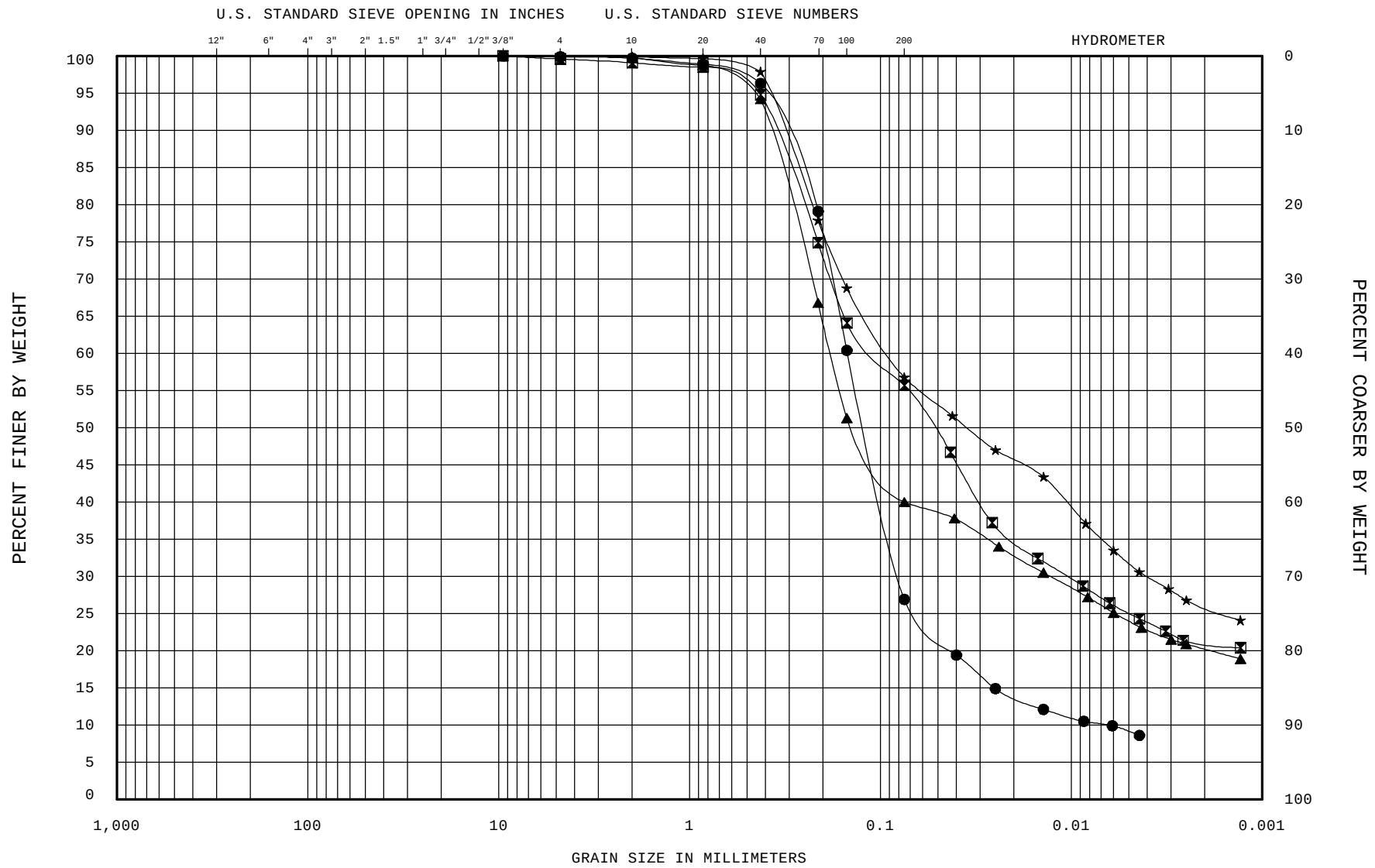
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-129*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SILTY SAND	SM	27.6			
—⊠—	Jar-3	5.0-6.5	SANDY LEAN CLAY	CL	36.0	36	16	20
—▲—	Jar-4	7.5-9.0	SILTY SAND	SC	31.0			
—★—	Jar-5	10.0-11.5	SANDY SILT	CL	43.5			

Remarks:

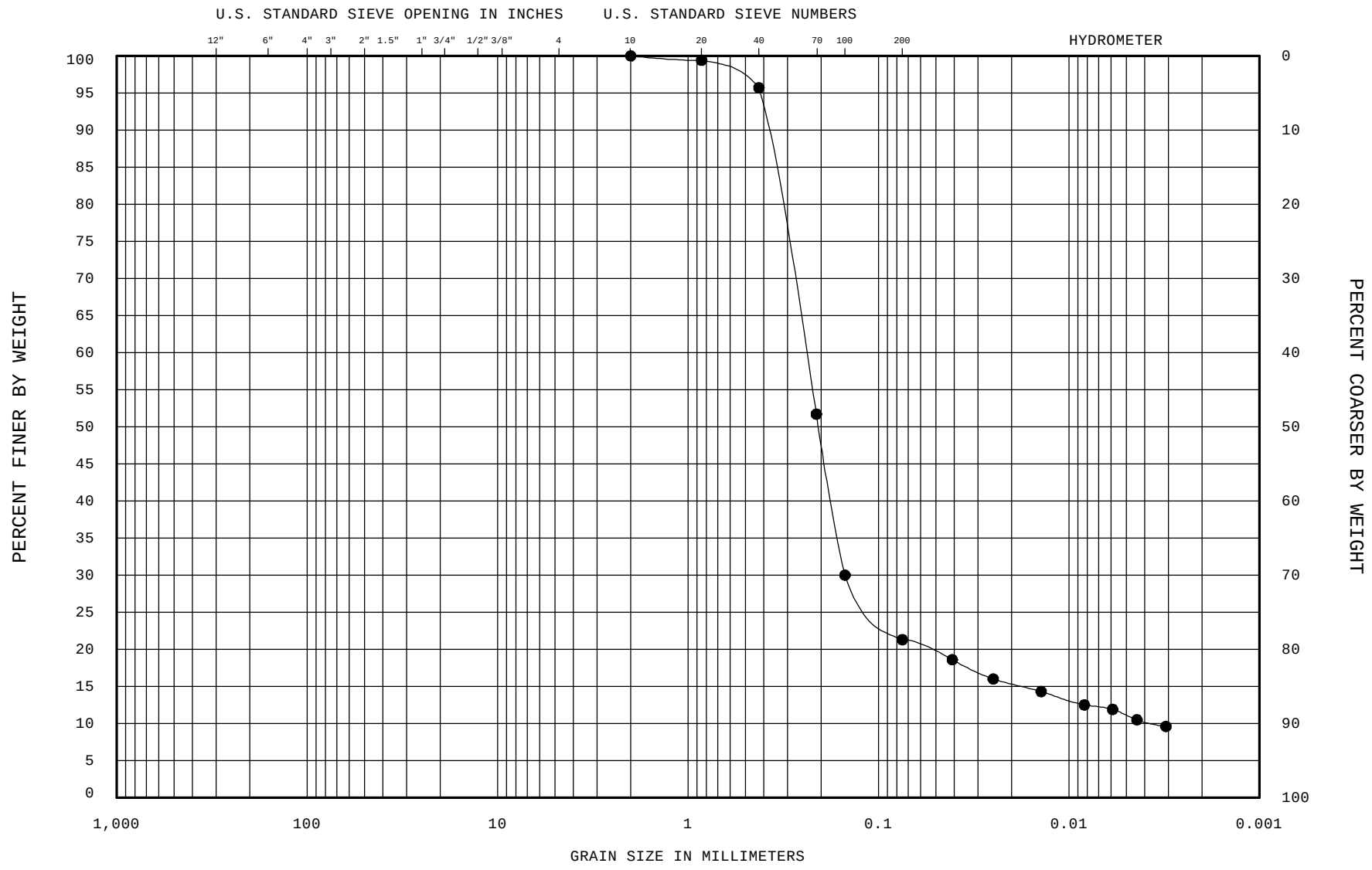
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-130*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-6	12.5-14.0	SILTY SAND	SM	26.2			

Remarks:

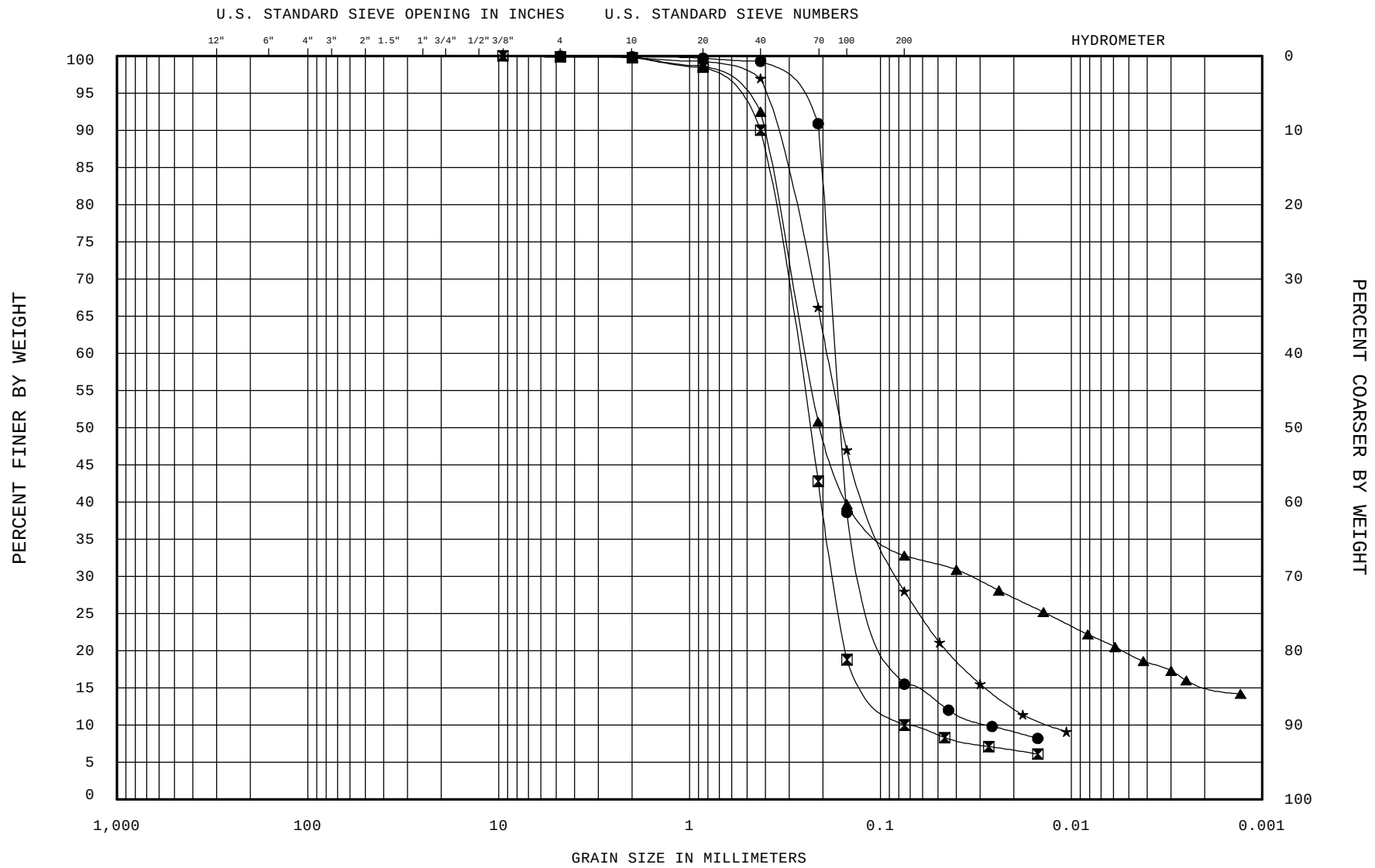
ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-130*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar 2&3	2.5-6.5	SILTY SAND	SM	28.5			
—⊠—	Jar-4	7.5-9.0	POORLY GRADED SAND with SILT	SP-SM	23.3			
—▲—	Jar-5	10.0-11.5	SILTY SAND	SC	34.0			
—★—	Jars 6&8	12.5-19.0	SILTY SAND	SM	21.4			

Remarks:

ENG FORM ENG2087BARREN ISLAND.GPJ

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *Dorchester County, MD*
AREA: *Barren Island*
Mid-Bay Feasibility Study

BORING NO.: *G-131*

DATE: *Jul 2004*

MID-BAY FEASIBILITY STUDY
JAMES ISLAND, DORCHESTER COUNTY, MD.

SUBSURFACE EXPLORATION NOTES

1. EXPLORATION WAS PERFORMED DURING MAY thru JULY 2004.

2. DRILL HOLES (DH) WERE ACCOMPLISHED BY A BARGE MOUNTED RIG USING STANDARD PENETRATION TEST PROCEDURE (SPT, ASTM - 1586) WITH A 1-3/8"ID SPLIT SPOON SAMPLER. SAMPLE SPOONS WERE ADVANCED BY A 140# HAMMER FALLING 30". THESE HOLES WERE POWER AUGERED BETWEEN SAMPLES UNLESS OTHERWISE INDICATED. BLOW COUNTS SHOWN ARE FOR 0.5' OF DRIVE, UNLESS OTHERWISE INDICATED.

   WH – DENOTES WEIGHT OF HAMMER

   WR – DENOTES WEIGHT OF ROD

3. BLOW COUNTS REQUIRED TO ADVANCE SAMPLE SPOON ARE SHOWN IN COLUMN (a). ALSO SHOWN IN THIS COLUMN ARE UNCONFINED COMPRESSION STRENGTH (tsf) READINGS FROM POCKET PENETROMETER (PPR). DASHES ARE SHOWN WHEN PART OF A SAMPLE DRIVE IS NOT SUITABLE FOR POCKET PENETROMETER READINGS. NOTHING IS SHOWN IF THE ENTIRE SAMPLE IS NOT SUITABLE FOR PPR READINGS

4. COLUMN (b) SHOWS THE NATURAL WATER CONTENTS IN PERCENT OF DRY WEIGHT OF THOSE SAMPLES TESTED.

5. SOIL DESCRIPTIONS ARE SHOWN IN COLUMN (c).

6. SOIL DESCRIPTIONS ARE LABORATORY CLASSIFICATIONS BASED ON THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487/2488).

7. NO GROUNDWATER READINGS WERE TAKEN AS THESE BORINGS WERE DRILLED IN THE BAY.

8. THE STARTING DEPTH OF BORINGS (0.0), REPRESENTS THE BOTTOM OF BAY.

9. THE DEPTH OF BAY WATER SHOWN ON EACH BORING LOG WAS DETERMINED BY SOUNDING WITH WEIGHTED TAPE MEASURE TO TOP OF SEDIMENT PRIOR TO SAMPLING.

   HORIZONTAL DATUM: NAD83 MARYLAND STATE PLANE COORDINATE SYSTEM.

10. FOR LOCATIONS OF SUBSURFACE EXPLORATIONS, SEE BORING LOCATION PLAN.

STA. MID-BAY ISLAND FEASIBILITY STUDY N 315875.0 **JB-101**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 15005302.9 **1 of 1**

TOP ELEV: COMPLETED: May 24, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, gray, poorly graded fine SAND w/silt & tr. shell frags. (SP-SM)		WH/1.0-1	
			WH-2-2	30.5
			WH-1-2	
7.00				
	Wet, gray, silty fine SAND (SM)		WH-1/1.0	31.1
9.50				
	V. moist, gray, SILT w/sand (ML)		WH-WH-WH	48.1
12.00				
	V. moist, gray, sandy fat CLAY (CH)		WH-WH-WH	
14.50				
	V. moist, gray, fat CLAY w/sand (CH)		WH-WH-WH	
17.00				
	V. moist, gray, fat CLAY w/tr. shell frags. (CH)		WH-WH-WH	73.5
19.50				
	V. moist, gray, fat CLAY (CH)		WH-1/1.0	
22.55				
	Wet, gray, clayey, med. to fine SAND w/gravel & tr. shell frags. (SC)		WH-1/1.0	
24.75				
	Moist, dk. grayish brown, sandy fat CLAY (CH)		WH-WH-WH	
26.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 8.0' @ 1021 Hrs.			

5 10 15 20 25 30 35 40 45

Preliminary

JB-101
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 316334.8 **JB-102**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1504544.6 **1 of 1**

TOP ELEV: COMPLETED: May 24, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	NO RECOVERY		WR/1.O-WH	
2.00				
	Wet, gray, poorly graded, fine SAND w/silt & tr. shell frags. (SP-SM)		WR-WH/1.0	
4.50				
	Wet, gray, silty fine SAND w/tr. shell frags. & wood pieces (SM)	5	WH-2-2	
				32.9
			1-2-2	
9.50				
	Wet, gray, poorly graded, fine SAND w/silt (SP-SM)	10	WH-1/1.0	
12.00				
	Wet, gray, clayey fine SAND (SC)		WH-1/1.0	20.6
14.50				
	Wet, olive gray, silty fine SAND (SM)	15	1-2-3	
17.00				
	Wet, grayish brown, silty fine SAND (SM)			21.9
19.50			1-3-6	
	Wet, grayish brown, silty med. to fine SAND w/tr. gravel (SM/SP-SM)	20	4-4-4	
22.40				
	Moist, v. dk. grayish brown, sandy elastic SILT (MH) PPR 23.3'-24.0': 0.5, 0.5, 0.5		WH/1.0-2	
24.50				
	Moist, dk. gray, sandy elastic SILT (MH)	25	WH-WH-WH	66.3
27.55				
	V. moist, grayish brown, silty med. to fine SAND (SM)		2-8-5	
29.65				
	Moist, dk. grayish brown, fat CLAY w/sand (CH) PPR 30.3'-31.5': 0.5, 0.25, 0.25	30	WH-WH-WH	
32.00				
	Moist, dk. grayish brown, sandy fat CLAY (CH)		1-2-3	
34.50				
	Wet, dk. grayish brown, clayey fine SAND w/tr. wood pieces (SC)	35	1-1-2	37.2
37.00				
	Moist, dk. grayish brown, clayey med. to fine SAND (SC)		12-23-31	
39.50				
	Wet, grayish brown, clayey med. to fine SAND (SC)	40	1-1-1	
41.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 8.9' @ 1407 Hrs.	45		

Preliminary

JB-102
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 316994.6 **JB-103**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1503475.0 **1 of 1**

TOP ELEV: COMPLETED: June 3, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, gray, poorly graded fine SAND w/tr. shell frags. (SP-SM)		WH/1.0-1	28.8
2.00				
	Wet, grayish brown, silty fine SAND w/silt & tr. shell frags. (SM)		2-2-2	
4.50				24.0
	Wet, grayish brown, silty fine SAND (SM)	5	1-1-2	
7.00				
	Wet, pale brown, poorly graded SAND w/silt & tr. gravel (SP-SM)		2-4-7	
9.50				24.7
	Wet, lt. brownish gray, poorly graded, fine SAND w/silt & tr. shell frags. (SP-SM)	10	WH-1-2	
12.00				
	Wet, lt. yellowish brown, silty fine SAND (SM)		2-3-3	
14.50				
	Wet, strong brown, poorly graded med. to fine SAND w/silt (SP-SM)	15	3-5-7	
17.00				20.7
	Wet, yellowish brown, poorly graded SAND w/silt & tr. gravel (SP-SM)		59-26-9	
19.85				
	Moist, gray, sandy lean CLAY (CL)	20	1/1.0-1	32.4
	PPR 20.7'-21.5': 0.5, 0.5, 0.5			
	PPR 22.5'-24.0': 0.5, 0.25, 0.5		4-2-2	34.8
24.50				
	Moist, gray, lean to fat CLAY w/sand (CL/CH)	25	SH-2-2	
	PPR 25.0'-26.5': 0.5, 0.5, 0.5			
27.00				
	Moist, gray, fat CLAY w/sand (CH)		1-2-2	
	PPR 27.5'-29.0': 1.0, 0.75, 1.0			
29.50				
	Moist, gray, fat CLAY w/tr. sand (CH)	30	1-2-3	
31.50	PPR 30.0'-31.5': 1.0, 0.0, 1.0			
	BOTTOM OF HOLE	35		
	Day 1: Depth of bay water @ start of boring 9.4' @ 0900 Hrs.			
	Day 2: Depth of bay water @ start of boring 10.1' @ 0801 Hrs.	40		
		45		

Preliminary

JB-103
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 317946.9 **JB-104**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1502268.3 **1 of 1**

TOP ELEV: COMPLETED: June 4, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, olive brown & gray, silty fine SAND w/shells (SM)		1-1-2	
2.00				
	Wet, lt. olive brown, silty fine SAND (SM)		2-3-4	23.9
		5	1-2-3	
7.05				
	V. moist, dk. gray, soft, clayey SAND (SC)		2-1-1	26.1
9.50				
	Wet, lt. olive brown, poorly graded SAND w/silt (SP-SM)	10	2-4-4	
				24.0
			1-4-9	
15.00				
	V. moist, dk. greenish gray, sandy lean CLAY (CL)	15	3-3-5	
17.00				
	V. moist, dk. greenish gray, sandy lean CLAY (CH) PPR 17.5'-19.0': 0.5, 0.5, 0.5		11-12-15	32.8
19.50				
	Wet, dk. greenish gray, silty fine SAND w/clay lense (SM)	20	2-4-5	
22.00				
	Wet, dk. gray, clayey fine SAND (SC)		1-1-2	
24.50				
	Wet, dk. gray, silty fine SAND (SM)	25	1-1-1	
27.00				
	Moist, dk. greenish gray, soft, fat CLAY w/sand(CH) PPR 27.5'-29.0': 0.5, 0.5, 0.5		2-2-3	43.3
29.50				
	V. moist, dk. greenish gray, soft, sandy fat CLAY (CH)	30	1-1-2	
32.00				
	Moist, dk. greenish gray, firm fat CLAY (CH) PPR 32.5'-34.0': 1.0, 1.0, 1.0		3-3-3	
34.50				
	Moist, dk. greenish gray, firm fat CLAY w/sand (CH)	35	2-4-4	
37.00				
	Wet, dk. greenish gray, soft, fat CLAY w/shells (CH)		2-4-3	
39.50				
	Moist, dk. greenish gray, firm fat CLAY w/shells (CH)	40	2-4-3	
41.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 10.0' @ 1005 Hrs.	45		

Preliminary

JB-104
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 316326.4 **JB-105**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1502009.9 **1 of 1**

TOP ELEV: COMPLETED: June 4, 2004

DEPTH(ft)	(c)	(a)	(b)
2.00	Wet, lt. yellowish brown, poorly graded, fine SAND (SP)	WH-1-1	24.5
4.50	Wet, olive gray, poorly graded fine SAND w/silt & shells (SP-SM)	3-2-2	25.1
7.00	Wet, lt. yellowish brown, poorly graded, fine SAND w/silt & tr. shells (SP-SM)	2-1-2	
12.00	Wet, lt. yellowish brown, poorly graded, fine SAND w/silt (SP-SM)	4-5-5	24.7
		1-2-2	
14.50	V. moist, lt. olive brown, poorly graded, fine SAND w/silt (SP-SM)	WH-WH-WH	
17.00	V. moist, dk. greenish gray, soft, sandy lean CLAY w/tr. shells (CL)	WH-1-2	
19.50	Moist, dk. greenish gray, hard, lean CLAY (CL) PPR 17.5'-19.0': 2.5, 2.5, 1.5	2-3-4	27.5
22.00	V. moist, dk. greenish gray, firm, lean CLAY (CL) PPR 20.0'-21.5': 1.5, 1.0, 0.5	1-3-4	
24.50	Wet, dk. gray, clayey med. SAND w/shells (SC)	1-3-3	24.2
27.00	Wet, dk. greenish gray, silty fine SAND w/tr. shells (SM)	2-2-1	
30.00	Wet, dk. greenish gray, silty fine SAND (SM)	2-2-2	26.7
32.00	V. moist, dk. greenish gray, soft to firm, fat CLAY w/sand (CH)	1-1/1.0	
34.50	V. moist, dk. greenish gray, soft, sandy fat CLAY (CH)	1-2-2	
37.00	V. moist, olive gray, clayey fine SAND (SC) PPR 35.0'-36.5': 0.5, 0.5, 0.5	1-1-1	
39.50	Moist, olive gray, sandy fat CLAY (CH) PPR 37.5'-39.0': 3.0, 3.0, 2.0	3-5-6	
41.50	Moist, olive gray, clayey fine SAND (SC-CH) PPR 40.0'-41.5': 1.0, 1.0, 1.0	3-5-5	

BOTTOM OF HOLE

Depth of bay water @ start of boring 10.0' @ 1444 Hrs.

Preliminary

JB-105
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 319326.2 **JB-106**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1501352.5 **1 of 1**

TOP ELEV: COMPLETED: August 2, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, olive gray, silty fine SAND w/shells (SM)		WH/1.0-1	
				25.2
			1-1-2	
4.50				
	Wet, lt. olive brown, poorly graded silty fine SAND (SM)	5	3-4-4	
			1-2-1	23.1
9.50				
	Wet, yellowish brown & dk. gray, poorly graded silty fine SAND (SM)	10	3-5-7	
12.00				
	Wet, dk. grayish brown, silty fine SAND w/trace of gravel (SM)		7-17-30	
14.50				16.7
	Wet, dk. gray, silty fine SAND w/tr. gravel (SM)	15	10-17-18	
17.00				
	Wet, gray, poorly graded med. SAND w/silt (SP-SM)		4-5-12	
19.50				
	Wet, grayish brown, poorly graded coarse SAND w/silt (SP-SM)	20	4-4-7	17.3
22.00				
	Wet, grayish brown, poorly graded med-coarse SAND w/silt (SP-SM)		4-5-8	
24.50				
	V. moist, v. dk. brown, soft fat CLAY w/sand (CH)	25	5-6-6	
27.00				
	V. moist, v. dk. brown, soft fat CLAY (CH)		1-3-3	
29.50				
	Moist, v. dk. brown, soft sandy SILT w/decayed wood (ML)	30	2-2-2	
32.00				
	V. moist, v. dk. brown, clayey fine SAND w/decayed wood (SC/CL)		3-7-4	
34.00				
	BOTTOM OF HOLE	35		
	Depth of bay water @ start of boring 12.1' @ 1103 Hrs.			
		40		
		45		

Preliminary

JB-106
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 318184.3 **JB-107**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1500121.2 **1 of 1**

TOP ELEV: COMPLETED: August 2, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray, poorly graded med. SAND w/silt & shells (SP-SM)		WH-2-6	
4.50	Wet, grayish brown, poorly graded fine SAND w/silt (SP-SM)		2-2-3	28.8
7.00	Wet, grayish brown, poorly graded fine SAND (SM)		WH-1-1	25.3
9.50	Wet, lt. yellowish brown, poorly graded fine SAND w/silt (SP-SM)		2-5-4	
12.00	Wet. lt. olive brown, poorly graded v. fine SAND w/silt (SP-SM)		2-1-1	22.8
14.50	Wet. lt. olive brown, poorly graded fine SAND w/silt (SP-SM)		2-3-6	
17.00	Wet, grayish brown, silty fine SAND w/tr. gravel (SM)		12-3-1	
19.50	Wet, grayish brown, poorly graded med. SAND w/silt (SP-SM)		3-5-5	
	V. moist, dk. gray, silty v. fine SAND (SM)		2-4-6	
			2-4-5	35.2
			2-4-8	
29.50			2-5-6	
31.50	V. moist, dk. greenish gray, sandy SILT (ML)		2-4-8	
	BOTTOM OF HOLE Depth of bay water @ start of boring 9.9' @ 1411 Hrs.			

5 10 15 20 25 30 35 40 45

Preliminary

JB-107
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 321075.2 **JB-108**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1501196.8 **1 of 1**

TOP ELEV: COMPLETED: May 25, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, lt. gray, poorly graded fine SAND w/silt & shells (SP-SM)		1/1.0-1	25.1
4.50	Wet, lt. gray, poorly graded fine SAND w/silt & tr. shells (SP-SM)		1-1-1	
7.00	V. moist, lt. brownish gray, poorly graded, med. SAND w/silt & gravel (SP-SM)		3-28-20	13.8
9.50	V. moist, olive gray, silty fine SAND (SM)		1-2-3	25.0
17.00	V. moist, olive yellow, silty fine SAND (SM)		2-2-2 5-4-5 4-4-5	
19.50	Moist, dk. gray, silty fine SAND (SM)		2-4-5	30.5
26.50	Moist, olive gray, silty v. fine SAND (SM) PPR 20.0'-21.5': 2.5, 2.0, 1.5 PPR 22.5'-24.0': 2.5, 2.0, 2.0		4-4-6 5-6-7 4-6-7	

BOTTOM OF HOLE

Depth of bay water @ start of boring 18.9' @ 0928 Hrs.

Preliminary

JB-108

GROUNDWATER DATA

WHILE DRILLING:

ON COMPLETION:

Hr. READING:

Fill | Auger | SPT | RB

Cored | 300 lb | Tubex | Hand

Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 319051.7 **JB-109**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1498351.1 **1 of 1**

TOP ELEV: COMPLETED: August 3, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, olive gray, silty fine-med SAND w/shells (SM)		1-5-4	
2.00				
	Wet, lt. yellowish brown, poorly graded fine SAND w/silt (SP-`SM)		1-1-1	
		5	3-6-6	25.9
			1-1-1	
9.50				
	Wet. lt. olive brown, poorly graded fine SAND w/silt (SP-SM)	10	1-4-9	23.9
12.00				
	Wet. lt. olive brown, silty fine SAND w/clay lense (SM)		1-2-4	27.2
14.50				
	Moist, dk. greenish gray, firm fat CLAY w/sand (CH)	15	2-7-12	
17.00				
	Moist, olive gray, SILT w/sand & clay lense (ML)		2-10-22	
19.50				
	Moist, dk. greenish gray, hard sandy SILT (ML)	20	100/.4	
22.00				
	Wet, olive gray, silty fine SAND (SM/SC)		2-5-10	
24.50				
	Wet, olive gray, clayey fine SAND (SC)	25	4-12-14	
26.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 11'-10" @ 0944 Hrs.	30		
		35		
		40		
		45		

Preliminary

JB-109
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 316528.7 **JB-110**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1499195.5 **1 of 1**

TOP ELEV: COMPLETED: August 3, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, v. dk. gray, poorly graded fine SAND w/silt & shells (SP-SM)		WH-4-1	
4.50	Wet, gray, poorly graded fine SAND w/silt & shells (SP-SM)		WH-WH-WH	
7.00	Wet, gray, silty fine-med SAND w/shells (SM)		WH/1.0-2	24.0
9.50	Wet, dk. gray, sandy CLAY (CL)		WH-WH-WH	37.6
12.00	Wet, dk. gray, soft fat CLAY (CH)		1-7-9	
14.50	Wet, dk. gray, silty med. SAND (SM)		1-5-6	
19.50	Wet, dk. gray, silty med. SAND w/tr. shells (SM)		1-1-2	27.9
22.00	V. moist, olive gray, clayey v. fine SAND w/shells (SC)		4-4-7	
24.50	V. moist, olive gray, silty fine SAND w/shells (SM)		4-7-12	
26.50	V. moist, olive gray, silty fine SAND w/tr. shells (SM)		7-15-14	
			3-6-8	

BOTTOM OF HOLE

Depth of bay water @ start of boring 8.8' @ 1200 Hrs.

Preliminary

JB-110

GROUNDWATER DATA

WHILE DRILLING:

ON COMPLETION:

Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 314615.5 **JB-111**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1499034.3 **1 of 1**

TOP ELEV: COMPLETED: May 25, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, lt. olive brown & black, poorly graded fine SAND w/silt & shells (SP-SM)		WH/1.0-5	
				26.1
			2-4-1	
4.50				
	Wet, dk. gray, clayey fine SAND (SC)		WH/1.0-3	30.1
7.00				
	Wet, lt. olive brown, poorly graded, silty fine SAND (SM)		WH-WH-WH	28.6
9.50				
	Wet, dk. gray, clayey SAND (SC)		3-12-15	33.3
12.00				
	Wet, dk. gray, poorly graded fine SAND w/silt & tr. gravel (SP-SM)		3-7-2	23.3
14.50				
	V. moist, olive gray, clayey SAND w/tr. shells (SC)		1-2-4	
17.00				
	V. moist, olive gray, clayey SAND (SC)			34.2
			4-6-9	
19.50				
	Moist, olive gray, silty fine SAND w/tr. shells (SM)		5-9-20	
			5-6-8	28.0
24.50				
	Moist, olive gray, silty fine SAND (SM)		4-6-8	
26.50	PPR 25.0'-26.5': 2.0, 2.0, 1.5			
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 9.5' @ 1256 Hrs.			

5 10 15 20 25 30 35 40 45

Preliminary

JB-111
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 315005.2 **JB-112**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1496933.7 **1 of 1**

TOP ELEV: COMPLETED: May 25, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray, poorly graded, fine SAND w/silt & shells (SP-SM)		WH-1-2	
4.50	Wet, dk. gray, poorly graded, fine SAND (SP-SM)		WH-WH-WH	27.2
7.00	Wet, dk. gray, poorly graded, fine SAND w/tr. shells (SP-SM)		WH-WH-WH	
9.50	Wet, olive gray, silty fine SAND (SM)		WH-WH-WH	26.6
12.45	V. moist, olive gray, soft, clayey SAND (SC)		WH-2-1	
15.00	Moist, olive gray, firm lean CLAY (CL) PPR 13.4'-15.0': 2.0, 2.0, 1.0		2-6-7	37.4
17.00	Moist, olive gray, silty, v. fine SAND w/shells (SM)		2-4-6	37.7
22.00	Moist, olive gray, clayey, v. fine SAND w/tr. shells (SC) PPR 20.0'-21.5': 2.0, 2.0, 0.0		1-4-7	35.2
			2-3-4	
24.50	Moist, olive gray, silty, v. fine SAND w/shells (SM)		6-11-15	
26.50	Moist, olive gray, silty, v. fine SAND w/tr. shells (SM)		10-6-7	31.8
	BOTTOM OF HOLE Depth of bay water @ start of boring 10.2' @ 1457 Hrs.			

5 10 15 20 25 30 35 40 45

Preliminary

JB-112
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 313907.5 **JB-113**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1497640.7 **1 of 1**

TOP ELEV: COMPLETED: May 26, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, lt. olive brown, poorly graded fine SAND w/silt & shells (SP-SM)		WH-2-2	
4.50	Wet, dk. gray, poorly graded fine SAND w/silt (SP-SM)		1-2-4	24.9
7.45	Wet, dk. gray & lt. olive brown, poorly graded fine SAND w/silt (SP-SM)		WH/1.0-3	
9.50	V. moist, dk. gray, soft, fat CLAY (CH)		WH-WH-WH	
12.00	V. moist, dk. gray, soft, fat CLAY w/tr. sand (CH)		3-3-2	45.2
14.50	Moist, olive gray, soft clayey SAND (SC) PPR 12.5'-14.0': 2.5, 2.0, 1.5		1-2-6	39.7
17.00	V. moist, olive gray, clayey, v. fine SAND (SC/CL)		3-3-6	
19.50	V. moist, olive gray, clayey, v. fine SAND w/tr. shells (SC) PPR 17.5'-19.0': 0.5, 2.0, 1.0		1-2-5	
24.50	V. moist, olive gray, clayey, v. fine SAND w/shells (SC/CL) PPR 20.0'-21.5':3.0, 3.0, 3.0		5-10-14	32.2
			8-14-20	
26.50	V. moist, olive gray, silty, v. fine SAND w/tr. shells (SM)		10-14-17	
	BOTTOM OF HOLE Depth of bay water @ start of boring 10.1' @ 1205 Hrs.			

5 10 15 20 25 30 35 40 45

Preliminary

JB-113
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 312580.9 **JB-114**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1498874.0 **1 of 1**

TOP ELEV: COMPLETED: May 26, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, gray, poorly graded fine SAND w/silt & shells (SP-SM)		WH/1.0-1	25.0
4.50	Wet, dk. gray, poorly graded, fine SAND w/silt & trace of shells (SP-SM)		1-1-2	24.2
7.00	Wet, gray, poorly graded, fine SAND w/silt (SP-SM)		3-7-5	
9.50	Wet, olive gray, lean CLAY (CL)		WH/1.0-3	35.4
12.00	Wet, grayish brown, poorly graded, fine SAND (SP)		WH-WH-WH	24.8
14.50	V. moist, dk. gray, soft, sandy lean CLAY (CL)		4-8-8	40.7
17.00	Wet, dk. gray, silty med. SAND w/gravel (SM)		10-5-2	24.5
19.50	Moist, olive gray, hard, fat CLAY (CH/CL) PPR 17.5'-19.0': 4.0, 3.0, 3.0		2-4-8	
22.00	Moist, olive gray, clayey, v. fine SAND (SC/CL) PPR 20.0'-21.5': 3.0, 1.5, 3.0		6-6-7	
24.50	Moist, olive gray, clayey, v. fine SAND w/shells (SC/CL) PPR 22.5'-24.0': 3.0, 3.5, 3.0		2-3-4	
26.50	Moist, olive gray, clayey, v. fine SAND w/tr. shells (SC) PPR 25.0'-26.5': 2.5, 2.0, 3.0		6-8-15	

BOTTOM OF HOLE

Depth of bay water @ start of boring 7.9' @ 1527 Hrs.

Preliminary

JB-114

GROUNDWATER DATA

WHILE DRILLING:

ON COMPLETION:

Hr. READING:

Fill | Auger | SPT | RB

Cored | 300 lb | Tubex | Hand

Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 311384.6 **JB-115**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1499923.7 **1 of 1**

TOP ELEV: COMPLETED: July 14, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray, silty, v. fine SAND w/trace of shells (SM)		WH/.5-1-1	
4.50	Wet, olive brown poorly graded, fine SAND w/silt & shells (SP-SM)		1-2-8	23.9
7.00	Wet, lt. olive brown, silty fine SAND w/tr. shells (SM)		6-10-14	
9.50	Wet, lt. olive brown, poorly graded, fine SAND w/silt & shells (SP-SM)		WH/1.0-2	24.5
12.00	Wet, dk. gray, clayey fine SAND (SC) PPR 10.0'-11.5': 0.25, 0.0, 0.0		WH-WH-WH	31.1
14.50	V. moist, dk. gray, soft fat CLAY w/sand (CH) PPR 12.5'-14.0': 0.25, 0.5, 0.25		7-9-9	
17.00	Wet, dk. grayish brown, clayey fine SAND (SC) PPR 15.0'-16.5': 0.25, 0.0, 0.25		1-1-1	
19.50	Wet, dk. grayish brown, poorly graded, fine SAND w/silt (SP-SM) PPR 17.5'-19.0': 3.0, 2.5, 3.0		1-2-2	
22.00	V. moist, v. dk. greenish gray, soft fat CLAY (CH) PPR 20.0'-21.5': 2.0, 2.5, 2.0		WH/.5-1-2	
26.50	V. moist, v. dk. greenish gray, soft fat CLAY w/shells (CH) PPR 22.5'-24.0': 2.5, 2.5, 2.5 PPR 25.0'-26.5': 3.5, 2.5, 3.5		3-2-2 2-2-3	
	BOTTOM OF HOLE Depth of bay water @ start of boring 8.0' @ 0902 Hrs.			

5 10 15 20 25 30 35 40 45

Preliminary

JB-115
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N **JB-116**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E **1 of 1**

TOP ELEV: COMPLETED: July 15, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, v. dk. gray, poorly graded, med. SAND w/silt & shells (SP-SM)		WH/1.0-1	
4.50	V. moist, lt. gray & yellowish brown, soft SILT w/sand (ML) PPR 2.5'-4.0': <0.5, <0.5, <0.5		2-2-2	
7.00	Wet, gray, poorly graded, silty med. SAND w/clay lense (SM)		WH-WH-WH	29.2
9.50	V. moist, v. dk. greenish gray, soft sandy lean CLAY (CL) PPR 7.5'-9.0': 0.5, 0.5, 0.5		WH-WH-WH	35.7
12.00	Wet, dk. greenish gray, soft fat CLAY w/sand (CH) PPR 10.0'-11.5': 0.5, 0.5, <0.5		WH-WH-WH	
14.50	V. moist, dk. olive gray, silty fine SAND (SM) PPR 12.5'-14.0': <0.5, <0.5, <0.5		WH-1-9	
19.50	Moist, olive gray, firm lean CLAY (CL) PPR 15.0'-16.5': 2.5, 2.0, 2.0 PPR 17.5'-19.0': 3.5, 3.0, 3.5		2-4-8	
			6-8-14	
24.50	Wet, dk. olive gray, silty fine SAND (SM)		8-8-12	
			2-6-6	
26.50	V. moist, dk. greenish gray, silty fine SAND w/tr. shells (SM)		5-5-8	

BOTTOM OF HOLE

NOTE: All depths are measured from the top of sediment. Water depth at start of drilling was 7.5'.

5 10 15 20 25 30 35 40 45

Preliminary

JB-116
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N **JB-117**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E **1 of 1**

TOP ELEV: COMPLETED: July 17, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, v. dk. gray, silty fine SAND w/shells (SM)		WH/1.0-2	
4.50	V. moist, olive gray, SILT w/sand (ML)		1-1-1	27.8
7.00	V. moist, dk. gray, sandy, soft fat CLAY (CH)	5	1-1-1	
9.50	V. moist, dk. greenish gray, soft leanCLAY (CL)		WH-WH-WH	37.6
12.00	V. moist, dk. greenish gray, soft fat CLAY w/sand (CH)	10	WH-WH-WH	
14.50	V. moist, v. dk. greenish gray, soft, sandy, fat CLAY w/gravel (CH)		8-7-8	
19.50	Wet, olive gray, silty, med. SAND w/gravel (SM)	15	10-12-11	
			6-7-7	
26.50	Wet, gray, silty fine SAND (SM)	20	8-8-8	
			6-12-18	
		25	1-2-4	
	BOTTOM OF HOLE			

NOTES: Jars were recorded by driller's helper, an inspector/geologist.
Water depth was not recorded nor the time the drilling took place.
Hole location is assumed to be within 50' of location in work plan.

30 35 40 45

Preliminary

JB-117
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 310169.7 **JB-118**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1498374.6 **1 of 1**

TOP ELEV: COMPLETED: July 16, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Moist, olive brown, poorly graded SAND w/silt & shells (SP)		WH-WH-WH	
				26.8
			WH-WH-WH	
4.50	Moist, dk. gray, sandy, soft lean CLAY w/shells (CL) PPR 5.0'-6.5': 1.0, 0.5, 0.5	5	WH/1.0-1	
7.00	Moist, dk. gray, clayey SAND (SC)		WH-WH-WH	29.8
		10	WH-WH-WH	
			WH-WH-WH	
14.50	Moist, yellowish brown, silty, med. SAND (SM)	15	2-1-4	
17.00	Moist, olive gray, silty, fine SAND (SM)		14-18-27	
19.50	Moist, dk. gray, fine sandy SILT (ML/SM)	20	6-9-17	
22.00	Moist, dk. gray, silty fine SAND (SM) PPR 22.5'-24.0': >4.5, >4.5, >4.5		7-16-20	
26.50	PPR 25.0'-26.5': 2.5, >4.5, >4.5	25	6-9-13	
	BOTTOM OF HOLE Depth of bay water @ start of boring 10.5' @ 1130 Hrs.	30		
		35		
		40		
		45		

Preliminary

JB-118
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 308774.6 **JB-119**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1497089.0 **1 of 1**

TOP ELEV: COMPLETED: July 16, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, olive brown, poorly graded SAND w/tr. shell frags. (SP-SM)		WH-1-3	
4.50	Wet, dk. gray, sandy, lean CLAY w/silt (CL/ML) PPR 2.5'-4.0': 0.5, 0.0, 0.5		2-1-1	
7.00	V. moist, dk. gray, soft lean CLAY w/sand (CL) PPR 5.0'-6.5': 0.0, 0.0, 0.5		WH-WH-WH	
9.50	Wet, yellowish brown, poorly graded SAND w/silt (SP-SM)		WR-WR-WR	22.9
12.00	Moist, dk. gray, soft fat CLAY w/sand (CH)		WH-WH-WH	
14.50	V. moist, dk. gray, clayey, fine-med. SAND (SC)		3-2-3	30.8
17.00	Moist, dk. gray, fine sandy SILT (ML) PPR 15.0'-16.5': 3.5, 4.0, 3.0		2-3-6	
19.00	Moist, dk. gray, poorly graded SAND w/silt (SP-SM) PPR 17.5'-19.0': 1.0, 0.0, 0.0		6-12-14	
19.50	Moist, dk. gray, SILT (SP-SM)			
22.00	Moist, dk. gray, silty, fine SAND (SM/ML)		3-4-16	
26.50	V. moist, olive gray, silty SAND w/tr. gravel (SM) PPR 25.0'-26.5': 0.5, 1.0, 1.0		5-4-7 7-13-14	

BOTTOM OF HOLE

Depth of bay water @ start of boring 9.5' @ 1605 Hrs.

Preliminary

JB-119

GROUNDWATER DATA

WHILE DRILLING:

ON COMPLETION:

Hr. READING:

Fill | Auger | SPT | RB

Cored | 300 lb | Tubex | Hand

Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 307610.6 **JB-120**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1499839.6 **1 of 1**

TOP ELEV: COMPLETED: July 17, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, olive brown & yellowish brown, sandy SILT w/tr. shells (ML)		1-1-1	
4.50	Wet, olive gray, silty fine SAND w/tr. shells (SM)		WH-1-1	
7.00	Wet, dk. grayish brown, silty fine SAND w/tr. shells (SM)		WH-WH-WH	25.4
9.50	V. moist, v. dk. greenish gray, soft lean CLAY w/sand (CL)		WH-WH-WH	
12.00	Wet, v. dk. greenish gray, clayey fine SAND (SC/CL)		WH-WH-WH	
14.50	Wet, v. dk. greenish gray, clayey fine SAND (SC)		WH-WH-WH	
17.00	Wet, dk. greenish gray, clayey fine SAND w/gravel (SC)		4-12-4	32.8
19.50	V. moist, dk. greenish gray, clayey fine SAND (SC) PPR 17.5'-19.0': 3.5, 3.5, 1.5		1-3-4	
24.50	V. moist, dk. greenish gray, silty fine SAND (SM) PPR 20.0'-21.5': >4.5, >4.5, >4.5		7-48-100/.1 4-14-16	
26.50	V. moist, dk. greenish gray, silty v. fine SAND (SM) PPR 25.0'-26.5': 3.0, 3.0, 3.0		9-12-16	

BOTTOM OF HOLE

Depth of bay water @ start of boring 6.5' @ 0959 Hrs.

Preliminary

JB-120
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 305810.2 **JB-121**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1498469.3 **1 of 1**

TOP ELEV: COMPLETED: July 17, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, lt. olive brown, poorly graded, fine SAND w/silt (SP-SM)		WH-1-3	
4.50	EMPTY JAR		WR-WH/1.0	
7.00	Wet, lt. olive brown, poorly graded, med. SAND w/silt & shells (SP-SM) PPR 5.0'-6.5': 0.0, 0.0, 0.5		WH-WH-WH	22.2
12.00	V. moist, dk. gray, soft fat CLAY (CH) PPR 7.5'-9.0': 0.5, 0.5, 0.5		WH-WH-WH WH-WH-WH	
13.50	V. moist, dk. greenish gray, silty fine SAND (SM)		2-21-16	31.0
14.50	Moist, black, silty fine SAND (SM)			
17.00	Wet, dk. greenish gray, clayey fine SAND (SC)		1-3-5	
19.50	Moist, dk. greenish gray, firm fat CLAY (CH) PPR 17.5'-19.0': 3.0, 3.25, 3.0		6-4-10	
22.00	Moist, dk. greenish gray, firm fat CLAY w/tr. sand (CH) PPR 20.0'-21.5': >4.5, >4.5, >4.5		4-6-7	
24.50	Moist, olive gray, silty fine SAND (SM) PPR 22.5'-24.0': 2.5, 2.5, 2.5		21-57-67	
26.50	V. moist, olive gray, silty fine SAND (SM) PPR 25.0'-26.5': 2.5, 2.5, 2.5		5-10-15	

BOTTOM OF HOLE

Depth of bay water @ start of boring 8.0' @ 1300 Hrs.

Preliminary

JB-121

GROUNDWATER DATA

WHILE DRILLING:

ON COMPLETION:

Hr. READING:

Fill | Auger | SPT | RB

Cored | 300 lb | Tubex | Hand

Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 304195.4 **JB-122**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1500420.6 **1 of 1**

TOP ELEV: COMPLETED: July 17, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	V. moist, olive brown, soft, lean CLAY w/sand & shells (CL) PPR 0.0'-1.5': 2.5, 1.0, 1.0		WH/1.0-2	
4.50	V. moist, lt. olive brown, sandy, v. fine SILT (ML)		1-1-1	22.4
7.00	V. moist, grayish brown, sandy silty CLAY (CL-ML) PPR 5.0'-6.5': 3.0, 1.0, 1.0		2-2-1	19.9
9.50	EMPTY JAR		WH-WH-WH	
12.00	Wet, lt. olive brown, silty, med. SAND (SM)		WH-WH-WH	
14.50	Wet, grayish brown, clayey fine SAND (SC)		WH/1.0-1	31.3
17.00	Wet, dk. gray, clayey fine SAND (SC/SM)		2-2-3	
19.50	Wet, dk. gray, silty fine SAND w/gravel (SM)		2-1-7	
22.00	Wet, dk. gray, silty fine SAND (SM)		2-3-5	
24.50	Wet, dk. gray, silty fine-med. SAND (SM)		1-7-12	
26.50	V. moist, dk. greenish gray, hard, silty, v. fine SAND (SM) PPR 25.0'-26.5': 3.0, 3.0, 3.0		3-5-8	

BOTTOM OF HOLE

Depth of bay water @ start of boring 6.6' @ 1521 Hrs.

Preliminary

JB-122

GROUNDWATER DATA

WHILE DRILLING:

ON COMPLETION:

Hr. READING:

Fill | Auger | SPT | RB

Cored | 300 lb | Tubex | Hand

Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 302339.3 **JB-123**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1501157.4 **1 of 1**

TOP ELEV: COMPLETED: July 17, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, silty fine SAND w/tr. shells (SM)		WH-1-1	
2.00	Wet, gray, soft lean CLAY (CL)			
			WH-2-2	
4.00	BOTTOM OF HOLE			

Depth of bay water @ start of boring 6.7' @ 1710 Hrs.

5

10

15

Preliminary

JB-123
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 305534.6 **JB-126**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1496698.5 **1 of 1**

TOP ELEV: COMPLETED: July 19, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded, med. SAND w/silt & shells (SP-SM)		WH-WH-WH	
2.00	Wet, gray, soft lean CLAY w/sand (CL)			
	PPR 2.5'-4.0': 0.5, 0.5, 0.5		WH-WH-WH	
	PPR 5.0'-6.5': 0.25, 0.25, 0.25		WH-WH-WH	
	PPR 7.5'-9.0': 0.25, 0.25, 0.25		WH-WH-WH	
9.50				
10.80	Wet, dk. greenish gray, soft, sandy lean CLAY (CL)		25-29-14	16.5
12.00	V. moist, v. dk. grayish brown, poorly graded, silty med. SAND w/gravel (SM)			
	Wet, dk. greenish gray, silty fine SAND (SM)		3-3-8	22.7
14.50	Wet, dk. gray, poorly graded SAND w/silt & gravel (SP-SM)		19-11-8	12.1
17.00	Moist, olive gray, silty, v. fine SAND (SM)		5-9-15	
19.50	V. moist, olive gray, silty fine SAND w/gravel (SM)		9-9-11	
22.00	Moist, olive gray, silty fine SAND (SM)		3-8-15	
	PPR 22.5'-24.0': 3.0, 3.0, 3.0			
24.50	Moist, olive gray, sandy SILT w/tr. shells (ML)		7-11-14	
26.50	PPR 25.0'-26.5': 2.5, 4.0, 4.0			
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 11.1' @ 0841 Hrs.			

Preliminary

JB-126
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

GEO-2 JAMESISL.GPJ 2/10/05 08:50

STA. MID-BAY ISLAND FEASIBILITY STUDY N 308299.9 **JB-127**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1495764.9 **1 of 1**

TOP ELEV: COMPLETED: July 19, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	EMPTY JAR		WH/1.0-1	
2.00	Wet, grayish brown, poorly graded, med. SAND w/silt & shells (SP-SM)		1-2-2	19.4
4.50	Wet, lt. olive brown soft lean CLAY w/sand (CL) PPR 5.0'-6.5': 0.25, 0.0, 0.00		WH-1/1.0	
7.00	Wet, lt. olive brown, poorly graded, med. SAND w/silt & clay lense (SP-SM)		1/1.0	
9.50	Wet, dk. greenish gray, soft, clayey SAND (SC)		WH/1.0-14	30.0
			1-2-3	
14.50	V. moist, dk. gray, silty, fine SAND w/clay lense (SM)		6-18-16	
17.00	V. moist, dk. greenish gray, silty, v. fine SAND (SM) PPR 17.5'-19.0': >4.5, 3.0, 3.0 PPR 20.0'-21.5': 4.5, 4.5, 2.5		5-5-14	24.1
22.00	Moist, dk. greenish gray, firm sandy SILT (ML) PPR 22.5'-24.0': 4.5, 4.5, 4.5		4-9-12	
			7-9-14	
26.50	PPR 25.0'-26.5': >4.5, >4.5, >4.5		5-8-14	

BOTTOM OF HOLE

Depth of bay water @ start of boring 9.3' @ 1046 Hrs.

Preliminary

JB-127

GROUNDWATER DATA

WHILE DRILLING:

ON COMPLETION:

Hr. READING:

Fill | Auger | SPT | RB | Cored | 300 lb | Tubex | Hand | Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 311408.5 **JB-128**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1494733.7 **1 of 1**

TOP ELEV: COMPLETED: July 19, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, v. dk. gray, poorly graded silty fine SAND w/shells (SM)		WH/1.0-1	27.0
4.50	Wet, gray, poorly graded siltyfine SAND w/shells (SM)		WH/1.0-2	
7.00	V. mist, olive gray, CLAY w/sand & clay lense (CL) PPR 5.0'-6.5': 0.5, 0.5, 0.5		1-1-1	28.0
9.50	V. moist, dk. greenish gray, firm fat CLAY w/tr. sand (CH) PPR 7.5'-9.0': 1.0, 1.0, 1.0		1-1-1	
12.00	Wet, dk. greenish gray, clayey fine SAND w/clay lense (SC)		1-1-7	29.3
14.50	Wet, dk. greenish gray, clayey fine SAND (SC)		1-1-2	
19.50	Moist, olive gray, silty, v. fine SAND (SM) PPR 15.0'-16.5': 3.0, 3.0, 3.0 PPR 17.5'-19.0': >4.5, >4.5, >4.5		1-2-4 2-6-10	41.9
22.00	Moist, olive gray, silty, v. fine SAND w/shells (SM) PPR 20.0'-21.5': 2.5, 2.5, 2.5		1-2-5	
24.50	V. moist, olive gray, silty fine SAND (SM) PPR 22.50'-24.0': 3.0, 0.0, 0.0		2-9-12	
26.50	V. moist, olive gray, silty fine SAND w/shells (SM)		7-14-12	
	BOTTOM OF HOLE Depth of bay water @ start of boring 9.7' @ 1353 Hrs.			

5 10 15 20 25 30 35 40 45

Preliminary

JB-128
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 312983.3 **JB-129**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1495692.3 **1 of 1**

TOP ELEV: COMPLETED: July 19, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray, silty fine SAND w/shells (SM)		WH/1.0-1	
4.50	Wet, olive gray, soft lean CLAY w/sand (CL)		WH-WH-WH	29.8
7.00	V. moist, gray, soft lean CLAY w/sand (CL)		WR/1.0-WH	
9.50	Wet, gray, soft lean CLAY (CL)		WH/1.0-1	
14.50	Wet, gray, clayey fine SAND (SC)		1-2-16	30.9
			1-2-2	
19.50	Moist, dk. greenish gray, silty, v. fine SAND (SM) PPR 15.0'-16.5': 4.5, 4.5, 4.0 PPR 17.5'-19.0': >4.5, >4.5, >4.5		6-14-16	40.2
			6-7-11	
22.00	V. moist, dk. gray, clayey fine SAND (SC) PPR 20.0'-21.5': 1.0, 2.0, 1.5		6-10-12	
24.50	V. moist, dk. gray, clayey fine SANDw/tr. shells (SC) PPR 22.5'-24.0': 3.0, 2.0, 0.5		7-12-15	
26.50	V. moist, olive gray, silty fine SAND w/tr. shells (SM) PPR 25.0'-26.5': 4.0, 3.0, 3.0		3-9-12	

BOTTOM OF HOLE

Depth of bay water @ start of boring 10.8' @ 1539 Hrs.

Preliminary

JB-129

GROUNDWATER DATA

WHILE DRILLING:

ON COMPLETION:

Hr. READING:

Fill | Auger | SPT | RB

Cored | 300 lb | Tubex | Hand

Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 315680.9 **JB-130**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1495196.6 **1 of 1**

TOP ELEV: COMPLETED: June 2, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded, fine SAND w/shells (SP)		WH-WH-WH	29.8
4.50			WH-WH-WH	
	Wet, grayish brown, soft lean CLAY w/sand (CL)		WH/1.0-1	29.0
7.00				
	Wet, dk. gray, soft sandy lean CLAY w/shells (CL)		WH-WH-WH	33.4
9.50				
	Wet, olive gray, clayey, fine SAND (SC)		WH-WH-WH	32.0
12.00				
	Moist, olive gray, soft clayey SAND (SC) PPR 12.5'-14.0': 2.5, 1.0, 0.5		1-1-4	41.3
14.50				
	Wet, olive gray, clayey, fine SAND (SC)		4-6-5	
			6-9-11	
19.50				
	Moist, olive gray, silty, fine SAND w/tr. shells (SM/SC)		10-10-11	
			12-12-19	
24.50				
	Wet, olive gray, silty, v. fine SAND (SM)		2-5-7	
27.00				
	Wet, olive gray, silty, v. fine SAND w/tr. shells (SM)		4-6-10	
			2-5-12	
32.00				
	V. moist, olive gray, silty, fine SAND w/shells (ML)		5-7-12	
34.50				
	Moist, olive gray, firm SILT w/tr. sand (ML) PPR 35.0'-36.5': >4.5, >4.5, >4.5		4-8-16	
37.00				
	Moist, olive gray, firm SILT w/tr. sand & shells (ML) PPR 37.5'-39.0': >4.5, >4.5, >4.5		5-12-16	
41.50	PPR 40.0'-41.5': 2.0, 4.0, 1.5		4-7-11	
	BOTTOM OF HOLE Depth of bay water @ start of boring 8.8' @ 1014 Hrs.			

5 10 15 20 25 30 35 40 45

Preliminary

JB-130
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 317360.8 **JB-131**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1496710.4 **1 of 1**

TOP ELEV: COMPLETED: August 3, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, olive gray & yellowish brown, silty fine SAND w/shells (SM)		1-2-5	
4.50	Wet, olive gray, silty fine SAND w/shells (SM)		2-5-3	28.5
7.00	Wet, lt. olive brown, silty fine SAND w/shells (SM)		1/1.5	
9.50	Wet, dk. gray, clayey fine SAND (SC/SM)		WH/1.0-1	30.0
12.00	Wet, v. dk. grayish brown, soft sandy lean CLAY (CL)		WH-WH-WH	36.9
14.50	Wet, dk. gray, clayey fine SAND (SC)		2-6-4	31.4
17.00	V. moist, dk. greenish gray, sandy SILT (ML)		2-4-8	
19.50	V. moist, olive gray, silty fine SAND w/tr. shells (SM)		6-7-9	
22.00	V. moist, olive gray, silty fine SAND w/shells (SM)		4-17-19	
24.50	V. moist, dk. greenish gray, silty fine SAND w/tr. shells (SM)		4-6-9	30.6
26.50	V. moist, olive gray, silty fine SAND w/tr. shells (SM)		2-5-7	

BOTTOM OF HOLE

Depth of bay water @ start of boring 9.3' @ 1438 Hrs.

Preliminary

JB-131

GROUNDWATER DATA

WHILE DRILLING:

ON COMPLETION:

Hr. READING:

Fill | Auger | SPT | RB

Cored | 300 lb | Tubex | Hand

Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 317914.9 **JB-201**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1506169.8 **1 of 1**

TOP ELEV: COMPLETED: September 10, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray, poorly graded fine SANSD w/silt & shells (SP-SM)		WH/1.0-1	
4.50	Wet, dk. gray, poorly graded silty fine SAND w/tr. of shells (SM)		WH/1.0-1	22.6
7.00	Wet, grayish brown, poorly graded fine SAND w/silt (SP-SM)	5	3-3-2	
9.50	Wet, gray, silty fine SAND (SM)		WH-1-1	
12.00	Wet, gray, poorly graded fine SAND w/silt (SP-SM)	10	WH-1-1	
14.50	Wet, gray, poorly graded fine SAND (SP-SM)		WH-1/1.0	24.4
17.00	Wet, lt. olive brown, poorly graded fine SAND (SP-SM)	15	6-2-2	
19.50	Wet, dk. yellowish brown, poorly graded fine SAND (SP-SM)		WH-1-1	
22.00	Wet, olive brown, poorly graded GRAVEL w/silt & sand (GP-GM)	20	6-38-45	9.3
24.50	Wet, brown, poorly graded fine SAND w/silt (SP-SM)		28-8-6	
27.00	Wet, lt. olive brown, poorly graded fine SAND (SP)	25	6-1-2	
29.50	Wet, olive gray, soft clayey SAND (SC) PPR 27.5'-29.0': <0.5, <0.5, <0.5		4-2-3	28.6
32.00	Wet, dk. gray, soft clayey SAND (SC) PPR 30.0'-31.5': <0.5, <0.5, <0.5	30	6-10-6	
37.00	Moist, dk. gray, soft to firm fat CLAY (CH) PPR 32.5'-34.0': 1.0, 0.8, 0.8	35	WH-1-1 / 1-2-2	
39.50	V. moist, dk. gray, soft fat CLAY (CH) PPR 37.5'-39.0': <0.5, <0.5, <0.5		WH/1.5	
41.50	Moist, dk. gray, firm fat CLAY (CH) PPR 40.0'-41.5': 1.0, 1.0, 1.2	40	WH-3-1	
	BOTTOM OF HOLE	45		

Depth of bay water @ start of boring 12.7' @ 1215 Hrs.
Depth of bay water @ completion 12.3' @ 1600 Hrs.

Preliminary

JB-201
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 315769.8 **JB-202**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1506114.2 **1 of 1**

TOP ELEV: COMPLETED: September 11, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded fine SAND w/tr. shells (SP)		WH/1.0-1	
				34.0
			WH-1-2	
4.50				
	Wet, dk. gray, poorly graded fine SAND w/silt (SP-SM)	5	1-1-2	
7.00				31.4
	Wet, dk. gray, poorly graded fine SAND (SP-SM)		1-2-3	
9.50				
	Wet, dk. gray, poorly graded silty fine SAND (SM)	10	1-4-3	
				31.9
			1-1/1.0	
14.50				
	Wet, olive gray, soft sandy SILT (ML) PPR 15.0'-16.5': <0.5, <0.5, <0.5	15	WH/1.5	
17.00				
	V. moist, olive gray, soft SILT (ML/CL) PPR 17.5'-19.0': <0.5, <0.5, <0.5		WH/1.5	
19.50				
	Wet, dk. gray, soft sandy SILT (ML) PPR 20.0'-21.5': <0.5, <0.5, <0.5	20	WH/1.5	
	PPR 22.5'-24.0': <0.5, <0.5, <0.5		WH/1.5	
24.50				
	V. moist, dk. gray, soft lean CLAY (CL) PPR 25.0'-26.5': <0.5, <0.5, <0.5	25	WH/1.5	
	PPR 27.5'-29.0': <0.5, <0.5, <0.5		WH/1.5	
29.50				
	V. moist, dk. gray, soft lean CLAY w/tr. shells (CL) PPR 30.0'-31.5': <0.5, <0.5, <0.5	30	WH/1.5	
	PPR 32.5'-34.0': <0.5, <0.5, <0.5		WH/1.5	
34.50				
	Wet, dk. gray, v. soft, fat CLAY (CH) PPR 35.0'-36.5': <0.5, <0.5, <0.5	35	WH/1.5	
37.00				
	V. moist, dk. gray, v. soft fat CLAY w/tr. shells (CH) PPR 37.5'-39.0': <0.5, <0.5, <0.5		WH/1.5	
	PPR 40.0'-41.5': <0.5, <0.5, <0.5	40	WH/1.5	
	PPR 45.0'-46.5': <0.5, <0.5, <0.5	45	WH/1.5	
46.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 7.1' @ 0835 Hrs. Depth of bay water @ completion 8.1' @ 1115 Hrs.			

Preliminary

JB-202
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 317350.1 **JB-203**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1505037.8 **1 of 1**

TOP ELEV: COMPLETED: September 11, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	EMPTY JAR		WR/1.0-WH	
2.00				
	Wet, dk. gray, v. soft lean CLAY (CL) PPR 2.5'-4.0': <0.5, <0.5, <0.5		WR/1.0-WH	
4.50 P				
	Wet, dk. gray, v. soft silty fine SAND (SM) PPR 5.0'-6.5': <0.5, <0.5, <0.5	5	WH/1.5	
7.00				
	Wet, grayish brown, silty fine SAND (SM)		WH-1-1	
9.50				
	Wet, olive brown, silty fine SAND (SM)	10	1-1-1	26.1
12.00				
	Wet, yellowish brown, silty fine SAND (SM)		1-1-2	
14.50				
	Wet, dk. yellowish brown, poorly graded fine SAND w/silt (SP-SM)	15	1-2-12	
17.00				
	V. moist, v. dk. gray, soft clayey SAND (SC) PPR 17.5'-19.0': <0.5, <0.5, <0.5 PPR 20.0'-21.5': <0.5, <0.5, <0.5		4-3-3	31.7
		20	WH/1.5	
22.00				
	V. moist, v. dk. gray, soft lean CLAY w/sand (CL) PPR 22.5'-24.0': <0.5, <0.5, <0.5		2-2-3	
24.50				
	V. moist, v. dk. gray, soft lean CLAY w/tr. sand (CL) PPR 25.0'-26.5': <0.5, <0.5, <0.5	25	WH/1.0-2	
27.00				
	V. moist, dk. gray, soft lean CLAY (CL/CH) PPR 27.5'-29.0': <0.5, <0.5, <0.5		1/1.5	
29.50				
	V. moist, dk. gray, sandy fat CLAY (CH) PPR 30.0'-31.5': 0.5, 0.8, 0.8 PPR 32.5'-34.0': 0.5, 0.5, 0.8 PPR 35.05'-36.5': 0.8, 0.5, 0.8 PPR 37.5'-39.0': 0.8, 0.5, 0.5	30	1-1-2	51.3
			1-1-1	
		35	1-2-2	
39.00			1-3-2	
	BOTTOM OF HOLE	40		
	Depth of bay water @ start of boring 12.2' @ 1330 Hrs. Depth of bay water @ completion 12.2' @ 1600 Hrs.	45		

Preliminary

JB-203	GROUNDWATER DATA	P - indicates pressed shelby tube sample obtained from an additional boring.
GROUNDWATER DATA	WHILE DRILLING:	Fill, Auger, SPT, RB
WHILE DRILLING:	ON COMPLETION:	Cored, 300 lb, Tubex, Hand
ON COMPLETION:	Hr. READING:	Fish Tail, Vibra Core, Water Jet, Odex
Hr. READING:		

STA. MID-BAY ISLAND FEASIBILITY STUDY N 315051.7 **JB-204**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1504776.6 **1 of 1**

TOP ELEV: COMPLETED: September 12, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, v. dk. gray, poorly graded fine SAND w/shells (SP)		1-1-1	
2.00				
	Wet, dk. gray, silty fine SAND w/tr. shells (SM)		WH/1.5	
	PPR 2.5'-4.0': <0.5, <0.5, <0.5			
4.50				
	Wet, dk. gray, sandy soft SILT (ML)	5	WH/1.5	
	PPR 5.0'-6.5': 0.5, 0.5, <0.5			
7.00				
	V. moist, olive gray, soft elastic SILT (MH)		WH/1.5	
	PPR 7.5'-9.0': 0.5, 0.5, 0.5			57.9
	PPR 10.0'-11.5': 0.5, 0.5, 0.5	10	WH/1.5	
	PPR 12.5'-14.0': 0.5, 0.5, <0.5		WH/1.5	
	PPR 15.0'-16.5': <0.5, <0.5, 0.5	15	WH/1.5	
	PPR 17.5'-19.0': 0.5, 0.5, 0.5		WH/1.5	
	PPR 20.0'-21.5': 0.5, 0.5, 0.5	20	WH/1.5	
	PPR 22.5'-24.0': 0.5, <0.5, 0.5		WH/1.5	
	PPR 25.0'-26.5': <0.5, <0.5, 0.5	25	WH/1.5	
	PPR 27.5'-29.0': 0.5, 0.5, <0.5		WH/1.5	
	PPR 30.0'-31.5': 0.5, 0.5, 0.5	30	WH/1.5	
32.00				
	Wet, dk. gray, silty fine SAND (SM/SC)		WH/1.5	
	PPR 32.5'-34.0': <0.5, <0.5, 0.5			
34.50				
	Wet, dk. gray, silty fine SAND w/tr. shells (SM)	35	WH/1.5	
	PPR 35.0'-36.5': 0.5, 0.5, <0.5			
37.00				
	Wet, dk. gray, clayey fine SAND w/tr. shells (SC)		1-1/1.0	
	PPR 37.5'-39.0': <0.5, <0.5, <0.5			
39.50				
	V. moist, v. dk. gray, silty fine SAND (SM)	40	1-1-1	
41.50	PPR 40.0'-41.5': <0.5, <0.5, <0.5			
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 10.4' @ 0835 Hrs.			
	Depth of bay water @ completion 10.9' @ 1100 Hrs.	45		

P

Preliminary

JB-204	GROUNDWATER DATA
GROUNDWATER DATA	WHILE DRILLING:
WHILE DRILLING:	ON COMPLETION:
ON COMPLETION:	Hr. READING:
Hr. READING:	

P - indicates pressed shelby tube sample obtained from an additional boring.

Fill **Auger** **SPT** **RB**
Cored **300 lb** **Tubex** **Hand**
Fish Tail **Vibra Core** **Water Jet** **Odex**

STA. MID-BAY ISLAND FEASIBILITY STUDY N 319104.6 **JB-205**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1504254.1 **1 of 1**

TOP ELEV: COMPLETED: September 12, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray, poorly graded fine SAND w/silt & shells (SP-SM)		WH/1.5	
4.50	Wet, yellowish brown, silty fine SAND w/tr. shells (SM)		WH-1-1	
7.00	Wet, yellowish brown, silty fine SAND (SM)		2-3-6	22.8
9.50	Wet, yellowish brown, poorly graded fine SAND w/silt (SP-SM)		3-13-5	
12.00	Wet, yellowish brown, poorly graded fine SAND (SP-SM)		11-14-4	22.8
14.50	EMPTY JAR		6-4-1	
17.00	Wet, brown, poorly graded fine SAND w/silt (SP-SM)		4-2-1	
22.00	Wet, brown, poorly graded fine SAND (SP-SM)		4-3-3 13-7-28	
24.50	Rusted metal flakes		3-3-4	
27.00	Wet, v. dk. greenish gray, soft clayey SAND (SC)		WH/1.0-1	
32.00	Wet dk. gray, silty fine SAND (SM)		WH/1.5 WH/1.0-1	
34.50	V. moist, dk. gray, clayey fine SAND (SC)		1-1-2	
36.50	V. moist, dk. gray, clayey v. fine SAND (SC)		1-1-2	

BOTTOM OF HOLE

Depth of bay water @ start of boring 14.2' @ 1130 Hrs.
Depth of bay water @ completion NE @ 1530 Hrs.

5 10 15 20 25 30 35 40 45

Preliminary

JB-205
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 317807.5 **JB-206**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1503953.8 **1 of 1**

TOP ELEV: COMPLETED: September 13, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, gray, silty fine SAND w/tr. shells (SM)		WH-2-2	
4.50	Wet, gray, silty fine SAND (SM)		WH-1-3	
7.00	Wet, yellowish brown, silty fine SAND (SM)		3-3-4	
9.50	Wet, lt. olive brown & gray, silty fine SAND (SM)		1-3-1	22.4
12.00	Wet, lt. olive brown, silty v. fine SAND (SM) PPR 10.0'-11.5': <0.5, <0.5, <0.5		1/1.0-1	
17.00	Wet, lt. olive brown, silty fine SAND (SM)		WH-1-1 1-2-3	22.4
19.50	Wet, strong brown, poorly graded SAND w/silt & gravel (SP-SM)		36-36-20	
22.00	Wet, dk. gray,silty v. fine SAND (SM)		2-1-1	
24.50	Wet, dk. gray, soft sandy SILT (ML/SM) PPR 22.5'-24.0': <0.5, <0.5, <0.5		WH/1.0-1	
27.00	V. moist, dk. gray, soft lean CLAY w/sand (CL) PPR 25.0'-26.5': <0.5, <0.5, <0.5		WH/1.0-2	
29.50	V. moist, dk. gray, soft lean CLAY (CL) PPR 27.5'-29.0': 0.5, 0.5, 0.5		1-2-2	
34.00	V. moist, dk. gray, soft to firm fat CLAY (CH)		1-2-2 2-2-2	

BOTTOM OF HOLE

Depth of bay water @ start of boring 12.6' @ 1330 Hrs.
Depth of bay water @ completion 12.9' @ 1615 Hrs.

Preliminary

JB-206
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 315336.8 **JB-207**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1503646.1 **1 of 1**

TOP ELEV: COMPLETED: September 14, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray, poorly graded fine-med. SAND w/shells (SP)		WH-2-3	
4.50	Wet, lt. olive gray, poorly graded fine SAND w/silt (SP-SM)		1-4-5	22.3
7.00	Wet, lt. olive gray, poorly graded fine SAND (SP-SM)	5	2-3-3	
9.50	Wet, lt. brown, gray, poorly graded fine SAND (SP)		2-1-1	
12.00	Wet, strong brown, poorly graded fine SAND w/silt (SP-SM)	10	2-7-8	25.1
14.50	Wet, yellowish brown & lt. gray, silty fine SAND (SM)		2-4-5	19.8
17.00	Wet, yellowish brown, poorly graded fine SAND w/silt (SP-SM)	15	1-2-4	
19.50	Wet, grayish brown, poorly graded SAND w/gravel (SP)		5-13-10	
22.00	V. moist, dk. gray, soft lean CLAY w/sand (CL) PPR 20.0'-21.5': <0.5, <0.5, <0.5	20	8-7-3	
24.50	V. moist, dk. gray, soft lean CLAY (CL) PPR 22.5'-24.0': <0.5, <0.5, <0.5		1-1-1	
29.50	V. moist, dk. greenish gray, soft to firm lean CLAY (CL/CH) PPR 25.0'-26.5': 0.5, 0.5, 0.5 PPR 27.5'-29.0': 0.5, 0.5, 0.5	25	1-2-2 1-1-2	
31.50	V. moist, dk. greenish gray, firm lean CLAY (CL/CH) PPR 30.0'-31.5': 0.5, 0.8, 0.5	30	2-2-2	
	BOTTOM OF HOLE	35		
	Depth of bay water @ start of boring 8.1' @ 0800 Hrs. Depth of bay water @ completion 8.3' @ 0930 Hrs.	40		
		45		

Preliminary

JB-207
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 318739.0 **JB-208**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1502683.6 **1 of 1**

TOP ELEV: COMPLETED: September 14, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray, poorly graded fine SAND w/tr. shells (SP)		WH-1-2	
4.50	Wet, gray, poorly graded fine SAND w/silt (SP-SM)		2-2-4	
7.00	Wet, yellowish brown & gray, poorly graded fine SAND w/silt (SP-SM)		1-3-7	23.4
9.50	Wet, yellowish brown, poorly graded fine SAND w/silt (SP-SM)		2-2-2	
12.00	Wet, olive brown, poorly graded SAND w/silt & gravel (SP-SM)		1-5-12	15.4
14.50	Wet, lt. olive brown, clayey fine SAND (SC/SM) PPR 12.5'-14.0': <0.5, <0.5, <0.5		1-1-2	
19.50	Wet, dk. gray, silty fine SAND (SM) PPR 15.0'-16.5': <0.5, <0.5, <0.5 PPR 17.5'-19.0': <0.5, <0.5, <0.5		WH/1.0-1 1-1-1	32.2
22.00	V. moist, dk. gray, clayey v. fine SAND (SC/SM) PPR 20.0'-21.5': <0.5, <0.5, <0.5		1-1-1	
24.50	V. moist, dk. gray, soft lean CLAY (CL) PPR 22.5'-24.0': 0.5, 0.5, 0.5		1-1-1	
31.50	V. moist, dk. gray, firm fat CLAY (CH) PPR 25.0'-26.5': 1.0, 1.0, 1.0 PPR 27.5'-29.0': 1.5, 1.0, 1.0 PPR 30.0'-31.5': 1.0, 0.8, 0.8		1-2-1 1-2-3 1-2-2	

BOTTOM OF HOLE

Depth of bay water @ start of boring 11.6' @ 1000 Hrs.
Depth of bay water @ completion 12.0' @ 1145 Hrs.

5 10 15 20 25 30 35 40 45

Preliminary

JB-208
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 316917.4 **JB-209**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1502601.5 **1 of 1**

TOP ELEV: COMPLETED: September 14, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray, silty fine SAND w/shells (SM)		WH-4-2	
4.50	Wet, lt. olive brown, poorly graded fine SAND w/silt (SP-SM)		WH-3-4	
9.50	Wet, lt. yellowish brown, silty fine SAND (SM)		1-3-4 1-2-2	23.5
12.00	V. moist, dk. gray, soft lean CLAY w/sand (CL)		WH-1/1.0	
14.50	Wet, dk. gray, silty fine SAND (SM)		3-3-7	19.3
17.00	Wet, gray, silty fine-med. SAND (SM)		8-6-2	
19.50	V. moist, v. dk. greenish gray, firm fat CLAY (CH) PPR 17.5'-19.0': 0.5, 0.5, 0.5		1-1-1	54.8
29.00	V. moist, dk. greenish gray, firm fat CLAY (CH) PPR 20.0'-21.5': 0.5, 0.5, 0.5 PPR 22.5'-24.0': 0.8, 0.5, 0.8 PPR 25.0'-26.5': 0.8, 0.5, 0.5 PPR 27.5'-29.0': 1.0, 1.2, 0.8		2-2-2 1-1-1 1-2-3 1-1-2	
	BOTTOM OF HOLE			

Depth of bay water @ start of boring 10.5' @ 1400 Hrs.
Depth of bay water @ completion 10.8' @ 1540 Hrs.

Preliminary

JB-209
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 314405.3 **JB-210**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1502151.0 **1 of 1**

TOP ELEV: COMPLETED: September 14, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, lt. brownish gray, silty fine SAND w/tr. shells (SM)		WH/1.0-1	
9.50	Wet, lt. brownish gray, poorly graded fine SAND w/silt (SP-SM)		4-5-6	
			1-2-2	25.9
			WH/1.5	
12.00	Wet, dk. gray, clayey fine SAND (SC)		WH-2-5	
17.00	Wet, gray, poorly graded fine SAND w/silt (SP-SM)		1-1-1	
			2-4-6	23.1
19.50	Wet, dk. gray, poorly graded coarse SAND w/gravel (SP)		12-25-16	
22.00	Wet, greenish gray, poorly graded fine SAND w/silt (SP-SM)		3-6-8	
24.50	V. moist, dk. greenish gray, soft-firm fat CLAY (CH)		2-3-11	
29.50	Wet, dk. greenish gray, poorly graded fine SAND w/silt (SP-SM)		3-4-4	
			1-1-2	26.3
34.50	Wet, olive gray, poorly graded fine SAND w/silt (SP-SM)		2-3-6	
			1-1-1	
37.00	V. moist, dk. gray, soft fat CLAY (CH) PPR 35.0'-36.5': <0.5, <0.5, <0.5		1/1/1.0	
41.50	V. moist, olive gray, clayey fine SAND (SC)		7-3-4	
			WH-1-1	

BOTTOM OF HOLE

Depth of bay water @ start of boring 9.3' @ 1605 Hrs.
Depth of bay water @ completion NE @ 1810 Hrs.

Preliminary

JB-210
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 312396.4 **JB-211**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1501347.0 **1 of 1**

TOP ELEV: COMPLETED: September 16, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, lt. olive brown, silty fine SAND (SM)		WH-2-2	
4.50	Wet, yellowish brown & gray, poorly graded fine SAND (SP) w/silt		1-2-5	24.8
7.00	Wet, brownish yellow, poorly graded fine SAND (SP)		4-7-4	
9.50	Wet, dk. gray, silty fin SAND (SM)		WH-1-5	
12.00	V. moist, dk. gray, soft lean CLAY (CL) PPR 10.0'-11.5': <0.5, <0.5, <0.5		WH/1.0-1	38.0
14.50	Wet, dk. gray, silty fine-med. SAND (SM)		1-5-5	
17.00	Wet, dk. gray, poorly graded fine-med. SAND w/silt (SP-SM)		2-4-5	23.6
22.00	V. moist, dk. greenish gray, silty v. fine SAND (SM) PPR 20.0'-21.5': 1.1, 1.1, 1.5		2-5-8 5-8-11	
24.50	Moist, olive gray, hard silty v. fine SAND (SM/ML) PPR 22.5'-24.0': 2.5, 2.8, 3.0		6-12-25	
26.50	Moist, olive gray, hard sandy SILT w/tr. shells (ML/SM) PPR 25.0'-26.5': >4.5, 4.0, 4.0		11-16-21	

BOTTOM OF HOLE

Depth of bay water @ start of boring 7.0' @ 0840 Hrs.
Depth of bay water @ completion 7.3' @ 1015 Hrs.

Preliminary

5 10 15 20 25 30 35 40 45

JB-211
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 310611.3 **JB-212**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1500708.2 **1 of 1**

TOP ELEV: COMPLETED: September 16, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, gray, silty fine SAND (SM)		WH/1.0-1	
2.00				
	Wet, lt. olive brown & reddish brown, poorly graded fine SAND w/ silt (SP-SM)		2-12-10	23.5
4.50				
	Wet, brownsih yellow, poorly graded fine SAND w/silt (SP-SM)	5	8-9-5	25.9
7.00				
	Wet, lt olive brown, poorly graded fine SAND (SP)		WH/1.0-2	
9.50				
	V. moist, dk. gray, soft fat CLAY w/sand (CH) PPR 10.0'-11.5': <0.5, <0.5, <0.5	10	WH/1.5	41.1
12.00				
	Wet, dk. gray, poorly graded fine-med. SAND w/silt (SP-SM)		2-3-4	
		15	5-6-2	25.1
17.00				
	V. moist, dk. greenish gray, firm fat CLAY (CH) PPR 17.5'-19.0': <0.5, <0.5, <0.5		WH-1-1	
19.00	P			
19.50	V. moist, dk. gray, silty fine SAND (SM)			51.0
20.00	V. moist, dk. greenish gray, firm fat CLAY w/sand (CH)	20		
	V. moist, dk. greenish gray, firm fat CLAY (CH) PPR 20.0'-21.5': <0.5, <0.5, <0.5		1-1-1	
22.00				
	V. moist, dk. greenish gray, soft fat CLAY w/sand lense (CH) PPR 22.5'-24.0': <0.5, <0.5, <0.5		1-1-1	
24.50				
	V. moist, dk. greenish gray, soft-firm fat CLAY w/tr. shells (CH) PPR 25'-26.5': <0.5, <0.5, <0.5	25	2-1-2	
26.50				
	BOTTOM OF HOLE			

Depth of bay water @ start of boring 7.5' @ 1030 Hrs.
Depth of bay water @ completion 7.4' @ 1200 Hrs.

Preliminary

JB-212 GROUNDWATER DATA	GROUNDWATER DATA
WHILE DRILLING:	WHILE DRILLING:
ON COMPLETION:	ON COMPLETION:
Hr. READING:	Hr. READING:

P - indicates pressed shelby tube sample obtained from an additional boring.

Fill **Auger** **SPT** **RB**
Cored **300 lb** **Tubex** **Hand**
Fish Tail **Vibra Core** **Water Jet** **Odex**

STA. MID-BAY ISLAND FEASIBILITY STUDY N 318308.1 **JB-213**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1500462.0 **1 of 1**

TOP ELEV: COMPLETED: September 16, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, black, silty fine SAND w/shells (SM)		WH/1.0-2	
4.50	Wet, lt. olive brown, poorly graded fine SAND w/silt (SP-SM)		3-4-5	26.5
7.00	Wet, dk. gray, silty fine SAND w/tr. gravel (SM)		1-1-1	
9.50	Wet, olive yellow, silty fine SAND (SM)		3-4-6	23.4
12.00	Wet, lt. olive brown, poorly graded fine SAND w/silt (SP-SM)		1-4-7	
14.50	Wet, lt. olive brown poorly graded fine-med. SAND (SP)		4-3-2	
17.00	Wet, dk. greenish gray, silty fine SAND w/tr. shells (SM)		1-1-1	27.1
22.00	V. moist, dk. gray, soft lean CLAY (CL) PPR 17.5'-19.0': <0.5, <0.5, <0.5 PPR 20.0'-21.5': <0.5, <0.5, <0.5		WH/1.0-1 WH/1.0-1	39.0
24.50	Wet, v. dk. gray, silty fine SAND (SM)		4-5-11	
26.50	V. moist, greenish gray, silty fine SAND (SM)		2-3-5	

BOTTOM OF HOLE

Depth of bay water @ start of boring 9.9' @ 1255 Hrs.
Depth of bay water @ completion 9.5' @ 1415 Hrs.

Preliminary

JB-213
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 306825.7 **JB-214**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1500417.5 **1 of 1**

TOP ELEV: COMPLETED: September 20, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, lt. olive brown, silty v. fine SAND (SM)		1-1-2	
4.50	Wet, lt. olive brown, sandy SILT (ML)		1-1/1.0	26.2
7.00	Wet, grayish brown, SILT w/sand (ML)		WH/1.0-1	
9.50	Wet, grayish brown, soft lean CLAY w/sand(CL)		WH/1.5	31.8
12.00	Wet, dk. gray, soft clayey SAND (SC)		WH/1.5	31.6
14.50	Wet, dk. gray, soft clayey SAND (SC/CL)		WH/1.5	
17.00	Wet, dk. gray, clayey SAND w/tr. gravel (SC)		1-9-77	
19.50	Wet, dk. gray, silty fine SAND w/tr. gravel (SM)		10-5-5	
22.00	Wet, olive gray, silty fine SAND w/tr. gravel (SM)		7-9-10	
	Wet, olive gray, sandy SILT (ML/CL) PPR 22.5'-24.0': >4.5, >4.5, >4.5		14-15-17	
26.50	PPR 25.0'-26.5': 1.5, 1.5, 2.0		4-4-6	

BOTTOM OF HOLE

Depth of bay water @ start of boring 6.2' @ 1433 Hrs.
Depth of bay water @ completion 7.0' @ 1601 Hrs.

Preliminary

JB-214
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 305714.0 **JB-215**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1500576.6 **1 of 1**

TOP ELEV: COMPLETED: September 20, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, soft lean CLAY (CL)		WH/1.5	
2.00				
	Wet, olive gray, soft lean clayey SAND (SC)		WH-1-1	34.1
4.50				
	Wet, olive gray, soft sandy lean CLAY (CL)		WH-1-2	
7.00				
	Wet, olive gray, soft lean CLAY w/sand (CL)		WH-1-2	26.5
			WH/1.5	29.9
			WH/1.5	
14.50				
	Wet, dk. gray, clayey SAND (SC)		1-1/1.0	
17.00				
	Moist, olive gray, soft to firm sandy fat CLAY (CH)		3-5-7	42.1
	PPR 17.5'-19.0': 2.5, 2.5, 2.0			
	PPR 20.0'-21.5': 3.0, 3.5, 2.5		3-5-7	
	PPR 22.5'-24.0': 4.5, 4.0, 4.0		3-7-9	
	PPR 25.0'-26.5': 3.0, 3.5, 3.0		6-7-23	
26.50	BOTTOM OF HOLE			

Depth of bay water @ start of boring 6.3' @ 1626 Hrs.
Depth of bay water @ completion 6.9' @ 1742 Hrs.

P

5 10 15 20 25 30 35 40 45

Preliminary

JB-215	
GROUNDWATER DATA	GROUNDWATER DATA
WHILE DRILLING:	WHILE DRILLING:
ON COMPLETION:	ON COMPLETION:
Hr. READING:	Hr. READING:

P - indicates pressed shelby tube sample obtained from an additional boring.

Fill **Auger** **SPT** **RB**
Cored **300 lb** **Tubex** **Hand**
Fish Tail **Vibra Core** **Water Jet** **Odex**

STA. MID-BAY ISLAND FEASIBILITY STUDY N 304831.8 **JB-216**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1498881.7 **1 of 1**

TOP ELEV: COMPLETED: September 21, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, v. dk. gray, poorly graded fine SAND w/silt & shells (SP-SM)		WH-1	
2.00				
	Wet, dk. gray, poorly graded fine SAND w/silt & tr. of shells (SP-SM)		2-1-1	24.0
4.50				
	Wet, lt. olive brown, poorly graded fine SAND w/silt (SP-SM)	5	WH/1.0-1	
7.00				
	V. moist, dk. gray, soft lean CLAY (CL)		WH/1.5	
9.50				
	V. moist, dk. greenish gray, soft lean CLAY (CL)	10	WH/1.5	43.1
12.00				
	V. moist, dk. greenish gray, soft sandy lean CLAY (CL)		WH/1.0-1	43.8
14.50				
	V. moist, oive gray, soft to firm fat CLAY (CH/CL) PPR 15.0'-16.5': 2.5, 1.5, 1.5	15	1-1-4	
	PPR 17.5'-19.0': 1.0, 1.5, 1.0		5-4-6	
	PPR 20.0'-21.5': 1.0, --, --	20	3-6-9	
22.00				
	V. moist, olikve gray, soft lean CLAY w/sand (CL)		100/.3	
24.50				
	V. moist, olive gray, silty fine SAND (SM) PPR 25.0'-26.5': 1.0, 2.0, 1.5	25	12-11-16	
26.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 8.1' @ 0822 Hrs. Depth of bay water @ completion 8.0' @ 1002 Hrs.			

Preliminary

JB-216
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 304367.4 **JB-217**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1497597.1 **1 of 1**

TOP ELEV: COMPLETED: September 21, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, black, poorly graded fine SAND w/silt & shells (SP-SM)		WH/1.5	
2.00				
	Wet, dk. gray, soft lean CLAY w/sand (CL)		WH/1.5	
				36.5
5			WH/1.5	
7.00	P			39.2
	Wet, dk. gray, soft lean CLAY (CL/CH)		WH/1.5	
9.50				
	V. moist, dk. gray, soft fat CLAY (CH)			
10			WH/1.5	
12.00				
	Moist, dk. grayish brown, silty fine SAND (SM)		11-8-7	
14.50				28.3
	Wet, dk. grayish brown, silty fine SAND (SM)			
15			3-1-2	
17.00				
	Moist, olive gray, firm clayey SAND (SC) PPR 17.5'-19.0': 4.5, 4.0, 4.0		4-7-11	
				30.3
20	PPR 20.0'-21.5': 4.5, 4.5, >4.5		3-5-10	
22.00				
	V. moist, olive gray, silty fine SAND w/tr. of gravel (SM) PPR 22.5'-24.0': >4.5, >4.5, >4.5		100/.4	
24.50				
	V. moist, olive gray, silty fine SAND (SM) PPR 25.0'-26.5': 3.0, 3.0, 3.0			
25			5-8-10	
26.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 9.5' @ 1015 Hrs. Depth of bay water @ completion 9.7' @ 1141 Hrs.			

Preliminary

JB-217
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

P - indicates pressed shelby tube sample obtained from an additional boring.

Fill **Auger** **SPT** **RB**
Cored **300 lb** **Tubex** **Hand**
Fish Tail **Vibra Core** **Water Jet** **Odex**

STA. MID-BAY ISLAND FEASIBILITY STUDY N 307041.7 **JB-218**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1496672.0 **1 of 1**

TOP ELEV: COMPLETED: September 21, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded fine SAND w/silt & shells (SP-SM)		WH/1.5	
2.00				20.6
	Wet, dk. gray, poorly graded fine SAND w/silt (SP-SM)		5-3-3	
4.50				
	V. moist, dk. greenish gray, soft-firm lean CLAY w/sand (CL)		1/1.0-1	
				32.4
			WH/1.5	
9.50	P			39.7
	V. moist, dk. gray, soft lean CLAY w/sand (CL)		WH/1.0-1	
			3-10-6	
14.50				
	Wet, v. dk. grayish brown, silty fine SAND w/gravel (SM)		3-10-5	
17.00				
	Moist, lt. olive brown, soft to firm SILT (ML) PPR 17.5'-19.0': 2.0, 2.0, 1.0		5-5-8	
19.50				
	Moist, dk. greenish gray, firm lean CLAY (CL) PPR 20.0'-21.5': 4.0, >4.5, 4.0		3-4-7	
	PPR 22.5'-24.0': 4.0, 4.0, 4.0		8-8-10	
	PPR 25.0'-26.5': 3.0, 3.0, 4.0		6-8-14	
26.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 9.5' @ 1015 Hrs. Depth of bay water @ completion 9.7' @ 1141 Hrs.			

5 10 15 20 25

Preliminary

JB-218	
GROUNDWATER DATA	GROUNDWATER DATA
WHILE DRILLING:	WHILE DRILLING:
ON COMPLETION:	ON COMPLETION:
Hr. READING:	Hr. READING:

P - indicates pressed shelby tube sample obtained from an additional boring.

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 307702.2 **JB-219**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1498511.5 **1 of 1**

TOP ELEV: COMPLETED: September 21, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray & yellowish brown, silty fine SAND w/shells (SM)		WH-1-1	
4.50	V. moist, dk. gray, soft lean CLAY (CL)		1/1.5	
7.00	V. moist, dk. gray, soft lean CLAY w/shells (CL)		WH/1.5	
9.50	V. moist, dk. greenish gray, soft clayey SAND (SC)		WH/1.5	
12.00	V. moist, dk. greenish gray, soft clayey SAND w/tr. of sand (SC)		WH/1.5	36.6
15.75	V. moist, dk. greenish gray, soft clayey SAND (SC)		2-2-9	
17.00	Wet, dk. grayish brown, silty fine-med. SAND (SM)		2-1-4	
19.50	Wet, dk. grayish brown, silty med. SAND w/tr. of gravel (SM)		6-8-5	
20.75	Wet, dk. grayish brown, silty med. SAND (SM)		2-1-2	
22.00	V. moist, v. dk. gray, soft lean CLAY w/sand (CL)			
24.50	Wet, dk. gray silty med-coarse SAND (SM)		6-8-14	
26.50	Wet, greenish gray, clayey fine SAND (SC/SM)		1/1.0-1	
28.00	Wet, olive gray, clayey v. fine SAND (SC)		WH-1-4	

BOTTOM OF HOLE

Depth of bay water @ start of boring 8.9' @ 1438 Hrs.
Depth of bay water @ completion 10.5' @ 1549 Hrs.

5 10 15 20 25 30

Preliminary

JB-219
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 309919.0 **JB-220**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1495833.0 **1 of 1**

TOP ELEV: COMPLETED: September 22, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, lt. olive gray, soft sandy lean CLAY w/shells (CL)		WH/1.5	
4.50	Wet, lt. gray & lt. olive brown, soft sandy lean CLAY (CL) PPR 2.5'-4.0': --, 0.25, --		WH-1/1.0	27.6
7.00	Wet, dk. gray, poorly graded fine silty SAND (SM)		WH-1-1	24.0
9.50	Wet, olive gray, soft sandy lean CLAY (CL)		WH/1.0-2	
12.00	Wet, dk. yellowish brown, clayey SAND w/tr. of gravel (SC)		6-6-10	26.7
14.50	Wet, strong brown, silty SAND w/clay lense (SM) PPR 12.5'-14.0': 0.5, 0.5, 1.0		WH/0.5-1/1.0	34.6
17.00	Wet, strong brown, poorly graded fine-med. SAND w/silt (SP-SM)		1/1.0-2	
19.50	V. moist, olive gray, soft to firm lean CLAY (CL) PPR 17.5'-19.0': 2.0, 4.0, 2.0		1-2-2	
22.00	Moist, dk. greenish gray, fine silty SAND (SM) PPR 20.0'-21.5': 1.0, 1.0, 1.0	P	1-2-2	38.4
24.50	V. moist, dk. greenish gray, clayey v. fine SAND w/shells (SC) PPR 22.5'-24.0': 0.5, 0.5, 0.5		1-1-3	
26.50	V. moist, dk. greenish gray, silty v. fine SAND w/shells (SM) PPR 25.0'-26.5': 2.5, 1.0, 1.5		2-2-4	

5 10 15 20 25

BOTTOM OF HOLE

Depth of bay water @ start of boring 12.0' @ 0859 Hrs.
Depth of bay water @ completion 12.8' @ 1002 Hrs.

Preliminary

JB-220
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

P - indicates pressed shelby tube sample obtained from an additional boring.

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 311572.2 **JB-221**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1497864.0 **1 of 1**

TOP ELEV: COMPLETED: September 22, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, black, poorly graded fine SAND w/shells (SP)		WH-1-1	
4.50	Wet, lt. olive brown, silty fine-med. SAND (SM) PPR 2.5'-4.0': 0.25, 0.5, 0.25		1-2-2	24.3
7.00	Wet, lt. olive brown, poorly graded SAND w/silt (SP-SM)		WH-1/1.0	23.4
9.50	Wet, olive & dk. gray, soft lean CLAY w/sand (CL) PPR 7.5'-9.0': 0.25, 0.25, 0.25		WH-1/1.0	
14.50	Wet, dk. greenish gray, silty fine SAND (SM) PPR 12.5'-14.0': 0.25, 0.25, --		WH/1.5 WH/1.5	
17.00	Wet, dk. greenish gray, silty fine SAND w/tr. of gravel (SM)		WH-3-10	29.8
19.50	Wet, dk. greenish gray, silty fine SAND (SM)		2-2-2	
22.00	Wet, dk. gray, silty fine SAND w/silt lenses & tr. of gravel (SM) PPR 20.0'-21.5': 0.5, 0.5, 0.5		1-6-18	
24.50	Wet, dk. gray, poorly graded fine SAND w/silt (SP-SM)		3-4-7	
26.50	Wet, dk. gray, silty fine SAND (SM) PPR 25.0'-26.5': 4.5, 2.5, 1.0		2-4-6	
	BOTTOM OF HOLE Depth of bay water @ start of boring 7.0' @ 1055 Hrs. Depth of bay water @ completion 7.1' @ 1210 Hrs.			

5 10 15 20 25

Preliminary

JB-221
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 312864.3 **JB-222**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1500302.5 **1 of 1**

TOP ELEV: COMPLETED: September 22, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, dk. gray, poorly graded med. silty SAND w/shells (SM)		WH/1.5	
4.50	Wet, dk. gray, poorly graded med. silty SAND (SM)		WH/1.5	23.9
7.00	Wet, dk. gray, soft sandy SILT (ML) PPR 5.0'-6.5': 1.0, --, --		WH/1.5	28.3
10.25	Wet, gray, silty v. fine SAND (SM)		2-2-1	20.9
12.00	Wet, dk. gray, soft fat CLAY (CH)		WH/1.5	
14.50	Wet, gray, soft sandy lean CLAY (CL)		6-7-6	33.9
17.00	Wet, dk. grayish brown, poorly graded med. SAND w/silt (SP-SM)		1-2-8	
19.50	V. moist, olive gray, silty v. fine SAND (SM) PPR 17.5'-19.0': 3.5, 4.5, 1.5		2-5-8	
22.00	V. moist, olive gray, silty fine SAND w/tr. of gravel (SM)			
24.50	Moist, olive gray, silty fine SAND (SM)			
26.50	Moist, olive gray, sandy SILT w/tr. of shells (ML)			
	BOTTOM OF HOLE Depth of bay water @ start of boring 6.0' @ 1243 Hrs. Depth of bay water @ completion 6.3' @ 1412 Hrs.			

5 10 15 20 25

Preliminary

JB-222
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill Auger SPT RB
Cored 300 lb Tubex Hand
Fish Tail Vibra Core Water Jet Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 314609.0 **JB-223**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1500949.5 **1 of 1**

TOP ELEV: COMPLETED: September 16, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. grayish brown, silty fine SAND w/shells (SM)		WH-1-2	
2.00				
	Wet, strong brown, poorly graded fine SAND (SP)		5-6-8	
4.50				
	Wet, dk. yellowish brown, poorly graded fine SAND (SP)	5	WH-1-1	24.3
			WH/1.0-1	
9.50				
	V. moist, dk. gray, soft lean CLAY (CL/CH) PPR 10.0'-11.5': <0.5, <0.5, <0.5	10	2-2-2	
12.00				
	Wet, gray, poorly graded fine-med. SAND w/silt (SP-SM)		2-4-6	23.6
14.50				
	Wet, dk. gray, silty fine SAND (SM/SP-SM)	15	1-1-4	
17.00				
	Wet, gray, poorly graded fine-med. SAND (SP)		4-5-6	
19.50				
	Wet, gray, poorly graded med. SAND (SP)	20	5-8-6	18.0
			4-5-6	
24.50				
	V. moist, olive gray, silty fine SAND w/shells (SM) PPR 25.0'-26.5': 3.0, 2.8, 3.0	25	3-8-12	
26.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 9.5' @ 1430 Hrs. Depth of bay water @ completion 9.6' @ 1550 Hrs.			

Preliminary

JB-223
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 315336.9 **JB-224**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1498059.7 **1 of 1**

TOP ELEV: COMPLETED: September 22, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, yellowish brown & black, silty fine SAND w/shells (SM)		1-4-8	
2.00				
	Wet, yellowish brown, poorly graded silty SAND (SM)		4-6-9	
				25.6
		5	2-1-1	
7.00				
	Wet, yellowish brown, poorly graded silty SAND (SM)			
8.25	PPR 7.5'-9.0': 0.5, 0.5, --		WH/1.5	27.8
	Wet, dk. gray, silty fine SAND (SM)			
9.50				
	V. moist, dk. gray, soft fat CLAY w/tr. of sand (CH)	10	WH-1-6	
12.00				
	Wet, dk. gray, clayey fine SAND (SC/SM)			
	PPR 12.5'-14.0': 0.25, 0.25, --		1-3-6	
14.50				
	Wet, black & gray, silty fine SAND w/tr. of gravel (SM)	15		
			3-4-2	
17.00				
	Wet, gray, silty fine SAND w/tr. of gravel (SM/SC)			
			1-3-6	22.6
19.50				
	Wet, dk. gray, silty v. fine SAND (SM)	20		
			3-8-10	
22.00				
	Wet, dk. gray, silty fine SAND (SM)			
	PPR 22.5'-24.0': 1.0, 2.0, 1.0		1-1-3	
		25		
	PPR 25.0'-26.5': 1.5, 1.0, 1.5		3-5-7	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 9.3' @ 1450 Hrs.			
	Depth of bay water @ completion 9.0' @ 1555 Hrs.			

Preliminary

JB-224
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 315573.0 **JB-225**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1499949.3 **1 of 1**

TOP ELEV: COMPLETED: September 22, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, black & olive brown, silty fine SAND w/shells (SM)		WH-2-4	
2.00				
	Wet, yellowish brown, poorly graded fine SAND (SP)		5-4-4	24.2
4.50				
	Wet, yellowish brown, poorly graded fine SAND w/silt (SP-SM)	5	WH-1-2	23.6
7.00				
	Wet, dk. gray, soft sandy lean CLAY (CL)		WH/1.5	
		10		30.0
			2-15-11	
12.00				
	Wet, dk. gray, poorly graded med. SAND w/clay lense (SP)		5-2-1	
14.50				
	Wet, dk. gray, silty fine SAND w/tr. of gravel (SM) PPR 15.0'-16.5': 2.5, 3.0, 1.0	15	2-3-4	
15.75				
	V. moist, fk. greenish gray, soft lean CLAY w/sand (CL)			
17.00				
	V. moist, olive gray, silty fine-med. SAND (SM) PPR 17.5'-19.0': 3.0, 2.0, 2.0		4-7-10	
19.50				
	Wet, olive gray, silty fine SAND w/shells (SM) PPR 20.0'-21.5': 1.0, 1.0, 0.5	20	4-4-8	
22.00				30.0
	Wet, olive gray, silty fine SAND (SM) PPR 22.5'-24.0': 3.5, 3.5, --		4-8-13	
	PPR 25.0'-26.5': 3.5, 3.0, 3.0	25	3-6-8	
26.50				
	BOTTOM OF HOLE			

Depth of bay water @ start of boring 8.8' @ 1629 Hrs.
Depth of bay water @ completion 9.5' @ 1735 Hrs.

Preliminary

JB-225
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 316649.9 **JB-226**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1500577.2 **1 of 1**

TOP ELEV: COMPLETED: September 24, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded fine SAND w/shells (SP)		WH/1.0-2	
2.00				
	Wet, lt. olive brown, poorly graded fine SAND w/silt (SP-SM)		3-2-2	
4.50				
	Wet, lt. yellowish brown, poorly graded fine SAND w/silt (SP-SM)	5	1-1/1.0	25.2
			WR/1.5	
9.50				
	Wet, dk. gray, silty fine SAND (SM)	10	2-2-4	22.5
12.00				
	Wet, dk. grayish brown, poorly graded fine SAND w/silt (SP-SM)		WH/1.5	22.9
14.50				
	Wet, dk. grayish brown, poorly graded fine SAND (SP-SM)	15	WR/1.5	
15.75				
	Wet, dk. gray, soft fat CLAY (CH)			
18.25			13-8-7	
	Wet, v. dk. gray, silty fine SAND (SM)			
19.50				
	V. moist, olive gray, silty v. fine SAND (SM) PPR 20.0'-21.5': 3.0, 2.0, 2.0	20	1-2-3	
22.00				
	V. moist, dk. greenish gray, silty v. fine SAND (SM) PPR 22.5'-24.0': 1.5, 1.5, 0.5		2-3-5	38.6
	PPR 25.0'-26.5': 2.5, 2.5, 2.5	25	3-5-7	
26.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 10.9' @ 1117 Hrs. Depth of bay water @ completion 11.1' @ 1212 Hrs.			

Preliminary

JB-226
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 319394.1 **JB-227**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1499548.4 **1 of 1**

TOP ELEV: COMPLETED: September 24, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
2.00	Wet, gray, silty med. to fine SAND w/tr. of shell frags. (SM/SP-SM)		WH-2-2	
4.50	Wet, lt. yellowish brown, poorly graded med. to fine SAND w/silt & tr. of shell frags. (SP-SM)		1-2-4	
7.00	Wet, lt. yellowish brown, poorly graded med. to fine SAND w/silt & tr. of gravel (SP-SM)		3-2-1	25.1
9.50	Wet, pale yellow, poorly graded med. to fine SAND w/silt (SP-SM)		1-1-2	
12.00	Wet, lt. brownish gray, poorly graded med. to fine SAND (SP)		2-4-6	
14.50	Wet, lt. brownish gray, poorly graded med. to fine SAND w/tr. of gravel (SP)		27-16-17	20.2
17.00	Wet, lt. brownish gray, poorly graded med. to fine SAND (SP)		4-3-1	
19.50	Wet, lt. olive gray, silty med. to fine SAND w/tr. of gravel (SM)		1-3-4	
22.00	Wet, lt. olive gray, silty fine SAND (SM)		2-2-3	23.8
24.50	V. moist, lt. olive gray to olive yellow, silty fine SAND (SM) PPR 22.5'-24.0': 0.5, 0.5, 0.5		WR/1.5	
27.00	Moist, lt. yellowish brown, fine sandy lean CLAY (CL) PPR 25.0'-26.5': 1.5, 1.5, 0.5		2-2-2	
29.50	Moist, lt. brownish gray, clayey fine SAND (SC) PPR 27.5'-29.0': 2.0, 1.5, 0.5		1-3-5	
34.00	Moist, olive gray, fine sandy lean CLAY (CL) PPR 30.0'-31.5': 2.5, 1.0, 0.5 PPR 32.5'-34.0': 2.5, 2.5, 2.25		2-3-5 2-4-4	
	BOTTOM OF HOLE Depth of bay water @ start of boring 14.3' @ 1310 Hrs. Depth of bay water @ completion 14.3' @ 1449 Hrs.			

5 10 15 20 25 30 35

Preliminary

JB-227
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 316598.2 **JB-228**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1497597.8 **1 of 1**

TOP ELEV: COMPLETED: September 24, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded med. to fine SAND w/tr. of silt & shell frags. (SP-SM/SP)		WH/1.0-1	
2.00				
	Wet, grayish brown, poorly graded med. to fine SAND w/silt (SP-SM)		2-2-2	
				28.2
		5	WH/1.5	
7.00				
	V. moist, grayish brown, clayey med. to fine SAND (SC)		WR/1.0-WH	
9.50				
	Moist, grayish brown, sandy lean CLAY (CL)	10	WH/1.5	
				38.1
			3-4-8	
14.50				
	Wet, gray, poorly graded med. to fine SAND w/silt & tr. of gravel (SP-SM)	15	4-7-11	22.7
17.00				
	V. moist, dk. grayish brown, clayey med. to fine SAND (SC/SC-SM)		12-7-3	
19.50				
	V. moist, dk. grayish brown, silty med. to fine SAND w/tr. of gravel (SM)	20	12-17-21	
22.00				
	Wet, dk. gray, silty fine SAND w/tr. of gravel & shell frags. (SM)		7-6-8	
24.50				
	V. moist, dk. gray, silty fine SAND w/tr. of gravel & shell frags. (SM)	25	1-3-5	
26.50				
	BOTTOM OF HOLE			

Depth of bay water @ start of boring 10.5' @ 1520 Hrs.
Depth of bay water @ completion 11.1' @ 1626 Hrs.

Preliminary

JB-228
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 314904.5 **JB-229**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1495559.6 **1 of 1**

TOP ELEV: COMPLETED: September 24, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, lt. yellowish brown, silty med. to fine SAND w/tr. of gravel & shell frags. (SM) PPR 0.0'-1.5': 0.5, 0.5, --		2-1-1	
2.00	V. moist, gray, sandy lean CLAY (CL)			
			1/1.5	
				35.8
5				
			WH/1.5	
6.50				
7.25	P V. moist, dk. greenish gray, v. fine silty SAND (SM)			31.4
8.00	V. moist, dk. greenish gray, v. fine clayey SAND (SC)			
	V. moist, dk. gray, sandy lean to fat CLAY (CL/CH)		WH/1.5	
9.50				
10	V. moist, dk. gray, clayey med. to fine SAND w a +1" rock (SC)			
			WH/1.0-3	
12.00				
	Wet, gray, clayey med. to fine SAND w/tr. of gravel (SC)		2-3-4	35.8
14.50				
15	Moist, gray, clayey fine SAND (SC) PPR 15.0'-16.5': 3.0, 3.0, 3.0			
			2-5-8	
17.00				
	Moist, grayish brown, fine sandy lean to fat CLAY (CL/CH) PPR 17.5'-19.0': >4.5, >4.5, >4.5		4-7-10	
19.50				
20	Moist, grayish brown, clayey fine SAND w/tr. of shell frags. (SC/CL) PPR 20.0'-21.5': 3.0, 3.0, 3.0		6-4-8	
	PPR 22.5-24.0': 3.0, >4.5, 3.0		3-6-8	
24.50				
25	Moist, grayish brown, clayey fine SAND w/tr. of gravel & shell frags. (SC) PPR 25.0'-26.5': 3.0, 3.5, 3.5		3-8-12	
26.50				
	BOTTOM OF HOLE			
	Depth of bay water @ start of boring 10.1' @ 1649 Hrs. Depth of bay water @ completion 10.0' @ 1756 Hrs.			

Preliminary

JB-229 GROUNDWATER DATA	GROUNDWATER DATA
WHILE DRILLING:	WHILE DRILLING:
ON COMPLETION:	ON COMPLETION:
Hr. READING:	Hr. READING:

P - indicates pressed shelby tube sample obtained from an additional boring.

Fill **Auger** **SPT** **RB**
Cored **300 lb** **Tubex** **Hand**
Fish Tail **Vibra Core** **Water Jet** **Odex**

STA. MID-BAY ISLAND FEASIBILITY STUDY N 318223.7 **JB-230**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1495711.1 **1 of 1**

TOP ELEV: COMPLETED: September 25, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, silty med. to fine SAND w/shells (SM)		1-2-2	
2.00				
	Wet, lt. olive brown, silty med. to fine SAND (SM)		2-1/1.0	
4.50				
	Wet, olive, silty med. SAND (SM)	5	WR-WH-1	28.2
7.00				
	V. moist, gray, silty med. to fine SAND (SM)		1/1.5	
9.50				
	V. moist, dk. gray, silty med. to fine SAND w/clay lense (SM)	10	WR-1-6	
12.00				
	V. moist, dk. gray, clayey med. to fine SAND (SC)		2-1-6	32.9
14.50				
	V. moist, v. dk. gray, silty med. SAND w/clay lense (SM)	15	WH/1.5	
17.00				
	Moist, dk. gray, soft fat CLAY w/sand (CH)		WH/1.5	
		20	WH/1.0-1	
				42.6
	PPR 22.5'-24.0': 0.5, 0.5, 0.25		WH/1.0-1	
	PPR 25.0'-26.5': 0.5, 0.5, 0.5	25	WH-2-3	
26.50				
	BOTTOM OF HOLE			

Depth of bay water @ start of boring 12.0' @ 0827 Hrs.
Depth of bay water @ completion 12.3' @ 0955 Hrs.

Preliminary

JB-230
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 317301.2 **JB-231**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1493958.4 **1 of 1**

TOP ELEV: COMPLETED: September 25, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded SAND w/silt & shells (SP-SM)		WH-1-1	
2.00				
	V. moist, dk. gray, soft lean CLAY w/sand & tr. of shells (CL) PPR 2.5'-4.0': 0.25, 0.25, 0.25		WH/1.5	
4.50				
	V. moist, dk. gray, sandy soft lean CLAY w/tr. of shells (CL)	5	WH/1.5	33.4
7.00				
	V. moist, dk. gray, clayey fine SAND (SC/CL)		8-6-6	
9.50				
	Moist, lt. olive brown, sandy lean CLAY (CL) PPR 10.0'-11.5': >4.5, 2.0, 2.0	10	2-5-100/.4	
12.00				
	Moist, grayish brown, clayey fine SAND w/gravel (SC) PPR 12.5'-14.0': >4.5, >4.5, >4.5		67-21-37	
14.50				
	Moist, olive gray, silty med. to fine SAND (SM)	15	3-6-5	
17.00				
	Moist, olive gray, silty fine SAND w/tr. of clay (SM)		8-14-14	
	PPR 20.0'-21.5': 2.0, 2.0, 2.5	20	6-8-10	
				32.5
	PPR 22.5'-24.0': 2.0, 2.0, 2.0		4-5-5	
	PPR 25.0'-26.5': 3.0, 2.0, 1.5	25	4-5-9	
26.50				
	BOTTOM OF HOLE Depth of bay water @ start of boring 15.1' @ 1011 Hrs. Depth of bay water @ completion 13.1' @ 1147 Hrs.			

Preliminary

JB-231
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 318730.3 **JB-232**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1492918.7 **1 of 1**

TOP ELEV: COMPLETED: September 25, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Wet, dk. gray, poorly graded SAND w/silt & shells (SP)		WH-2-2	
			1-2-2	
4.50				26.0
	Wet, gray, poorly graded SAND w/silt & shells (SP)		2-1-2	
			WR-WH/1.0	
9.50				
	V. moist, dk. gray, clayey fine SAND w/gravel, rock frags. & shells (SC)		6-8-2	26.0
12.00				
	V. moist, lt. gray, poorly graded SAND w/silt & gravel (SP-SM)		6-12-18	20.6
14.50				
	Moist, dk. gray, silty med SAND (SM)		3-7-7	
17.00				
	Moist, dk. gray, poorly graded SAND w/silt & tr. of gravel (SP-SM)		8-12-13	
19.50				
	Moist, greenish gray, silty fine SAND (SM)		1-2-1	
			3-1-2	30.4
24.50				
	Moist, olive gray, silty fine SAND w/tr. of shells (SM)		4-5-10	
26.50				
	BOTTOM OF HOLE			

Depth of bay water @ start of boring 13.0' @ 1245 Hrs.
Depth of bay water @ completion 13.0' @ 1401 Hrs.

5 10 15 20 25

Preliminary

JB-232
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill, Auger, SPT, RB, Cored, 300 lb, Tubex, Hand, Fish Tail, Vibra Core, Water Jet, Odex

STA. MID-BAY ISLAND FEASIBILITY STUDY N 319335.2 **JB-233**

OFFSET: JAMES ISLAND, DORCHESTER COUNTY, MD E 1492612.6 **1 of 1**

TOP ELEV: COMPLETED: September 25, 2004

DEPTH(ft)	(c)	(d)	(a)	(b)
	Moist, dk. gray, silty med. to fine SAND w/shells (SM)		WH/1.0-2	
2.00				
	Moist, lt. olive gray, silty med. to fine SAND (SM)		WH-1-2	
4.50				
	Wet, lt. yellowish brown, silty fine SAND w/clay (SM)	5	2-3-2	22.3
7.00				
	Wet, lt. yellowish brown, silty fine SAND (SM)		1-1-2	
9.50				
	V. moist, lt. yellowish brown, silty fine SAND w/tr. of gravel & clay (SM) PPR 10.0'-11.5': 0.75, 0.75, --	10	6-3-2	
12.00				
	Moist, greenish gray & dk. gray, clayey fine SAND w/tr. of gravel (SC) PPR 12.5'-14.0': 1.0, 1.0, 1.0		2-3-2	
14.50				
	Moist, lt. gray, silty fine SAND (SM)	15	1-5-8	22.6
17.00				
	V. moist, gray, silty coarse to med. SAND w/tr. of gravel (SM)		5-3-2	
19.50				
	V. moist, gray, silty coarse to med. SAND w/tr. of gravel & shells (SM) PPR 20.0'-21.5': 2.0, 1.5, 1.25	20	5-5-7	
22.00				
	Moist, olive gray, silty fine SAND w/shells (SM/ML) PPR 22.5'-24.0': 1.5, 1.5, 1.25		7-6-8	
24.50				
	Moist, olive gray, silty fine SAND w/shells (SM) PPR 25.0'-26.5': 1.0, 2.0, 1.25	25	3-7-6	
26.50				
	BOTTOM OF HOLE			

Depth of bay water @ start of boring 13.6' @ 1434 Hrs.
Depth of bay water @ completion 13.5' @ 1557 Hrs.

Preliminary

JB-233
GROUNDWATER DATA
WHILE DRILLING:
ON COMPLETION:
Hr. READING:

Fill | Auger | SPT | RB
Cored | 300 lb | Tubex | Hand
Fish Tail | Vibra Core | Water Jet | Odex

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** Estes

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-101			
Jar -1	0.0-1.5	wet gry poorly graded sand ①②	(SP)
-2	2.5-4.0	ditto ①②	(SP)
-3	5.0-6.5	ditto ①②	(SP)
-4	7.5-9.0	wet gry silty sand ①	(SM)
-5	10.0-11.5	very moist gry fat clay w/sand	(CH)
-6	12.5-14.0	very moist gry sandy fat clay	(CH)
-7	15.0-16.5	very moist gry fat clay w/sand	(CH)
-8	17.5-19.0	ditto ②	(CH)
-9	20.0-21.5	ditto	(CH)
-10	23.6-24.0	wet gry clayey sand ②③ w/gravel	(SC)
-11	25.5-26.5	moist dk gry brn sandy fat clay	(CH)
		① fine sand	
		② trace of shell fragments	
		③ medium to fine sand	

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** Estes

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-102			
Jar Small Sampled	2.5-4.0	wet gry poorly graded sand ①② w/silt	(SP-SM)
-2	5.0-6.5	wet gry silty sand ①②③	(SM)
-3	7.5-9.0	ditto ①②③	(SM)
-4	10.0-11.5	wet gry poorly graded sand ① w/silt	(SP-SM)
-5	12.5-14.0	wet gry clayey sand ①	(SC)
-6	15.0-16.5	wet olive gry silty sand ①	(SM)
-7	17.5-19.0	wet gry brn ditto ①	(SM)
-8	20.0-21.5	wet gry brn silty sand ④ trace of gravel	SM/SP-SM
-9	23.3-24.0	moist very dk gry brn fat clay w/sand	(CH)
-10	25.0-26.5	moist dk gry sandy fat clay	(CH)
-11	28.6-29.0	very moist gry brn silty sand ④	(SM)
-12	30.3-31.5	moist dk gry brn fat clay w/sand	(CH)
-13	32.5-34.0	moist dk gry brn sandy fat clay	(CH)
-14	35.0-36.5	wet dk gry brn clayey sand ①③	(SC)
-15	37.5-39.0	moist ditto ④	(SC)
-16	40.0-41.5	wet gry brn ditto ④	(SC)

① fine sand
② trace of shell fragments
③ trace of wood pieces
④ medium to fine sand

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** Estes

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-103			
Jar -1	0.0-1.5	wet gry poorly graded sand ①② w/silt	(SP-SM)
-2	2.5-4.0	wet gry brn silty sand ①②	(SM)
-3	5.0-6.5	ditto ①	(SM)
-4	7.5-9.0	wet pale brn poorly graded sand w/silt trace of gravel	(SP-SM)
-5	10.0-11.5	wet lt brn gry poorly graded sand ①② w/silt	(SP-SM)
-6	12.5-14.0	wet lt yel brn silty sand ①	(SM)
-7	15.0-16.5	wet str brn poorly graded sand ③ w/silt	(SP-SM)
-8	17.5-19.0	wet yel brn poorly graded sand w/silt trace of gravel	(SP-SM)
-9	20.7-21.5	moist gry sandy lean to fat clay	CL/CH
-10	22.5-24.0	moist gry sandy fat clay	(CH)
-11	25.0-26.5	moist gry lean to fat clay w/sand	(CL/CH
-12	27.5-29.0	moist gry fat clay w/sand	(CH)
-13	30.0-31.5	moist gry fat clay trace of sand	(CH)
		① fine sand	
		② trace of shell fragments	
		③ medium to fine sand	

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-104			
Jar -1	0.0-1.5	Wet olive brn + gray silty fine sand w/ shells	(SM)
-2	2.5-4.0	Wet lt. olive brn silty fine sand	(SM)
-3	5.0-6.5	-ditto-	(SM)
-4	8.6-9.0	V. moist dk gray soft sandy elastic silt	MH/CL
-5	10.0-11.5	Wet lt. olive brn silty fine sand	(SM)
-6	12.5-14.0	-ditto-	(SM)
-7	16.0-16.5	V. moist dk greenish gray soft fat clay	(CH)
-8	17.5-19.0	-ditto- w/ sand	(CH)
-9	20.0-21.5	Wet dk greenish gray silty fine sand w/ clay lense	(SM)
-10	22.5-24.0	Wet dk gray clayey fine sand	(SC)
-11	25.0-26.5	Wet dk gray silty fine sand	(SM)
-12	27.5-29.0	Moist dk greenish gray soft fat clay	(CH)
-13	30.0-31.5	V. moist dk greenish gray soft sandy fat clay	(CH)
-14	32.5-34.0	Moist dk greenish gray firm fat clay	(CH)
-15	35.0-36.5	Moist dk greenish gray firm fat clay w/ sand	(CH)
-16	37.5-39.0	Wet dk greenish gray soft fat clay w/ shells	(CH)
-17	40.0-41.5	Moist dk greenish gray firm fat clay w/ shells	

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-105			
Jar -1	0.0-1.5	Wet lt. yell brn poorly graded fine sand w/ silt + shells	(SP-SM)
-2	2.5-4.0	Wet olive gray silty fine sand w/ shells	(SM)
-3	5.0-6.5	Wet lt. yell brn poorly graded fine sand w/ silt (Tr. shells)	(SP-SM)
-4	7.5-9.0	Wet lt. yell brn poorly graded fine sand w/ silt	(SP-SM)
-5	10.0-11.5	-ditto-	(SP-SM)
-6	12.5-14.0	V. moist lt olive brn poorly graded fine sand w/ silt	(SP-SM)
-7	15.0-16.5	V. moist dk greenish gray soft sandy fat clay (Tr. shells)	(CH)
-8	17.5-19.0	Moist dk greenish gray hard fat clay	(CH)
-9	20.0-21.5	V. moist -ditto- (firm)	(CH)
-10	22.5-24.0	Wet dk gray clayey med sand w/ shells	(SC)
-11	25.0-26.5	Wet dk greenish gray silty fine sand (Tr shells)	(SM)
-12	27.5-29.0	-ditto-	(SM)
-13	31.0-31.5	V. moist dk greenish gray soft to firm fat clay w/ sand	(CH)
-14	32.5-34.0	V. moist dk greenish gray soft sandy fat clay	(CH)
-15	35.0-36.5	V. moist olive gray clayey fine sand	(SC)
-16	37.5-39.0	Moist olive gray sandy fat clay	(CH)
-17	40.0-41.5	Moist olive gray clayey fine sand	SC/CH

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-106			
JAR-1	0.0-1.5	Wet olive gray silty fine sand w/ shells	(SM)
-2	2.5-4.0	-ditto-	(SM)
-3	5.0-6.5	Wet lt olive brn poorly graded fine sand w/silt	(SP-SM)
-4	7.5-9.0	-ditto-	(SP-SM)
-5	10.0-11.5	yell brn + dk gray -ditto-	(SP-SM)
-6	12.5-14.0	Wet dk grayish brn silty fine sand (Tr grav)	(SM)
-7	15.0-16.5	Wet dk gray silty fine sand (Tr. grav)	(SM)
-8	17.5-19.0	Wet gray poorly graded med sand w/ silt	(SP-SM)
-9	20.0-21.5	Wet grayish brn poorly graded coarse sand w/silt	(SP-SM)
-10	22.5-24.0	-ditto- (med)	(SP-SM)
-11	25.0-26.5	V. moist v. dk brn soft fat clay w/ sand	(CH)
-12	27.5-29.0	-ditto- w/o sand	(CH)
-13	30.0-31.5	Moist v. dk brn soft sandy silt w/ decayed wood	(ML)
-14	32.5-34.0	V. moist v. dk brn clayey fine sand w/ decayed wood	SC/CL

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-107			
JAR-1	0.0-1.5	Wet dk gray poorly graded med sand w/ silt + shells	(SP-SM)
-2	2.5-4.0	Wet grayish brn silty fine sand	(SM)
-3	5.0-6.5	Wet grayish brn poorly graded fine sand w/ silt	(SP-SM)
-4	7.5-9.0	Wet lt. yellowish brn silty fine sand	(SM)
-5	10.0-11.5	Wet lt. olive brown silty v. fine sand	(SM)
-6	12.5-14.0	-ditto- (f. ine)	(SM)
-7	15.0-16.5	Wet grayish brn silty fine sand (tr. grand)	(SM)
-8	17.5-19.0	Wet grayish brn poorly graded med sand w/ silt	(SP-SM)
-9	20.0-21.5	V. moist dk gray silty v. fine sand	(SM)
-10	22.5-24.0	ditto	(SM)
-11	25.0-26.5	ditto	(SM)
-12	27.5-29.0	ditto	(SM)
-13	30.0-31.5	V. moist dk greenish gray sandy silt	(ML)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 108			
JAR-1	0.0 - 1.5	Wet lt gray silty fine sand w/ shells	(SM)
-2	2.5 - 4.0	-Ditto- (Tr shells)	(SM)
-3	5.0 - 6.5	V. moist lt brn gray poorly graded med sand w/ silt	(SP-SM)
-4	7.5 - 9.0	V. moist olive gray silty fine sand	(SM)
-5	10.0 - 11.5	V. moist olive yell silty fine sand	(SM)
-6	12.5 - 14.0	-Ditto-	(SM)
-7	15.0 - 16.5	-Ditto-	(SM)
-8	17.5 - 19.0	Moist dk gray silty fine sand	(SM)
-9	20.0 - 21.5	Moist olive gray silty v. fine sand	(SM)
-10	22.5 - 24.0	-Ditto-	(SM)
-11	25.0 - 26.5	-Ditto-	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-109			
JAR-1	0.0-1.5	Wet olive gray silty fine-med sand w/ shells	(SM)
-2	2.5-4.0	Wet lt. yellowish brn silty fine sand	(SM)
-3	5.0-6.5	-ditto-	(SM)
-4	7.5-9.0	-ditto-	(SM)
-5	10.0-11.5	Wet lt olive brn silty fine sand	(SM)
-6	12.5-14.0	-ditto- w/ clay lense	(SM)
-7	15.0-16.5	Moist dk greenish gray firm fat clay w/ sand	(CH)
-8	17.5-19.0	Moist olive gray silt w/ sand + (CH lense)	(ML)
-9	20.0-21.5	Moist dk greenish gray hard sandy silt	(ML)
-10	22.5-24.0	Wet olive gray silty fine sand	SM/SC
-11	25.0-26.5	Wet olive gray clayey fine sand	(SC)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-110			
JAR-1	0.0-1.5	Wet v. dk gray poorly graded fine sand w/ silt + shells	(SP-SM)
Small Sample 2	2.5-4.0	Wet gray -ditto- "	(SP-SM)
-3	5.0-6.5	Wet gray silty fine-med sand w/ shells	(SM)
-4	7.5-9.0	Wet dk gray clayey fine sand	(SC)
-5	10.0-11.5	Wet dk gray soft fat clay	(CH)
-6	12.5-14.0	Wet dk gray silty med sand	(SM)
-7	15.0-16.5	-ditto- (Tr. shells)	(SM)
-8	17.5-19.0	-ditto- "	(SM)
-9	20.0-21.5	V. moist olive gray clayey v. fine sand w/ shells	(SC)
-10	22.5-24.0	V. moist olive gray silty fine sand w/ shells	(SM)
-11	25.0-26.5	-ditto- (Tr. shells)	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -	111		
JAR-1	0.0-1.5	Wet lt. olive brn + black silty fine sand w/ shells	(SM)
-2	2.5-4.0	-ditto-	(SM)
-3	5.0-6.5	Wet dk gray clayey fine sand	(SC)
-4	7.5-9.0	Wet lt olive brn poorly graded fine sand w/ silt	(SP-SM)
-5	10.0-11.5	Wet dk gray sandy fat clay	(CH)
-6	12.5-14.0	Wet dk gray silty fine sand (Tr gravel)	(SM)
-7	15.0-16.5	V. moist olive gray sandy lean clay (Tr shells)	(CL)
-8	17.5-19.0	-ditto-	(CL)
-9	20.0-21.5	Moist olive gray silty fine sand (Tr shells)	(SM)
-10	22.5-24.0	-ditto- "	(SM)
-11	25.0-26.5	-ditto-	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-112			
JAR-1	0.0-1.5	Wet dk gray poorly graded fine sand w/ silt + shells	(SP-SM)
small Sample 2	2.5-4.0	-ditto-	(SP-SM)
-3	5.0-6.5	-ditto- (Tr. shells)	(SP-SM)
-4	7.5-9.0	Wet olive gray silty fine sand	(SM)
-5	10.0-11.5	V. moist olive gray soft sandy lean clay	(CL)
-6	13.4-15.0	Moist olive gray firm lean clay	(CL)
-7	15.0-16.5	Moist olive gray silty v. fine sand w/ shells	(SM)
-8	17.5-19.0	Moist olive gray clayey v. fine sand (Tr. shells)	(SC)
-9	20.0-21.5	-ditto- "	SC/CL
-10	22.5-24.0	Moist olive gray silty v. fine sand w/ shells	(SM)
-11	25.0-26.5	-ditto- (Tr shells)	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-113			
JAR-1	0.0-1.5	Wet lt olive brn silty fine sand w/shells	(SM)
-2	2.5-4.0	Wet dk gray -ditto-	(SM)
-3	5.0-6.5	Wet dk gray + lt. olive brn silty fine sand	(SM)
-4	8.4-9.0	V. moist dk gray soft fat clay	(CH)
-5	10.0-11.5	ditto (Tr sand)	(CH)
-6	12.5-14.0	Moist olive gray soft lean clay	CL/CH
-7	15.0-16.5	V. moist olive gray clayey v. fine sand	SC/CL
-8	17.5-19.0	V. moist olive gray clayey v. fine sand (Tr shells)	(SC)
-9	20.0-21.5	-ditto- w/shells	(SC)
-10	22.5-24.0	-ditto- "	(SC)
-11	25.0-26.5	V. moist olive gray silty fine sand (Tr shells)	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -114			
JAR-1	0.0-1.5	Wet gray silty fine sand w/ shells	(SM)
-2	2.5-4.0	Wet dk gray poorly graded fine sand (Tr shells)	(SP-SM)
-3	5.0-6.5	gray - ditto -	(SP-SM)
-4	7.5-9.0	Wet olive gray clayey fine sand	(SC)
-5	10.0-11.5	Wet grayish brn poorly graded fine sand	(SP-SM)
-6	12.5-14.0	V. moist dk gray soft sandy fat clay	(CH)
-7	15.0-16.5	Wet dk gray silty med sand w/ gravel	(SM)
-8	17.5-19.0	Moist olive gray hard fat clay	CH/CL
-9	20.0-21.5	Moist olive gray clayey v. fine sand	SC/CL
-10	22.5-24.0	- ditto - w/ shells	(SC)
-11	25.0-26.5	- ditto - (Tr shells)	SC

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 115			
JAR-1	0.0-1.5	Wet dk gray silty v. fine sand (tr shells)	(SM)
-2	2.5-4.0	Wet olive brown poorly graded fine sand w/ shells & silt	(SP-SM)
-3	5.0-6.5	Wet lt olive brn silty fine sand (tr shells)	(SM)
-4	7.5-9.0	Wet lt olive brn poorly graded fine sand w/ shells & silt	(SP-SM)
-5	10.0-11.5	Wet dk gray clayey fine sand	(SC)
-6	12.5-14.0	V. moist dk gray soft fat clay w/ sand	(CH)
-7	15.0-16.5	Wet dk grayish brn clayey fine sand	(SC)
-8	17.5-19.0	Wet dk grayish brn poorly graded fine sand w/ silt	(SP-SM)
-9	20.0-21.5	V. moist v. dk greenish gray soft fat clay	(CH)
-10	22.5-24.0	-ditto- w/ shells	(CH)
-11	25.0-26.5	-ditto- w/ shells	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-116			
JAR-1	0.0-1.5	Wet v. dk gray poorly graded med sand w/ silt + shells	(SP-SM)
small sample 2	2.5-4.0	V. moist lt gray + yell brn soft silt w/ sand	(ML)
small sample-3	5.0-6.5	Wet gray poorly graded med sand w/ silt + clay lense	(SP-SM)
-4	7.5-9.0	V. moist v. dk greenish gray soft fat clay	(CH)
-5	10.0-11.5	Wet dk greenish gray soft fat clay w/ sand	(CH)
small sample 6	12.5-14.0	V. moist dk olive gray silty fine sand	(SM)
-7	15.0-16.5	Moist olive gray firm lean clay	(CL)
-8	17.5-19.0	ditto	(CL)
-9	20.0-21.5	Wet dk olive gray silty fine sand	(SM)
-10	22.5-24.0	-ditto-	(SM)
-11	25.0-26.5	V. moist dk greenish gray silty fine sand (tr. shells)	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 117			
JAR-1	0.0 - 1.5	Wet v. dk gray silty fine sand w/ shells	(SM)
- 2	2.5 - 4.0	V. moist olive gray sandy silt	(ML)
- 3	5.0 - 6.5	V. moist dk gray sandy soft fat clay	(CH)
- 4	7.5 - 9.0	V. moist dk greenish gray soft fat clay	(CH)
- 5	10.0 - 11.5	V. moist dk greenish gray soft fat clay w/ sand	(CH)
- 6	12.5 - 14.0	V. moist v. dk greenish gray soft sandy fat clay w/ grav.	(CH)
- 7	15.0 - 16.5	Wet olive gray silty med sand w/ gravel	(SM)
- 8	17.5 - 19.0	- ditto -	(SM)
- 9	20.0 - 21.5	Wet gray silty fine sand	(SM)
-10	22.5 - 24.0	- ditto -	(SM)
-11	25.0 - 26.5	- ditto -	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
Small Sample JB	- 118		
JAR-1	0.0-1.5	Moist, Olive Brown, Poorly Graded SAND w/Silty Shells	(SP-SM)
-2	2.5-4.0	Ditto " "	(SP-SM)
-3	5.0-6.5	Moist, DK Gray, Sandy, SOFT LEAN CLAY w/shells	(CL)
-4	7.5-9.0	Moist, DK Gray, Sandy, LEAN CLAY	CL/SC
-5	10.0-11.5	Ditto	(SC)
-6	12.5-14.0	Ditto	(SC)
-7	15.0-16.5	Moist, Yellowish Brown, Silty, Med SAND	(SM)
-8	17.5-19.0	Moist, Olive Gray, Silty, Fine SAND	(SM)
-9	20.0-21.5	Moist, DK Gray, Fine Sandy, SILT	ML/SM
-10	22.5-24.0	Moist, DK Gray, Silty, Fine SAND	(SM)
-11	25.0-26.5	Ditto	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-119			
JAR-1	0.0-1.5	Wet, Olive Brown, Poorly Graded SAND w/Sand, Tr. Shell Frags	(SP-SM)
-2	2.5-4.0	Wet, DK Gray, Sandy, Lean CLAY with Silt	CL/ML
-3	5.0-6.5	V. Moist, DK Gray, SOFT LEAN CLAY with Sand	(CL)
-4	7.5-9.0	Wet, yellowish Brown, Poorly Graded SAND	(SP)
-5	10.0-11.5	Moist, DK. Gray, SOFT FAT CLAY with Sand	(CH)
-6	12.5-14.0	V. Moist, DK Gray, Clayey, Fine-Med SAND	(SC)
-7	15.0-16.5	Moist, DK Gray, Fine Sandy, SILT	(ML)
-8	17.5-19.0	80% Moist, DK Gray, Poorly Graded SAND w/Silt (SP-SM) 20% DK Gray, Silt	(ML)
-9	20.0-21.5	Moist, DK Gray, Silty, Fine SAND	SM/ML
-10	22.5-24.0	V. Moist, Olive Gray, Silty, SAND Trace of Gravel	(SM)
-11	25.0-26.5	Ditto	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 120			
JAR - 1	0.0 - 1.5	Wet olive brn & yell brn sandy silt (Tr shells)	(ML)
- 2	2.5 - 4.0	Wet olive gray silty fine sand (Tr shells)	(SM)
small Sample 3	5.0 - 6.5	Wet dk grayish brn - ditto -	(SM)
- 4	7.5 - 9.0	V. moist v. dk. greenish gray soft lean clay w/ sand	(CL)
- 5	10.0 - 11.5	Wet v. dk greenish gray clayey fine sand	SC/CL
- 6	12.5 - 14.0	- ditto -	(SC)
- 7	15.0 - 16.5	Wet dk greenish gray clayey fine sand w/ grav	(SC)
- 8	17.5 - 19.0	V. moist dk greenish gray clayey fine sand	(SC)
- 9	20.0 - 21.5	V. moist dk greenish gray silty fine sand	(SM)
- 10	22.5 - 24.0	- ditto -	(SM)
- 11	25.0 - 26.5	- ditto - v. fine sand	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-121			
JAR-1	0.0-1.5	Wet lt. olive brn poorly graded fine sand w/ silt	(SP-SM)
-2	2.5-4.0	EMPTY JAR	—
-3	5.0-6.5	Wet lt. olive brn poorly graded med sand w/ silt & shells	(SP-S
-4	7.5-9.0	V. moist dk gray soft fat clay	(CH)
-5	10.0-11.5	-ditto-	(CH)
-6	12.5-14.0	50% V. moist dk greenish gray clayey fine sand 50% moist black silty fine sand	(SC) (SM)
V. small sample 7	15.0-16.5	Wet dk greenish gray clayey fine sand	(SC)
-8	17.5-19.0	Moist dk greenish gray firm fat clay	(CH)
-9	20.0-21.5	-ditto- (+1 sand)	(CH)
-10	22.5-24.0	Moist olive gray silty fine sand	(SM)
-11	25.0-26.5	V. moist -ditto-	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-122			
JAR-1	0.0-1.5	V. moist olive brn soft lean clay w/ sand & shells	(CL)
-2	2.5-4.0	V. moist lt olive brown silty v. fine sand	(SM)
-3	5.0-6.5	V. moist grayish brown sandy silt	(ML)
-4	7.5-9.0	EMPTY JAR	—
V. Small sample 5	10.0-11.5	Wet lt. olive brn silty med sand	(SM)
-6	12.5-14.0	Wet grayish brn clayey fine sand	(SC)
-7	15.0-16.5	Wet dk gray clayey fine sand	SC/SM
-8	17.5-19.0	Wet dk gray silty fine sand w/ gravel	(SM)
-9	20.0-21.5	Wet dk gray silty fine sand	(SM)
-10	22.5-24.0	- ditto - fine-med	(SM)
-11	25.0-26.5	V. moist dk greenish gray hard silty v. fine sand	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-123			
JAR-1	0.0-1.5	Wet dk gray silty fine sand (tr shells)	(SM)
-2	2.5-4.0	Wet gray soft lean clay	(CL)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 126			
JAR - 1	0.0 - 1.5	Wet dk gray poorly graded med sand w/ silt + shells	(SP-SM)
- 2	2.5 - 4.0	Wet gray soft lean clay w/ sand	(CL)
- 3	5.0 - 6.5	- ditto -	(CL)
- 4	7.5 - 9.0	- ditto -	(CL)
- 5	10.0 - 10.8	Wet dk greenish gray soft sandy lean clay	(CL)
- 6	10.8 - 11.5	V. moist v. dk grayish brn poorly graded med sand w/ silt + grav.	(SP-SM)
- 7	12.5 - 14.0	Wet dk greenish gray silty fine sand	(SM)
- 8	15.0 - 16.5	Wet dk gray silty gravel w/ sand	GM/SM
- 9	17.5 - 19.0	Moist olive gray silty v. fine sand	(SM)
- 10	20.0 - 21.5	V. moist olive gray silty fine sand w/ grav	(SM)
- 11	22.5 - 24.0	Moist olive gray silty fine sand	(SM)
- 12	25.0 - 26.5	Moist olive gray sand silt (tr. shells)	(ML)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -127			
JAR-1	0.0-1.5	- EMPTY JAR -	—
-2	2.5-4.0	Wet grayish brn poorly graded med sand w/ silt & shells	(SP-SM)
-3	5.0-6.5	Wet lt. olive brn soft lean clay w/ sand	(CL)
-4	7.5-9.0	Wet lt olive brn poorly graded med sand w/ silt & clay lense	(SP-SM)
-5	10.0-11.5	Wet dk greenish gray soft clayey sand	(SC)
-6	12.5-14.0	- ditto -	(SC)
-7	15.0-16.5	V. moist dk gray silty fine sand w/ clay lense	(SM)
-8	17.5-19.0	V. moist dk greenish gray silty v. fine sand	(SM)
-9	20.0-21.5	- ditto -	(SM)
-10	22.5-24.0	Moist dk greenish gray firm sandy silt	(ML)
-11	25.0-26.5	- ditto -	(ML)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-128			
JAR-1	0.0-1.5	Wet v. dk gray poorly graded fine sand w/ Silt & Shells	(SP-SM)
-2	2.5-4.0	Wet gray -ditto- "	(SP-SM)
-3	5.0-6.5	V. moist olive gray clayey fine sand w/ clay lense	(SC)
-4	7.5-9.0	V. moist dk greenish gray firm fat clay (Tr sand)	(CH)
-5	10.0-11.5	Wet dk greenish gray Clayey fine sand w/ clay lense	(SC)
-6	12.5-14.0	-ditto- w/o " "	(SC)
-7	15.0-16.5	Moist olive gray silty v. fine sand	(SM)
-8	17.5-19.0	-ditto-	(SM)
-9	20.0-21.5	-ditto- w/shells	SM/ML
-10	22.5-24.0	V. moist olive gray silty fine sand	(SM)
-11	25.0-26.5	ditto w/shells	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 129			
JAR - 1	0.0 - 1.5	Wet dk gray silty fine sand w/ shells	(SM)
- 2	2.5 - 4.0	Wet olive gray soft sdy silt	(ML)
- 3	5.0 - 6.5	V. moist gray soft sandy silt	(ML)
- 4	7.5 - 9.0	Wet gray soft lean clay	(CL)
- 5	10.0 - 11.5	Wet gray clayey fine sand	(SC)
- 6	12.5 - 14.0	- ditto -	(SC)
- 7	15.0 - 16.5	Moist dk greenish gray silty v. fine sand	(SM)
- 8	17.5 - 19.0	- ditto -	(SM)
- 9	20.0 - 21.5	V. moist dk gray clayey fine sand	(SC)
- 10	22.5 - 24.0	- ditto - (tr shells)	(SC)
- 11	25.0 - 26.5	V. moist olive gray silty fine sand (tr shells)	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Jun 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -	130		
JAR-1	0.0-1.5	Wet dk gray poorly graded fine sand w/ silt + shells	(SP-SM)
-2	2.5-4.0	Wet grayish brn soft sandy silt	(ML)
-3	5.0-6.5	ditto	(ML)
-4	7.5-9.0	Wet dk gray soft lean clay w/ shells	CL/CH
-5	10.0-11.5	Wet olive gray clayey fine sand	(SC)
-6	12.5-14.0	Moist olive gray soft silt	(ML)
small sample -7	15.0-16.5	Wet olive gray clayey fine sand	(SC)
-8	22.5-24.0	Moist olive gray silty fine sand (Tr. shells)	SM/SC
-9	25.0-26.5	Wet olive gray silty v. fine sand	(SM)
-10	27.5-29.0	-ditto- (Tr shells)	(SM)
-11	30.0-31.5	-ditto- "	(SM)
-12	32.5-34.0	V. moist olive gray silty fine sand w/ shells	(SM)
-13	35.0-36.5	Moist olive gray firm silt (Tr sand)	(ML)
-14	37.5-39.0	-ditto- (Tr sand + shells)	(ML)
-15	40.0-41.5	-ditto- "	(ML)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** AUG 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -	131		
JAR-1	0.0-1.5	Wet olive gray & yell brn silty fine sand w/ shells	(SM)
-2	2.5-4.0	Wet olive gray silty fine sand w/ shells	(SM)
-3	5.0-6.5	Wet lt. olive brown silty fine sand w/ shells	(SM)
-4	7.5-9.0	Wet dk gray clayey fine sand	SC/SM
-5	10.0-11.5	Wet v. dk grayish brn soft sandy lean clay	CL/SC
-6	12.5-14.0	Wet dk gray clayey fine sand	(SC)
-7	15.0-16.5	V. moist dk greenish gray sandy silt	(ML)
-8	17.5-19.0	V. moist olive gray silty fine sand (+ shells)	(SM)
-9	20.0-21.5	Ditto w/ shells	(SM)
-10	22.5-24.0	V. moist dk greenish gray silty fine sand (+ shells)	(SM)
-11	25.0-26.5	V. moist olive gray -ditto- "	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-201			
JAR-1	0.0-1.5	Wet dk gray poorly graded fine sand w/ silt + shells	(SP-SM)
-2	2.5-4.0	Wet dk gray poorly graded fine sand (tr. shells)	(SP)
-3	5.0-6.5	Wet grayish brn poorly graded fine sand w/ silt	(SP-SM)
-4	7.5-9.0	Wet gray silty fine sand	(SM)
-5	10.0-11.5	Wet gray poorly graded fine sand w/ silt	(SP-SM)
-6	12.5-14.0	-ditto-	(SP-SM)
-7	15.0-16.5	Wet lt. olive brn -ditto-	(SP-SM)
-8	17.5-19.0	Wet dk yell. brn -ditto-	(SP-SM)
-9	20.0-21.5	Wet olive brn poorly graded gravel w/ sand	(GP)
-10	22.5-24.0	Wet brown poorly graded fine sand w/ silt	(SP-SM)
-11	25.0-26.5	Wet lt. olive brn poorly graded fine sand	(SP)
-12	27.5-29.0	Wet olive gray soft clayey sand	(SC)
-13	30.0-31.5	Wet dk. gray -ditto-	(SC)
-14	32.5-34.0	Moist dk gray soft to firm fat clay	(CH)
-15	35.0-36.5	-ditto-	(CH)
-16	37.5-39.0	V. moist dk gray soft fat clay	(CH)
-17	40.0-41.5	Moist dk gray firm fat clay	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-202			
JAR-1	0.0-1.5	Wet dk gray poorly graded fine sand (Tr shells)	(SP)
-2	2.5-4.0	-ditto- "	(SP)
-3	5.0-6.5	Wet dk gray poorly graded fine sand w/ silt	(SP-SM)
-4	7.5-9.0	-ditto-	(SP-SM)
-5	10.0-11.5	Wet dk gray poorly graded fine sand	(SP)
-6	12.5-14.0	-ditto-	(SP)
-7	15.0-16.5	Wet olive gray soft sandy silt	(ML)
-8	17.5-19.0	V. moist olive gray soft silt	ML/CL
-9	20.0-21.5	Wet dk gray soft sandy silt	(ML)
-10	22.5-24.0	-ditto-	(ML)
-11	25.0-26.5	V. moist dk gray soft lean clay	(CL)
-12	27.5-29.0	-ditto-	(CL)
-13	30.0-31.5	-ditto- (Tr shells)	(CL)
-14	32.5-34.0	-ditto- "	(CL)
-15	35.0-36.5	Wet dk gray V. soft fat clay	(CH)
-16	37.5-39.0	V. moist -ditto- (Tr shells)	(CH)
-17	40.0-41.5	" -ditto- "	(CH)
-18	45.0-46.5	" -ditto- "	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 203			
JAR - 1	0.0 - 1.5	EMPTY JAR	—
- 2	2.5 - 4.0	Wet dk gray v. soft lean clay	(CL)
- 3	5.0 - 6.5	Wet dk gray v. soft silty fine sand	(SM)
- 4	7.5 - 9.0	Wet grayish brn silty fine sand	(SM)
- 5	10.0 - 11.5	Wet olive brn silty fine sand	(SM)
- 6	12.5 - 14.0	Wet yellowish brn - ditto -	(SM)
- 7	15.0 - 16.5	Wet dk yell brn poorly graded fine sand w/silt	(SP-SM)
- 8	17.5 - 19.0	V. moist v. dk gray soft sandy clay	(CL)
- 9	20.0 - 21.5	- ditto -	(CL)
- 10	22.5 - 24.0	V. moist v. dk gray soft lean clay w/sand	(CL)
- 11	25.0 - 26.5	- ditto - (Tr sand)	(CL)
- 12	27.5 - 29.0	V. moist dk gray soft lean clay	CL/CH
- 13	30.0 - 31.5	V. moist dk gray firm fat clay	(CH)
- 14	32.5 - 34.0	- ditto -	(CH)
- 15	35.0 - 36.5	- ditto -	(CH)
- 16	37.5 - 39.0	- ditto -	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-204			
JAR-1	0.0-1.5	Wet v. dk gray poorly graded fine sand w/ shells	(SP)
-2	2.5-4.0	Wet dk gray silty fine sand (Tr shells)	(SM)
-3	5.0-6.5	Wet dk gray sandy soft silt	(ML)
-4	7.5-9.0	V. moist olive gray soft lean clay	(CL)
-5	10.0-11.5	-ditto-	(CL)
-6	12.5-14.0	-ditto-	(CL)
-7	15.0-16.5	-ditto-	(CL)
-8	17.5-19.0	-ditto-	(CL)
-9	20.0-21.5	-ditto-	(CL)
-10	22.5-24.0	-ditto-	(CL)
-11	25.0-26.5	-ditto-	(CL)
-12	27.5-29.0	-ditto-	CL/CH
-13	30.0-31.5	-ditto-	CL/CH
-14	32.5-34.0	Wet dk gray silty fine sand	SM/SC
-15	35.0-36.5	Wet dk gray silty fine sand (Tr shells)	(SM)
-16	37.5-39.0	Wet dk gray clayey fine sand (Tr. shells)	(SC)
V. Small sample -17	40.0-41.5	V. moist v. dk gray silty fine sand	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 205			
JAR-1	0.0-1.5	Wet dk gray poorly graded fine sand w/silt + shells	(SP-SM)
-2	2.5-4.0	Wet yell. brn silty fine sand (Tr shells)	(SM)
-3	5.0-6.5	ditto w/o shells	(SM)
-4	7.5-9.0	Wet yell. brn poorly graded fine sand w/silt	(SP-SM)
-5	10.0-11.5	-ditto-	(SP-SM)
-6	12.5-14.0	EMPTY JAR	—
-7	15.0-16.5	Wet brown poorly graded fine sand w/silt	(SP-SM)
-8	17.5-19.0	-ditto-	(SP-SM)
-9	20.0-21.5	-ditto-	(SP-SM)
-10	22.5-24.0	RUSTED METAL FLAKES	—
-11	25.0-26.5	Wet v. dk greenish gray soft clayey sand	(SC)
-12	27.5-29.0	Wet dk gray silty fine sand	(SM)
-13	30.0-31.5	-ditto-	(SM)
-14	32.5-34.0	V. moist dk gray clayey fine sand	(SC)
-15	35.0-36.5	-ditto- v. fine	(SC)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-206			
JAR-1	0.0-1.5	Wet gray silty fine sand (tr shells)	(SM)
-2	2.5-4.0	-ditto-	(SM)
-3	5.0-6.5	Wet yellowish brn silty fine sand	(SM)
-4	7.5-9.0	Wet lt. olive brn + gray silty fine sand	(SM)
-5	10.0-11.5	Wet lt. olive brn silty v. fine sand	(SM)
-6	12.5-14.0	-ditto- (fine)	(SM)
-7	15.0-16.5	-ditto- "	(SM)
-8	17.5-19.0	Wet strong brown poorly graded sand w/silt+grav.	(SP-SM)
-9	20.0-21.5	Wet dk gray silty v. fine sand	(SM)
-10	22.5-24.0	Wet dk gray soft sandy silt	ML/SM
-11	25.0-26.5	V. moist dk gray soft lean clay w/ sand	(CL)
-12	27.5-29.0	-ditto-	(CL)
-13	30.0-31.5	V. moist dk gray soft to firm fat clay	(CH)
-14	32.5-34.0	-ditto-	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-207			
JAR-1	0.0-1.5	Wet dk gray poorly graded fine-med sand (w/ shells)	(SP)
-2	2.5-4.0	Wet lt olive gray poorly graded fine sand w/ silt	(SP-SM)
Small Sample 3	5.0-6.5	-ditto-	(SP-SM)
-4	7.5-9.0	Wet lt brn gray poorly graded fine sand	(SP)
-5	10.0-11.5	Wet strong brn poorly graded fine sand w/ silt	(SP-SM)
-6	12.5-14.0	Wet yell brn + lt gray Silty fine sand	(SM)
-7	15.0-16.5	Wet yell brn poorly graded fine sand w/ silt	(SP-SM)
-8	17.5-19.0	Wet grayish brn poorly graded sand w/ gravel	(SP)
-9	20.0-21.5	V. moist dk gray soft lean clay w/ sand	(CL)
-10	22.5-24.0	V. moist dk gray soft lean clay	(CL)
-11	25.0-26.5	V. moist dk greenish gray soft to firm lean clay	CL/CH
-12	27.5-29.0	-ditto-	CL/CH
-13	30.0-31.5	-ditto- (firm)	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -	208		
JAR-1	0.0 - 1.5	Wet dk gray poorly graded fine sand (tr. shells)	(SP)
-2	2.5 - 4.0	Wet gray poorly graded fine sand w/ silt	(SP-SM)
-3	5.0 - 6.5	Wet yell brn & gray - ditto -	(SP-SM)
-4	7.5 - 9.0	Wet yell brn - ditto -	(SP-SM)
-5	10.0 - 11.5	Wet olive brown poorly graded gravel w/ silt + sd	(GP-GM)
small sample-6	12.5 - 14.0	Wet lt. olive brn clayey fine sand	SC/SM
-7	15.0 - 16.5	Wet dk gray silty fine sand	(SM)
-8	17.5 - 19.0	- ditto -	(SM)
-9	20.0 - 21.5	V. moist dk gray clayey v. fine sand	SC/SM
-10	22.5 - 24.0	V. moist dk gray soft lean clay	(CL)
-11	25.0 - 26.5	V. moist dk gray firm fat clay	(CH)
-12	27.5 - 29.0	- ditto -	(CH)
-13	30.0 - 31.5	- ditto -	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-209			
JAR-1	0.0-1.5	Wet dk gray silty fine sand w/ shells	(SM)
-2	2.5-4.0	Wet lt. olive brn poorly graded fine sand w/ silt	(SP-SM)
-3	5.0-6.5	Wet lt. yell. brn silty fine sand	(SM)
-4	7.5-9.0	-ditto-	(SM)
small sample -5	10.0-11.5	V. moist dk gray soft lean clay w/ sand	(CL)
-6	12.5-14.0	Wet dk gray silty fine sand	(SM)
-7	15.0-16.5	Wet gray silty fine-med sand	(SM)
-8	17.5-19.0	V. moist v. dk greenish gray firm fat clay	(CH)
-9	20.0-21.5	V. moist dk greenish gray firm fat clay	(CH)
-10	22.5-24.0	-ditto-	(CH)
-11	25.0-26.5	-ditto-	(CH)
-12	27.5-29.0	-ditto-	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-210			
JAR-1	0.0-1.5	Wet lt. brownish gray silty fine sand (tr shells)	(SM)
-2	2.5-4.0	Wet lt. brownish gray poorly graded fine sand	(SP)
-3	5.0-6.5	-ditto-	(SP)
-4	7.5-9.0	-ditto-	(SP)
-5	10.0-11.5	Wet dk gray clayey fine sand	(SC)
-6	12.5-14.0	Wet gray poorly graded fine sand w/silt	(SP-SM)
-7	15.0-16.5	-ditto-	(SP-SM)
-8	17.5-19.0	Wet dk gray poorly graded coarse sand w/gravel	(SP)
-9	20.0-21.5	Wet greenish gray poorly graded fine sand w/silt	(SP-SM)
-10	22.5-24.0	V. moist dk greenish gray soft-firm fat clay	(CH)
-11	25.0-26.5	Wet dk greenish gray silty fine sand	(SM)
-12	27.5-29.0	-ditto-	(SM)
-13	30.0-31.5	Wet olive gray silty fine sand	(SM)
-14	32.5-34.0	-ditto-	(SM)
-15	35.0-36.5	V. moist dk gray soft fat clay	(CH)
-16	37.5-39.0	V. moist olive gray clayey fine sand	(SC)
-17	40.0-41.5	-ditto-	(SC)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -	211		
JAR-1	0.0-1.5	Wet lt. olive brn silty fine sand	(SM)
-2	2.5-4.0	Wet yell brn & gray poorly graded fine sand w/ silt	(SP-SM)
-3	5.0-6.5	Wet brownish yell - ditto -	(SP-SM)
-4	7.5-9.0	Wet dk gray silty fine sand	(SM)
-5	10.0-11.5	V. moist dk gray soft fat clay	(CH)
-6	12.5-14.0	Wet dk gray silty fine-med sand	(SM)
-7	15.0-16.5	Wet dk gray poorly graded fine-med sand w/ silt	(SP-SM)
-8	17.5-19.0	V. moist dk greenish gray silty v. fine sand	(SM)
-9	20.0-21.5	- ditto -	(SM)
-10	22.5-24.0	Moist olive gray hard silty v. fine sand	SM/ML
-11	25.0-26.5	Moist olive gray hard sandy silt (tr. shells)	ML/SM

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -	212		
JAR-1	0.0-1.5	Wet gray silty fine sand	(SM)
-2	2.5-4.0	Wet lt olive brn + red. brn silty fine sand	(SM)
-3	5.0-6.5	Wet brn, yellow poorly graded fine sand w/ silt	(SP-SM)
-4	7.5-9.0	Wet lt olive brn poorly graded fine sand	(SP)
-5	10.0-11.5	V. moist dk gray soft fat clay	(CH)
-6	12.5-14.0	Wet dk gray poorly graded fine-med sand w/ silt	(SP-SM)
-7	15.0-16.5	- ditto -	(SP-SM)
-8	17.5-19.0	V. moist dk greenish gray firm fat clay	(CH)
-9	20.0-21.5	- ditto -	(CH)
-10	22.5-24.0	V. moist dk greenish gray soft fat clay w/ some sd	(CH)
-11	25.0-26.5	V. moist dk greenish gray soft-firm fat clay (Tr shells)	(CH)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -	213		
JAR-1	0.0-1.5	Wet black silty fine sand w/shells	(SM)
-2	2.5-4.0	Wet lt. olive brn poorly graded fine sand w/silt	(SP-SM)
-3	5.0-6.5	Wet dk gray silty fine sand (tr. gran)	(SM)
-4	7.5-9.0	Wet olive yellow silty fine sand	(SM)
-5	10.0-11.5	Wet lt. olive brn poorly graded fine sand w/ silt	(SP-SM)
-6	12.5-14.0	Wet lt. olive brn poorly graded fine-med sand	(SP)
-7	15.0-16.5	Wet dk greenish gray silty fine sand (tr shells)	(SM)
-8	17.5-19.0	V. moist dk gray soft fat clay	(CH)
-9	20.0-21.5	- ditto -	(CH)
-10	22.5-24.0	Wet v. dk gray silty fine sand	(SM)
-11	25.0-26.5	V. moist greenish gray silty fine sand	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-214			
JAR-1	0.0-1.5	Wet lt. olive brn silty v. fine sand	(SM)
-2	2.5-4.0	Wet lt. olive brn sandy silt	(ML)
-3	5.0-6.5	Wet grayish brn silt w/ sand	(ML)
-4	7.5-9.0	Wet grayish brn soft lean clay	(CL)
-5	10.0-11.5	Wet dk gray soft sandy clay	CL/SC
-6	12.5-14.0	Wet dk gray soft clayey sand	SC/CL
-7	15.0-16.5	Wet dk gray clayey sand (tr. grav)	(SC)
-8	17.5-19.0	Wet dk gray silty fine sand (tr grav)	(SM)
-9	20.0-21.5	Wet olive gray silty fine sand (tr. grav)	(SM)
-10	22.5-24.0	Wet olive gray sandy silt	ML/CL
-11	25.0-26.5	-ditto-	ML/CL

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 215			
JAR-1	0.0-1.5	Wet dk gray soft lean clay	(CL)
-2	2.5-4.0	Wet olive gray soft lean clay w/ sand	(CL)
-3	5.0-6.5	Wet olive gray soft sandy lean clay	(CL)
-4	7.5-9.0	Wet olive gray soft lean clay w/ sand	(CL)
-5	10.0-11.5	Wet olive gray soft lean clay	(CL)
-6	12.5-14.0	-ditto-	(CL)
-7	15.0-16.5	Wet dk gray clayey sand	(SC)
-8	17.5-19.0	Moist olive gray soft to firm fat clay	CH/CL
-9	20.0-21.5	-ditto-	CH/CL
-10	22.5-24.0	-ditto-	CH/CL
-11	25.0-26.5	-ditto-	CH/CL

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -	216		
JAR - 1	0.0 - 1.5	Wet v. dk gray poorly graded fine sand w/ shells	(SP)
- 2	2.5 - 4.0	Wet dk gray poorly graded fine sand (tr. shells)	(SP)
- 3	5.0 - 6.5	Wet lt. olive brn poorly graded fine sand	(SP)
- 4	7.5 - 9.0	V. moist dk gray soft lean clay	(CL)
- 5	10.0 - 11.5	V. moist dk greenish gray soft lean clay	CL/CH
- 6	12.5 - 14.0	- ditto -	(CH)
- 7	15.0 - 16.5	V. moist olive gray soft & firm fat clay	CH/CL
- 8	17.5 - 19.0	- ditto -	CH/CL
- 9	20.0 - 21.5	- ditto	CH/CL
V. Small sample 10	22.5 - 24.0	V. moist olive gray soft lean clay w/ sand	(CL)
- 11	25.0 - 26.5	V. moist olive gray silty fine sand	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 217			
JAR - 1	0.0 - 1.5	Wet black poorly graded fine sand w/ silt + shells	(SP-SM)
- 2	2.5 - 4.0	Wet dk gray soft sandy clay	(CL)
- 3	5.0 - 6.5	Wet dk gray soft lean clay	(CL)
- 4	7.5 - 9.0	Wet dk gray soft lean clay	CL/CH
- 5	10.0 - 11.5	V. moist dk gray soft fat clay	(CH)
- 6	12.5 - 14.0	Moist dk grayish brn silty fine sand	(SM)
- 7	15.0 - 16.5	Wet -ditto-	(SM)
- 8	17.5 - 19.0	Moist olive gray firm fat clay	CH/CL
- 9	20.0 - 21.5	Moist olive gray firm fat clay w/ sand	CH/CL
- 10	22.5 - 24.0	V. moist olive gray silty fine sand (tr. gravel)	(SM)
- 11	25.0 - 26.5	V. moist olive gray silty fine sand	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -	218		
JAR-1	0.0-1.5	Wet dk gray poorly graded fine sand w/ silt + shells	(SP-SM)
-2	2.5-4.0	-ditto-	(SP-SM)
-3	5.0-6.5	Wet gray & lt. olive brn soft lean clay	(CL)
-4	7.5-9.0	-ditto-	(CL)
-5	10.0-11.5	V. moist dk gray soft lean clay w/ sand	(CL)
-6	12.5-14.0	-ditto-	(CL)
-7	15.0-16.5	Wet v. dk grayish brn silty fine sand w/ gravel	(SM)
-8	17.5-19.0	Moist lt. olive brn soft to firm silt	(ML)
-9	20.0-21.5	Moist dk greenish gray firm lean clay	(CL)
-10	22.5-24.0	-ditto-	(CL)
-11	25.0-26.5	-ditto-	(CL)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 219			
JAR-1	0.0-1.5	Wet dk gray & yell brn silty fine sand w/ shells	(SM)
-2	2.5-4.0	V. moist dk gray soft lean clay	(CL)
-3	5.0-6.5	- ditto - w/ shells	(CL)
-4	7.5-9.0	V. moist dk greenish gray soft lean clay	CL/CH
-5	10.0-11.5	- ditto - (tr sand)	CL/CH
-6	12.5-14.0	- ditto - w/ sand (tr sand)	CL/CH
-7	15.0-16.5	50% - ditto - 50% wet dk grayish brn silty fine-med sand	(CH) (SM)
-8	17.5-19.0	Wet dk grayish brn silty med sand (tr. grav.)	(SM)
-9	20.0-21.5	50% - ditto - w/o grav. 50% V. MOIST V. DK GRAY SOFT LEAN CLAY w/ sand	(SM) (CL)
-10	22.5-24.0	Wet dk gray silty med-coarse sand	(SM)
-11	25.0-26.5	Wet greenish gray clayey fine sand	SC/SM
-12	26.5-28.0	Wet olive gray clayey v. fine sand	(SC)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-220			
JAR-1	0.0-1.5	Wet lt. olive gray soft lean clay w/ sand lense & shells	(CL)
-2	2.5-4.0	Wet lt gray & lt olive brn soft lean clay	(CL)
-3	5.0-6.5	Wet dk gray poorly graded fine sand w/ silt	(SP-SM)
-4	7.5-9.0	Wet olive gray soft sandy lean clay	(CL)
-5	10.0-11.5	Wet dk yell brn clayey sand (tr. gravel)	(SC)
-6	12.5-14.0	Wet strong brown silty sand w/ clay lense	(SM)
-7	15.0-16.5	Wet strong brown poorly graded fine-med sand w/ silt	(SP-SM)
-8	17.5-19.0	V. moist olive gray soft to firm lean clay	(CL)
-9	20.0-21.5	V. moist dk greenish gray sandy clay	CL/ML
-10	22.5-24.0	V. moist dk greenish gray clayey v. fine sand w/ shells	(SC)
-11	25.0-26.5	V. moist dk greenish gray silty v. fine sand w/ shells	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-221			
JAR-1	0.0-1.5	Wet black poorly graded fine sand w/ shells	(SP)
-2	2.5-4.0	Wet lt olive brn silty fine-med sand	(SM)
-3	5.0-6.5	Wet lt olive brn poorly graded sand w/ silt	(SP-SM)
-4	7.5-9.0	Wet olive + dk gray soft lean clay w/ sand	(CL)
-5	10.0-11.5	Wet dk greenish gray silty fine sand	(SM)
-6	12.5-14.0	-ditto-	(SM)
-7	15.0-16.5	-ditto- (tr. grav)	(SM)
-8	17.5-19.0	-ditto- w/o grav	(SM)
-9	20.0-21.5	Wet dk gray silty fine sand w/ silt lenses (tr grav)	(SM)
-10	22.5-24.0	Wet dk gray poorly graded fine sand w/ silt	(SP-SM)
-11	25.0-26.5	Wet dk gray silty fine sand	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB -222			
JAR-1	0.0-1.5	Wet dk gray poorly graded med sand w/ silt + shells	(SM)
-2	2.5-4.0	- ditto -	(SM)
-3	5.0-6.5	Wet dk gray soft silt w/ sand	(ML)
-4	7.5-9.0	Wet gray silty v. fine sand	(SM)
-5	10.0-11.5	30% -ditto- 70% wet dr Gray soft fat clay	(SM) (CH)
-6	12.5-14.0	Wet gray soft fat clay w/ sand lense	(CH)
-7	15.0-16.5	Wet dk grayish brn poorly graded med sand w/ silt	(SP-SM)
-8	17.5-19.0	V. moist olive gray silty v. fine sand	(SM)
-9	20.0-21.5	V. moist olive gray silty fine sand (Tr. gravel)	(SM)
-10	22.5-24.0	Moist olive gray silty fine sand	(SM)
-11	25.0-26.5	Moist olive gray sandy silt (Tr shells)	(ML)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 223			
JAR-1	0.0-1.5	Wet dk grayish brn silty fine sand w/ shells	(SM)
-2	2.5-4.0	Wet strong brn poorly graded fine sand w/ silt	(SP-SM)
-3	5.0-6.5	Wet dk yell brn -ditto-	(SP-SM)
-4	7.5-9.0	" -ditto-	(SP-SM)
-5	10.0-11.5	V. moist dk gray soft lean clay	CL/CH
-6	12.5-14.0	Wet gray poorly graded fine-med sand w/ silt	(SP-SM)
-7	15.0-16.5	Wet dk gray silty fine sand	SM/SP-SM
-8	17.5-19.0	Wet gray poorly graded fine-med sand	(SP)
-9	20.0-21.5	Wet gray poorly graded med sand	(SP)
-10	22.5-24.0	-ditto-	(SP)
-11	25.0-26.5	V. moist olive gray silty fine sand w/ shells	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 224			
JAR-1	0.0-1.5	Wet yell brn + black silty fine sand w/ shells	(SM)
-2	2.5-4.0	Wet yell brn poorly graded med sand w/ silt	(SP-SM)
-3	5.0-6.5	-ditto- also (silt lense)	(SP-SM)
-4	7.5-9.0	50% wet yell BRN POORLY GRADED MED SAND w/ SILT 50% wet dk gray silty fine sand	(SP-SM) (SM)
-5	10.0-11.5	V. moist dk gray soft fat clay (tr sand)	(CH)
-6	12.5-14.0	Wet dk gray clayey fine sand	SC/SM
-7	15.0-16.5	Wet black + gray silty fine sand (tr. grav.)	(SM)
-8	17.5-19.0	Wet gray silty fine sand (tr. gravel)	SM/SC
-9	20.0-21.5	Wet dk gray silty v. fine sand	(SM)
-10	22.5-24.0	-ditto- (fine)	(SM)
-11	25.0-26.5	-ditto- "	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB	-22.5		
JAR-1	0.0-1.5	Wet black & olive brn silty fine sand w/shells	(SM)
-2	2.5-4.0	Wet yell. brn poorly graded fine sand w/silt	(SP-SM)
-3	5.0-6.5	Wet yell. brn poorly graded fine sand	(SP)
-4	7.5-9.0	Wet dark gray soft fat clay w/sand	CH/CL
-5	10.0-11.5	-ditto-	CH/CL
-6	12.5-14.0	Wet dk gray poorly graded med sand w/clay lens	(SP)
-7	15.0-16.5	50% wet dk gray silty fine sand (tr. grav) 50% v. moist dk Greenish Gray soft lean clay w/sand	(SM) (CL)
-8	17.5-19.0	V. moist olive gray silty fine-med sand	(SM)
-9	20.0-21.5	Wet olive gray silty fine sand w/shells	(SM)
-10	22.5-24.0	-ditto-	(SM)
-11	25.0-26.5	-ditto-	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** KUHN

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-226			
JAR-1	0.0-1.5	Wet dk gray poorly graded fine sand w/ shells	(SP)
-2	2.5-4.0	Wet lt. olive brn poorly graded fine sand w/ silt	(SP-SM)
-3	5.0-6.5	Wet lt. yell brn -ditto-	(SP-SM)
-4	7.5-9.0	" -ditto-	(SP-SM)
-5	10.0-11.5	Wet dk gray silty fine sand	(SM)
-6	12.5-14.0	Wet dk grayish brn poorly graded fine sand w/ silt	(SP-SM)
-7	15.0-16.5	50% -ditto- (SP-SM) 50% wet dk gray soft fat clay	(CH)
-8	17.5-19.0	50% wet dk gray soft fat clay 50% wet v. dk gray silt fine sand	(CH) (SM)
-9	20.0-21.5	V. moist olive gray silty v. fine sand	(SM)
-10	22.5-24.0	V. moist dk greenish gray silty v. fine sand	(SM)
-11	25.0-26.5	-ditto-	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** Estes

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-227			
JAR-1	0.0 - 1.5	wet gry silty sand ①②	SM/SP-SM
-2	2.5 - 4.0	wet lt yel brn ditto ①②	(SM)
-3	5.0 - 6.5	wet lt yel brn silty sand ① trace of gravel	SM/SP-SM
-4	7.5 - 9.0	wet pale yel poorly graded sand ① w/ silt	(SP-SM)
-5	10.0 - 11.5	wet lt brn gry poorly graded sand ①	(SP)
-6	12.5 - 14.0	wet lt brn gry poorly graded sand ① trace of gravel	(SP)
-7	15.0 - 16.5	ditto ①	(SP)
-8	17.5 - 19.0	wet lt olive gry silty sand ① trace of gravel	(SM)
-9	20.0 - 21.5	wet lt olive gry silty sand ③	(SM)
-10	22.5 - 24.0	very moist lt olive gry to olive yel ditto ③	(SM)
-11	25.0 - 26.5	moist lt yel brn sandy ③ lean clay	(CL)
-12	27.5 - 29.0	moist lt brn gry clayey sand ③	SC/CL
-13	30.0 - 31.5	moist olive gry sandy ③ lean clay	(CL)
-14	32.5 - 34.0	ditto ③	(CL)

① medium to fine sand

② trace shell fragments

③ fine sand

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** Estes

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-228			
JAR-1	0.0-1.5	wet dK gry poorly graded sand (1)(2) w/silt	SP-SM/SP
-2	2.5-4.0	wet gry brn silty sand (1)	(SM)
-3	5.0-6.5	ditto (1)	(SM)
-4	7.5-9.0	very moist gry brn clayey sand (1)	(SC)
-5	10.0-11.5	moist gry brn sandy lean to fat clay	CL/CH
-6	12.5-14.0	ditto	CL/CH
-7	15.0-16.5	wet gry silty sand (1) trace of gravel	(SM)
-8	17.5-19.0	very moist dK gry brn clayey sand (1)	SC/SC-SM
-9	20.0-21.5	very moist dK gry brn silty sand (1) trace of gravel	(SM)
-10	22.5-24.0	wet dK gry silty sand (2)(3) trace of gravel	(SM)
-11	25.0-26.5	very moist ditto (2)(3)	(SM)

(1) medium to fine sand

(2) trace of shell fragments

(3) fine sand

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** Estes

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-229			
JAR-1	0.0-1.5	wet ltyelbrn silty sand (1)(2) trace of gravel	(SM)
-2	2.5-4.0	very moist gry sandy lean clay	(CL)
-3	5.0-6.5	ditto	(CL)
-4	7.5-9.0	very moist dK gry sandy lean to fat clay	CL/CH
-5	10.0-11.5	very moist dK gry clayey sand (1)(3)	(SC)
-6	12.5-14.0	wet gry clayey sand (1) trace of gravel	(SC)
-7	15.0-16.5	moist gry clayey sand (4)	(SC)
-8	17.5-19.0	moist grybrn sandy (4) lean to fat clay	CL/CH
-9	20.0-21.5	moist grybrn clayey sand (4)(2)	SC/CL
-10	22.5-24.0	ditto (4)(2)	SC/CL
-11	25.0-26.5	moist grybrn clayey sand (4)(2) trace of gravel	(SC)
		(1) medium to fine sand	
		(2) trace of shell fragments	
		(3) with a +1" rock	
		(4) fine sand	

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island

DATE: Oct 2004

AREA: Mid-Bay Feasibility Study

CLASSIFIED BY: DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-230			
JAR-1	0.0-1.5	Wet, DK Gray, Silty, Med-Fine SAND w/Shells	(SM)
-2	2.5-4.0	Wet, LT. Olive Brown, Silty, Med-Fine SAND	(SM)
-3	5.0-6.5	Wet, Olive, Silty, Med SAND	(SM)
-4	7.5-9.0	Very Moist, Gray, Silty, Med-Fine SAND	(SM)
-5	10.0-11.5	Very Moist, DK. Gray, Silty, Med-Fine SAND w/ clay lense	(SM)
-6	12.5-14.0	Very Moist, DK. Gray, Clayey, Med-Fine SAND	(SC)
-7	15.0-16.5	Very Moist, V. DK Gray, Silty, Med SAND w/ clay lense	(SM)
-8	17.5-19.0	Moist, DK Gray, SoFT LEAN CLAY w/Sand	(CL)
-9	20.0-21.5	Ditto w/Sand	(CL)
-10	22.5-24.0	Ditto w/Sand	(CL)
-11	25.0-26.5	Ditto w/Sand	(CL)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island **DATE:** Oct 2004

AREA: Mid-Bay Feasibility Study **CLASSIFIED BY:** DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-231			
JAR-1	0.0-1.5	Wet, DK Gray, Poorly Graded SAND w/silt & Shells	(SP-SM)
-2	2.5-4.0	Very Moist, DK Gray, SOFT LEAN CLAY w/Sand, Tr. of Shells	(CL)
-3	5.0-6.5	Very Moist, DK Gray, Sandy, SOFT LEAN CLAY Tr of Shells	(CL)
-4	7.5-9.0	Very Moist, DK Gray, Clayey, Fine SAND	SC/CL
-5	10.0-11.5	Moist, Lt. Olive Brown, Sandy, LEAN CLAY	(CL)
-6	12.5-14.0	Moist, Grayish Brown, Clayey, Fine SAND w/Gravel	(SC)
-7	15.0-16.5	Moist, Olive Gray, Silty, Med-Fine SAND	(SM)
-8	17.5-19.0	Moist, Olive Gray, Silty, Fine SAND Trace of Clay	(SM)
-9	20.0-21.5	Ditto Trace of Clay	(SM)
-10	22.5-24.0	Ditto Trace of Clay	(SM)
-11	25.0-26.5	Ditto Trace of Clay	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island

DATE: Oct 2004

AREA: Mid-Bay Feasibility Study

CLASSIFIED BY: DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB-	232		
JAR-1	0.0-1.5	Wet, DK Gray, Poorly Graded SAND w/Silt + Shells	(SP-SM)
-2	2.5-4.0	Ditto w/silt + Shells	(SP-SM)
-3	5.0-6.5	Wet, Gray, Poorly Graded SAND w/silt + Shells	(SP-SM)
-4	7.5-9.0	Ditto w/silt + Shells	(SP-SM)
-5	10.0-11.5	V. Moist, DK Gray, Clayey, Fine SAND w/ Gravel + Rock Frags + Shells	(SC)
-6	12.5-14.0	V. Moist, Lt Gray, Poorly Graded SAND w/Silt + Gravel	(SP-SM)
-7	15.0-16.5	Moist, DK Gray, Silty, Med SAND	(SM)
-8	17.5-19.0	Moist, DK Gray, Poorly Graded SAND w/Silt, Tr. Gravel	(SP-SM)
-9	20.0-21.5	Moist, Greenish Gray, Silty, Fine SAND	(SM)
-10	22.5-24.0	Ditto	(SM)
-11	25.0-26.5	Moist, Olive Gray, Silty, Fine SAND Trace of Shells	(SM)

VISUAL-MANUAL CLASSIFICATION

(Test method: ASTM D 2488)

PROJECT: James Island

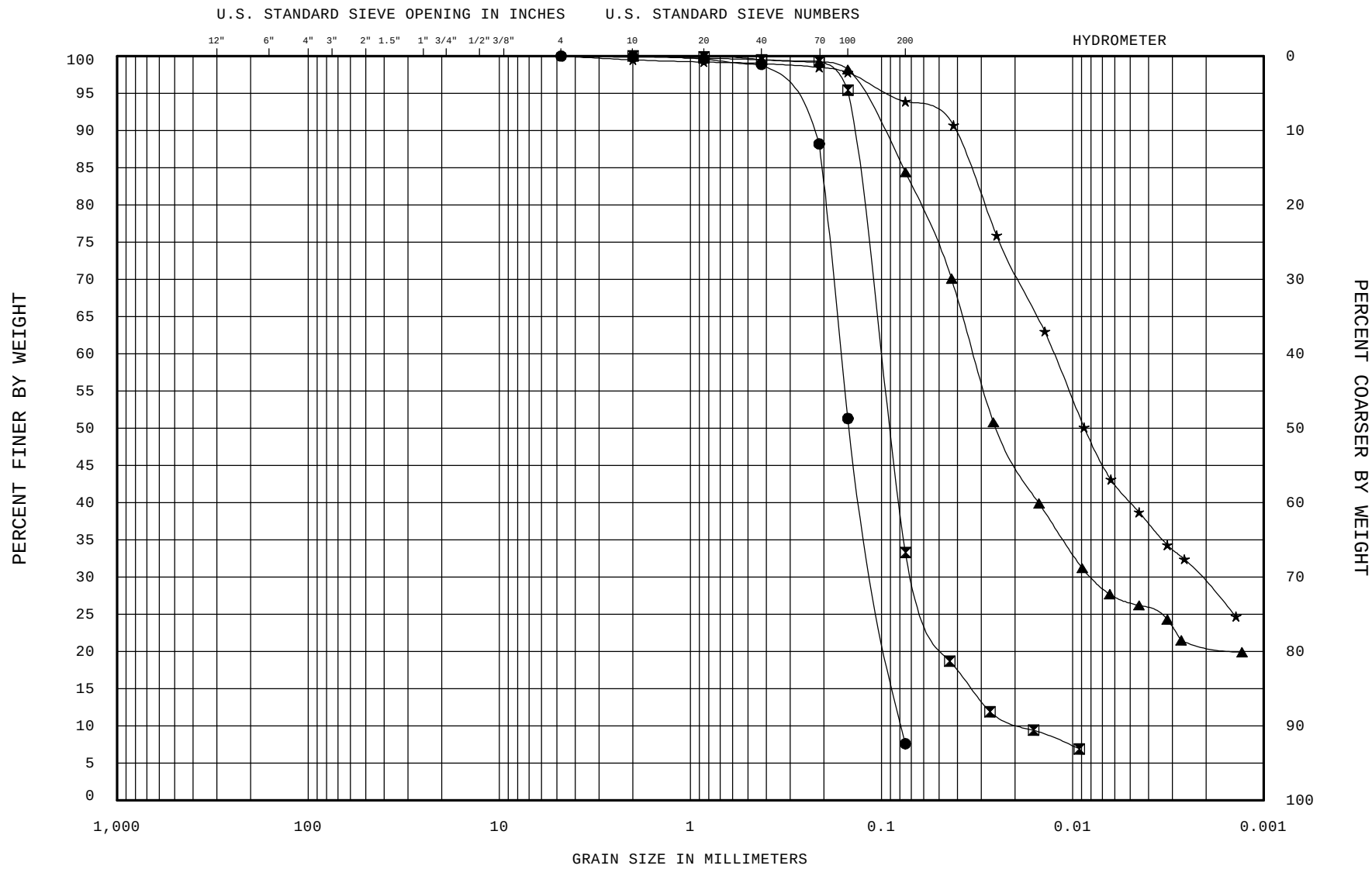
DATE: Oct 2004

AREA: Mid-Bay Feasibility Study

CLASSIFIED BY: DANKO

Dorchester County, MD

SAMPLE NO.	DEPTH (ft)	VISUAL CLASSIFICATION	SYMBOL
JB - 233			
JAR-1	0.0 - 1.5	Moist, DK Gray, Silty, Med-Fine SAND w/shells	(SM)
-2	2.5 - 4.0	Moist, Lt Olive Gray, Silty Med-Fine SAND	(SM)
-3	5.0 - 6.5	Wet, Lt yell. Brn, Silty, Fine SAND w/clay	(SM)
-4	7.5 - 9.0	Ditto	(SM)
-5	10.0 - 11.5	V. Moist, Lt. yell. Brn, Silty, Fine SAND Tr. of Gravel & Clay	(SM)
-6	12.5 - 14.0	Moist, Greenish Gray + DK Gray, Clayey, Fine SAND Tr. of Gravel	(SC)
-7	15.0 - 16.5	Moist, LT. Gray, Silty, Fine SAND	(SM)
-8	17.5 - 19.0	V. Moist, Gray, Silty, Coarse - Med SAND Tr. of Gravel	(SM)
-9	20.0 - 21.5	Ditto Trace of Gravel & Shells	(SM)
Small Sample 10	22.5 - 24.0	Moist, olive Gray, Silty, Fine SAND w/shells	SM/ML
-11	25.0 - 26.5	Ditto w/Shells	(SM)



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1-3	0.0-6.5	POORLY GRADED SAND with SILT	SP-SM	30.5			
—⊠—	Jar-4	7.5-9.0	SILTY SAND	SM	31.1			
—▲—	Jar-5	10.0-11.5	SILT with SAND	ML	48.1	44	28	16
—★—	Jar-8	17.5-19.0	FAT CLAY	CH	73.5	76	31	45

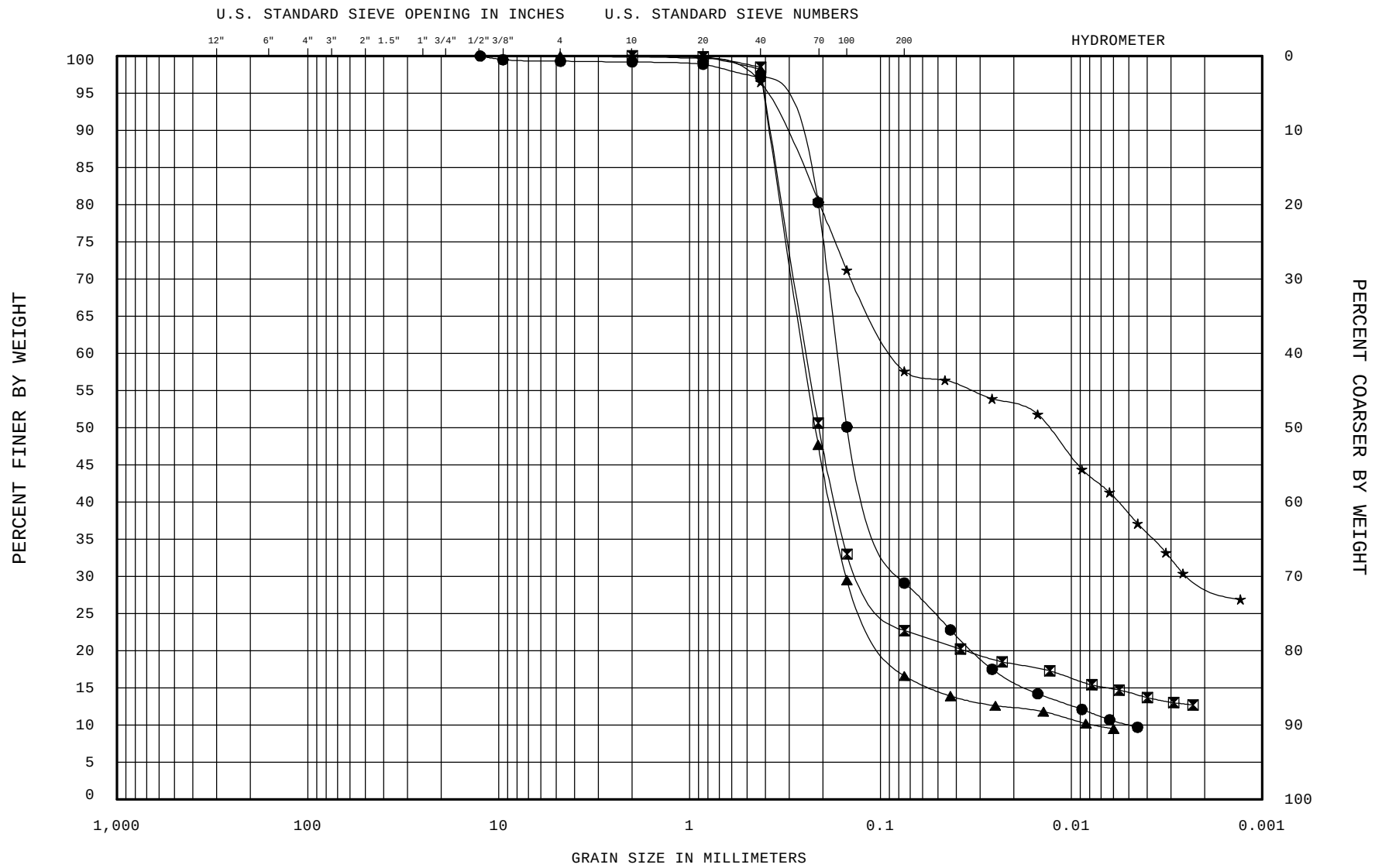
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-101*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	5.0-9.0	SILTY SAND	SM	32.9			
—⊠—	Jar-5	12.5-14.0	CLAYEY SAND	SC	20.6			
—▲—	Jars 6&7	15.0-19.0	SILTY SAND	SM	21.9			
—★—	Jars 9&10	23.3-26.5	SANDY ELASTIC SILT	MH	66.3	81	40	41

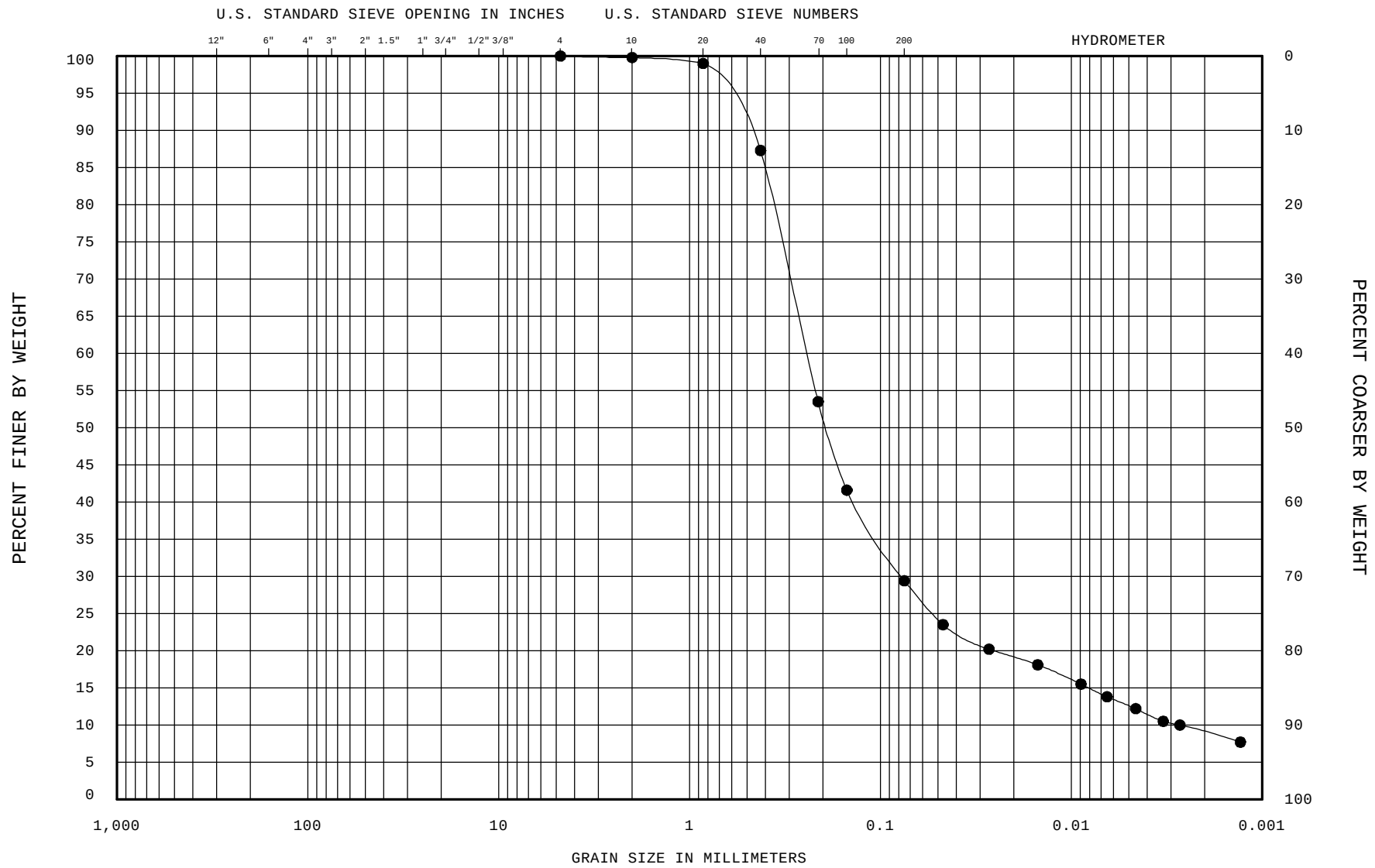
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-102*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-14	35.0-36.5	CLAYEY SAND	SC	37.2			

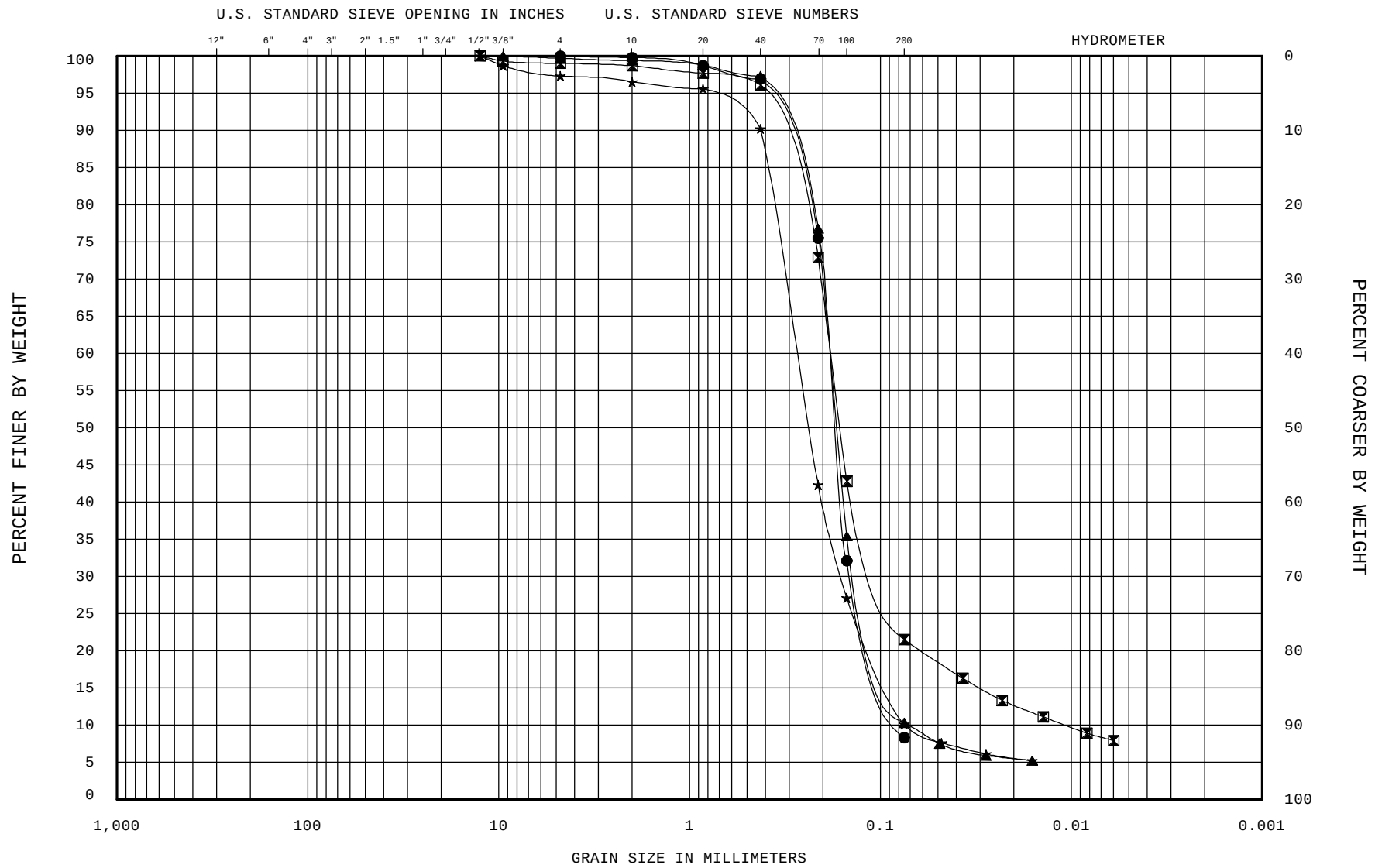
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-102*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-1	0.0-1.5	POORLY GRADED SAND with SILT	SP-SM	28.8			
—⊠—	Jars 2&3	2.5-6.5	SILTY SAND	SM	24.0			
—▲—	Jars 4&5	7.5-11.5	POORLY GRADED SAND with SILT	SP-SM	24.7			
—★—	Jars 7&8	15.0-19.0	POORLY GRADED SAND with SILT	SP-SM	20.7			

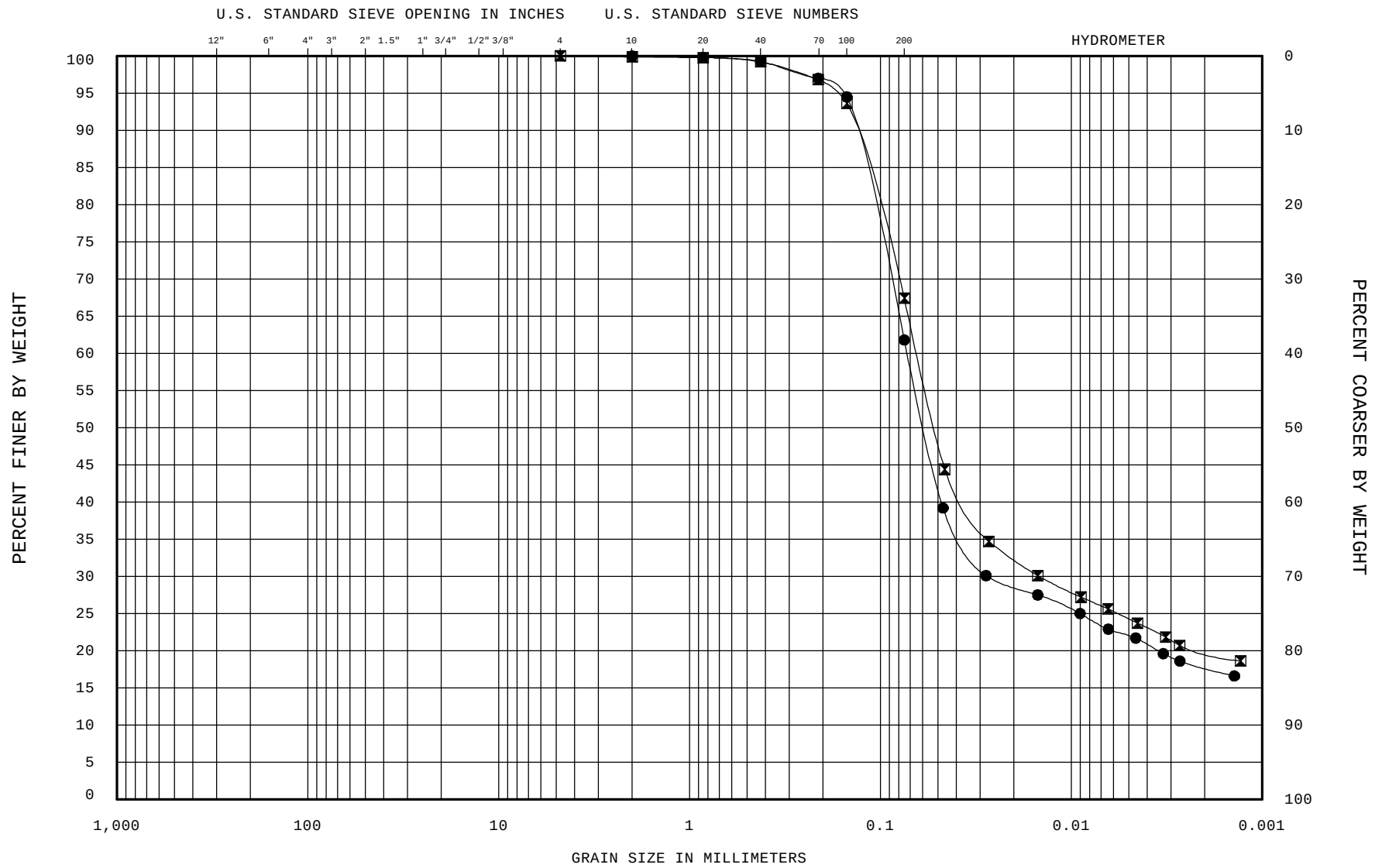
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-103*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-9	20.7-21.5	SANDY LEAN CLAY	CL	32.4	39	22	17
—⊠—	Jar-10	22.5-24.0	SANDY LEAN CLAY	CL	34.8	40	22	18
— —								
— —								

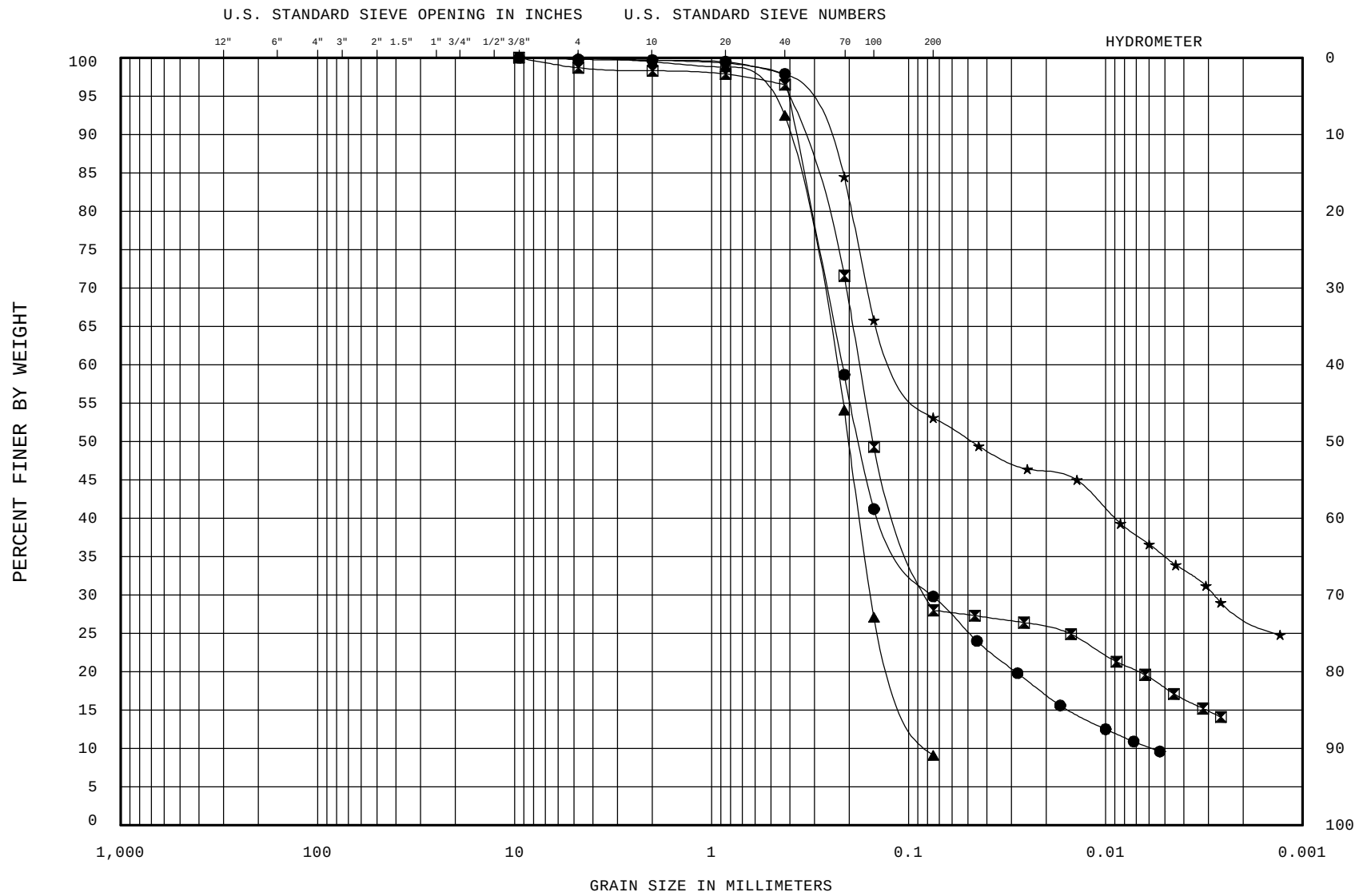
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-103*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar 1-3	0.0-6.5	SILTY SAND	SM	23.9			
—⊠—	Jar-4	8.6-9.0	CLAYEY SAND	SC	26.1	26	14	12
—▲—	Jars 5&6	10.0-14.0	POORLY GRADED SAND with SILT	SP-SM	24.0			
—★—	Jars 7&8	16.0-19.0	SANDY LEAN CLAY	CL	32.8	44	15	29

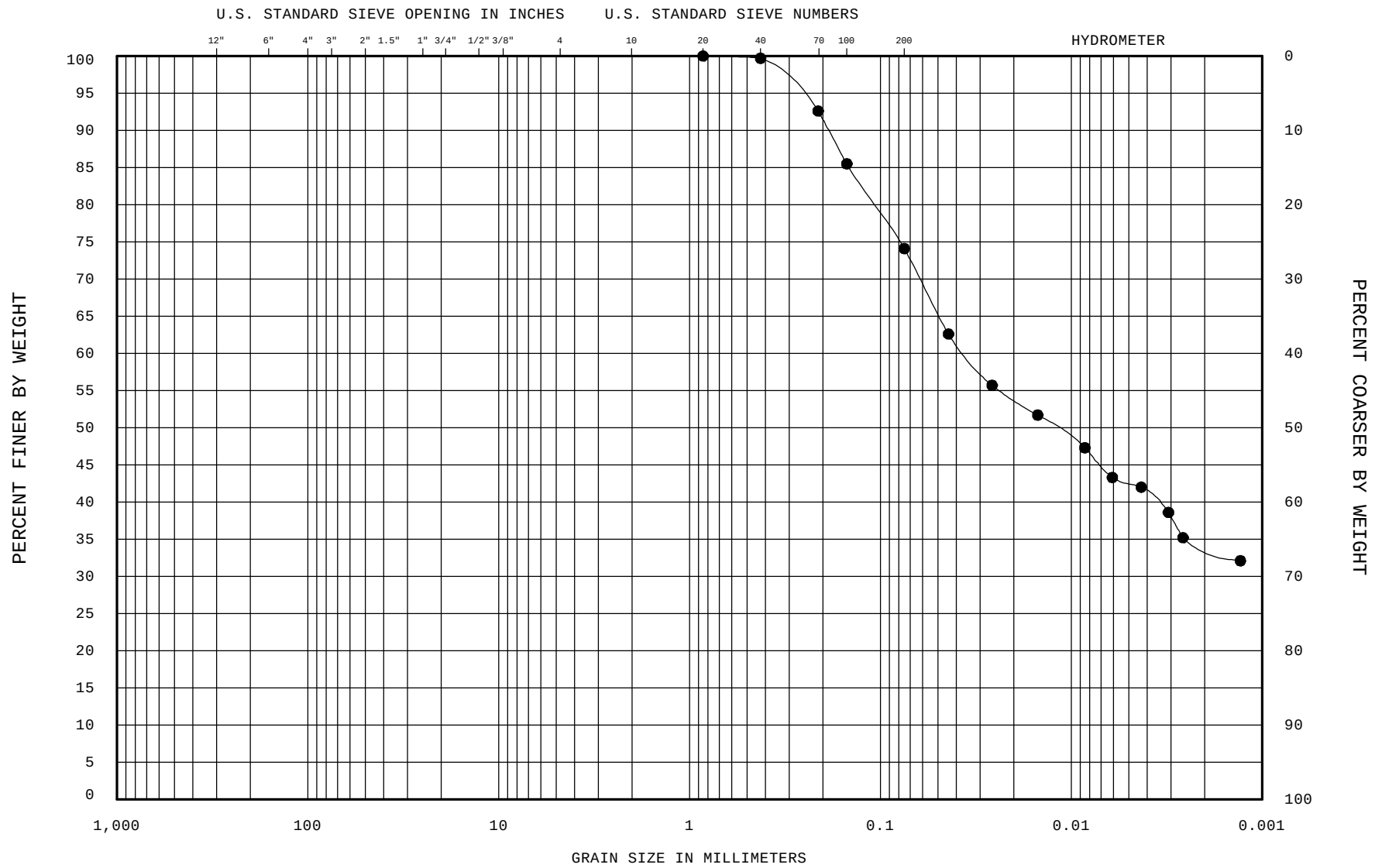
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-104*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-12	27.5-29.0	FAT CLAY with SAND	CH	43.3	57	18	39

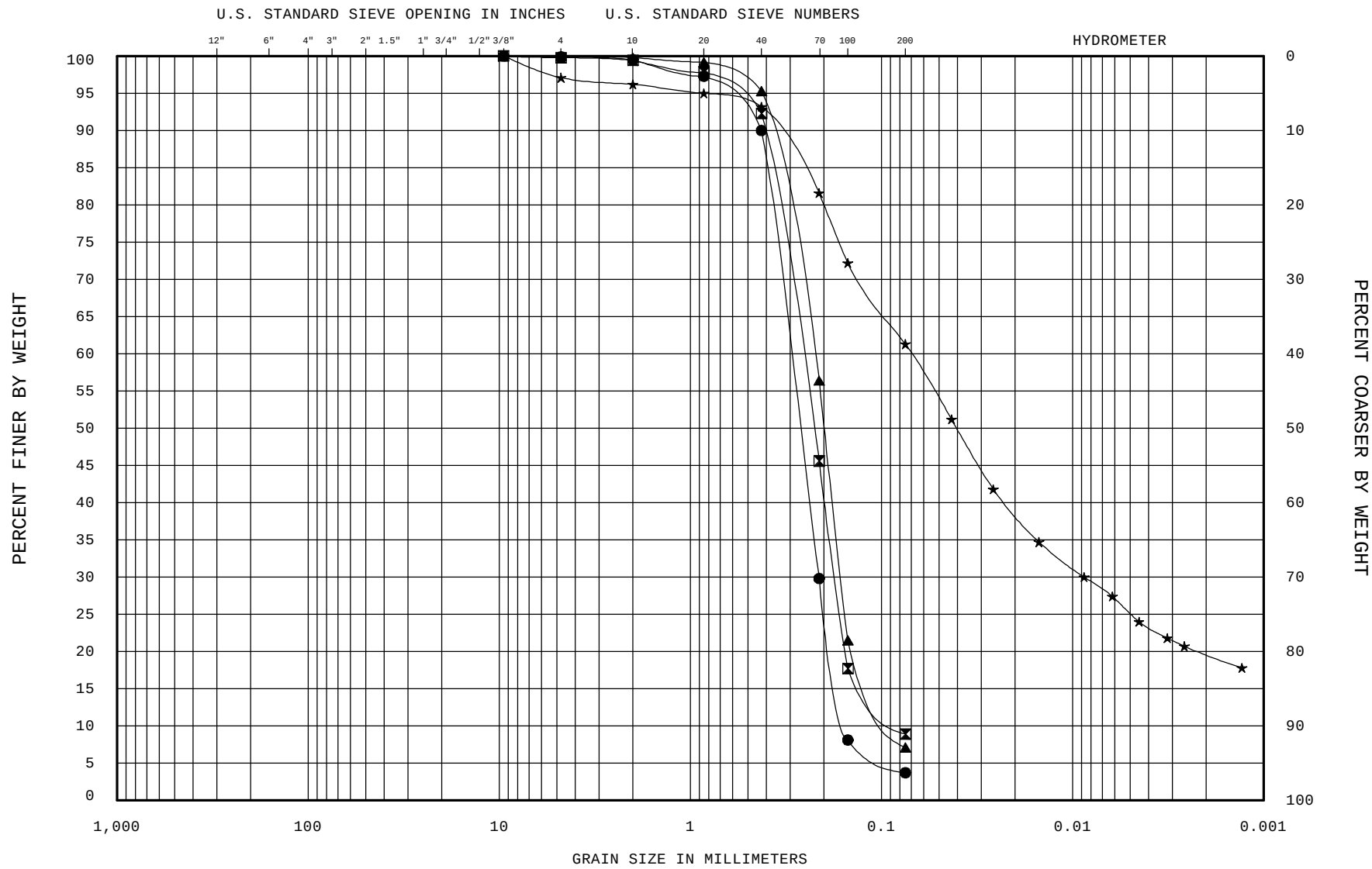
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-104*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-1	0.0-1.5	POORLY GRADED SAND	SP	24.5			
—⊠—	Jar-2	2.5-4.0	POORLY GRADED SAND with SILT	SP-SM	25.1			
—▲—	Jar 3-5	5.0-11.5	POORLY GRADED SAND with SILT	SP-SM	24.7			
—★—	Jars 7&8	15.0-19.0	SANDY LEAN CLAY	CL	27.5	36	15	21

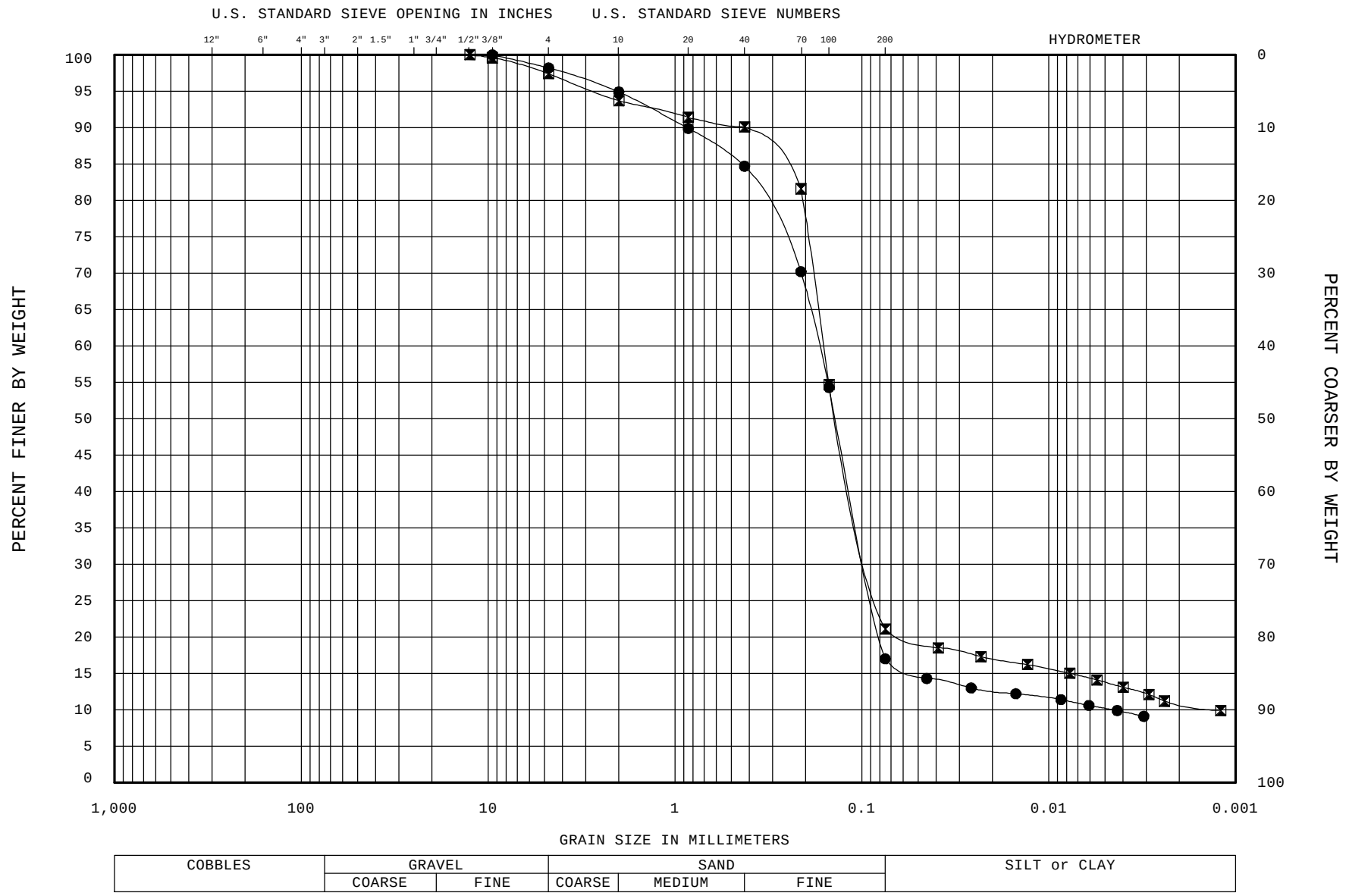
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-105*

DATE: *Jul 2004*



Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-10	22.5-24.0	CLAYEY SAND	SC	24.2			
—⊠—	Jars 11&12	25.0-29.0	SILTY SAND	SM	26.7			
— —								
— —								

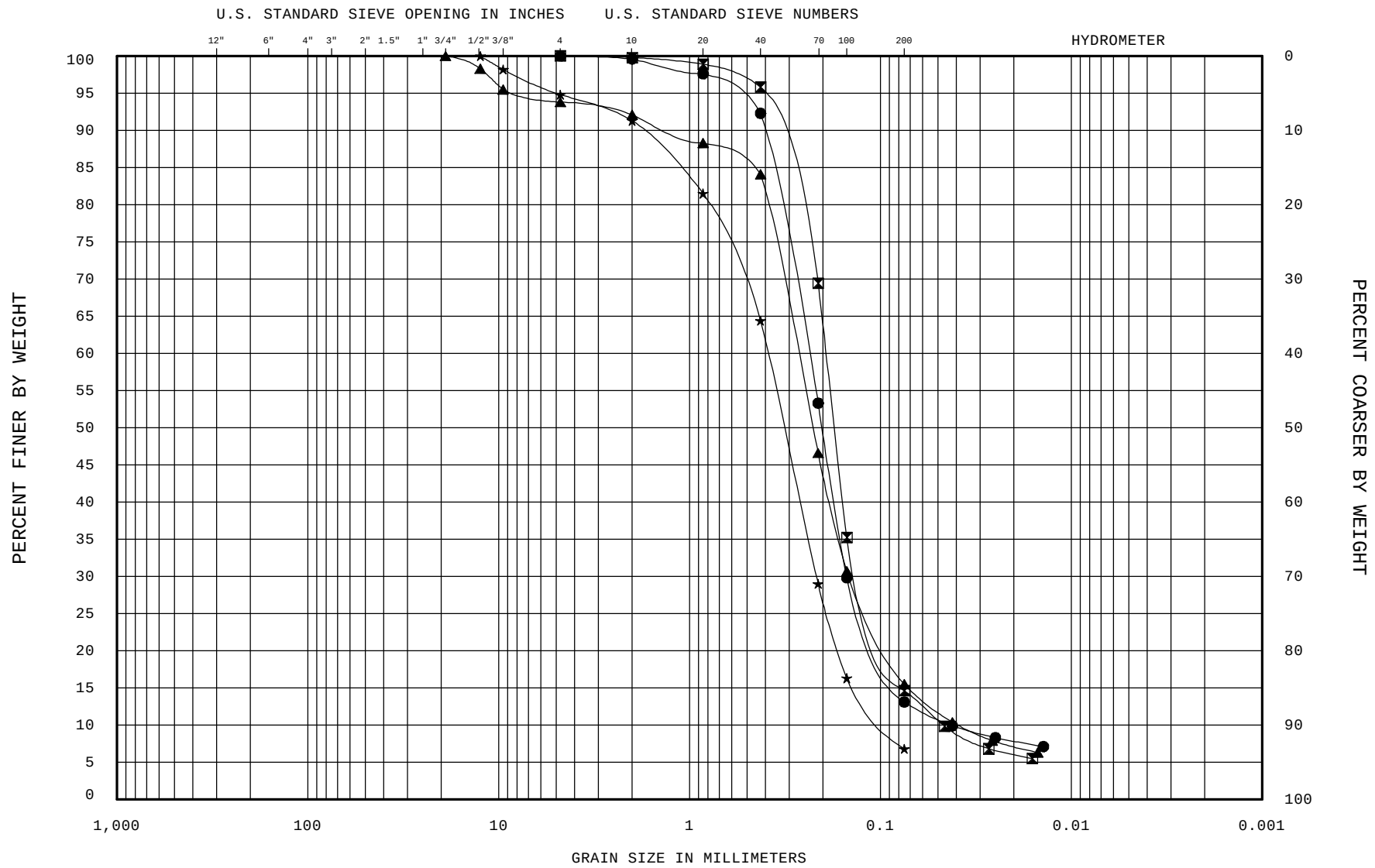
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-105*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SILTY SAND	SM	25.2			
—⊠—	Jars 3-5	5.0-11.5	SILTY SAND	SM	23.1			
—▲—	Jars 6&7	12.5-16.5	SILTY SAND	SM	16.7			
—★—	Jars 8-10	17.5-24.0	POORLY GRADED SAND with SILT	SP-SM	17.3			

Remarks:

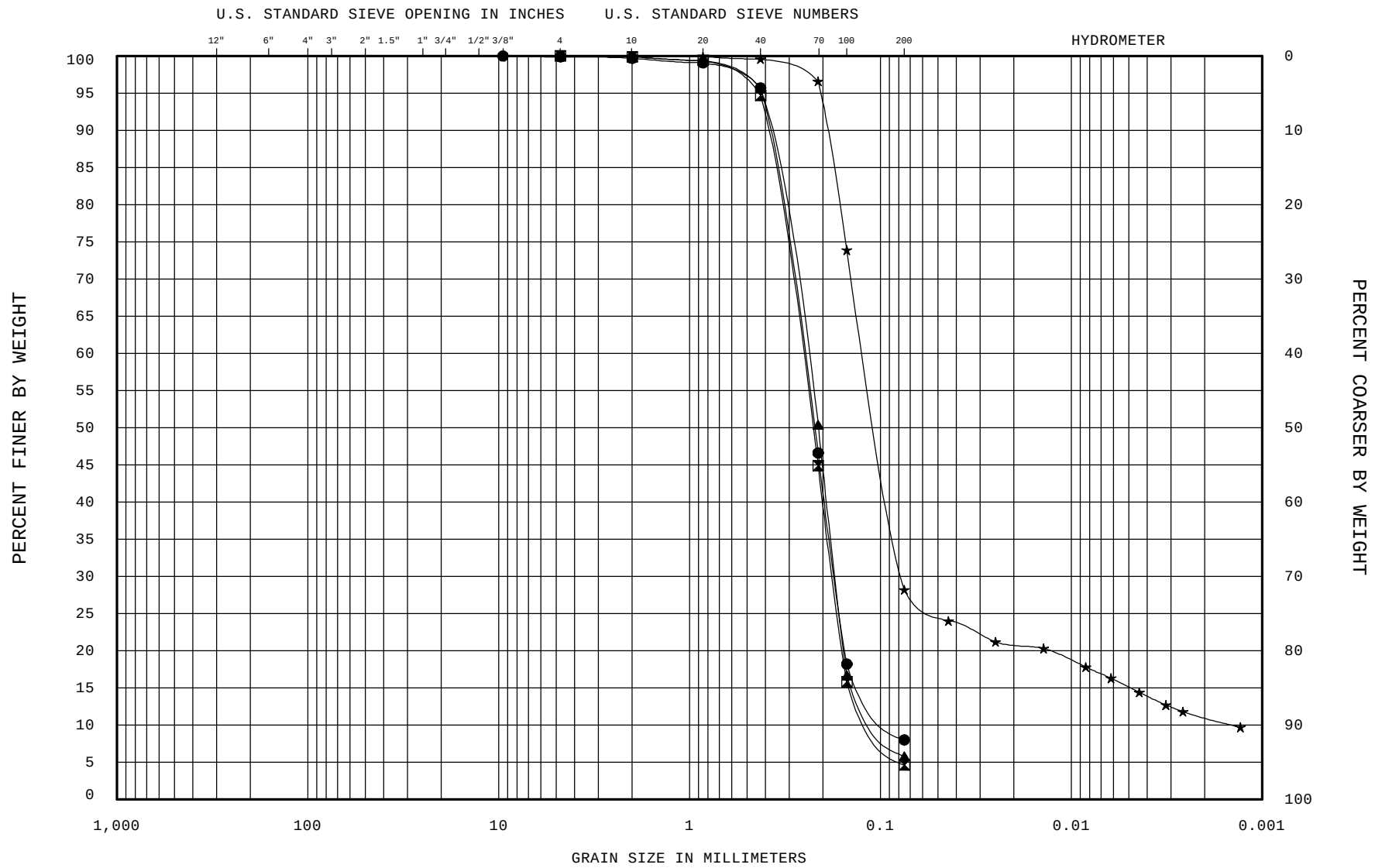
ENG FORM ENG2087-NO ATTSJAMES ISLAND, MID-BAY FEASIBILITY STUDY

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-106*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	POORLY GRADED SAND with SILT	SP-SM	28.8			
—⊠—	Jar-3	5.0-6.5	POORLY GRADED SAND	SP	25.3			
—▲—	Jar 4-6	7.5-14.0	POORLY GRADED SAND with SILT	SP-SM	22.8			
—★—	Jars 9-12	20.0-29.0	SILTY SAND	SM	35.2			

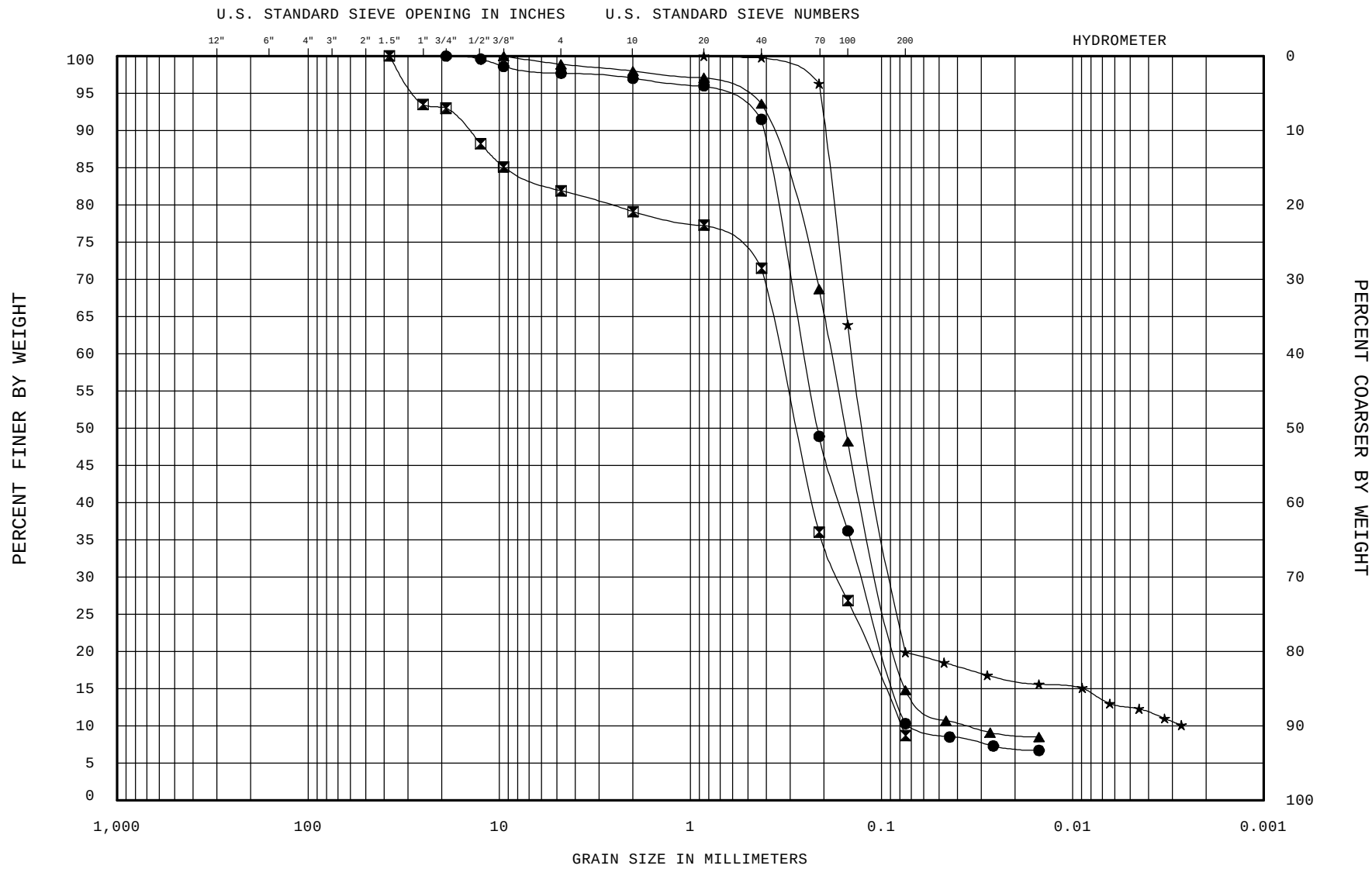
Remarks:

ENG FORM ENG2087-NO ATTSJAMES ISLAND, MID-BAY FEASIBILITY STUDY **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-107*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	POORLY GRADED SAND with SILT	SP-SM	25.1			
—⊠—	Jar-3	5.0-6.5	POORLY GRADED SAND with SILT and GRAVEL	SP-SM	13.8			
—▲—	Jars4&5	7.5-11.5	SILTY SAND	SM	25.0			
—★—	Jars 8&9	17.5-21.5	SILTY SAND	SM	30.5			

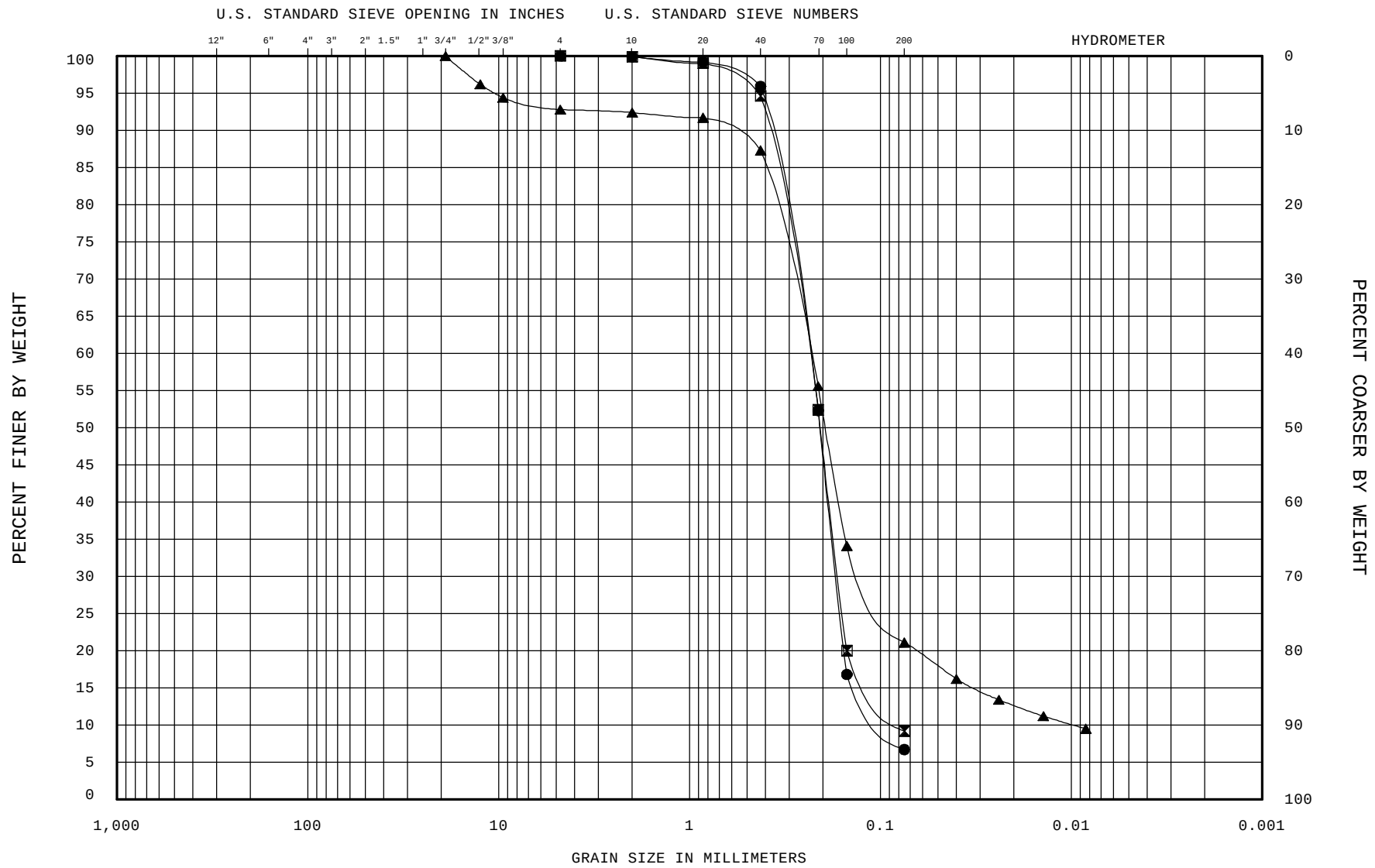
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-108*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2-4	2.5-9.0	POORLY GRADED SAND with SILT	SP-SM	25.9			
—⊠—	Jar-5	10.0-11.5	POORLY GRADED SAND with SILT	SP-SM	23.9			
—▲—	Jar-6	12.5-14.0	SILTY SAND	SM	27.2			
— —								

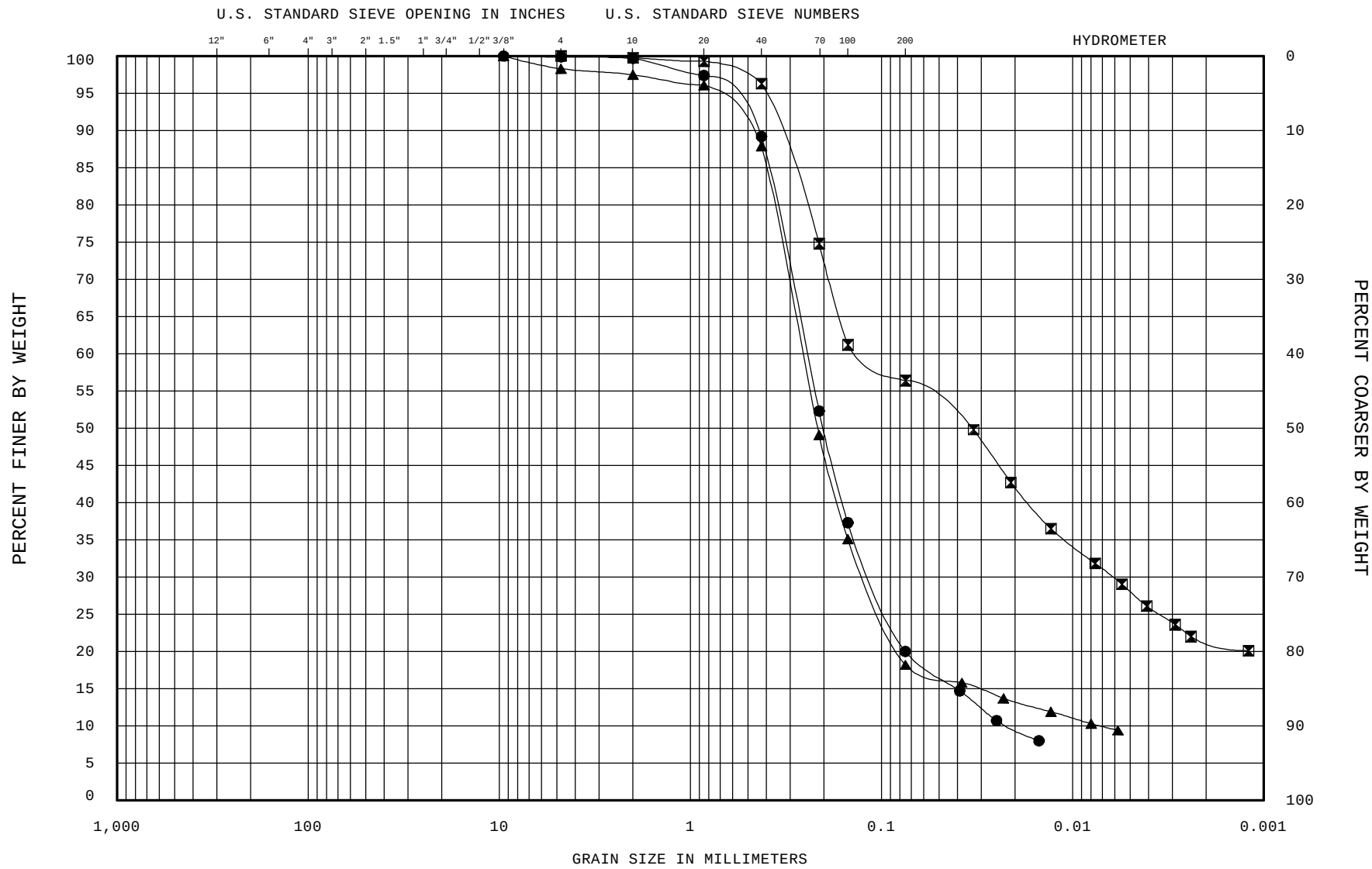
Remarks:

ENG FORM ENG2087-NO ATTSJAMES ISLAND, MID-BAY FEASIBILITY STUDY **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-109*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-3	5.0-6.5	SILTY SAND	SM	24.0			
—⊠—	Jar-4	7.5-9.0	SANDY CLAY	CL	37.6			
—▲—	Jar 6-8	12.5-19.0	SILTY SAND	SM	27.9			
— —								

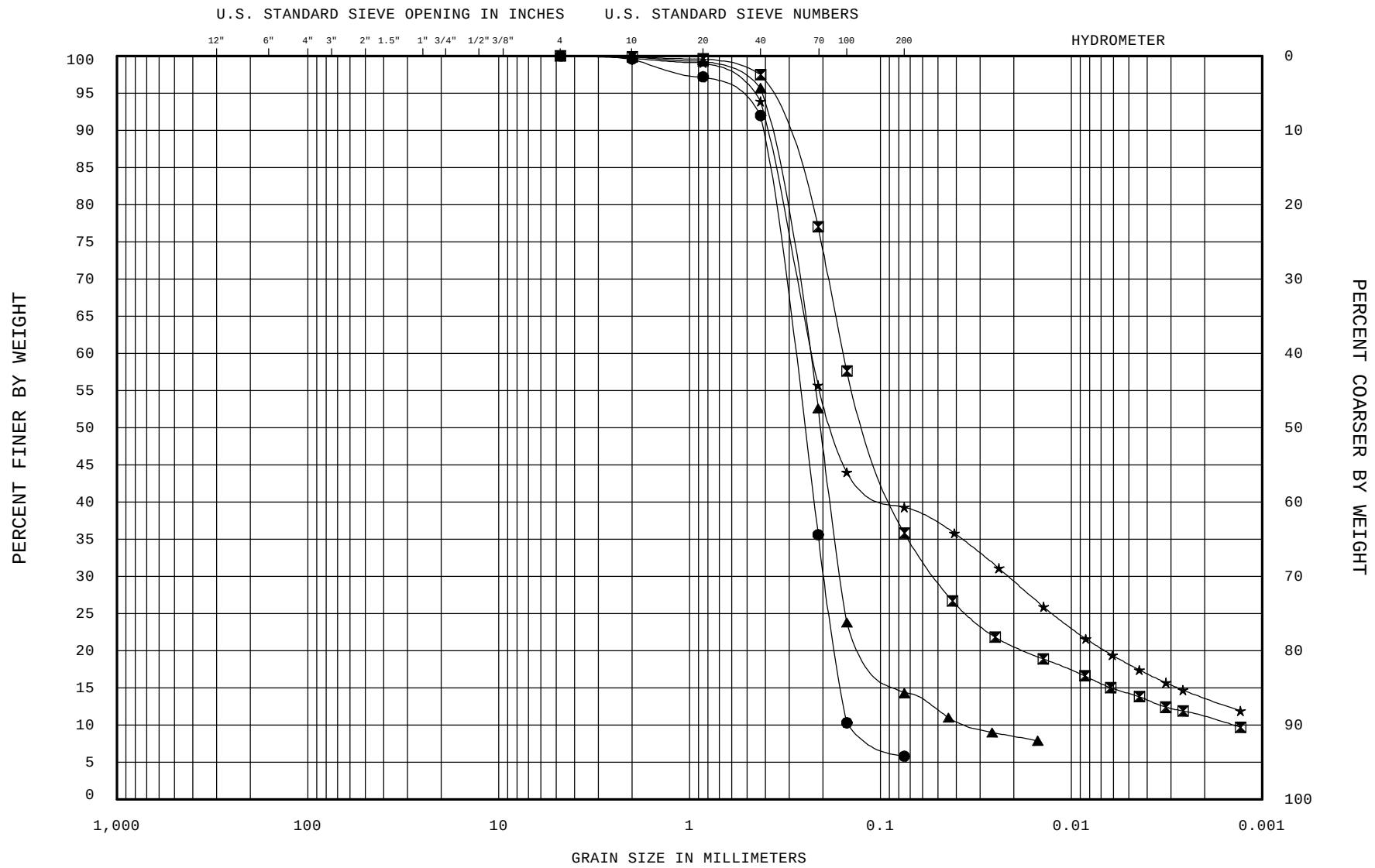
Remarks:

ENG FORM ENG2087-NO ATTSJAMES ISLAND, MID-BAY FEASIBILITY STUDY **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-110*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	POORLY GRADED SAND with SILT	SP-SM	26.1			
—⊠—	Jar-3	5.0-6.5	CLAYEY SAND	SC	30.1			
—▲—	Jar-4	7.5-9.0	SILTY SAND	SM	28.6			
—★—	Jar-5	10.0-11.5	CLAYEY SAND	SC	33.3	40	19	21

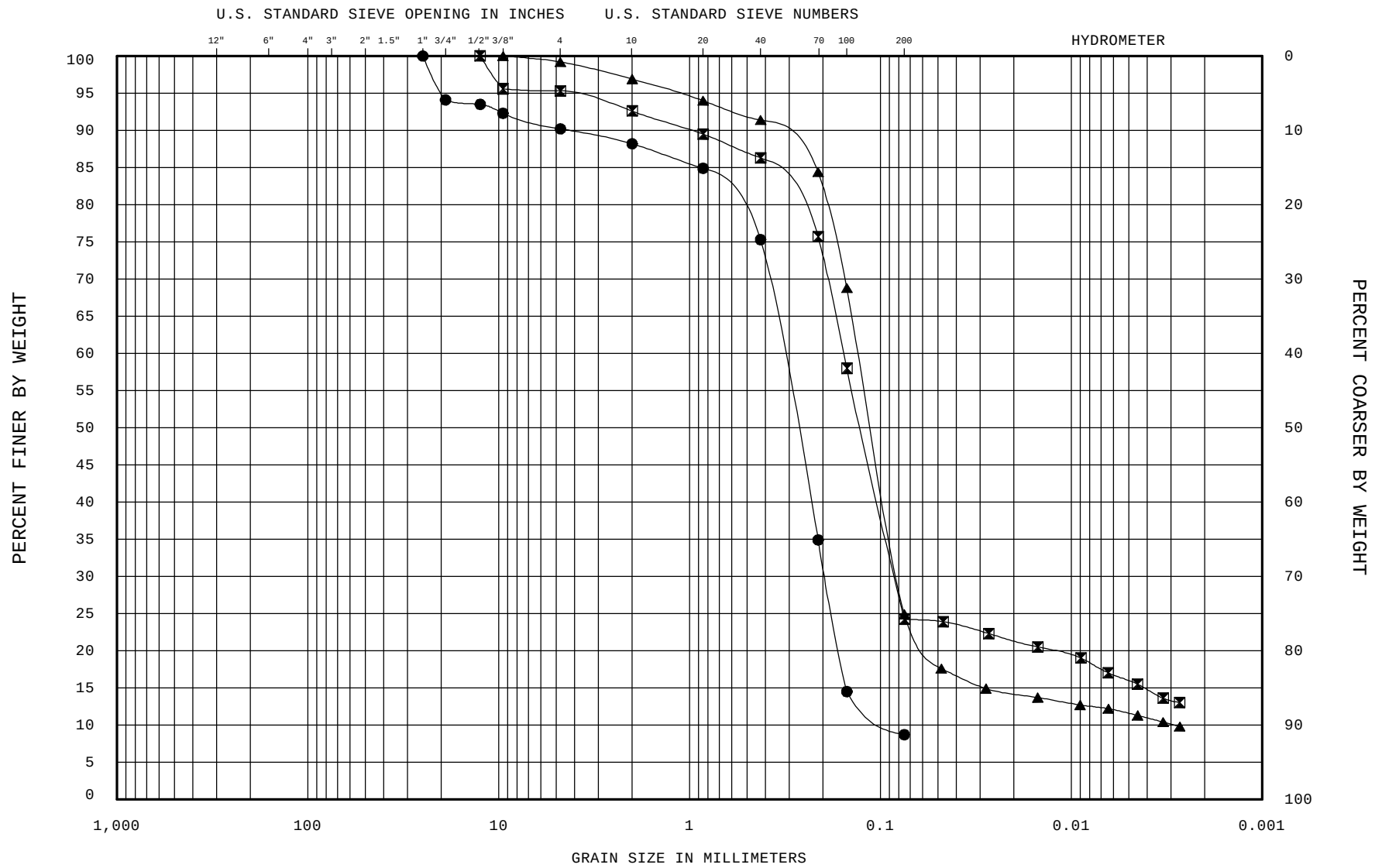
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-111*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-6	12.5-14.0	POORLY GRADED SAND with SILT	SP-SM	23.3			
—⊠—	Jars 7&8	15.0-19.0	CLAYEY SAND	SC	34.2	46	23	23
—▲—	Jars 9-11	20.0-26.5	SILTY SAND	SM	28.0			
— —								

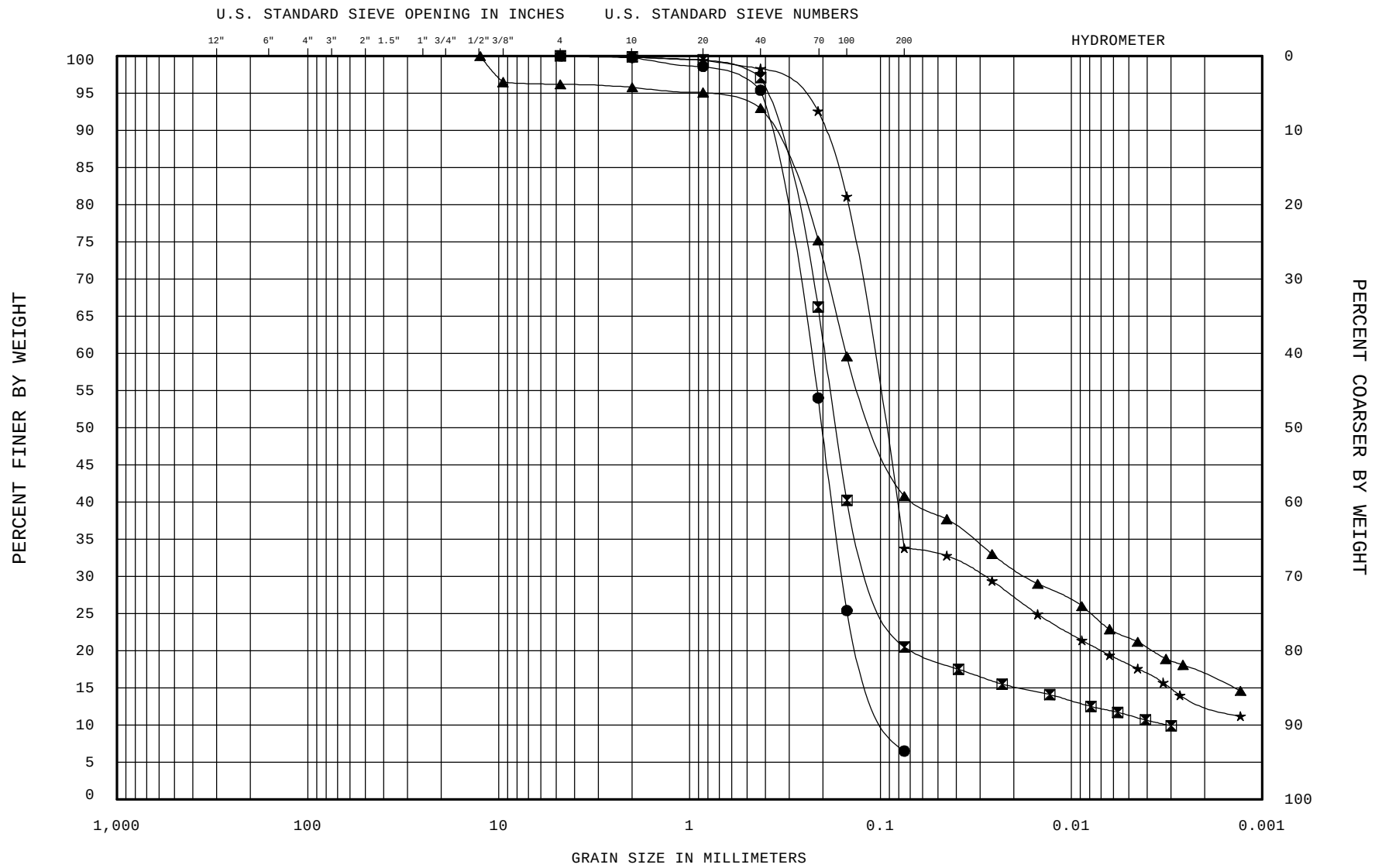
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-111*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1-3	0.0-6.5	POORLY GRADED SAND with SILT	SP-SM	27.2			
—⊠—	Jar-4	7.5-9.0	SILTY SAND	SM	26.6			
—▲—	Jars 5&6	10.0-15.0	CLAYEY SAND	SC	37.4	46	18	28
—★—	Jar-7	15.0-16.5	SILTY SAND	SM	37.7			

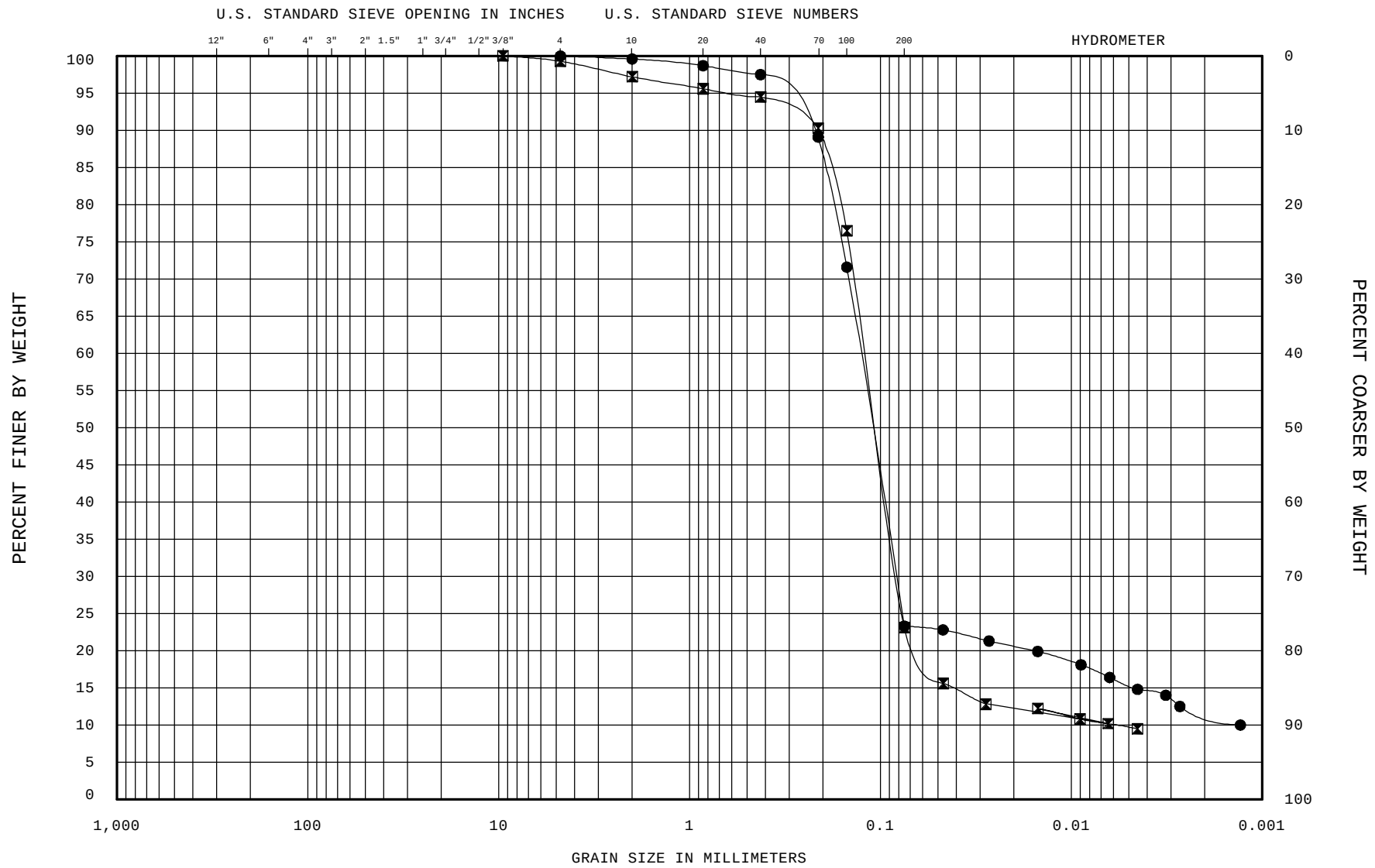
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-112*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-8	17.5-19.0	CLAYEY SAND	SC	35.2			
—⊠—	Jars 10&11	22.5-26.5	SILTY SAND	SM	31.8			
— —								
— —								

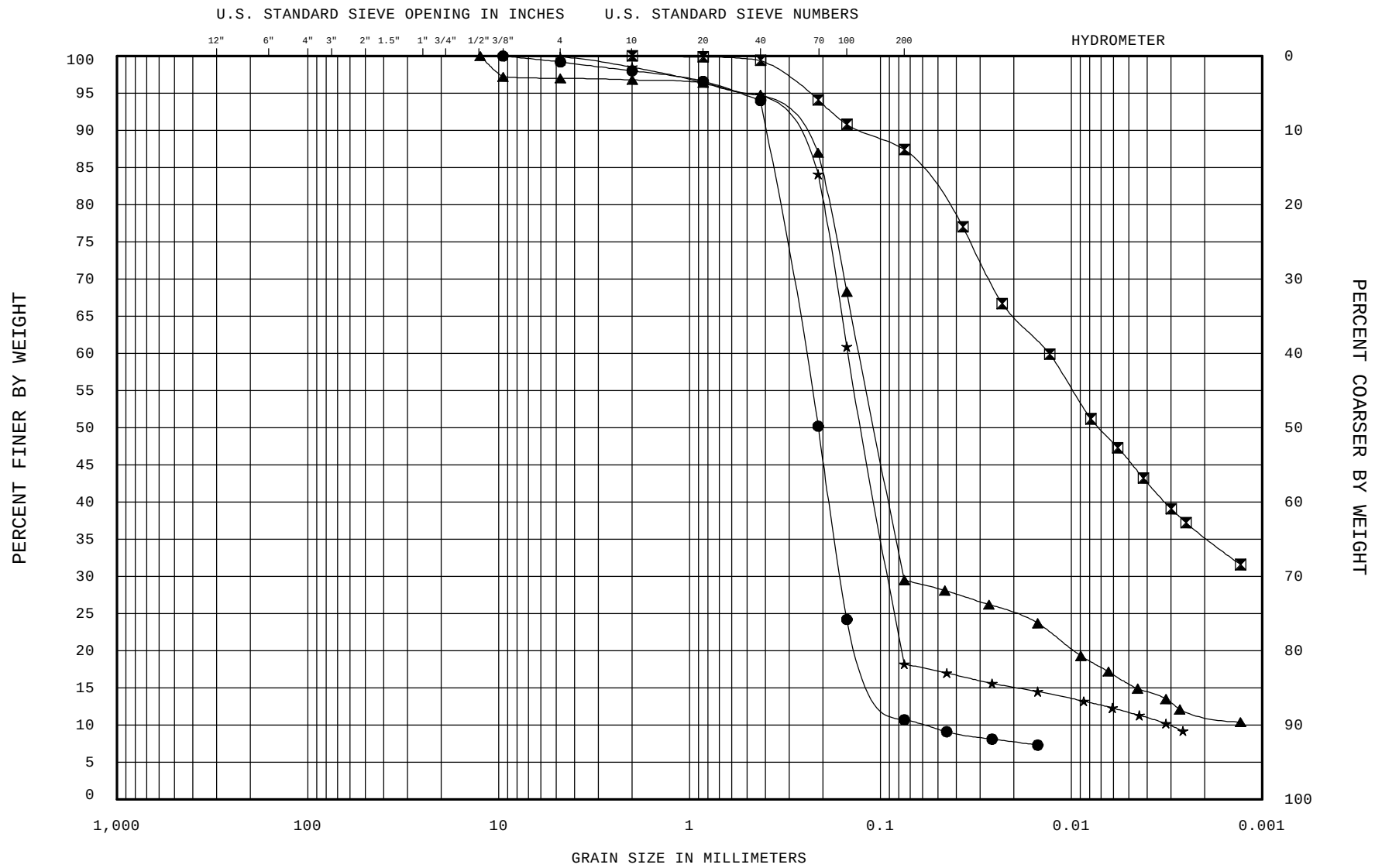
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-112*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1-3	0.0-6.5	POORLY GRADED SAND with SILT	SP-SM	24.9			
—⊠—	Jars 4&5	8.4-11.5	FAT CLAY	CH	45.2			
—▲—	Jar-6	12.5-14.0	CLAYEY SAND	SC	39.7	58	23	35
—★—	Jars 8-10	17.5-24.0	CLAYEY SAND	SC	32.2			

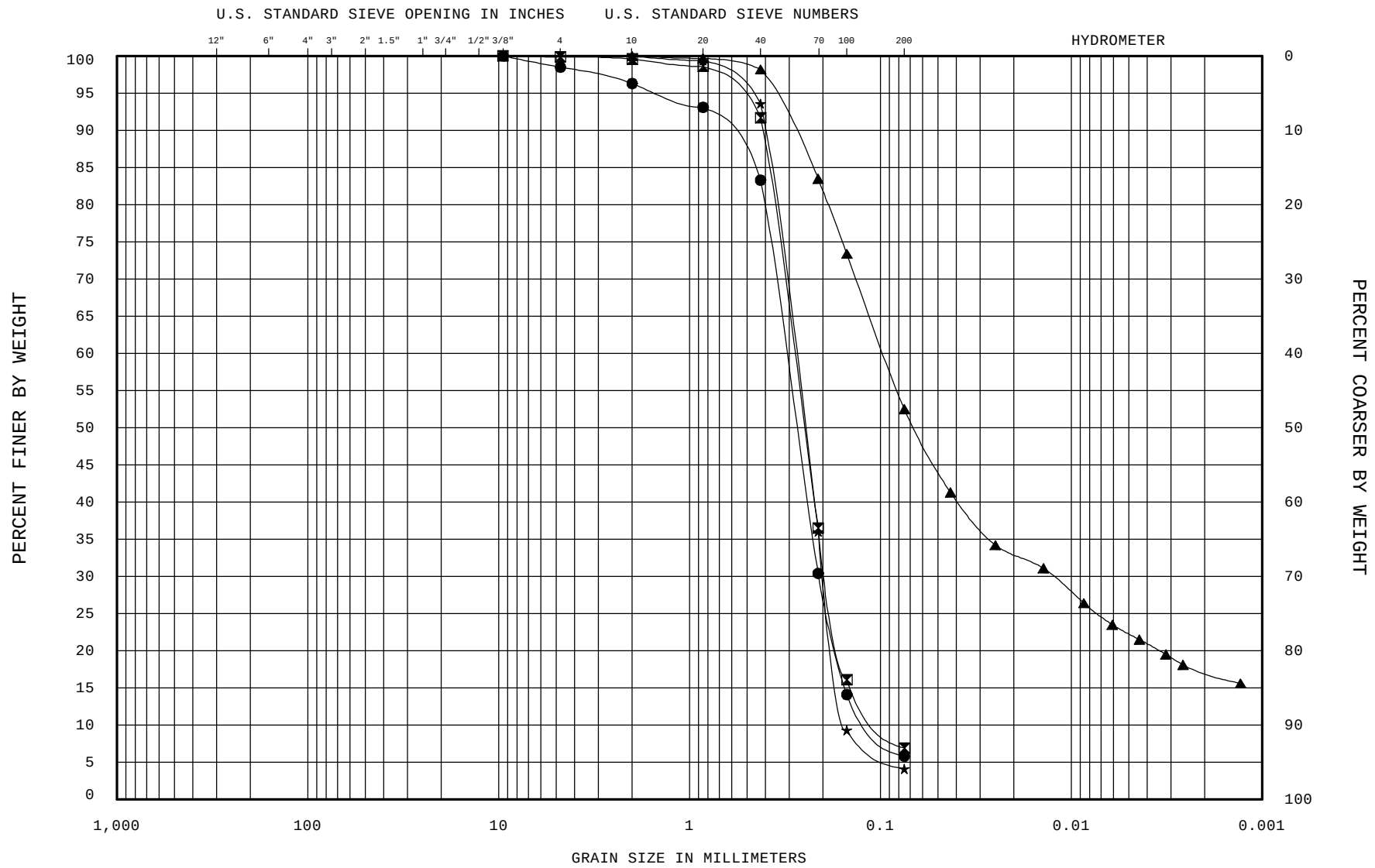
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-113*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-1	0.0-1.5	POORLY GRADED SAND with SILT	SP-SM	25.0			
—⊠—	Jars 2&3	2.5-6.5	POORLY GRADED SAND with SILT	SP-SM	24.2			
—▲—	Jar-4	7.5-9.0	SANDY LEAN CLAY	CL	35.4			
—★—	Jar-5	10.0-11.5	POORLY GRADED SAND	SP	24.8			

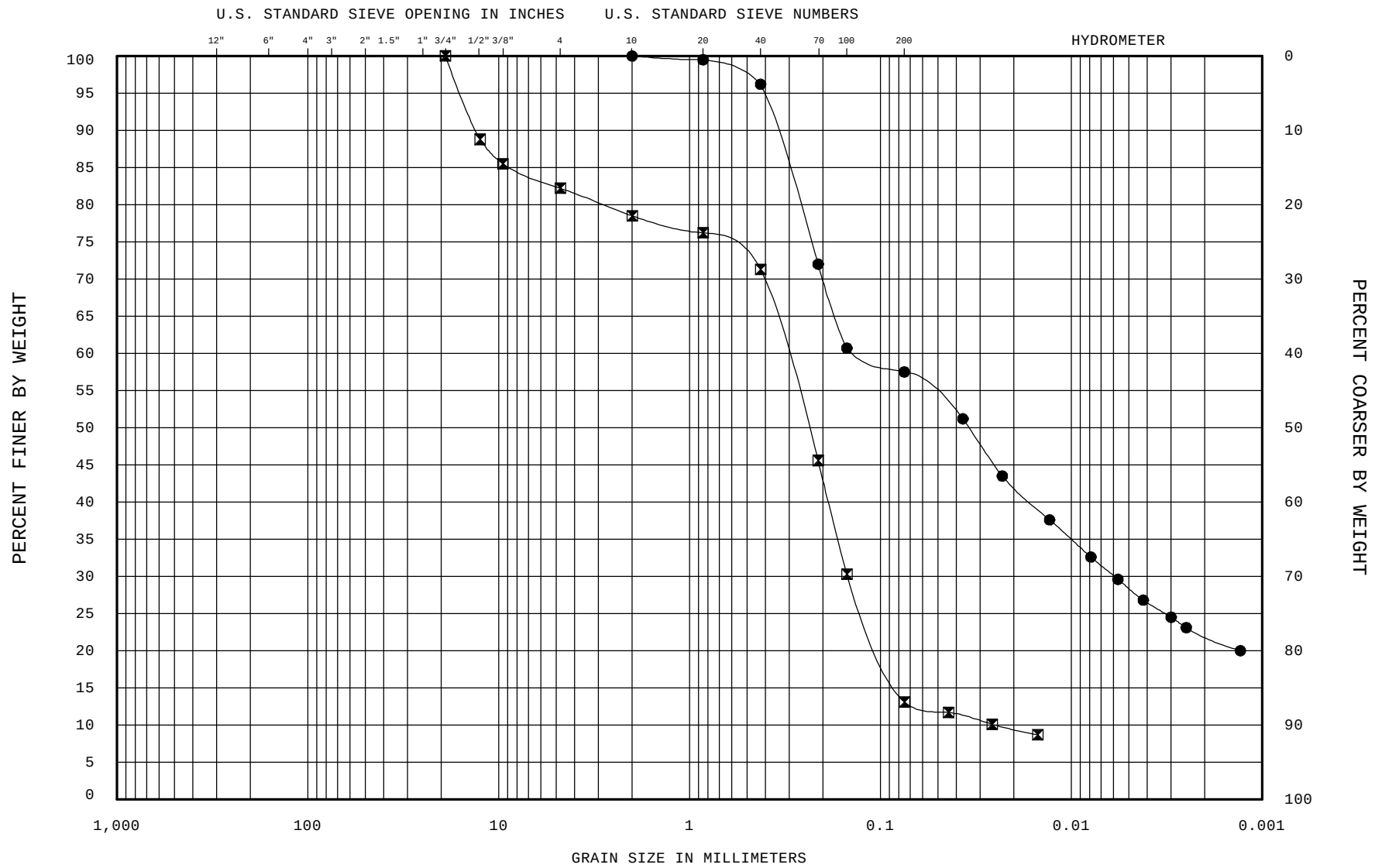
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-114*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-6	12.5-14.0	SANDY LEAN CLAY	CL	40.7	39	17	22
—⊠—	Jar-7	15.0-16.5	SILTY SAND with GRAVEL	SM	24.5			
— —								
— —								

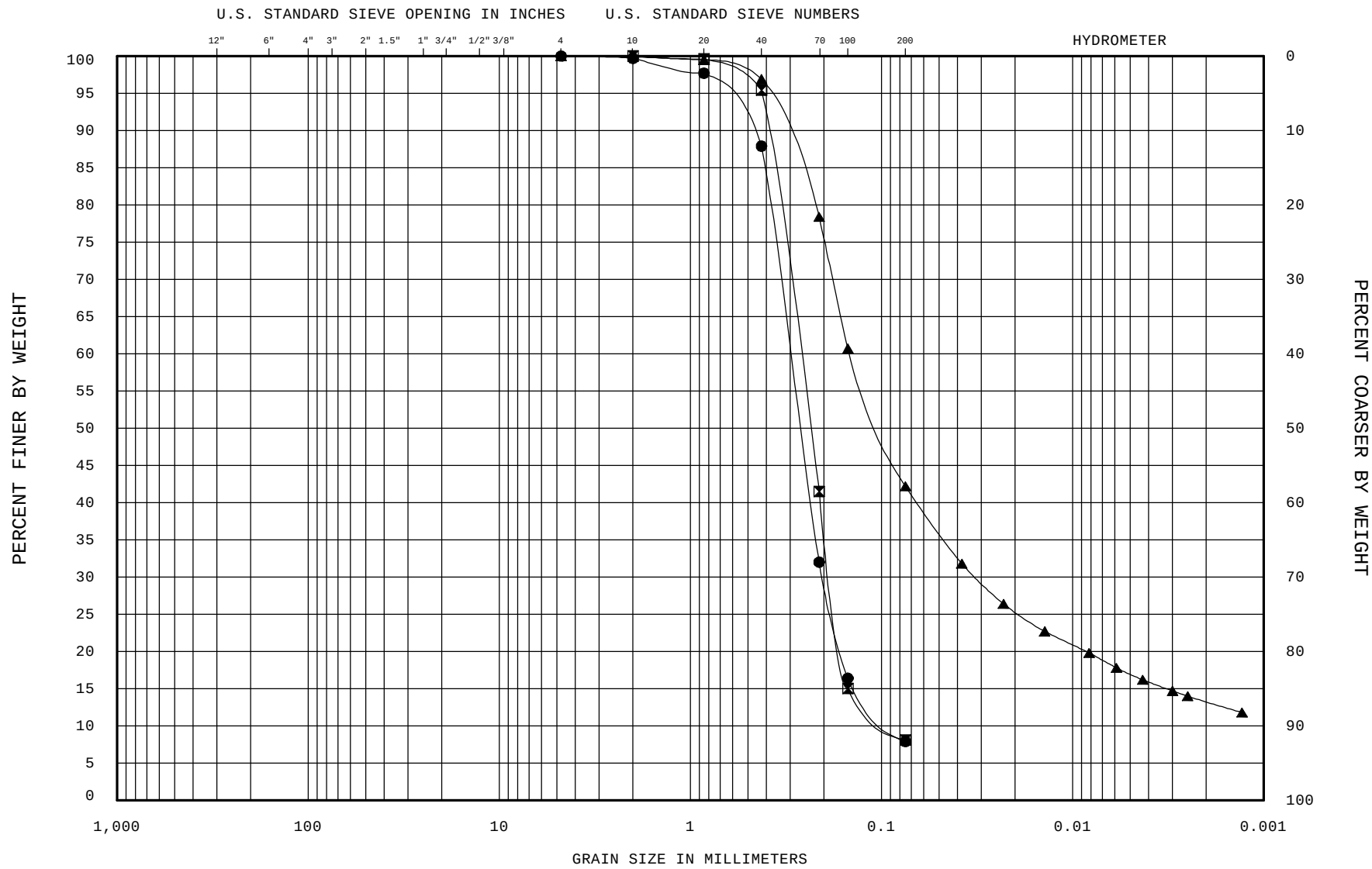
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-114*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	POORLY GRADED SAND with SILT	SP-SM	23.9			
—⊠—	Jar-4	7.5-9.0	POORLY GRADED SAND with SILT	SP-SM	24.5			
—▲—	Jar-5	10.0-11.5	CLAYEY SAND	SC	31.1			
— —								

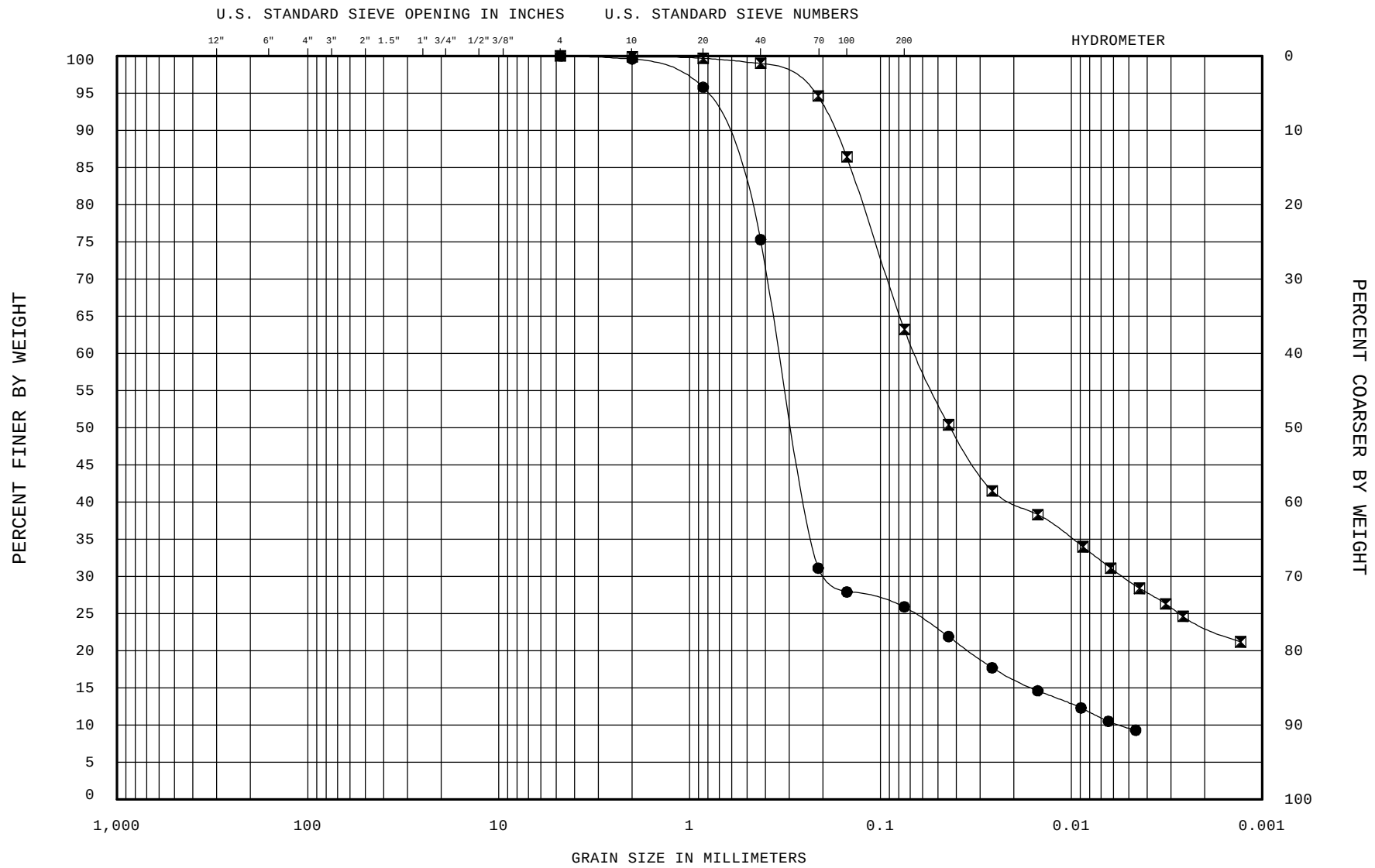
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-115*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-3	5.0-6.5	SILTY SAND	SM	29.2			
—⊠—	Jar-4	7.5-9.0	SANDY LEAN CLAY	CL	35.7	42	17	25
— —								
— —								

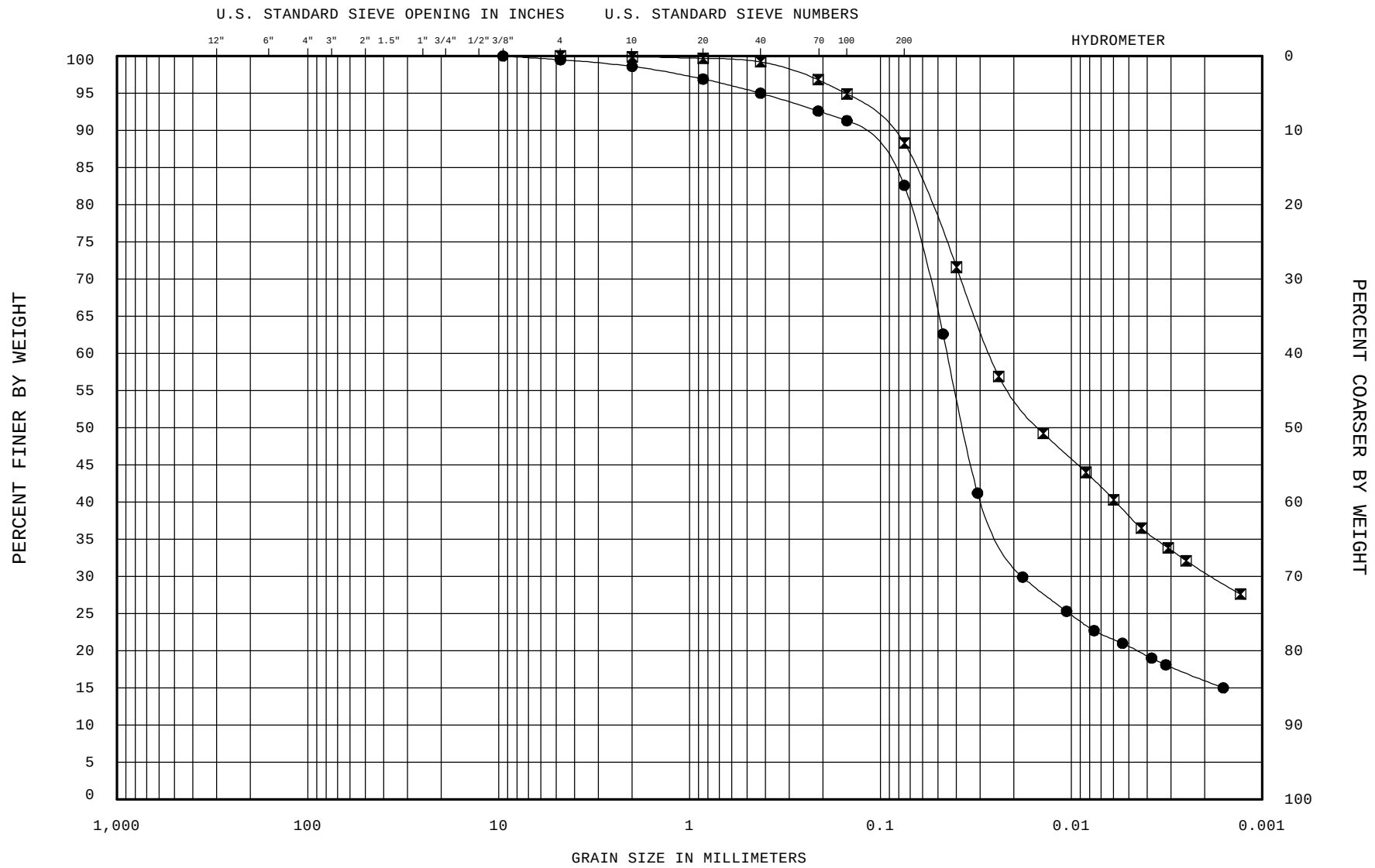
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-116*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	SILT with SAND	ML	27.8			
—⊠—	Jar-4	7.5-9.0	LEAN CLAY	CL	37.6	48	19	29
— —								
— —								

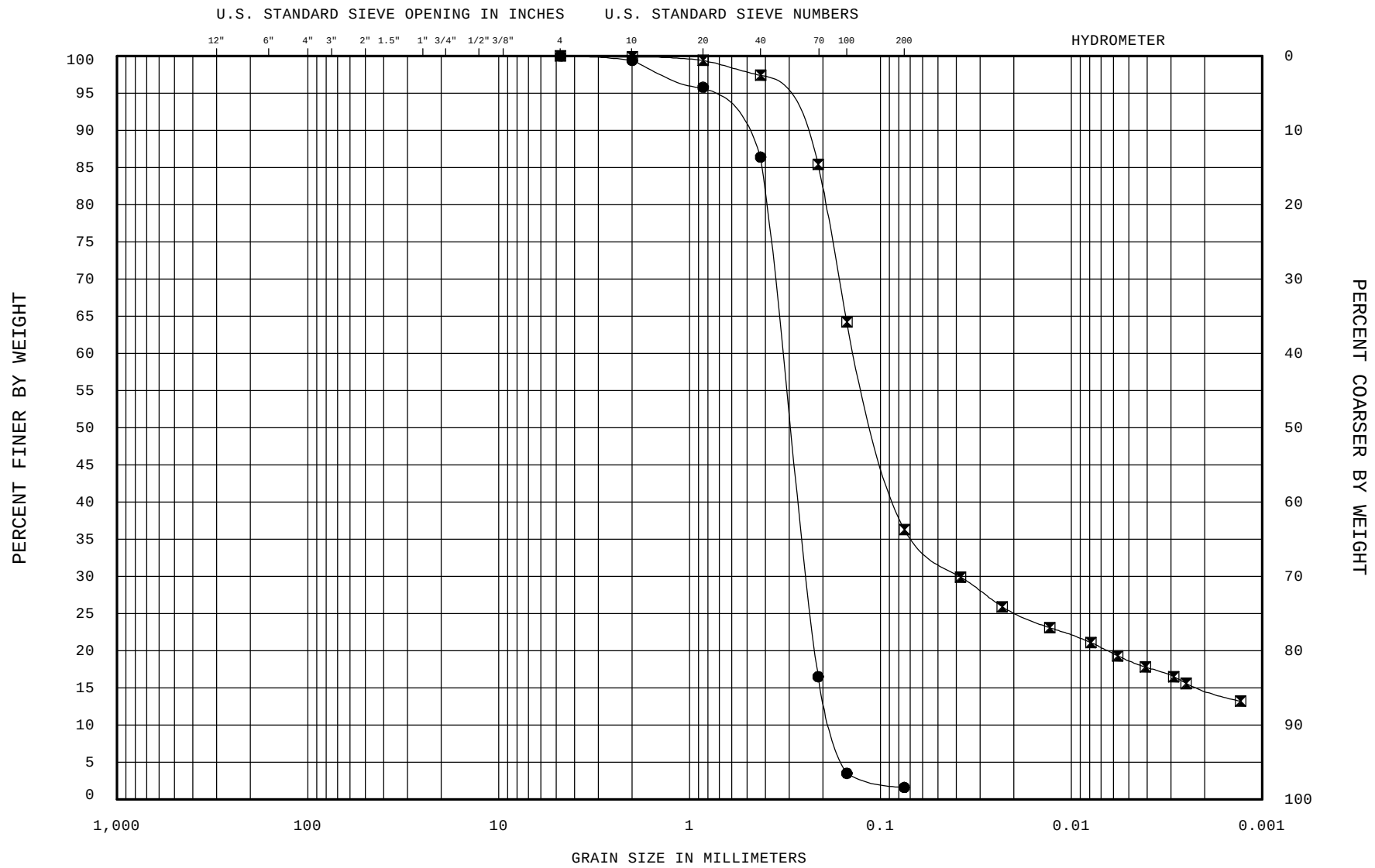
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-117*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	POORLY GRADED SAND	SP	26.8			
—⊠—	Jar-4	7.5-9.0	CLAYEY SAND	SC	29.8			
— —								
— —								

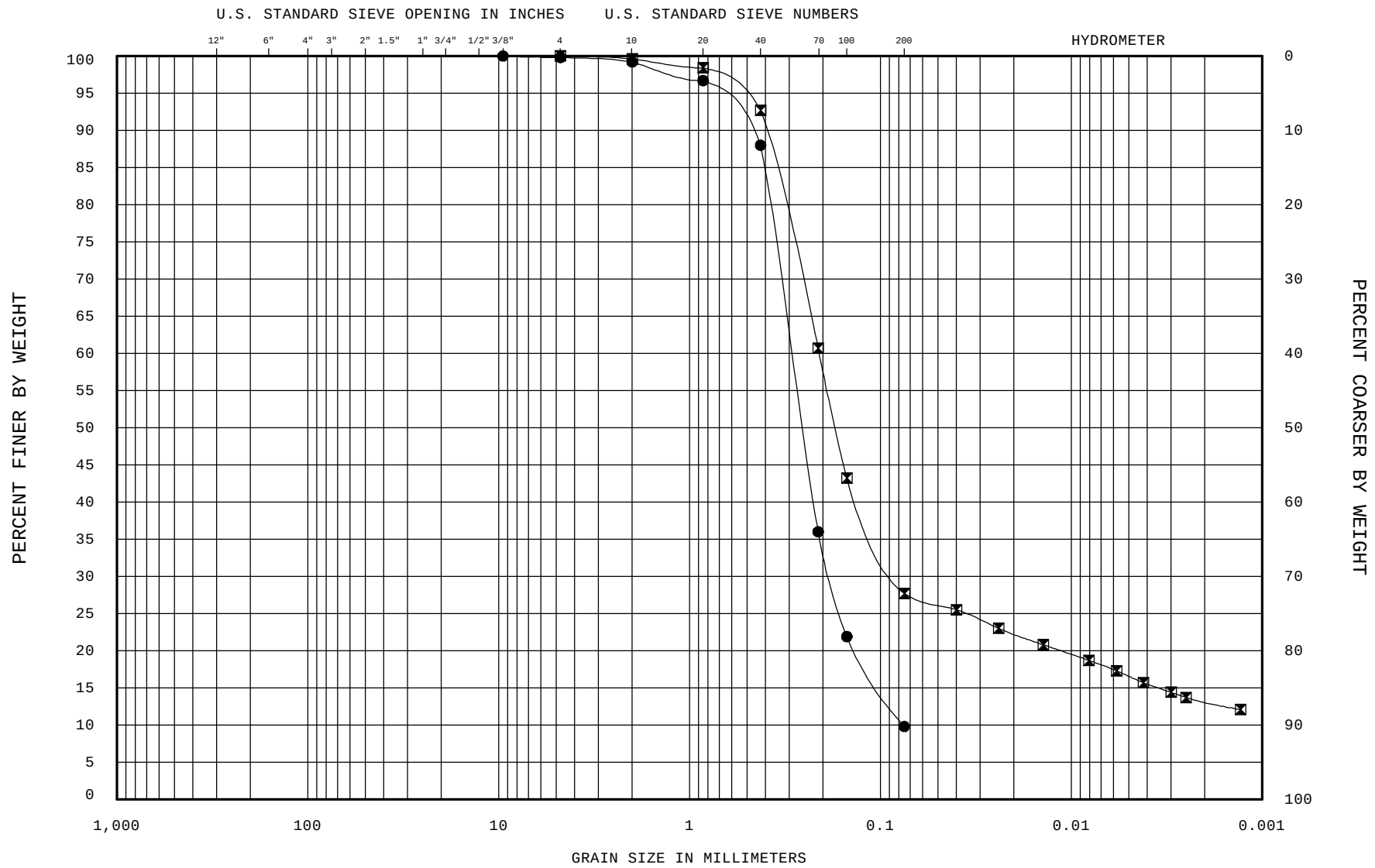
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-118*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-4	7.5-9.0	POORLY GRADED SAND with SILT	SP-SM	22.9			
—⊠—	Jar-6	12.5-14.0	CLAYEY SAND	SC	30.8			
— —								
— —								

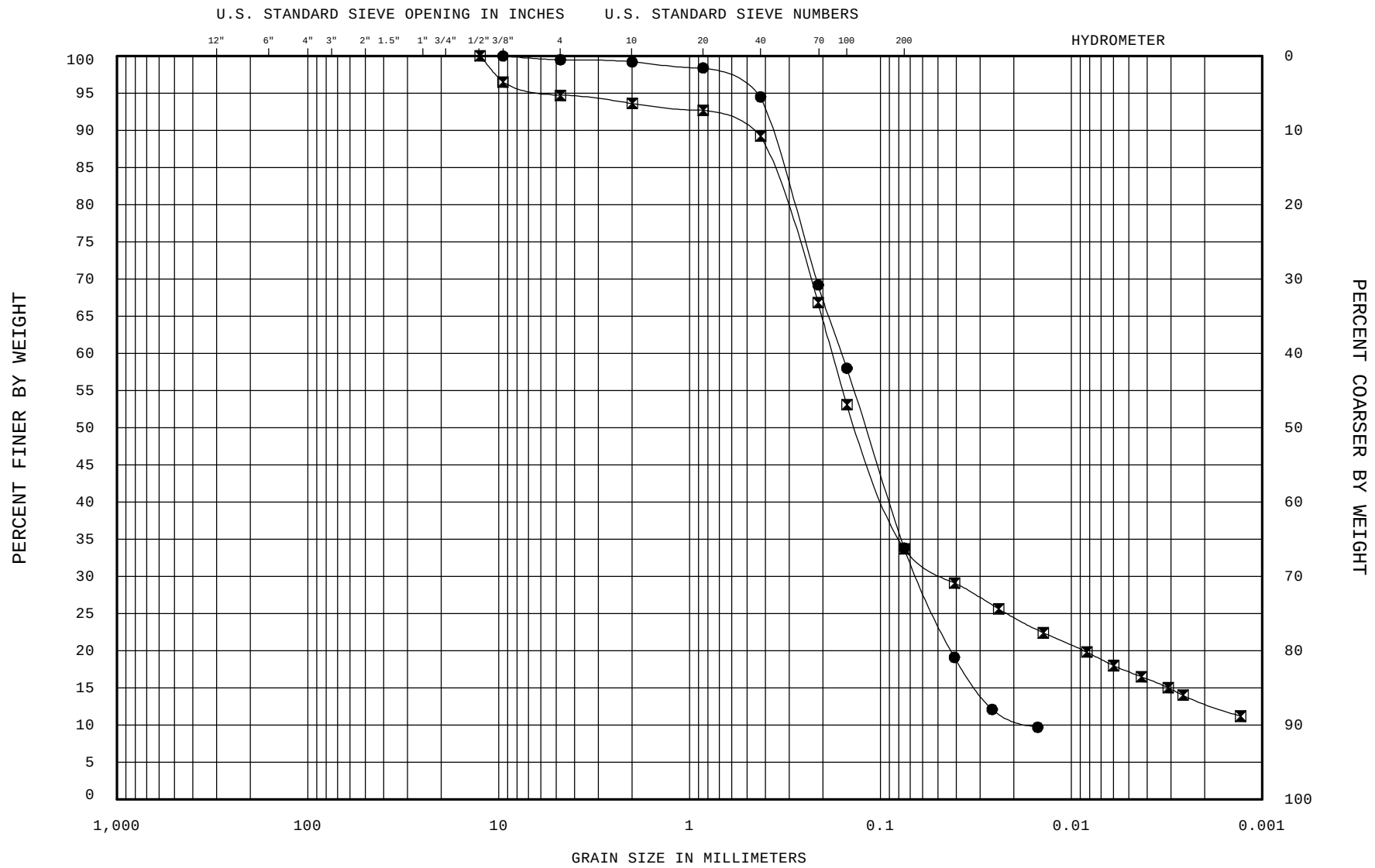
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-119*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	SILTY SAND	SM	25.4			
—⊠—	Jars 6-8	12.5-19.0	CLAYEY SAND	SC	32.8			
— —								
— —								

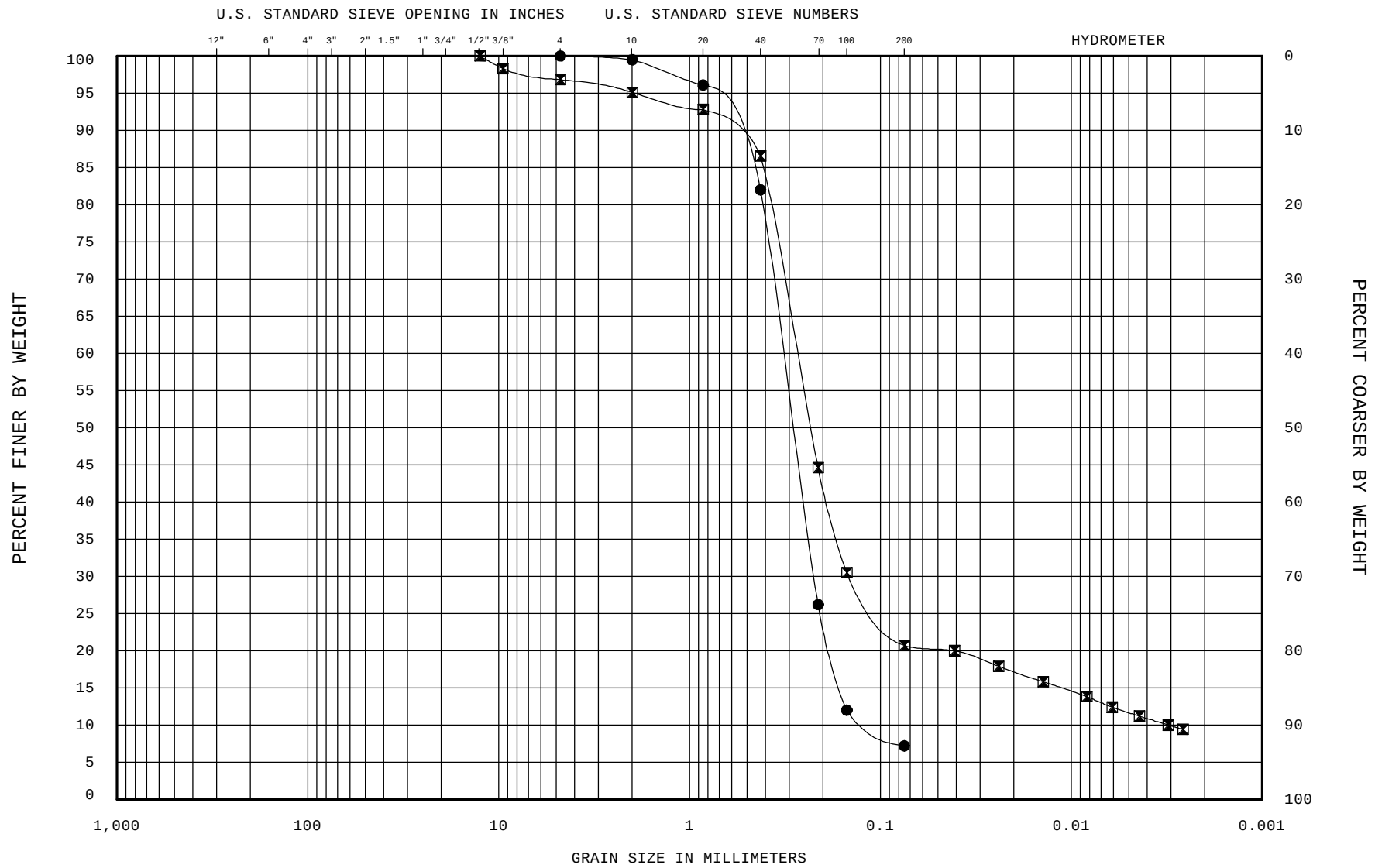
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-120*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-3	5.0-6.5	POORLY GRADED SAND with SILT	SP-SM	22.2			
—⊠—	Jar-6	12.5-14.0	SILTY SAND	SM	31.0			
— —								
— —								

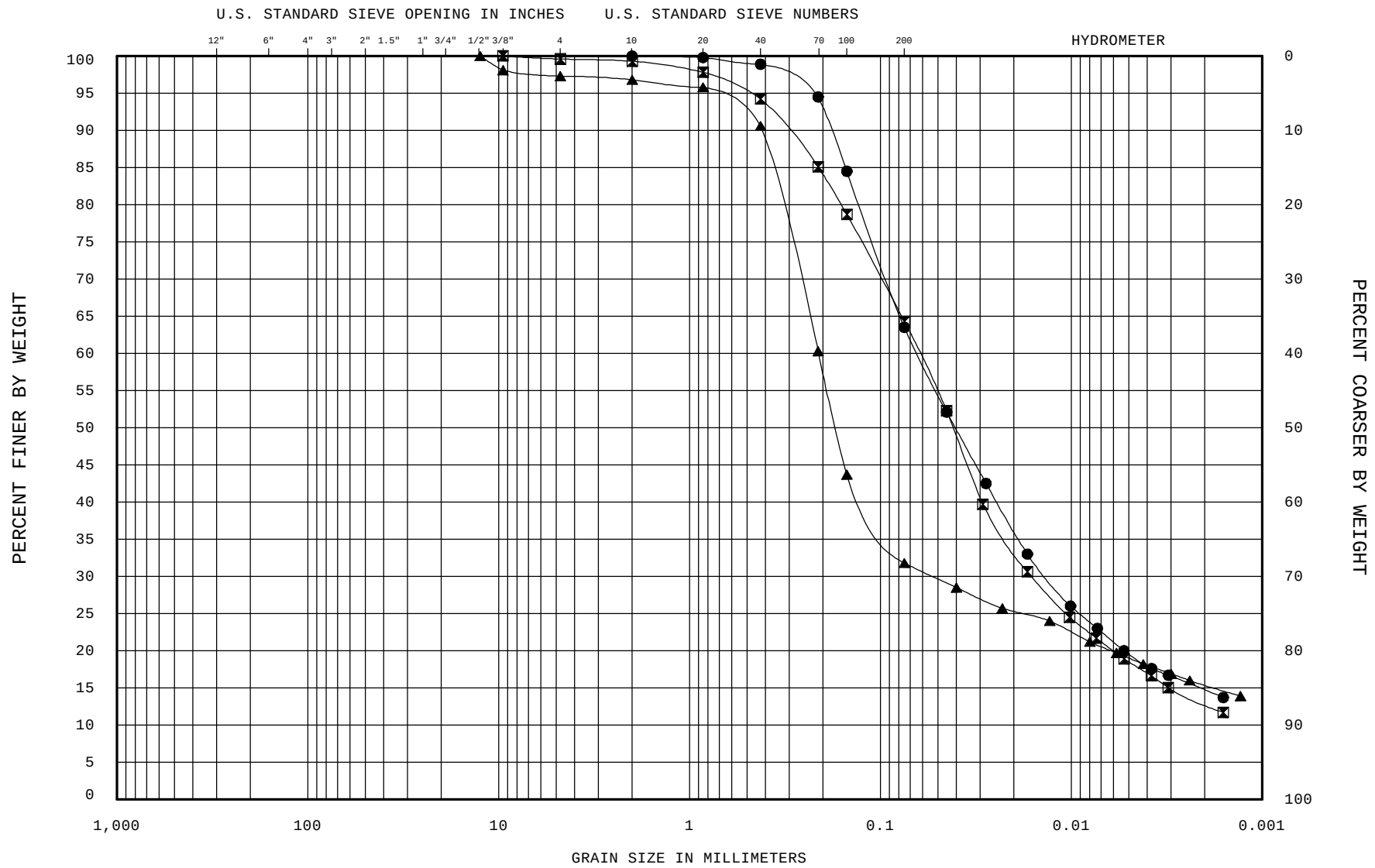
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-121*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	SANDY SILT	ML	22.4			
—⊠—	Jar-3	5.0-6.5	SANDY SILTY CLAY	CL-ML	19.9	21	16	5
—▲—	Jar-6	12.5-14.0	CLAYEY SAND	SC	31.3			
— —								

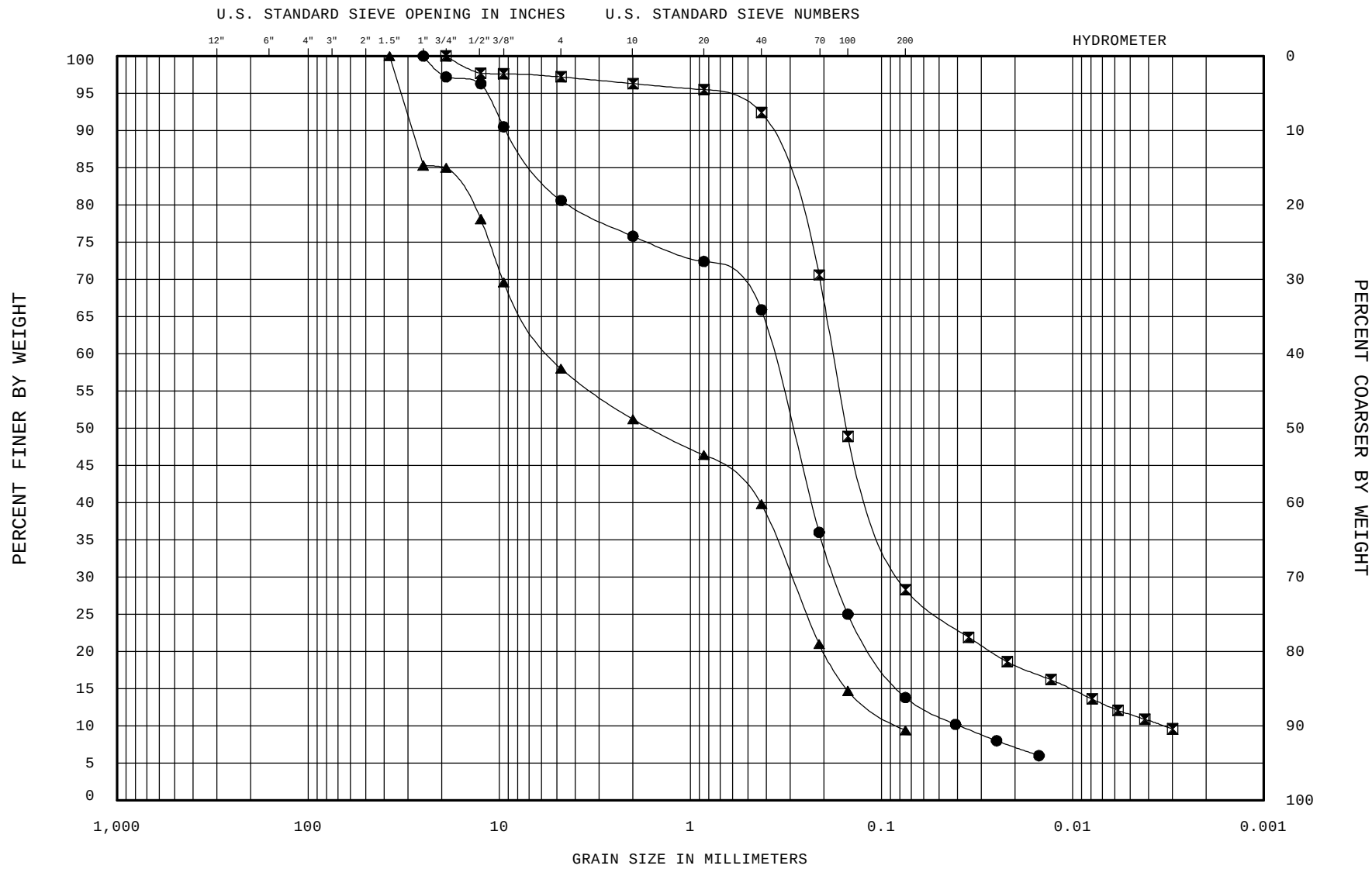
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-122*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-6	10.8-11.5	SILTY SAND with GRAVEL	SM	16.5			
—⊠—	Jar-7	12.5-14.0	SILTY SAND	SM	22.7			
—▲—	Jar-8	15.0-16.5	POORLY GRADED SAND with SILT and GRAVEL	SP-SM	12.1			
— —								

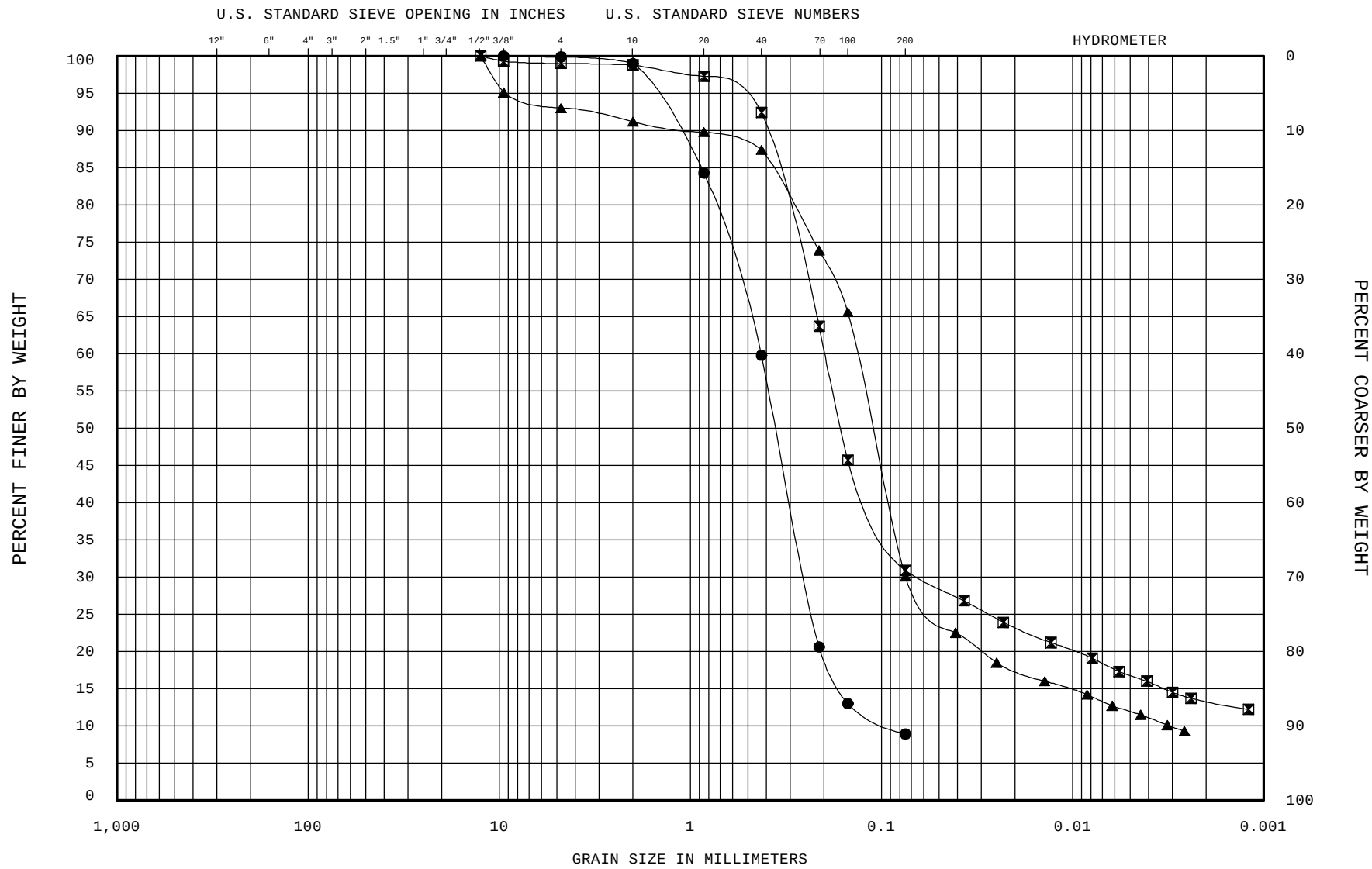
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-126*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	POORLY GRADED SAND with SILT	SP-SM	19.4			
—⊠—	Jars 5&6	10.0-14.0	CLAYEY SAND	SC	30.0			
—▲—	Jars 7-9	15.0-21.5	SILTY SAND	SM	24.1			
— —								

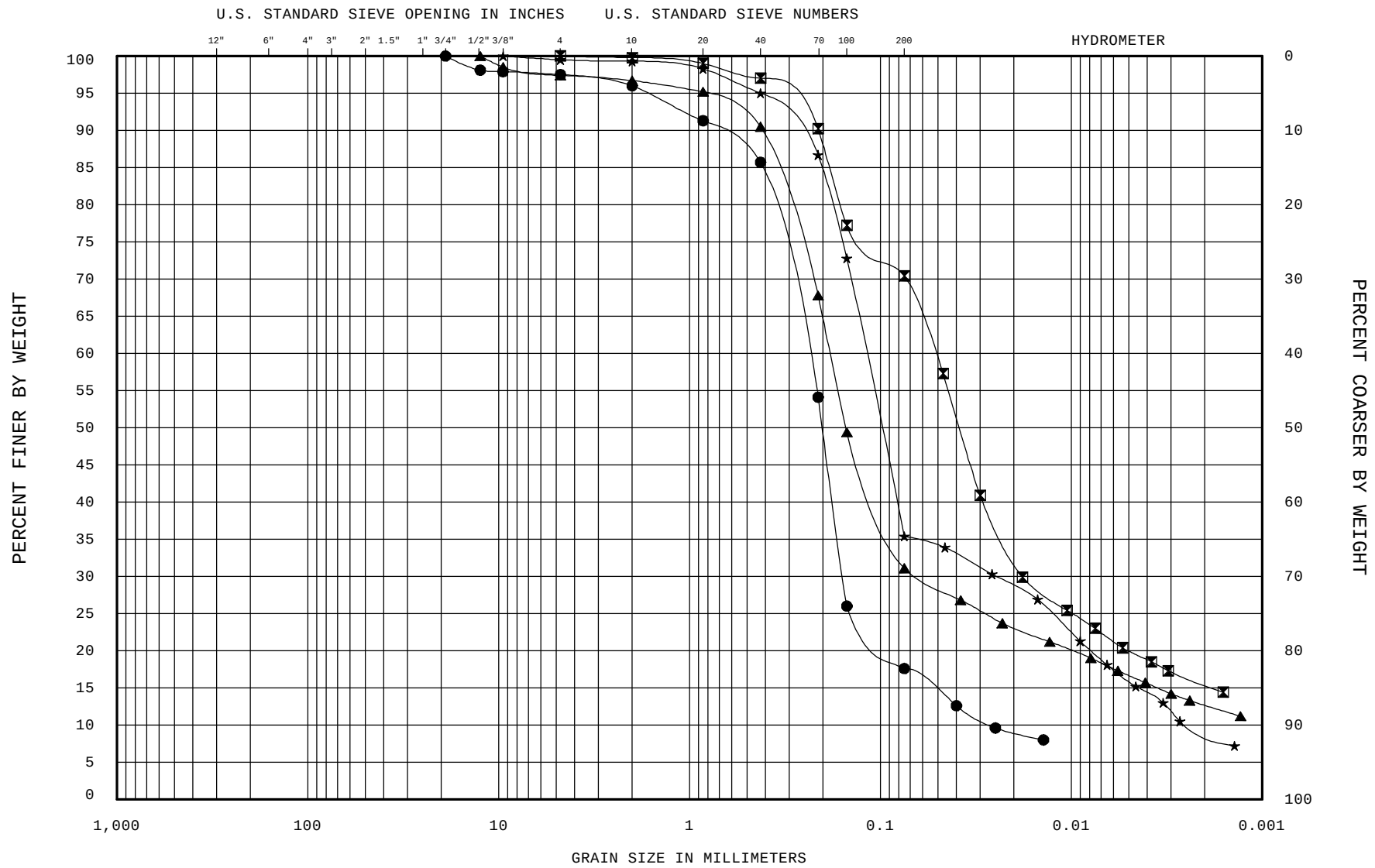
Remarks:

ENG FORM ENG2087-NO ATTSJAMES ISLAND, MID-BAY FEASIBILITY STUDY **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-127*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SILTY SAND	SM	27.0			
—⊠—	Jar-3	5.0-6.5	CLAY with SAND	CL	28.0			
—▲—	Jars 5&6	10.0-14.0	CLAYEY SAND	SC	29.3			
—★—	Jars 7&8	15.0-19.0	SILTY SAND	SM	41.9			

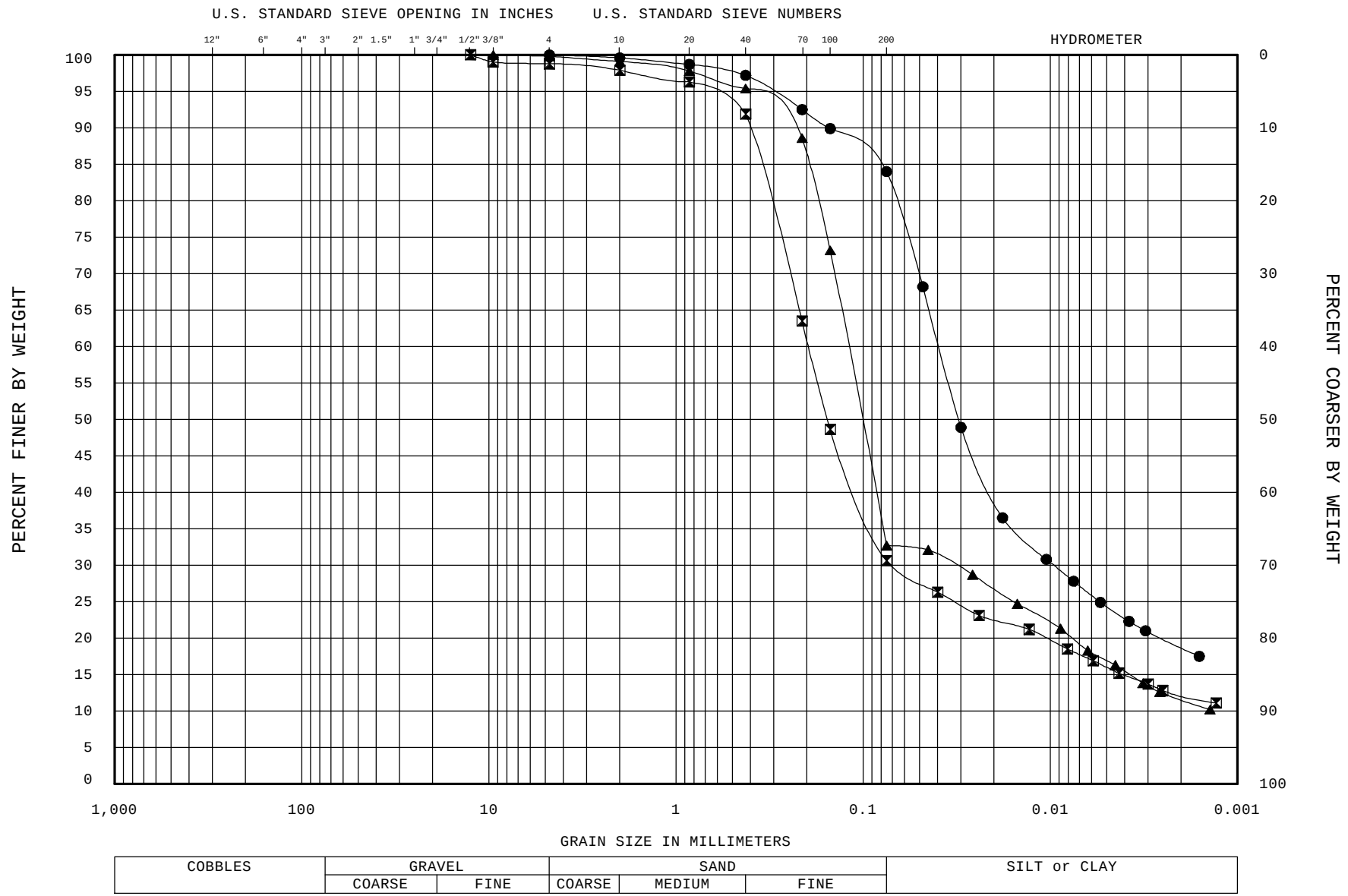
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-128*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	LEAN CLAY with SAND	CL	29.8	26	17	9
—⊠—	Jars 5&6	10.0-14.0	CLAYEY SAND	SC	30.9			
—▲—	Jars 7&8	15.0-19.0	SILTY SAND	SM	40.2			
— —								

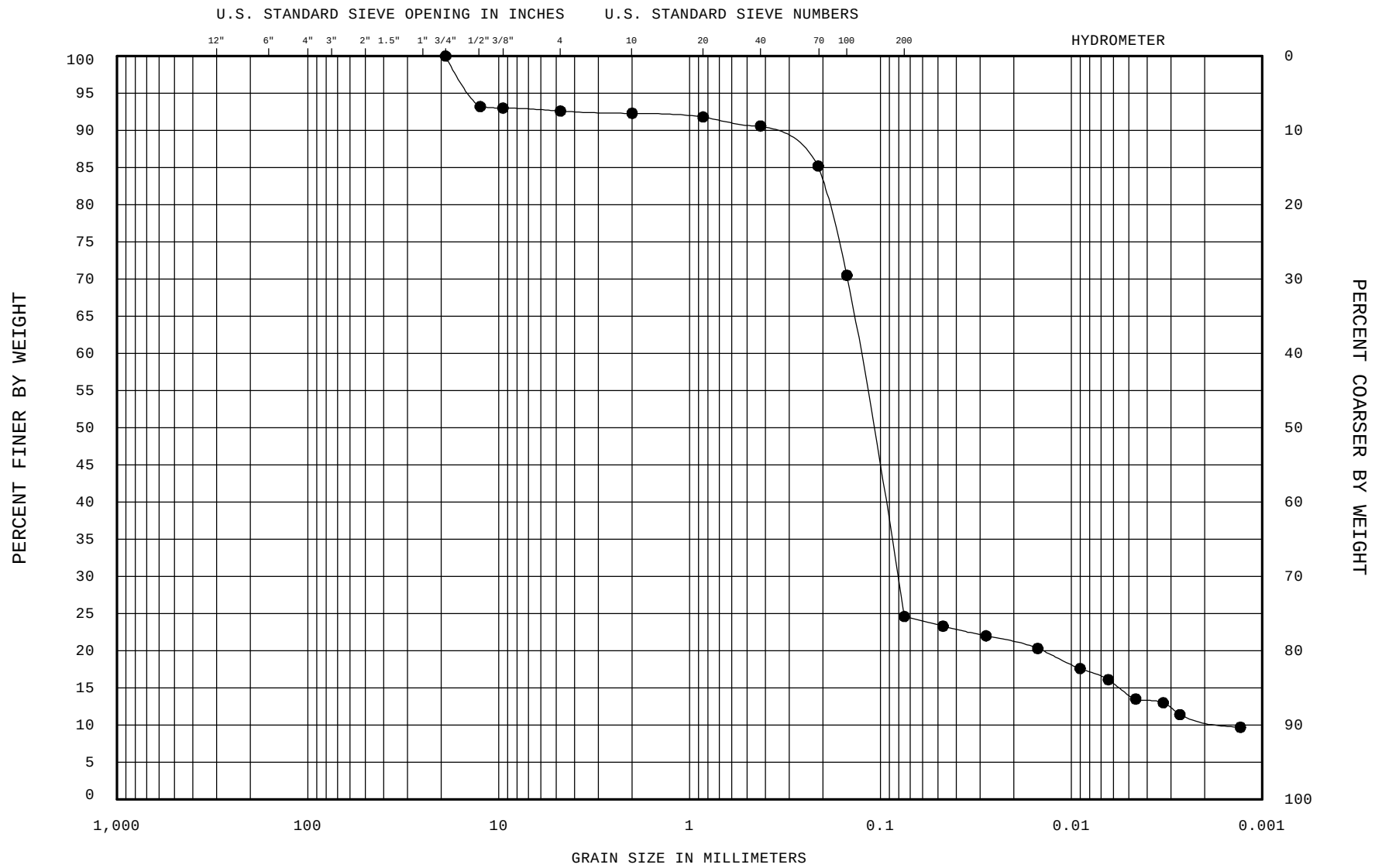
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-129*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-6	12.5-14.0	CLAYEY SAND	SC	41.3	50	24	26
— —								
— —								
— —								

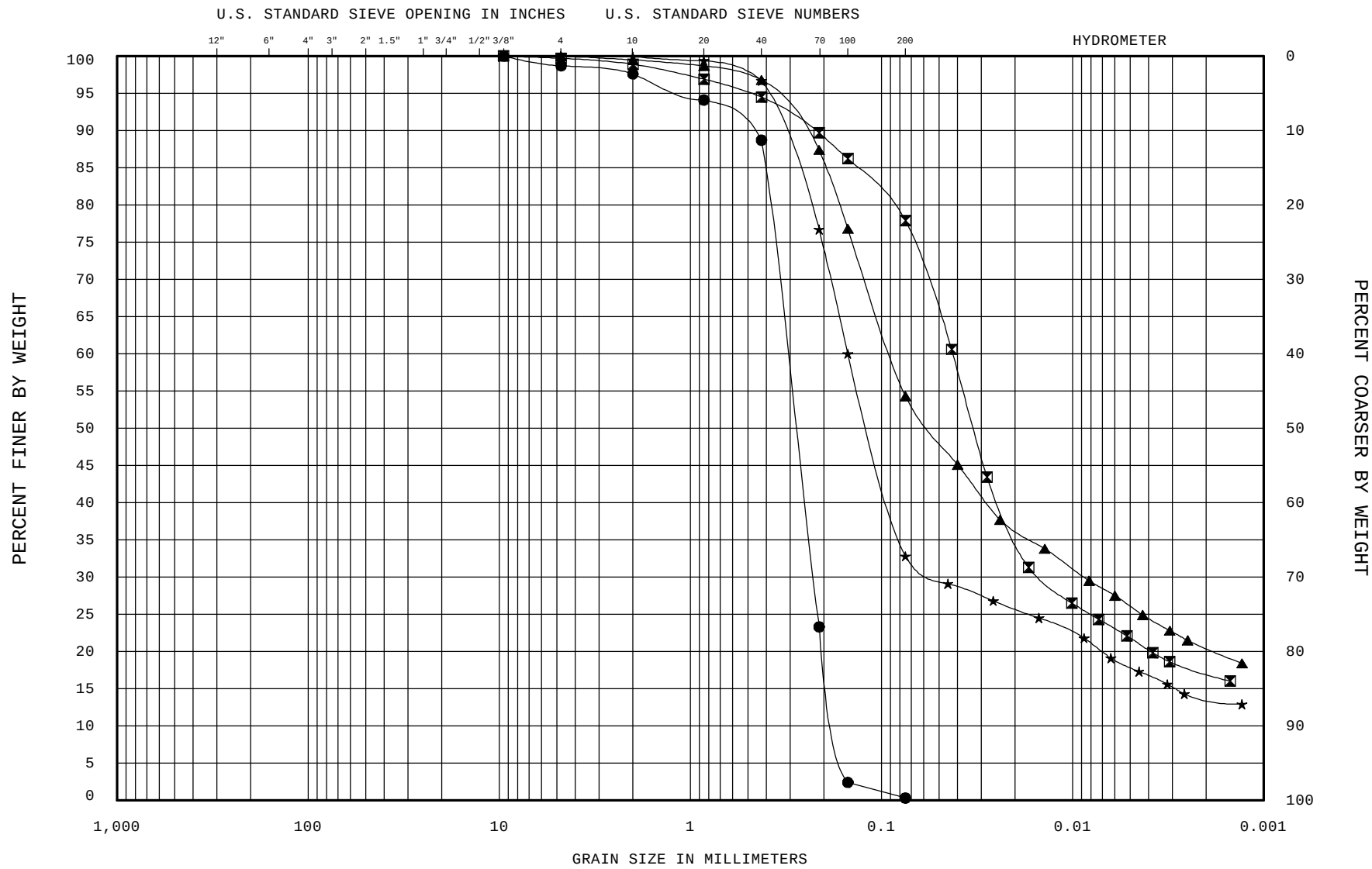
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-130*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-1	0.0-4.0	POORLY GRADED SAND	SP	29.8			
—⊠—	Jars 2&3	2.5-6.5	LEAN CLAY with SAND	CL	29.0	26	17	9
—▲—	Jar-4	7.5-9.0	SANDY LEAN CLAY	CL	33.4	35	16	19
—★—	Jar-5	10.0-11.5	CLAYEY SAND	SC	32.0			

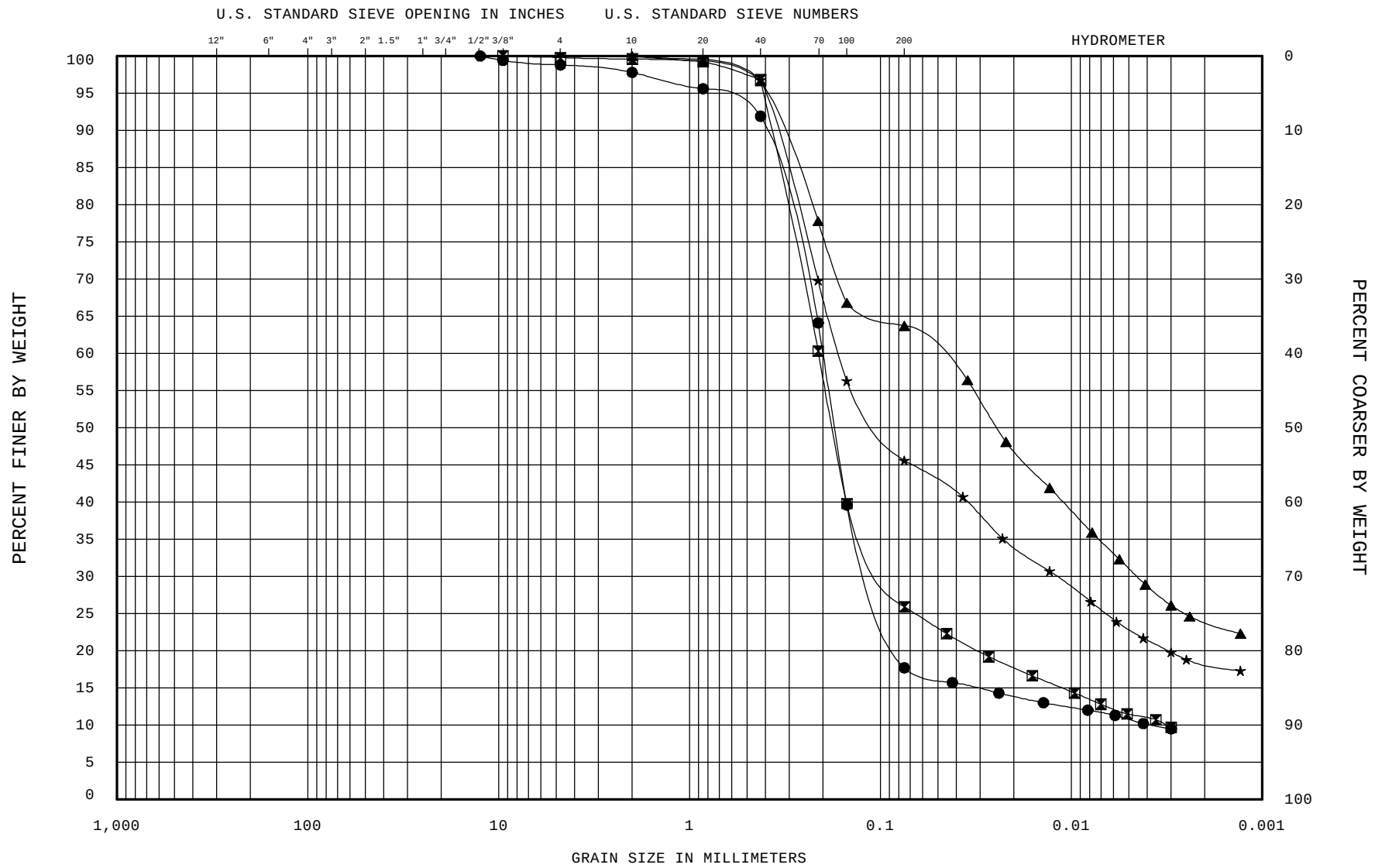
Remarks:

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-130*

DATE: *Jul 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar 1-3	0.0-6.5	SILTY SAND	SM	28.5			
—⊠—	Jar-4	7.5-9.0	CLAYEY SAND	SC/SM	30.0			
—▲—	Jar-5	10.0-11.5	SANDY CLAY	CL	36.9			
—★—	Jar-6	12.5-14.0	CLAYEY SAND	SC	31.4			

Remarks:

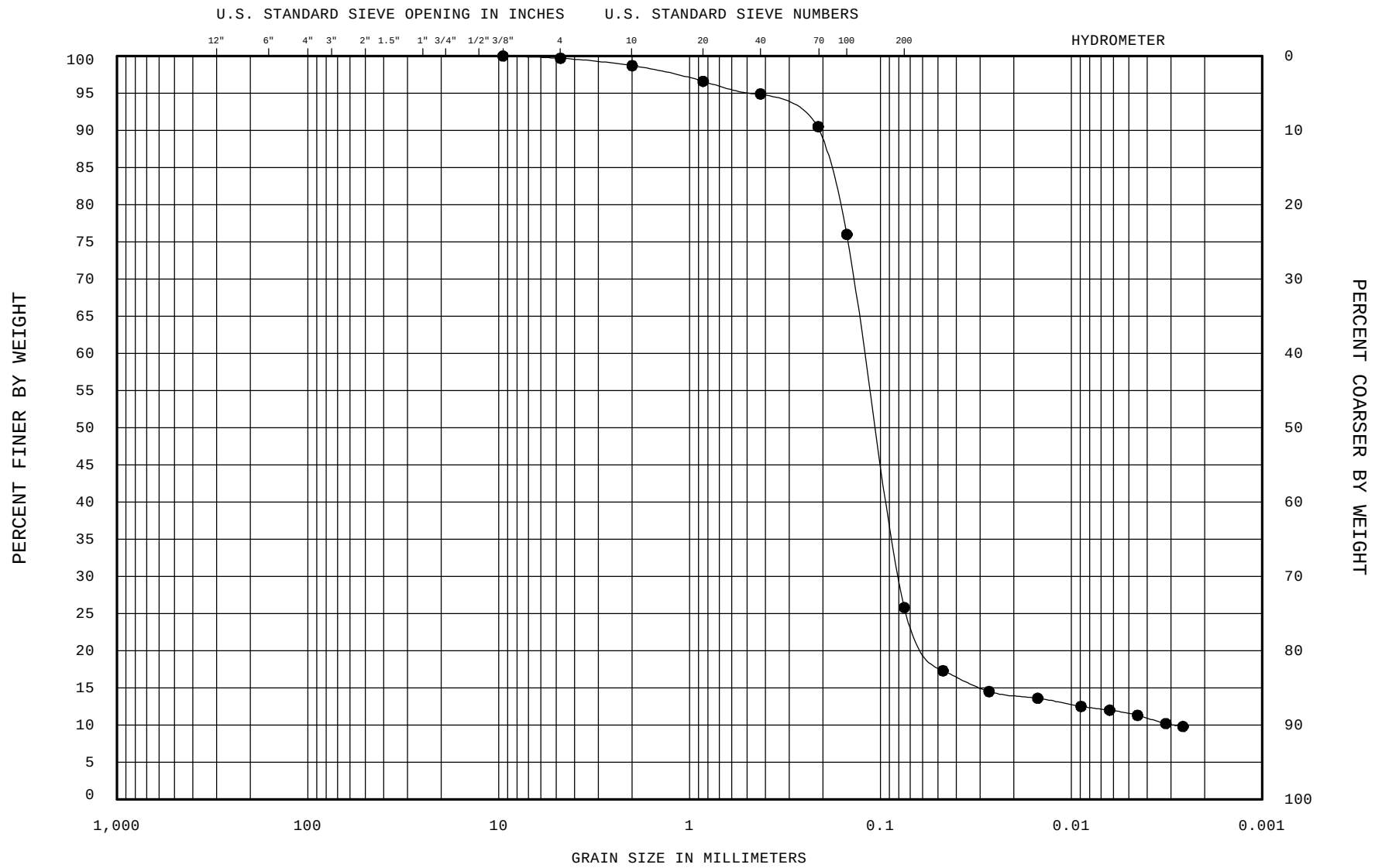
ENG FORM ENG2087-NO ATTSJAMES ISLAND, MID-BAY FEASIBILITY STUDY

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-131*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 9-11	20.0-26.5	SILTY SAND	SM	30.6			

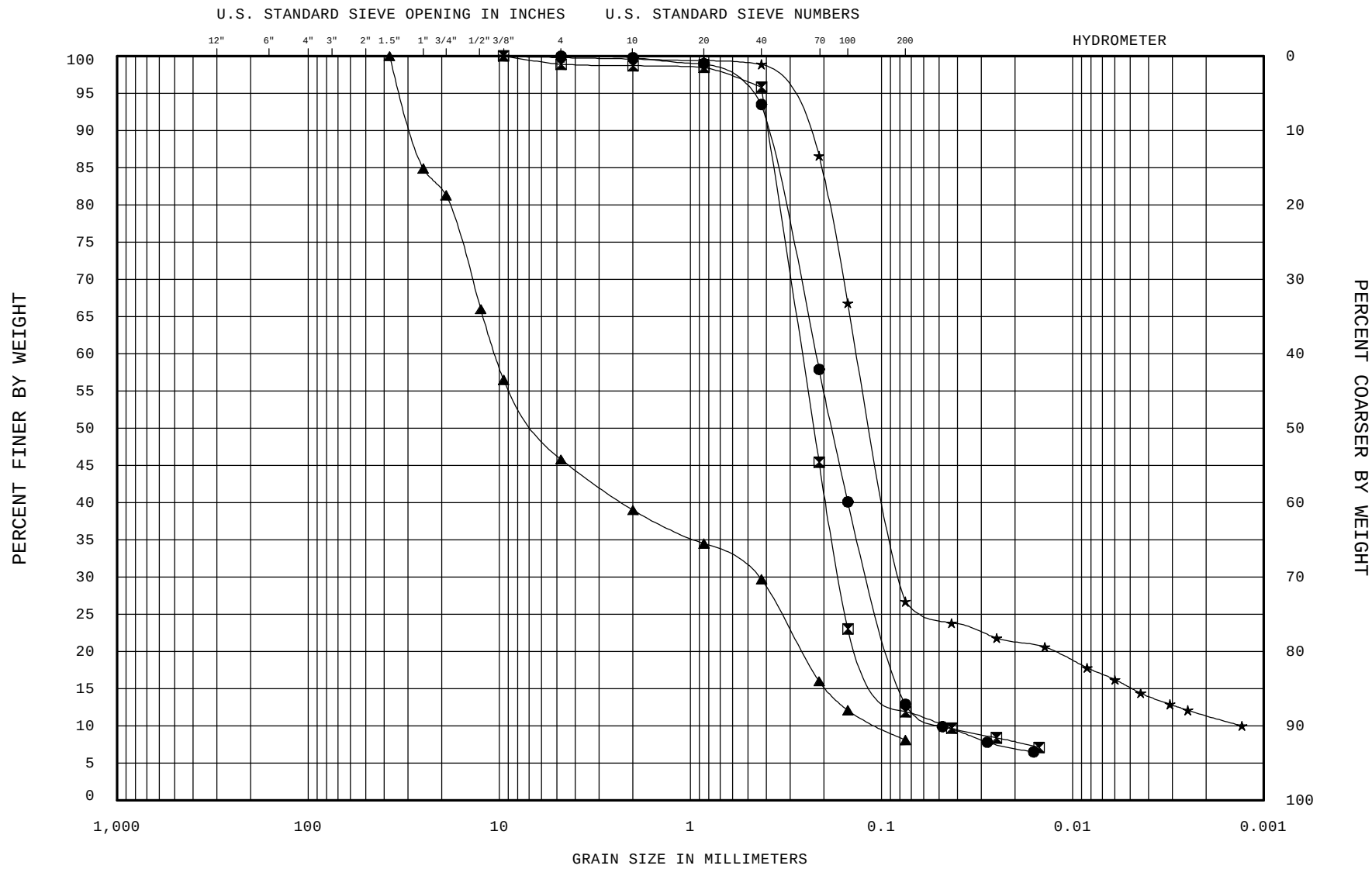
Remarks:

ENG FORM ENG2087-NO ATTSJAMES ISLAND, MID-BAY FEASIBILITY STUDY **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-131*

DATE: *Aug 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	SILTY SAND	SM	22.6			
—⊠—	Jars-5-8	10.0-19.0	POORLY GRADED SAND with SILT	SP-SM	24.4			
—▲—	Jar-9	20.0-21.5	POORLY GRADED GRAVEL with SILT and SAND	GP-GM	9.3			
—★—	Jar-12	27.5-29.0	CLAYEY SAND	SC	28.6			

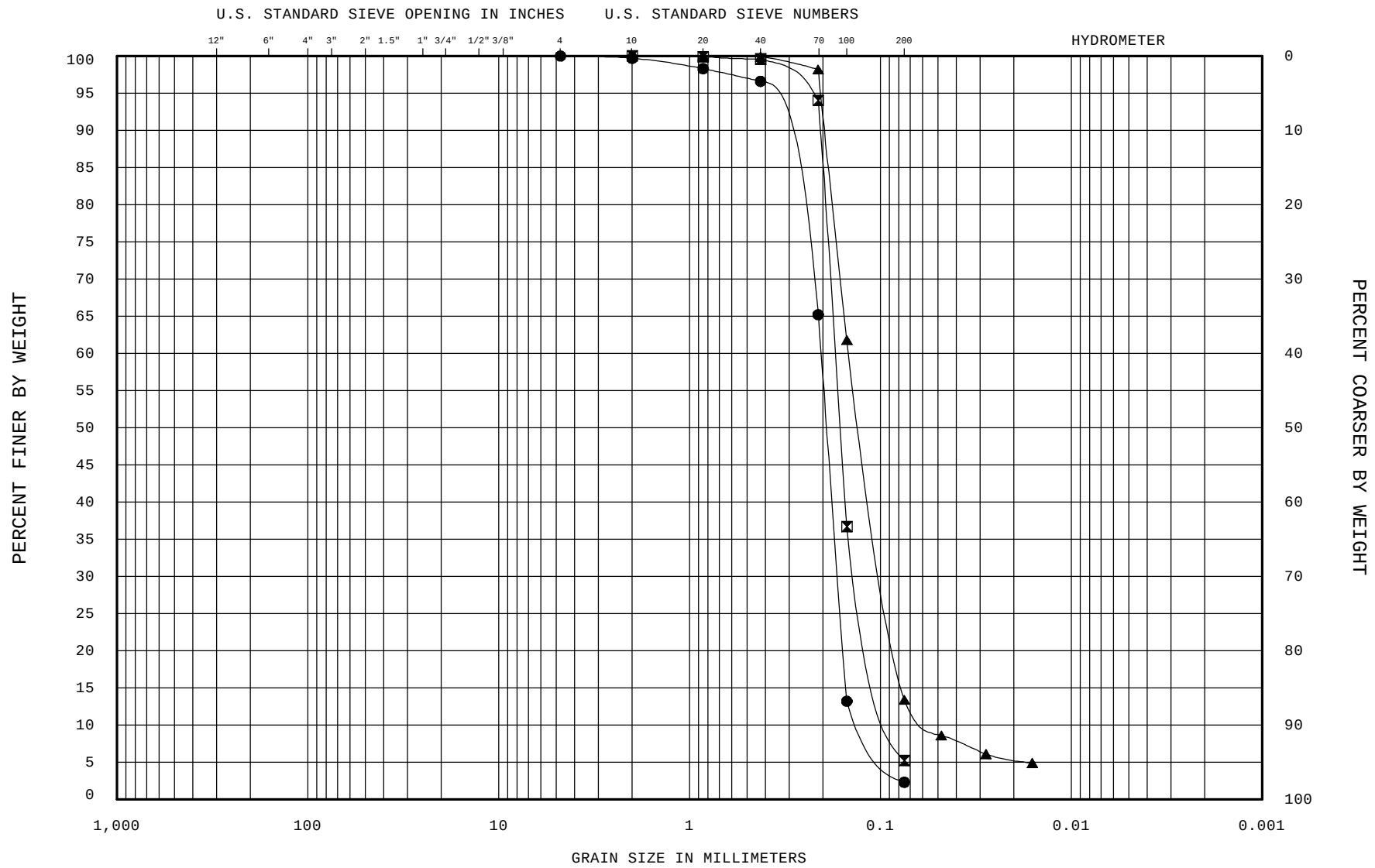
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-201*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	POORLY GRADED SAND	SP	34.0			
—⊠—	Jars 3&4	5.0-9.0	POORLY GRADED SAND with SILT	SP-SM	31.4			
—▲—	Jars 5&6	10.0-14.0	SILTY SAND	SM	31.9			
— —								

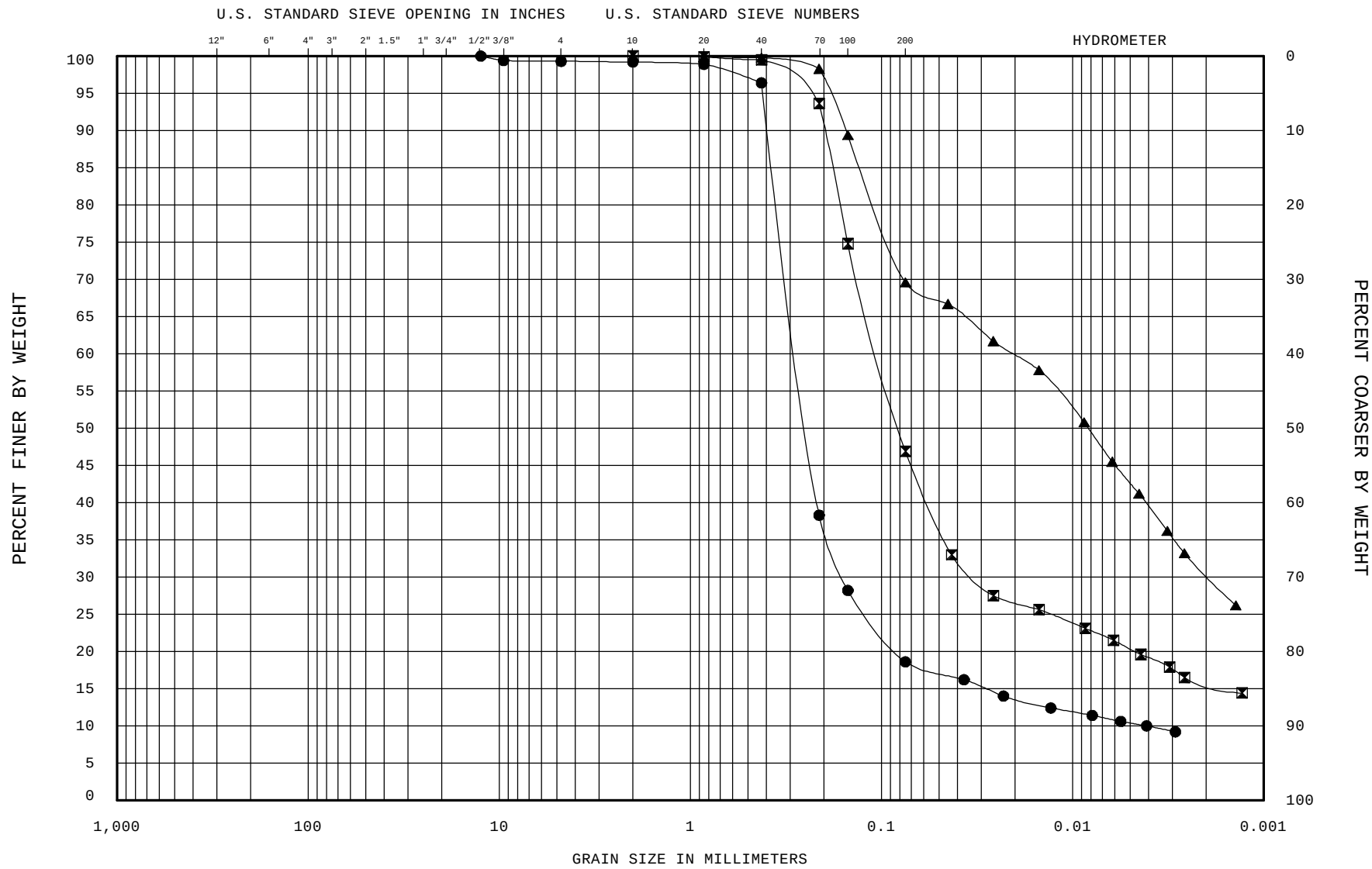
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-202*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 3-6	5.0-14.0	SILTY SAND	SM	26.1			
—⊠—	Jars 8&9	17.5-21.5	CLAYEY SAND	SC	31.7	36	20	16
—▲—	Jars 13&14	30.0-34.0	SANDY FAT CLAY	CH	51.3	75	23	52
— —								

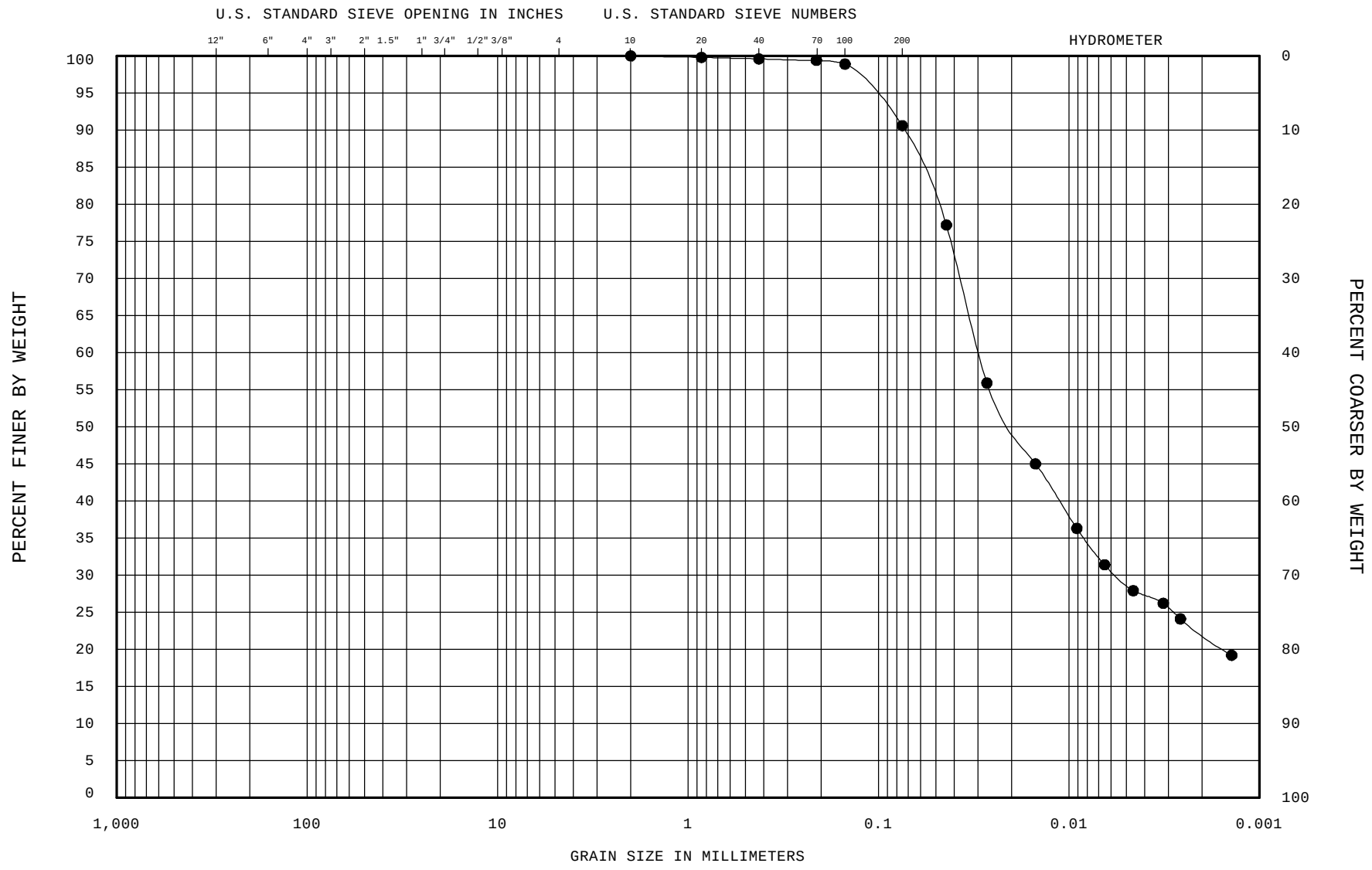
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-203*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 4&5	7.5-11.5	ELASTIC SILT	MH	57.9	62	32	30

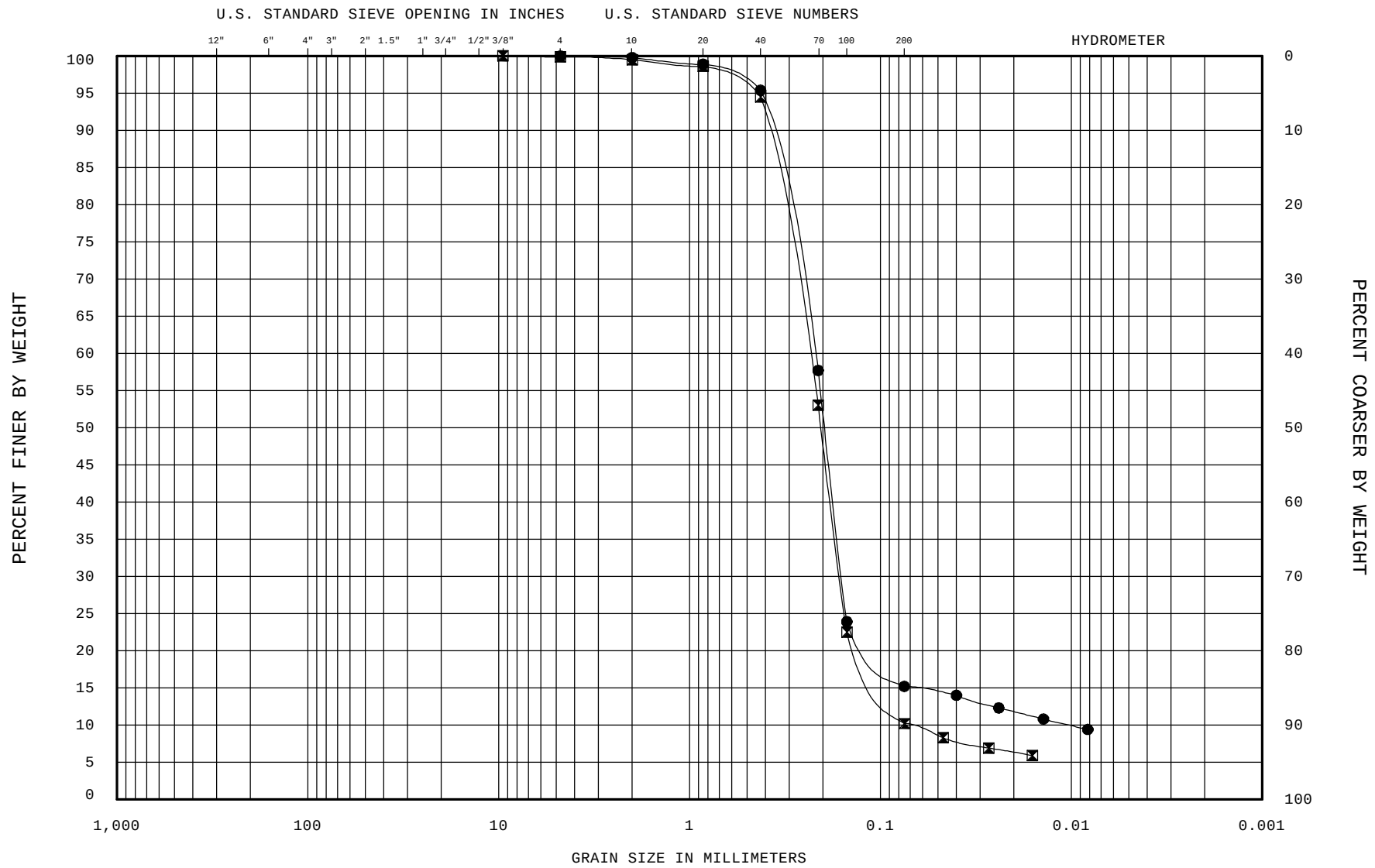
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-204*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	SILTY SAND	SM	22.8			
—⊠—	Jars 4&5	7.5-11.5	POORLY GRADED SAND with SILT	SP-SM	22.8			
— —								
— —								

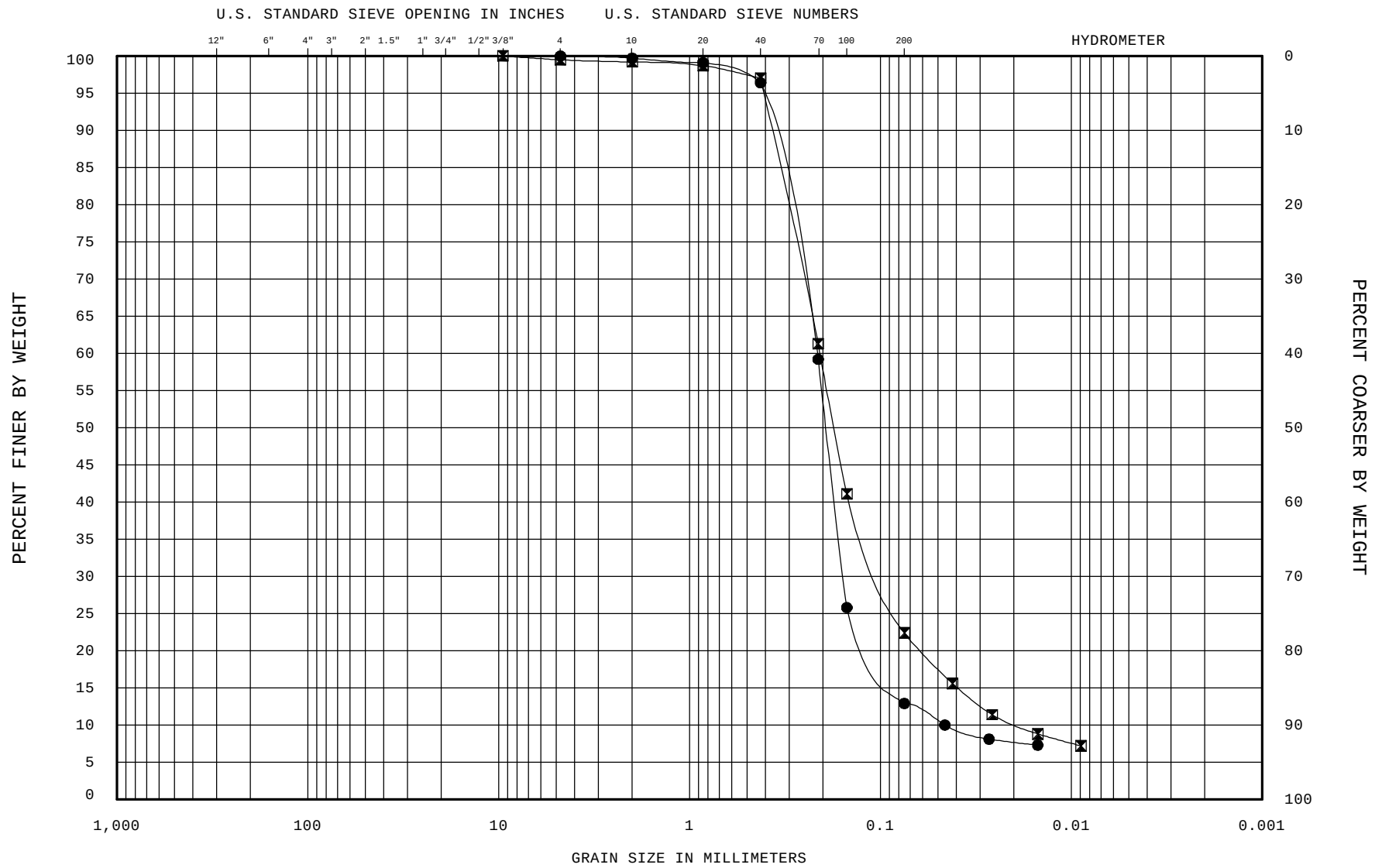
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-205*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-4	7.5-9.0	SILTY SAND	SM	22.4			
—⊠—	Jar-7	15.0-16.5	SILTY SAND	SM	22.4			
— —								
— —								

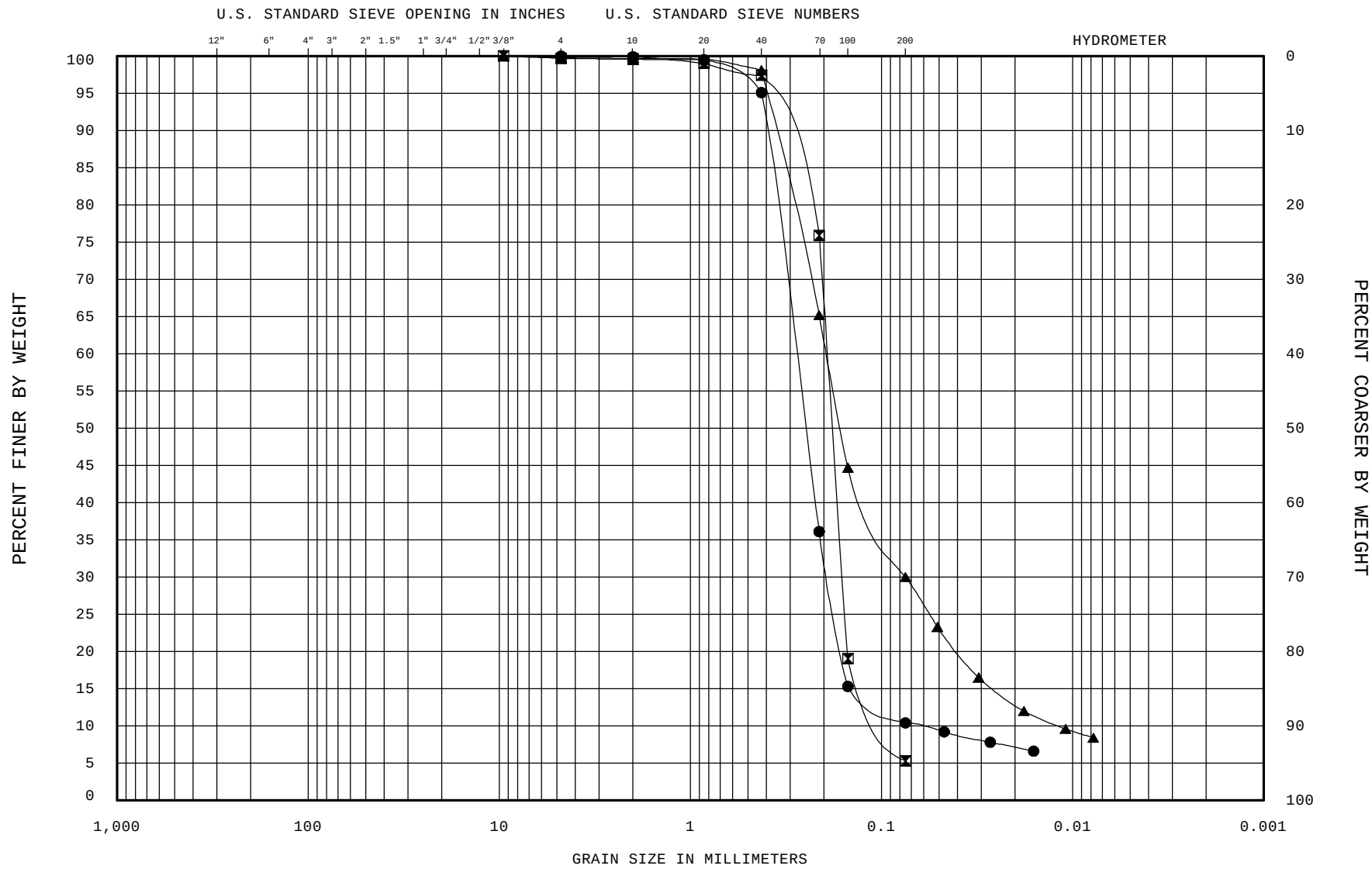
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-206*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	POORLY GRADED SAND with SILT	SP-SM	22.3			
—⊠—	Jar-5	10.0-11.5	POORLY GRADED SAND with SILT	SP-SM	25.1			
—▲—	Jar-6	12.5-14.0	SILTY SAND	SM	19.8			
— —								

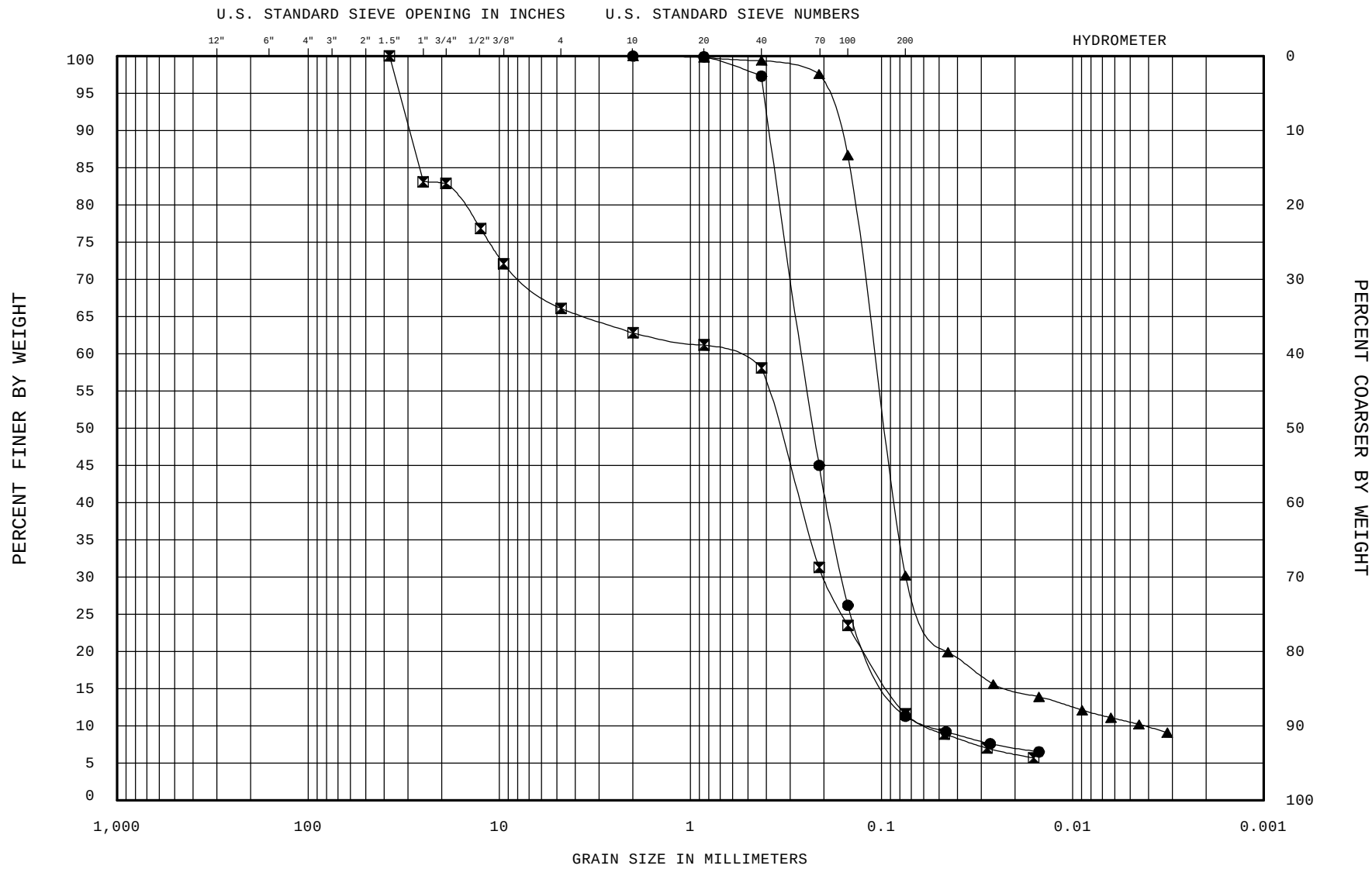
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-207*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2-4	2.5-9.0	POORLY GRADED SAND with SILT	SP-SM	23.4			
—⊠—	Jar-5	10.0-11.5	POORLY GRADED SAND with SILT and GRAVEL	SP-SM	15.4			
—▲—	Jars 7&8	15.0-19.0	SILTY SAND	SM	32.2			
— —								

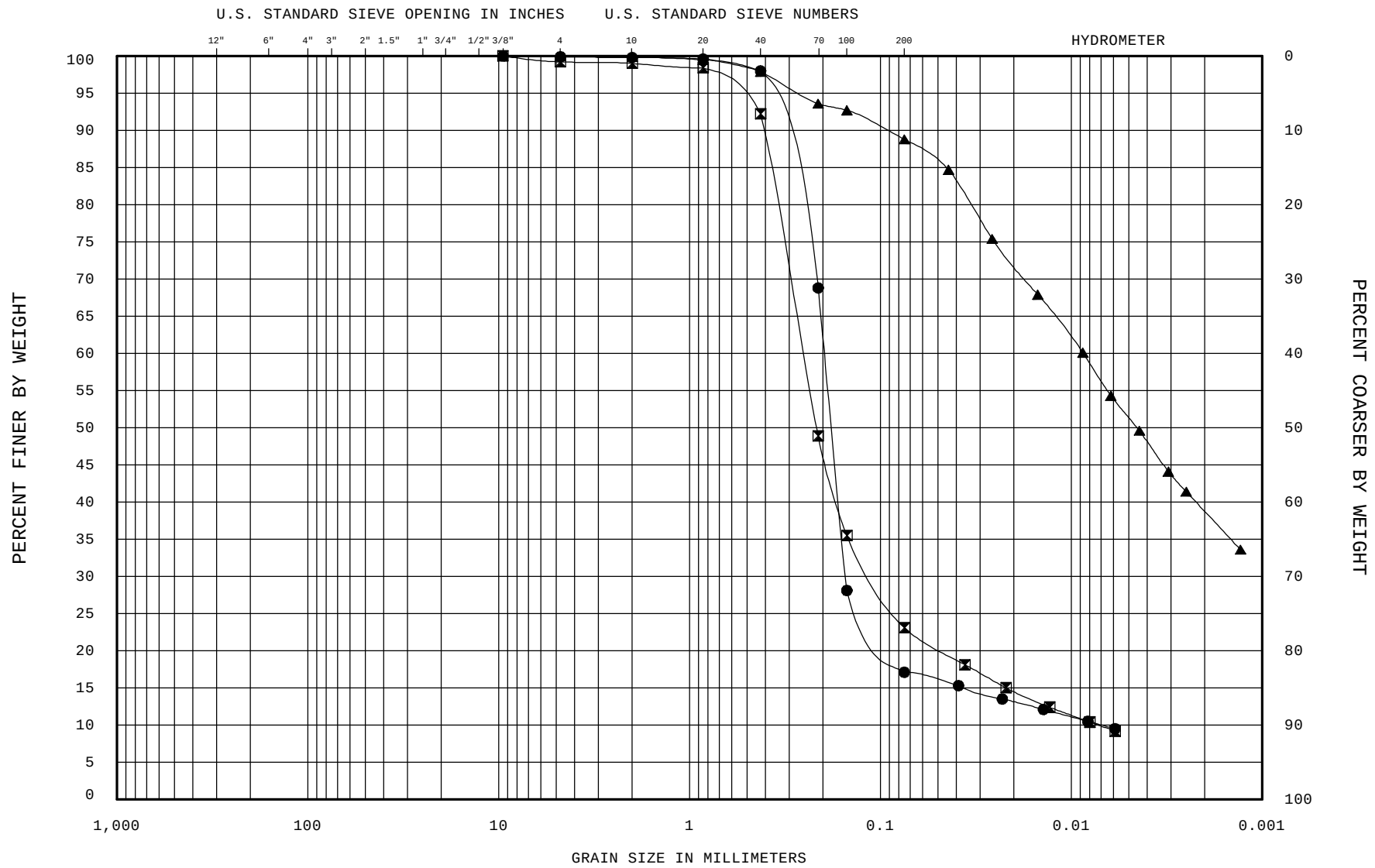
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-208*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 3&4	5.0-9.0	SILTY SAND	SM	23.5			
—⊠—	Jars 6&7	12.5-16.5	SILTY SAND	SM	19.3			
—▲—	Jar-8	17.5-19.0	FAT CLAY	CH	54.8	84	27	57
— —								

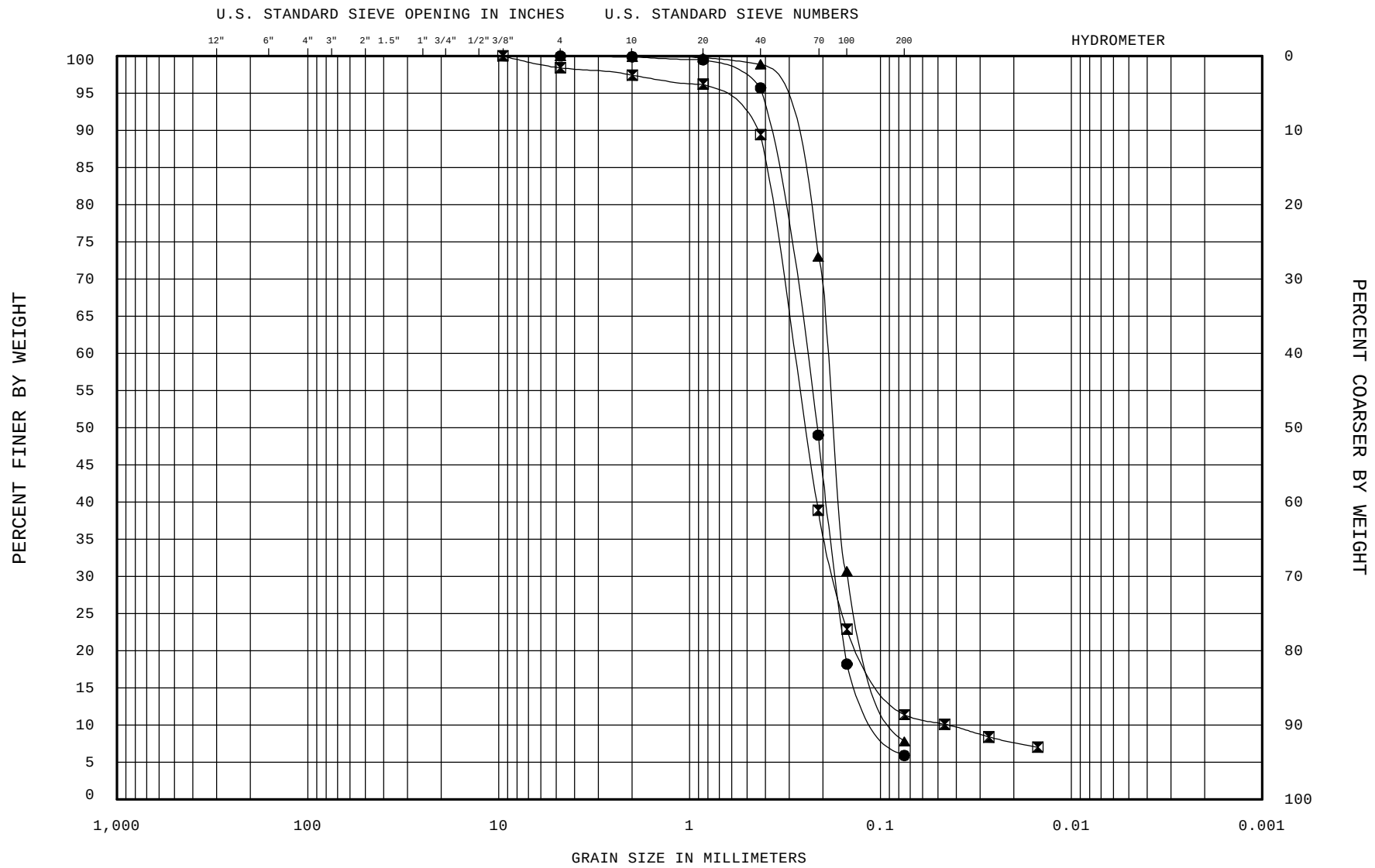
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-209*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2-4	2.5-9.0	POORLY GRADED SAND with SILT	SP-SM	25.9			
—⊠—	Jars 6&7	12.5-16.5	POORLY GRADED SAND with SILT	SP-SM	23.1			
—▲—	Jars 11-13	25.0-31.5	POORLY GRADED SAND with SILT	SP-SM	26.3			
— —								

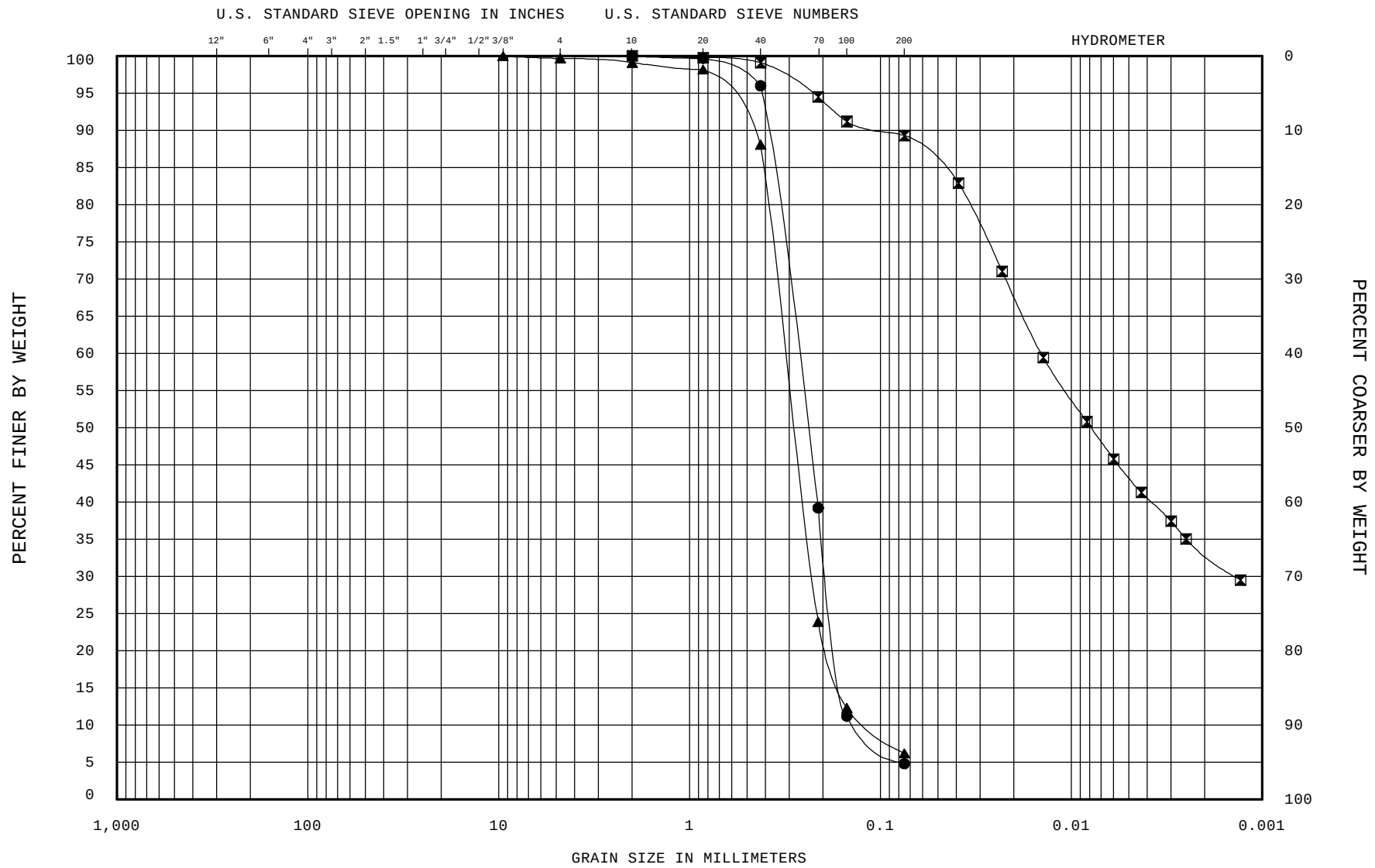
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-210*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	POORLY GRADED SAND	SP	24.8			
—⊠—	Jar-5	10.0-11.5	LEAN CLAY	CL	38.0	43	19	24
—▲—	Jar-7	15.0-16.5	POORLY GRADED SAND with SILT	SP-SM	23.6			
— —								

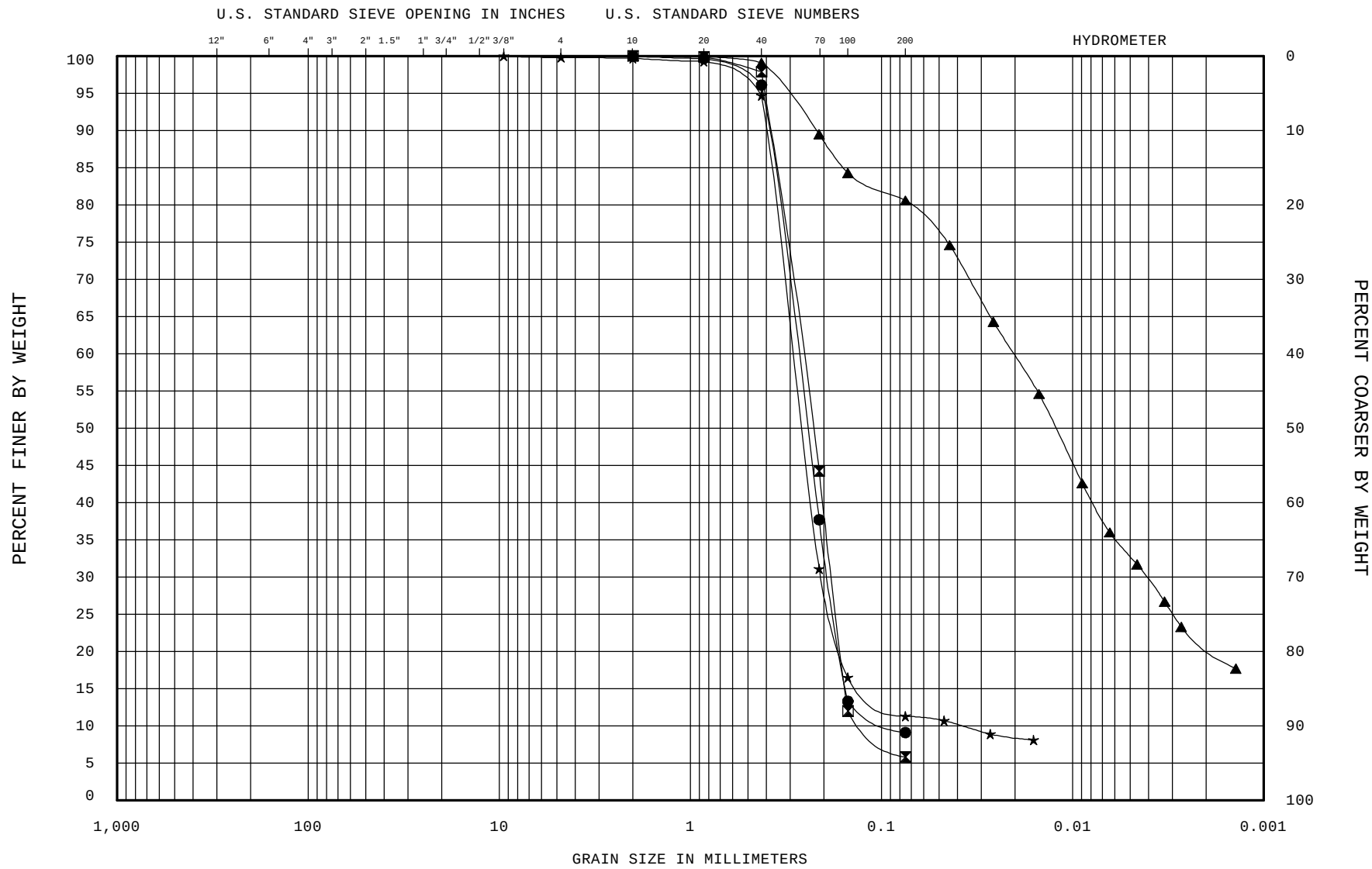
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-211*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	POORLY GRADED SAND with SILT	SP-SM	23.5			
—⊠—	Jar-3	5.0-6.5	POORLY GRADED SAND with SILT	SP-SM	25.9			
—▲—	Jar-5	10.0-11.5	FAT CLAY with SAND	CH	41.1	54	20	34
—★—	Jars 6&7	12.5-16.5	POORLY GRADED SAND with SILT	SP-SM	25.1			

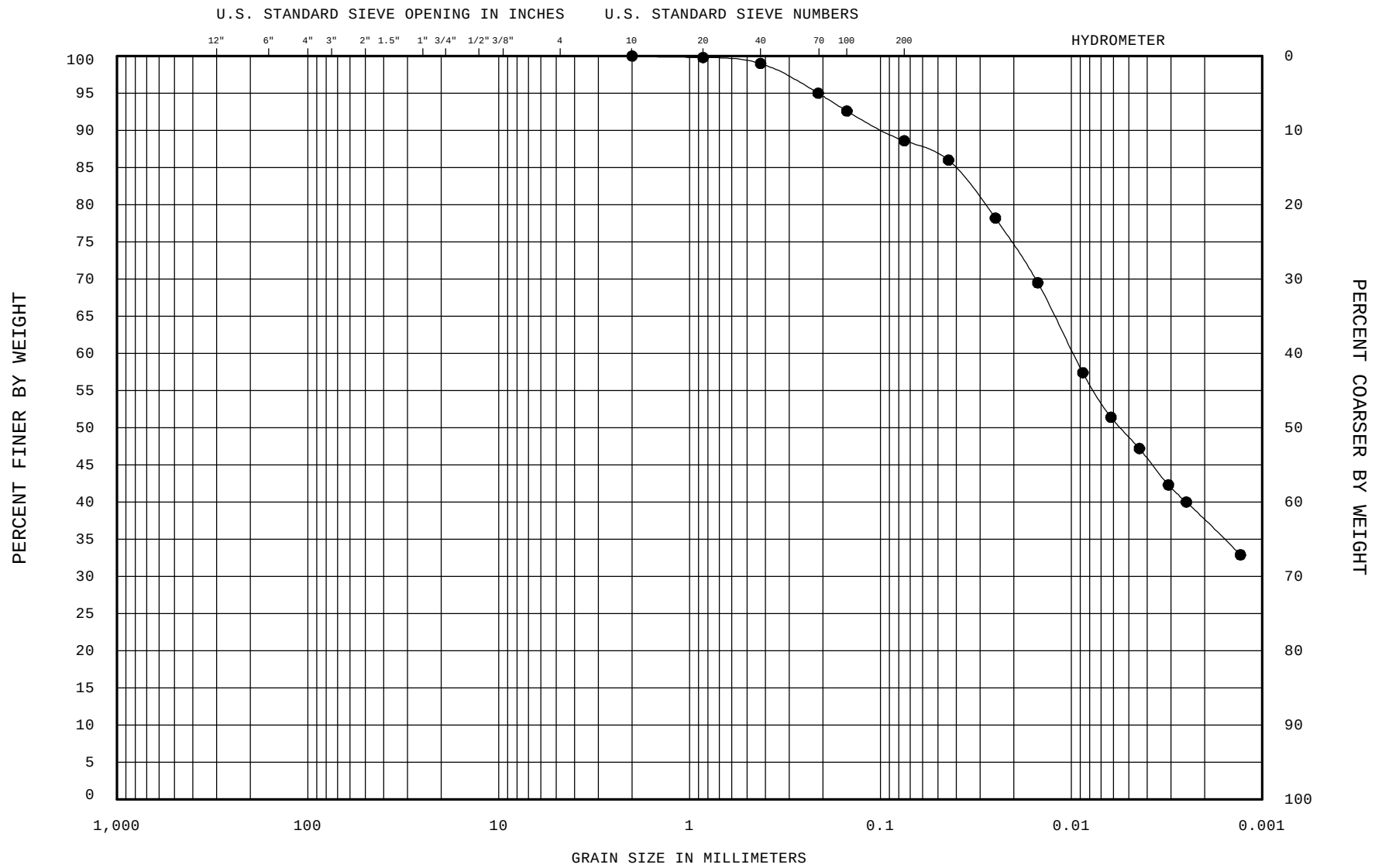
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-212*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-8	17.5-19.0	FAT CLAY	CH	51.4	71	27	44
— —								
— —								
— —								

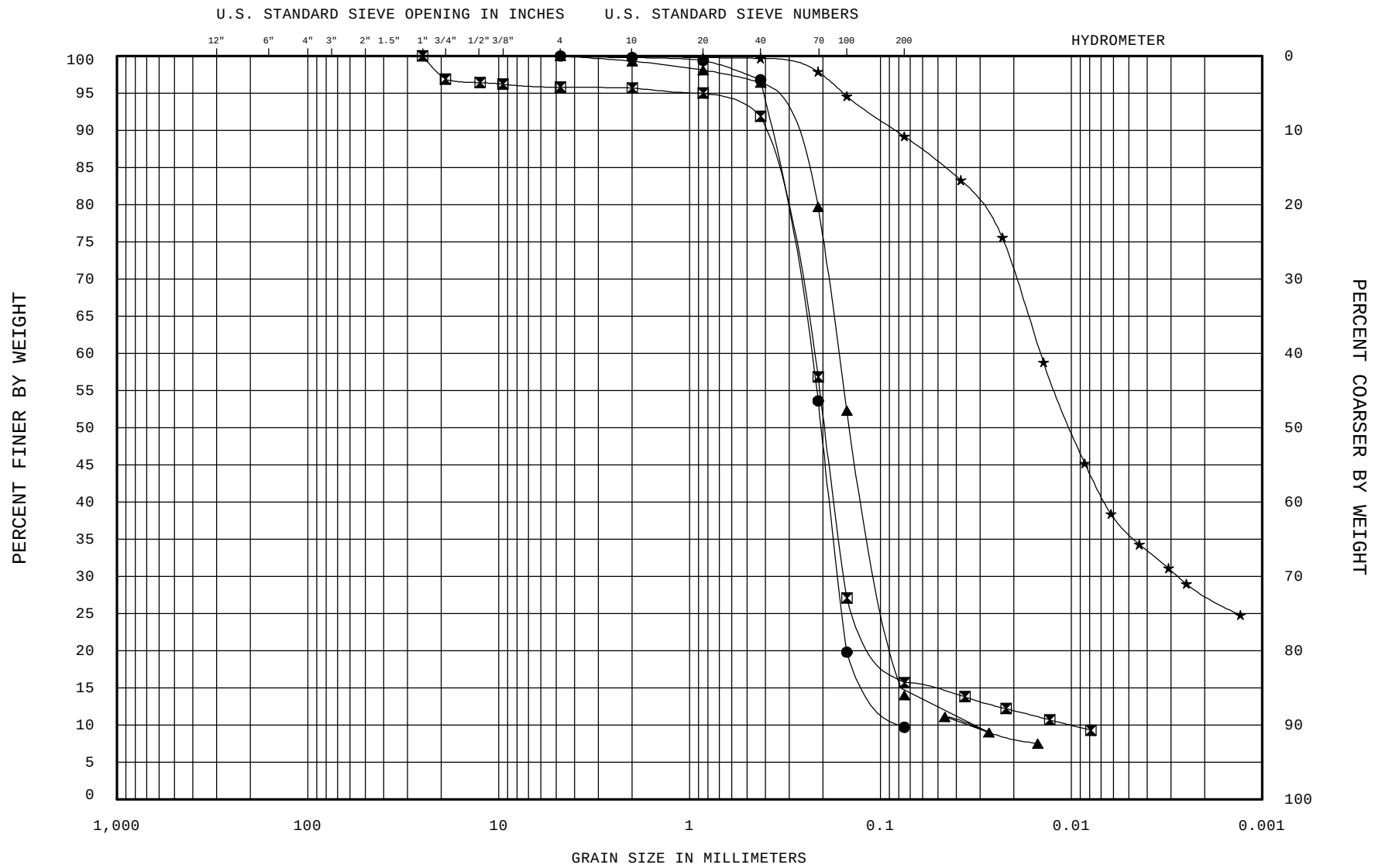
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-212*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	POORLY GRADED SAND with SILT	SP-SM	26.5			
—⊠—	Jars 3&4	5.0-9.0	SILTY SAND	SM	23.4			
—▲—	Jar-7	15.0-16.5	SILTY SAND	SM	27.1			
—★—	Jar-8	17.5-19.0	LEAN CLAY	CL	39.0	48	21	27

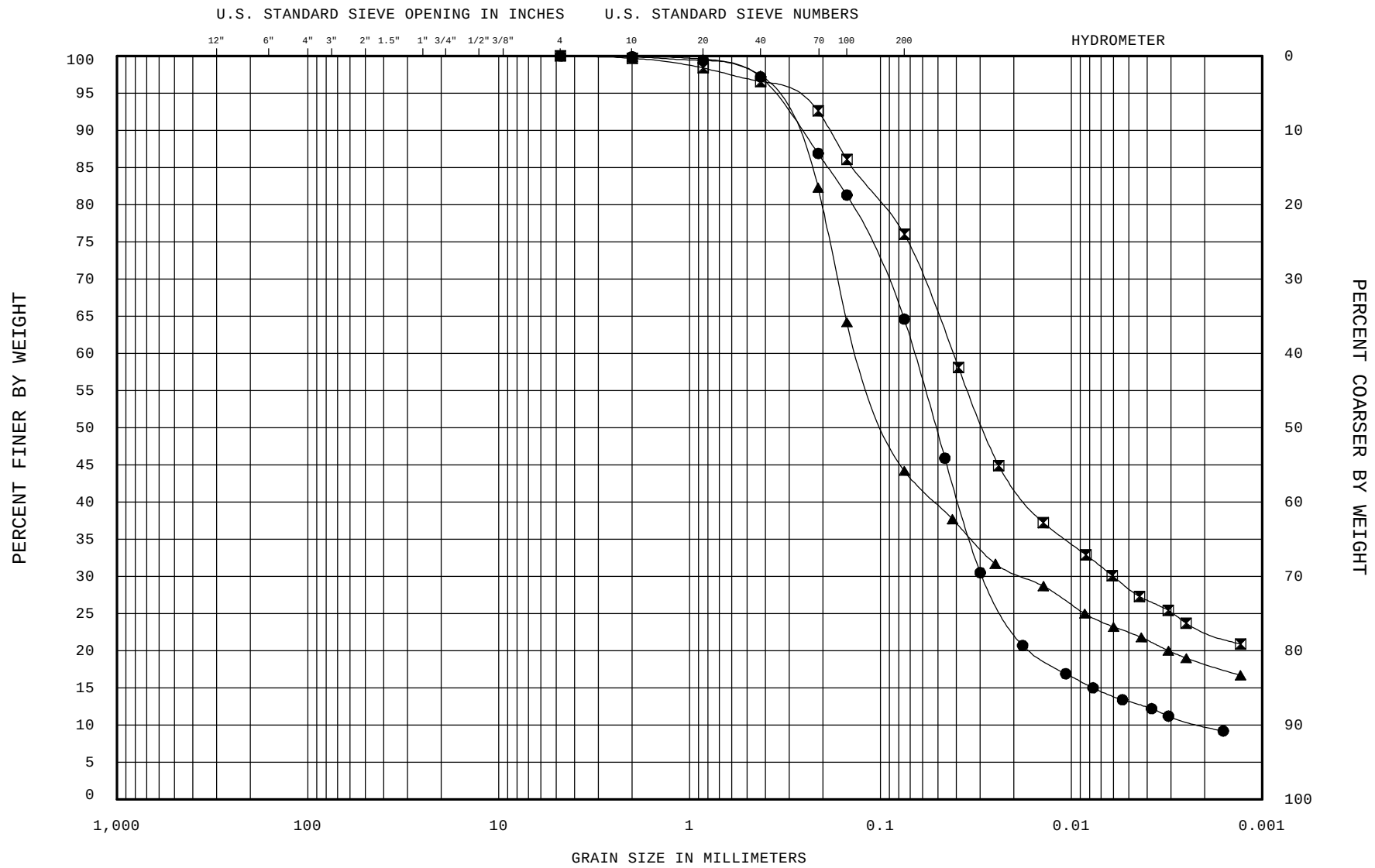
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-213*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	SANDY SILT	ML	26.2	22	20	2
—⊠—	Jar-4	7.5-9.0	LEAN CLAY with SAND	CL	31.8	30	19	11
—▲—	Jar-5	10.0-11.5	CLAYEY SAND	SC	31.6	30	16	14
— —								

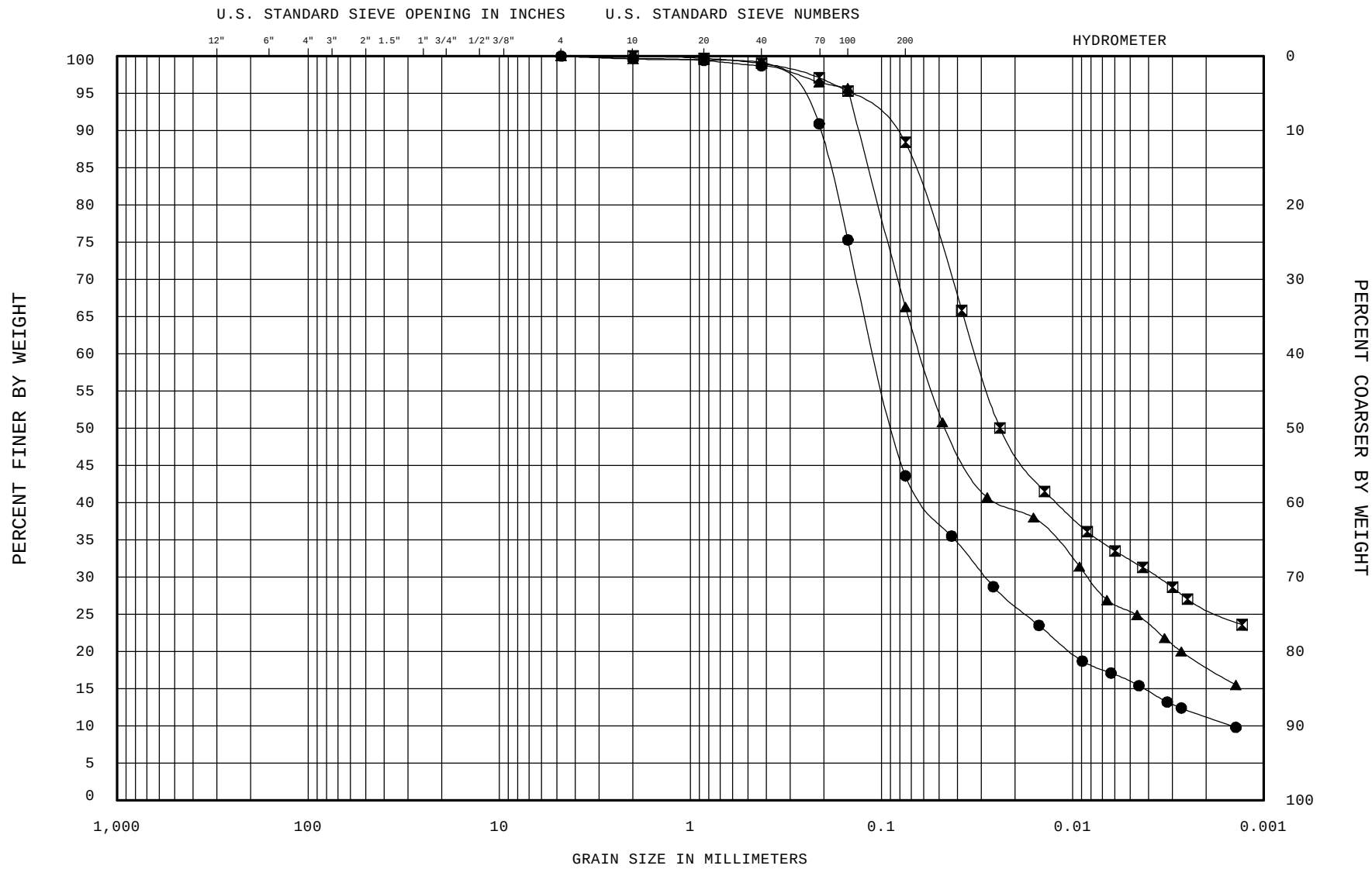
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-214*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	CLAYEY SAND	SC	34.1	28	19	9
—⊠—	Jar-5	10.0-11.5	LEAN CLAY	CL	29.9	29	17	12
—▲—	Jar-8	17.5-19.0	SANDY FAT CLAY	CH	42.1	66	24	42
— —								

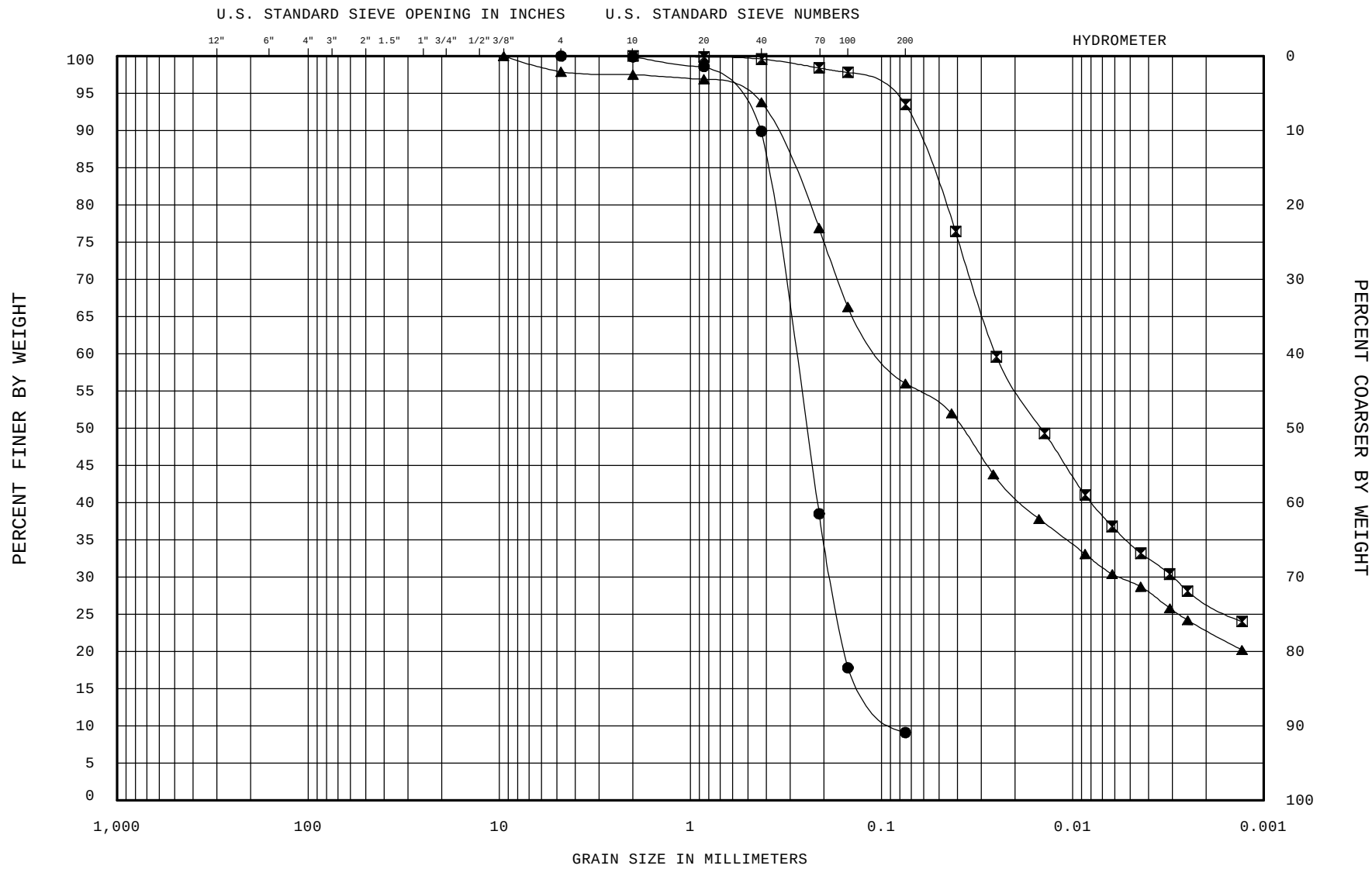
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-215*

DATE: *Nov 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1-3	0.0-6.5	POORLY GRADED SAND with SILT	SP-SM	24.0			
—⊠—	Jar-5	10.0-11.5	LEAN CLAY	CL	43.1	41	20	21
—▲—	Jar-6	12.5-14.0	SANDY LEAN CLAY	CL	43.8	48	20	28
— —								

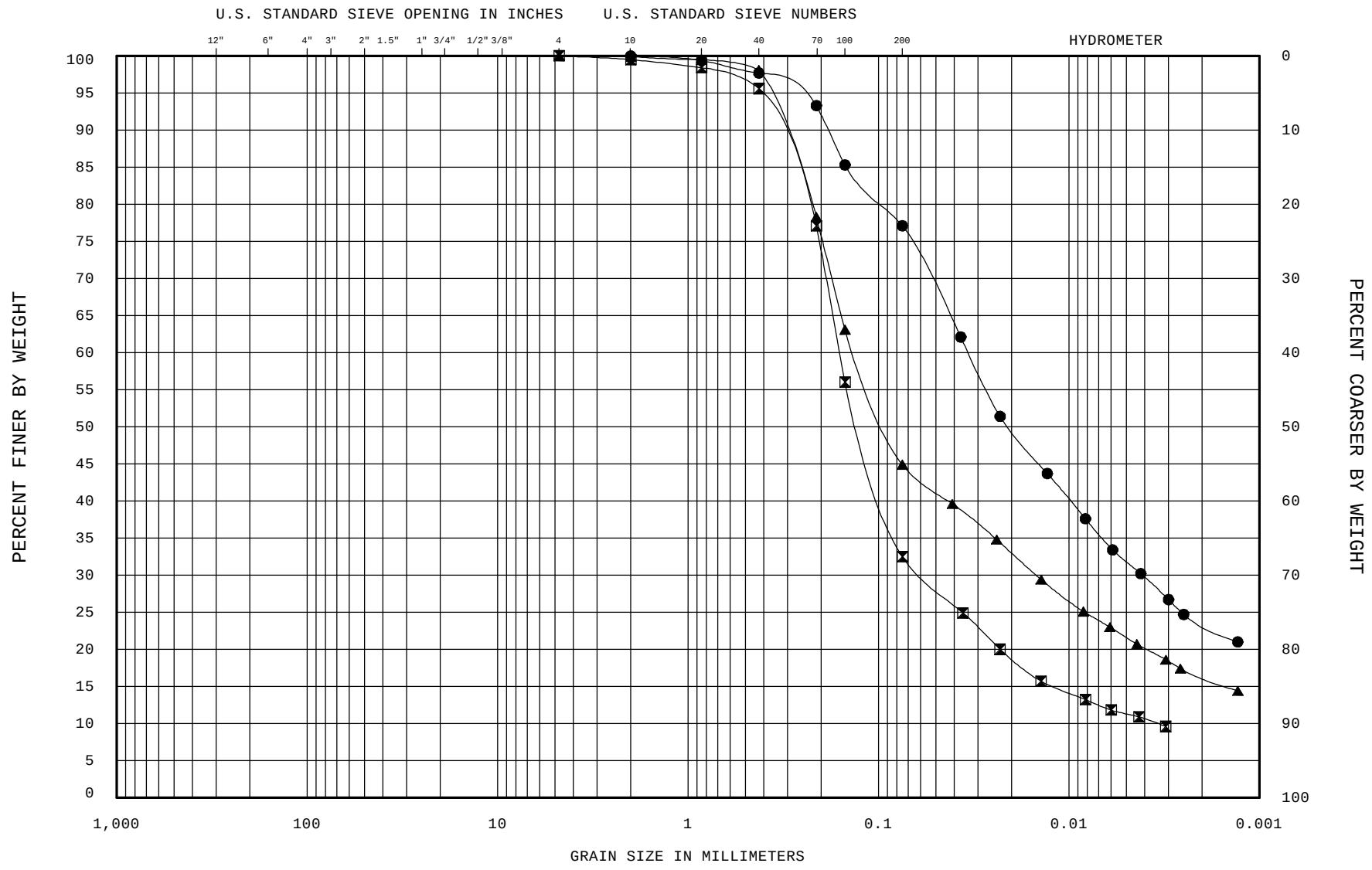
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-216*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend		Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	LEAN CLAY with SAND	CL	36.5	37	18	19
—⊠—	Jars 6&7	12.5-16.5	SILTY SAND	SM	28.3			
—▲—	Jars 8&9	17.5-21.5	CLAYEY SAND	SC	30.3	53	20	33
— —								

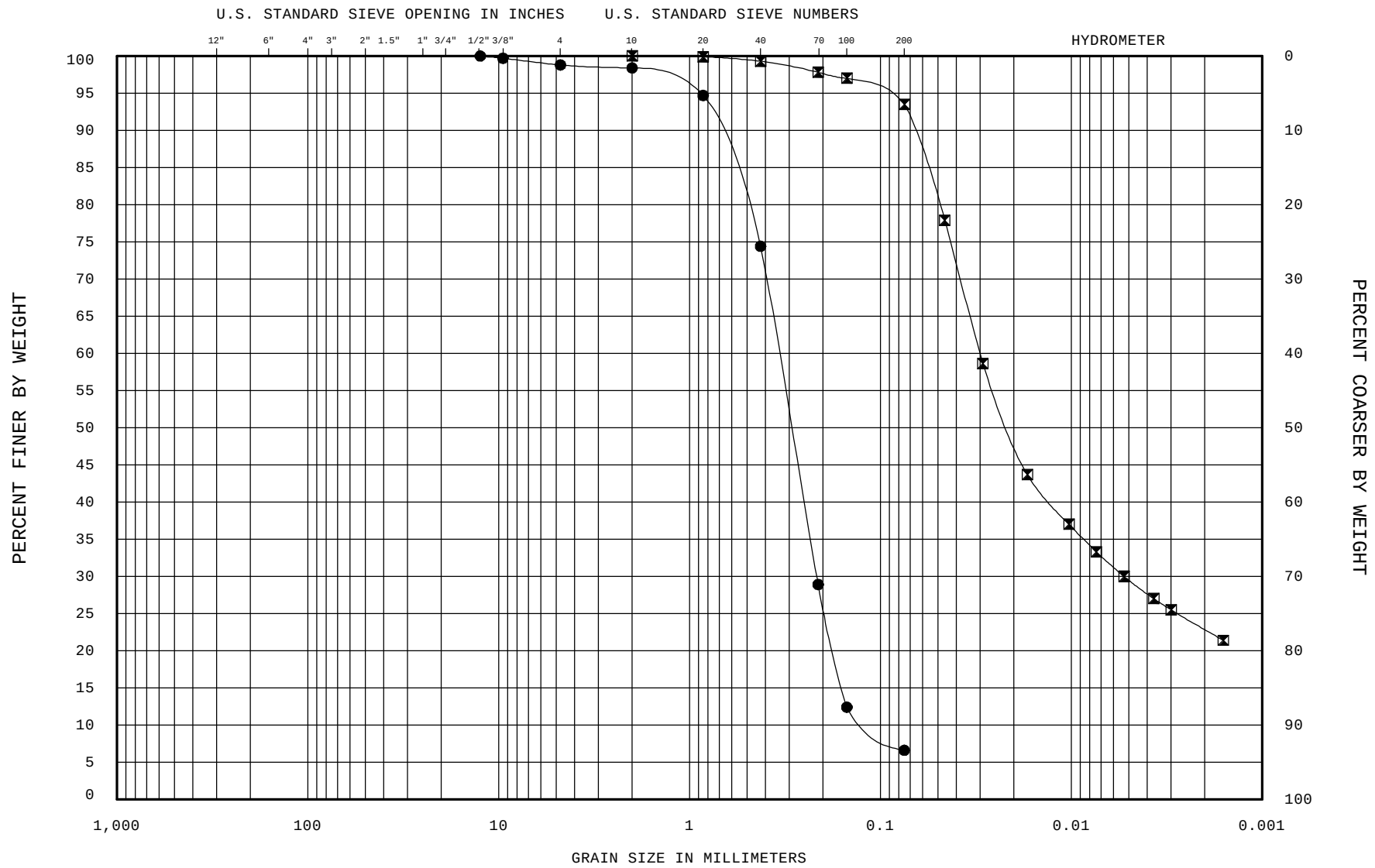
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-217*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	POORLY GRADED SAND with SILT	SP-SM	20.6			
—⊠—	Jars 3&4	5.0-9.0	LEAN CLAY	CL	32.4	30	18	12
— —								
— —								

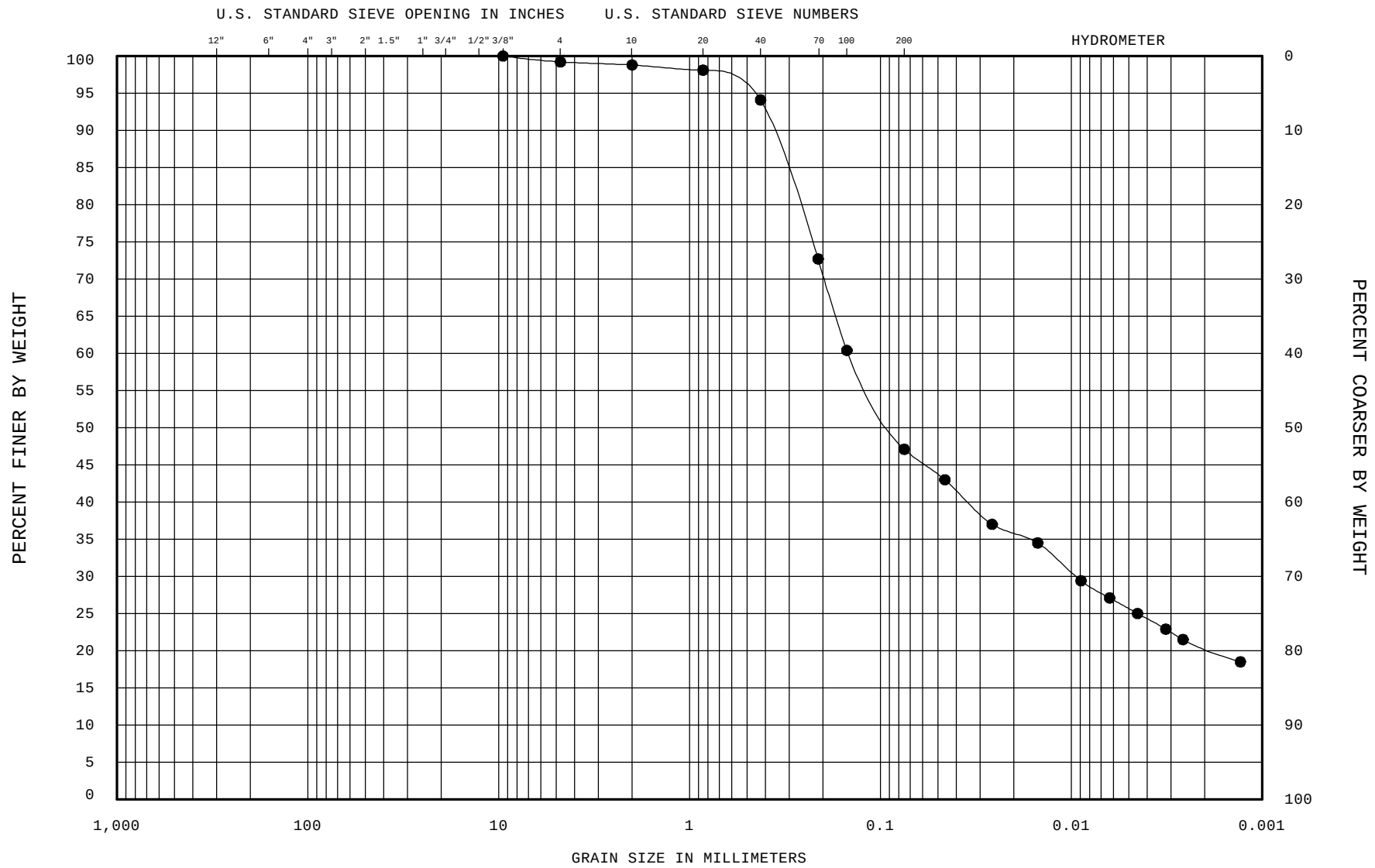
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-218*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 4-6	7.5-14.0	CLAYEY SAND	SC	36.6	38	16	22
— —								
— —								
— —								

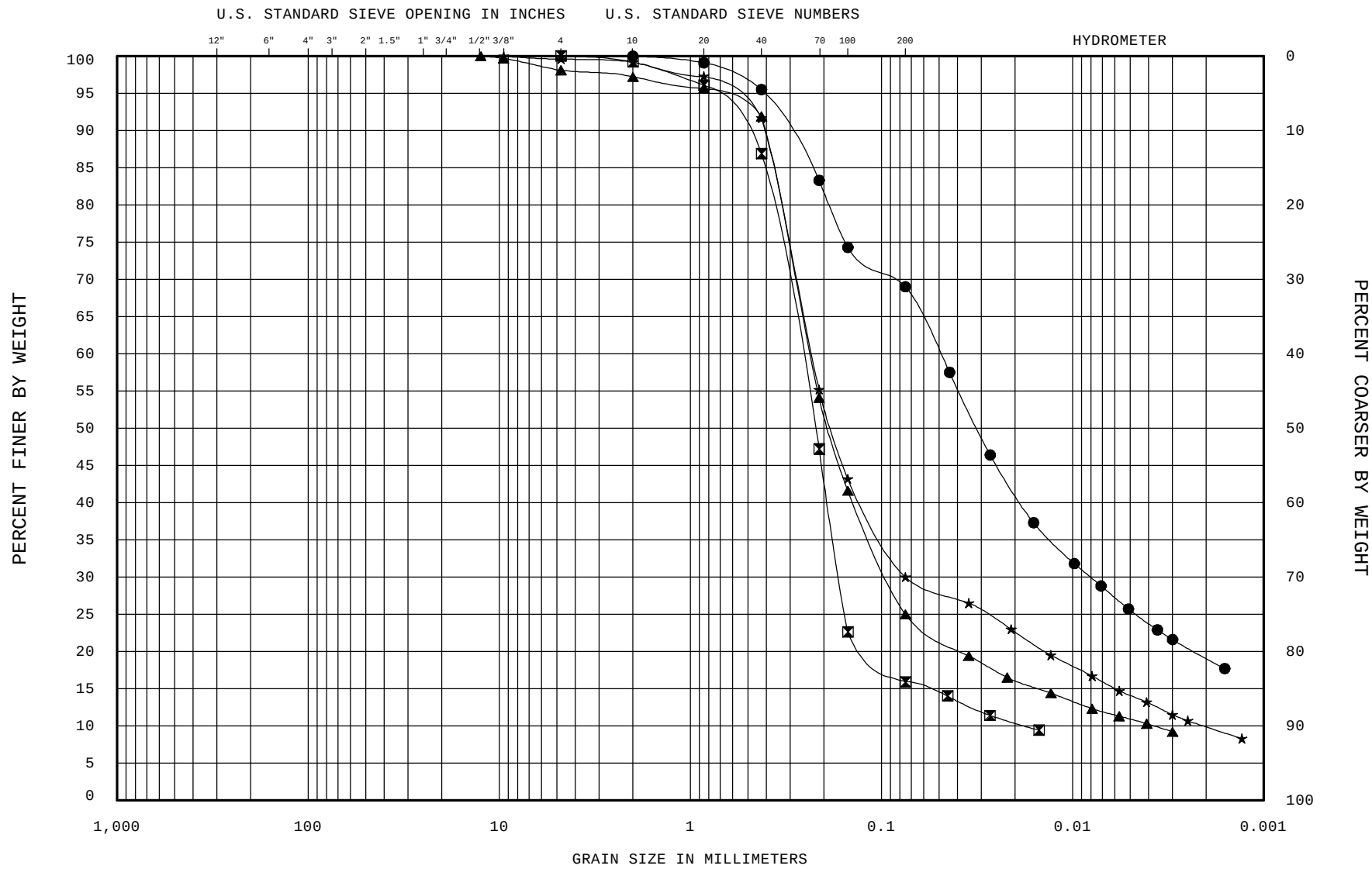
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-219*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SANDY LEAN CLAY	CL	27.6	24	15	9
—⊠—	Jar-3	5.0-6.5	SILTY SAND	SM	24.0			
—▲—	Jar-5	10.0-11.5	CLAYEY SAND	SC	26.7			
—★—	Jar-6	12.5-14.0	SILTY SAND	SM	34.6			

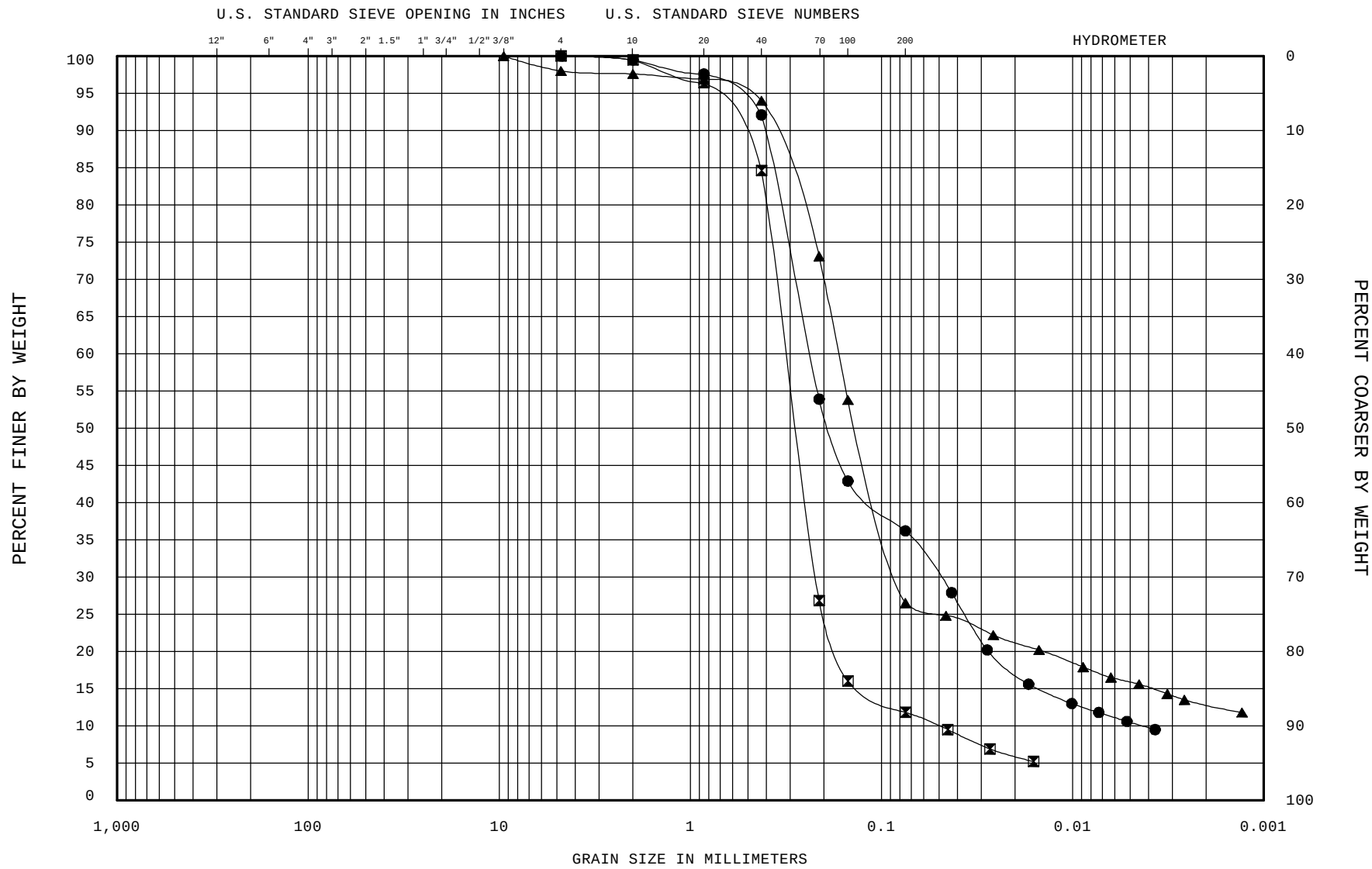
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-220*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	SILTY SAND	SM	24.3			
—⊠—	Jar-3	5.0-6.5	POORLY GRADED SAND with SILT	SP-SM	23.4			
—▲—	Jars 5-8	10.0-19.0	SILTY SAND	SM	29.8			
— —								

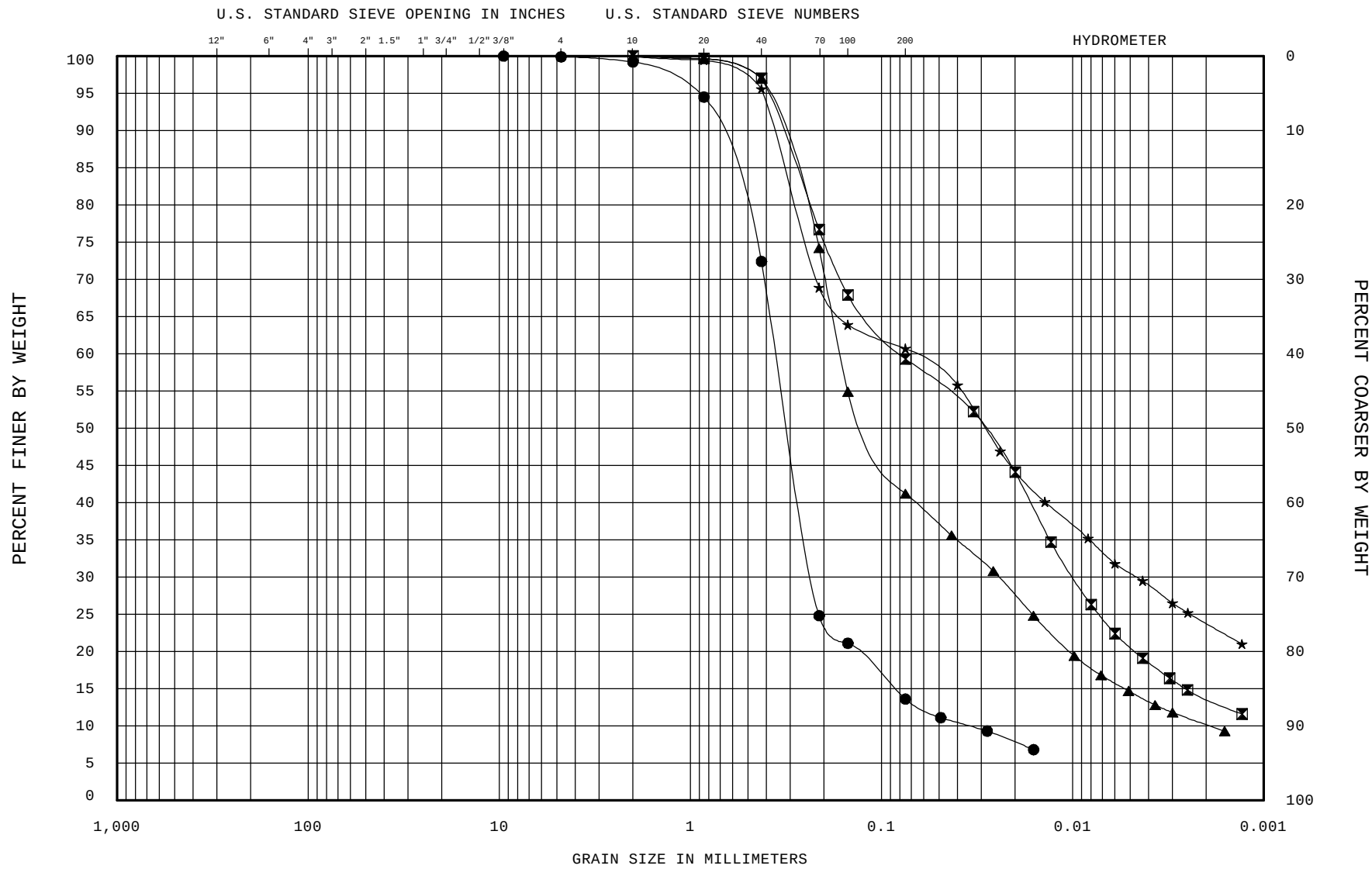
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-221*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1&2	0.0-4.0	SILTY SAND	SM	23.9			
—⊠—	Jar-3	5.0-6.5	SANDY SILT	ML	28.3			
—▲—	Jar-4	7.5-9.0	SILTY SAND	SM	20.9			
—★—	Jar-6	12.5-14.0	SANDY LEAN CLAY	CL	33.9	36	17	19

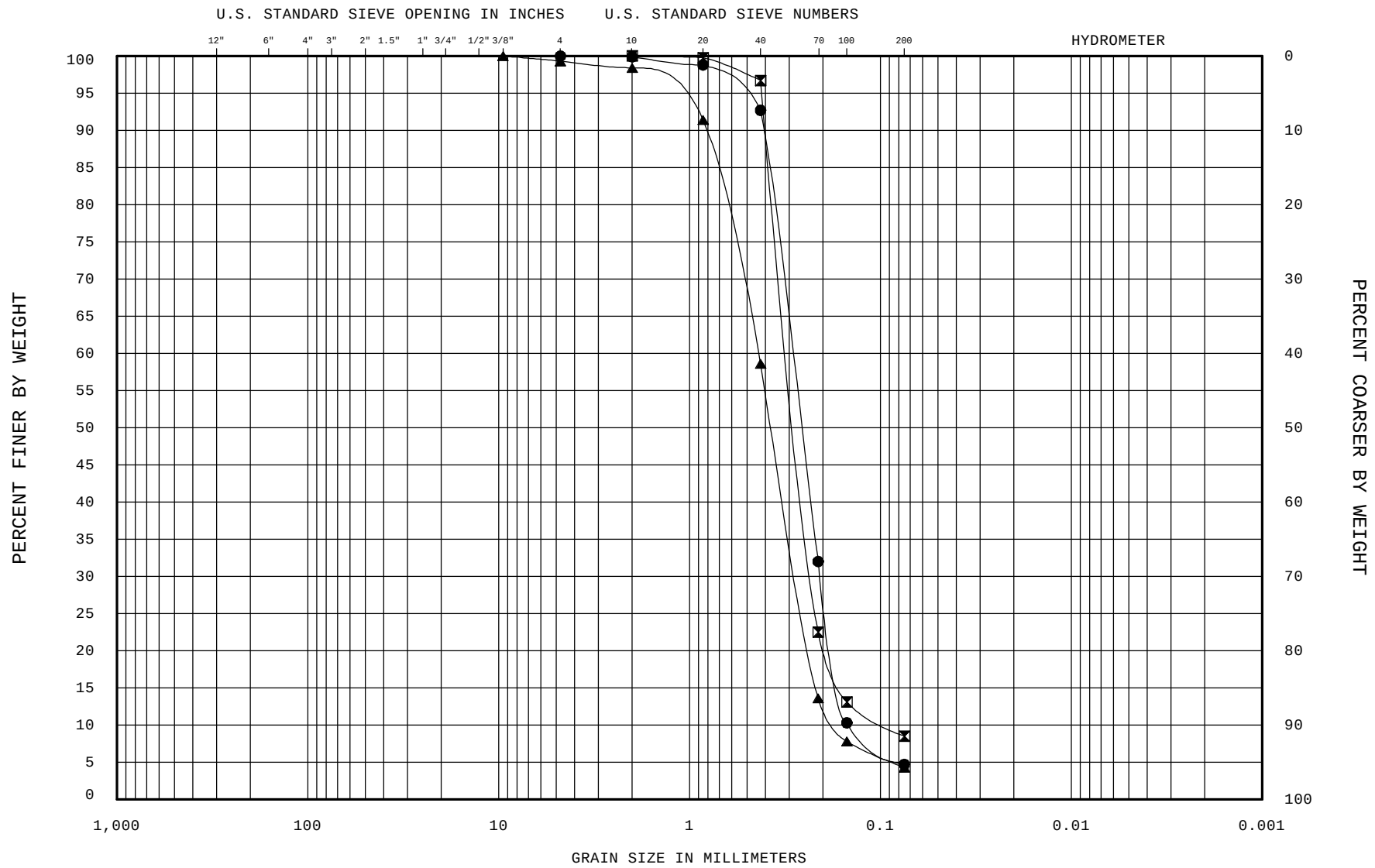
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-222*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2-4	2.5-9.0	POORLY GRADED SAND	SP	24.3			
—⊠—	Jar-6	12.5-14.0	POORLY GRADED SAND with SILT	SP-SM	23.6			
—▲—	Jars 8-10	17.5-24.0	POORLY GRADED SAND	SP	18.0			
— —								

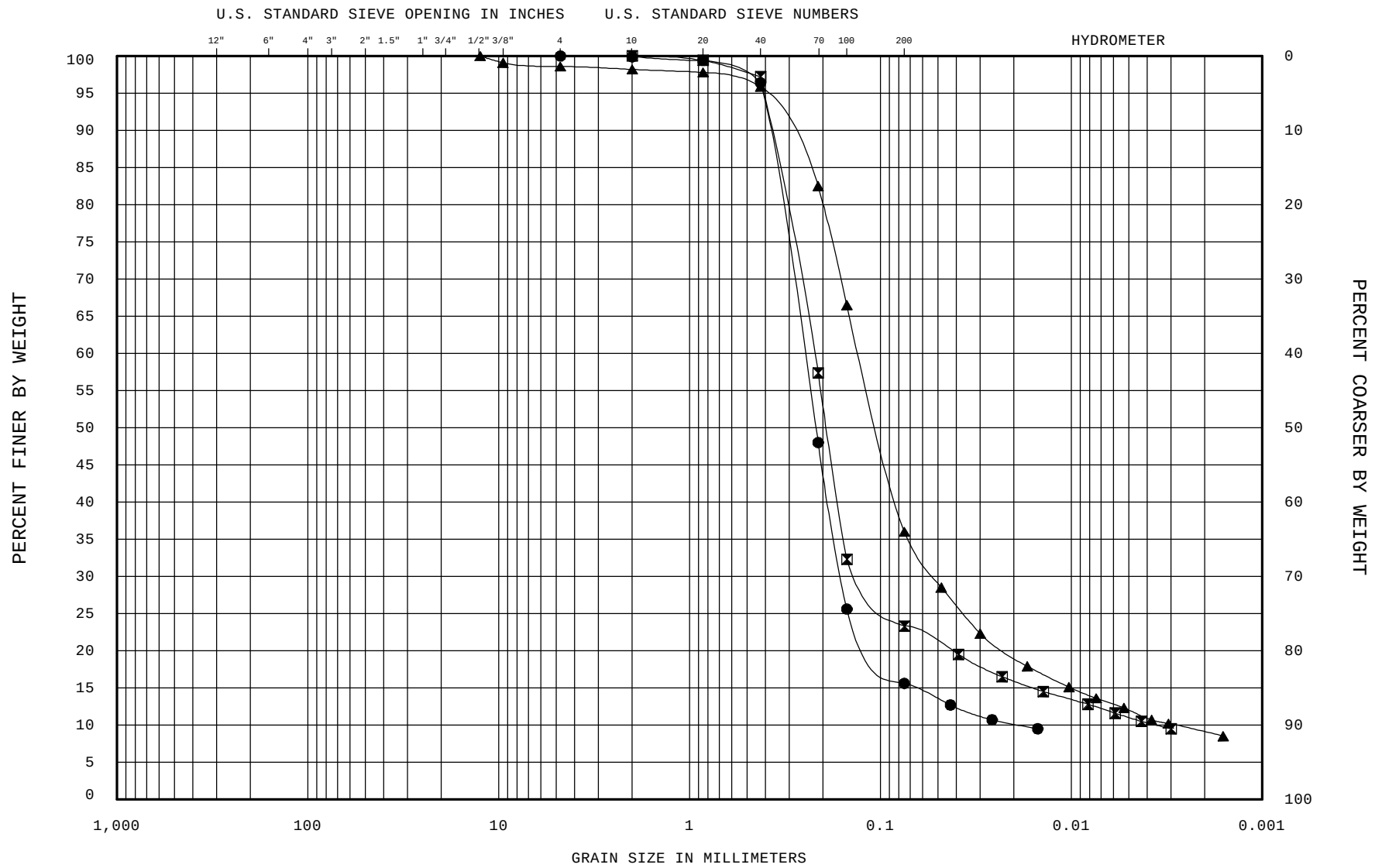
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-223*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	SILTY SAND	SM	25.6			
—⊠—	Jar-4	7.5-9.0	SILTY SAND	SM	27.8			
—▲—	Jar-8	17.5-19.0	SILTY SAND	SM/SC	22.6			
— —								

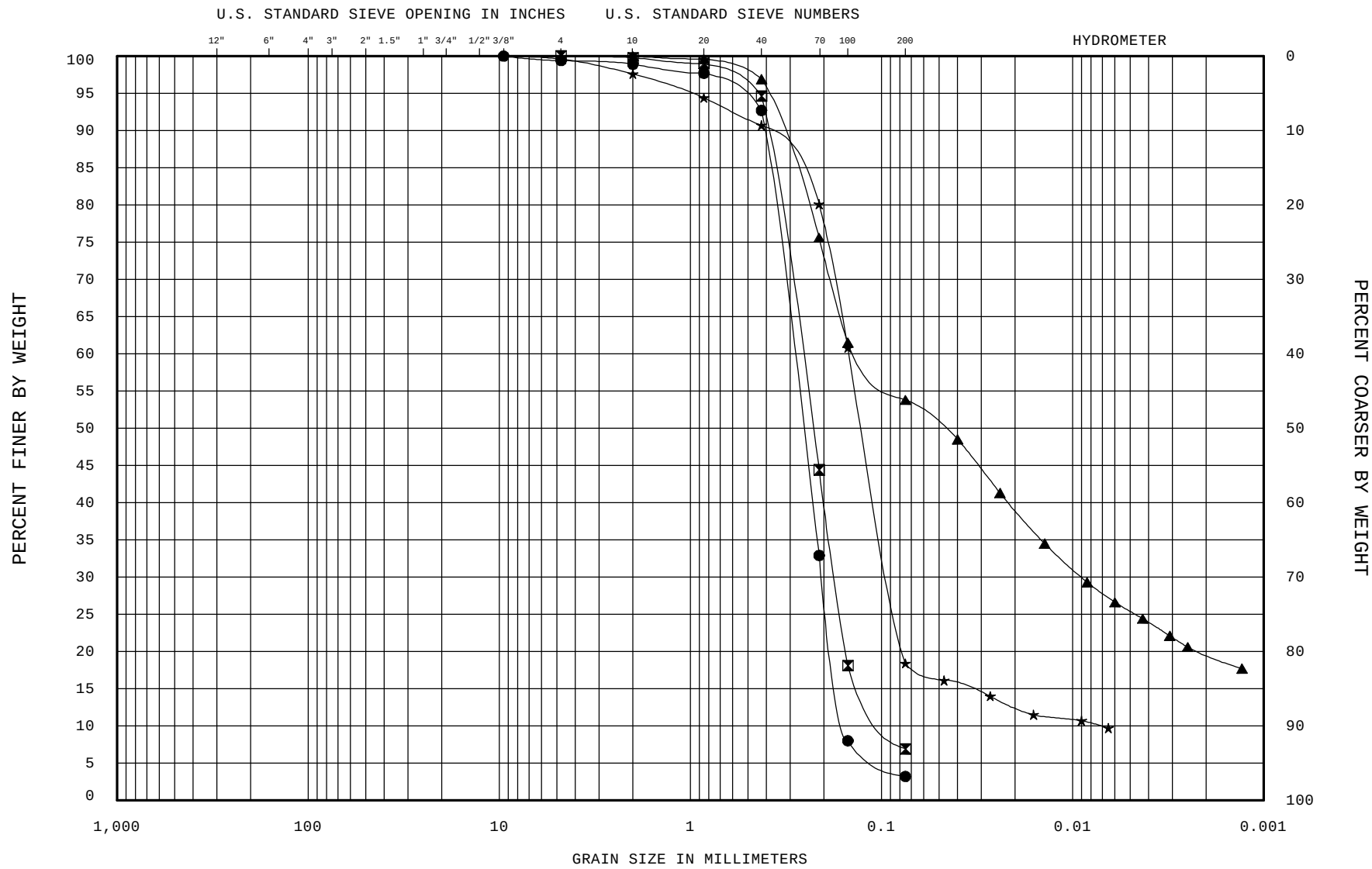
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-224*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-2	2.5-4.0	POORLY GRADED SAND	SP	24.2			
—⊠—	Jar-3	5.0-6.5	POORLY GRADED SAND with SILT	SP-SM	23.6			
—▲—	Jars 4&5	7.5-11.5	SANDY LEAN CLAY	CL	30.0	33	17	16
—★—	Jars 8-11	17.5-26.5	SILTY SAND	SM	30.0			

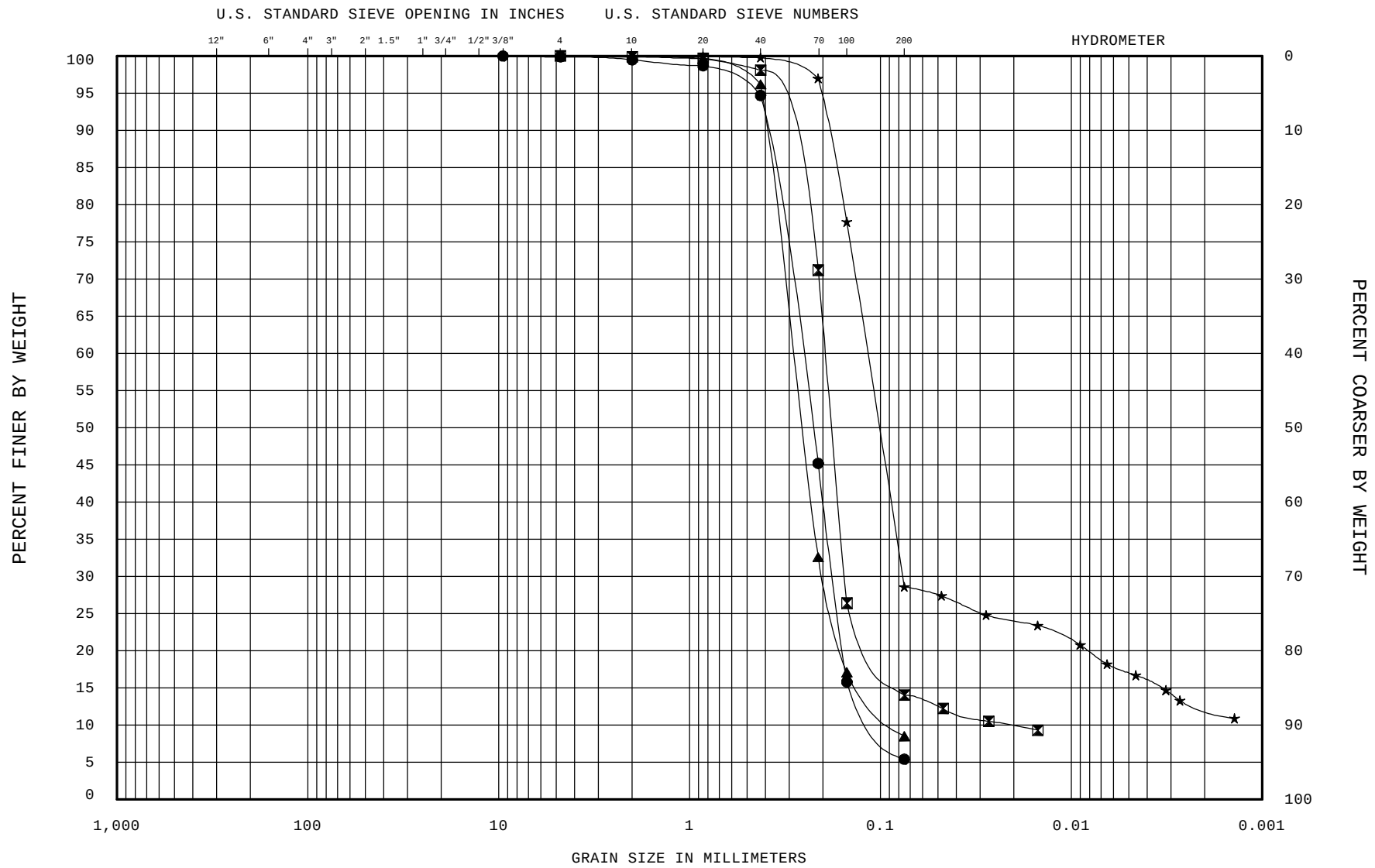
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-225*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2-4	2.5-9.0	POORLY GRADED SAND with SILT	SP-SM	25.2			
—⊠—	Jar-5	10.0-11.5	SILTY SAND	SM	22.5			
—▲—	Jar-6	12.5-14.0	POORLY GRADED SAND with SILT	SP-SM	22.9			
—★—	Jar-10	22.5-24.0	SILTY SAND	SM	38.6			

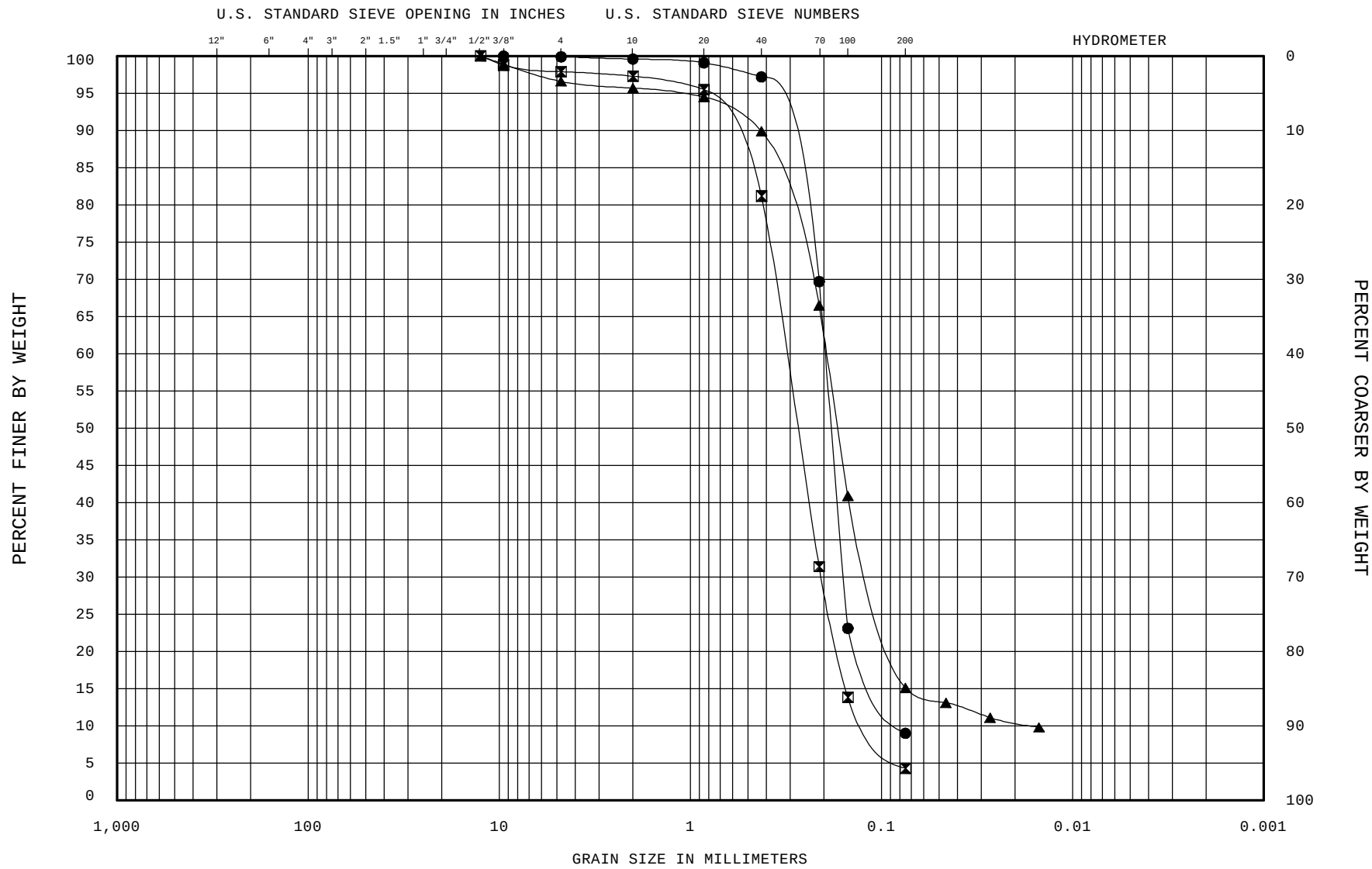
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-226*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2-4	2.5-9.0	POORLY GRADED SAND with SILT	SP-SM	25.1			
—⊠—	Jars 5-7	10.0-16.5	POORLY GRADED SAND	SP	20.2			
—▲—	Jars 8-10	17.5-24.0	SILTY SAND	SM	23.8			
— —								

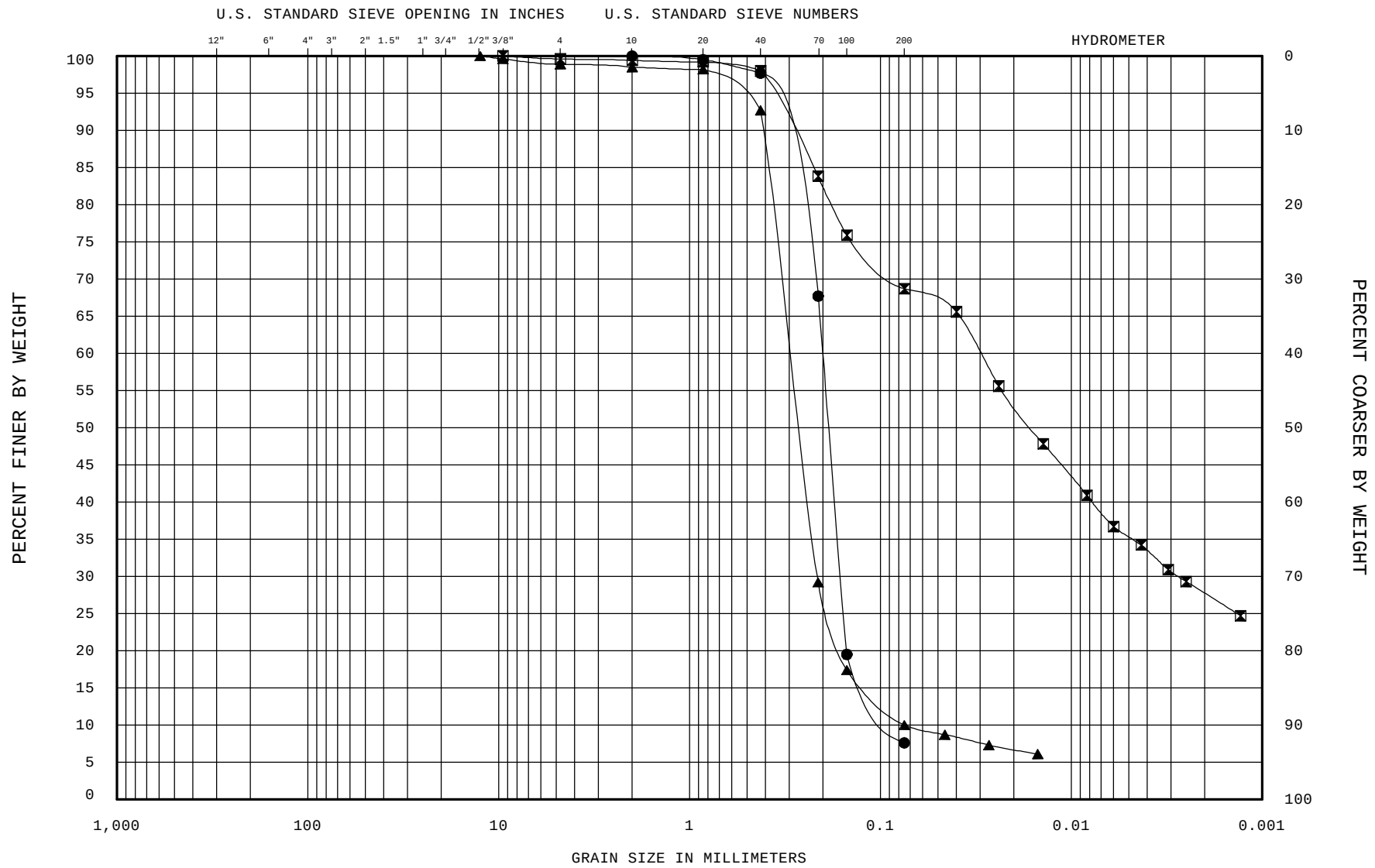
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-227*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	POORLY GRADED SAND with SILT	SP-SM	28.2			
—⊠—	Jars 5&6	10.0-14.0	SANDY LEAN CLAY	CL	38.1	41	17	24
—▲—	Jar-7	15.0-16.5	POORLY GRADED SAND with SILT	SP-SM	22.7			
— —								

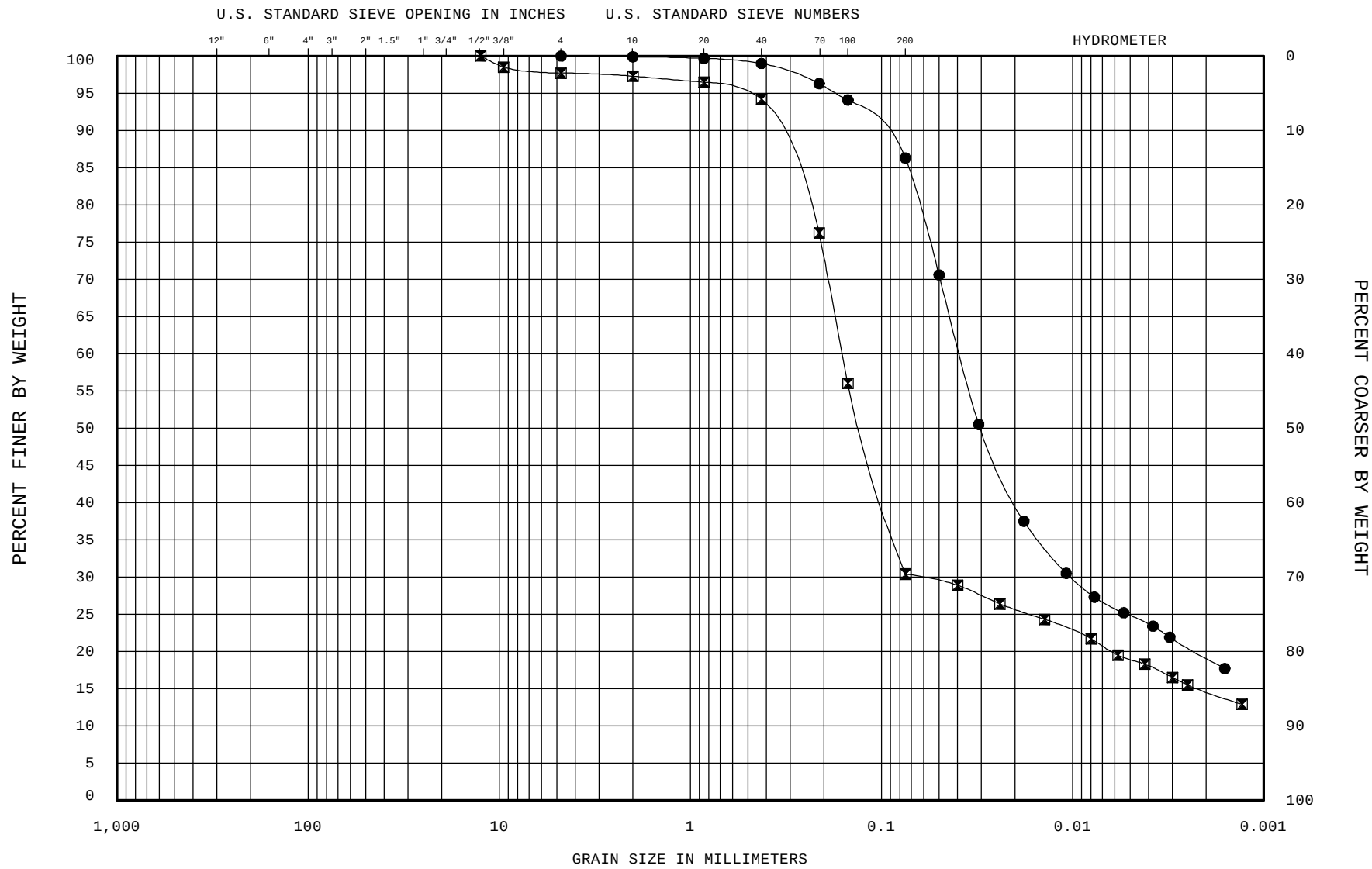
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-228*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2&3	2.5-6.5	LEAN CLAY	CL	35.8	34	20	14
—⊠—	Jars 5-7	10.0-16.5	CLAYEY SAND	SC	35.8			
— —								
— —								

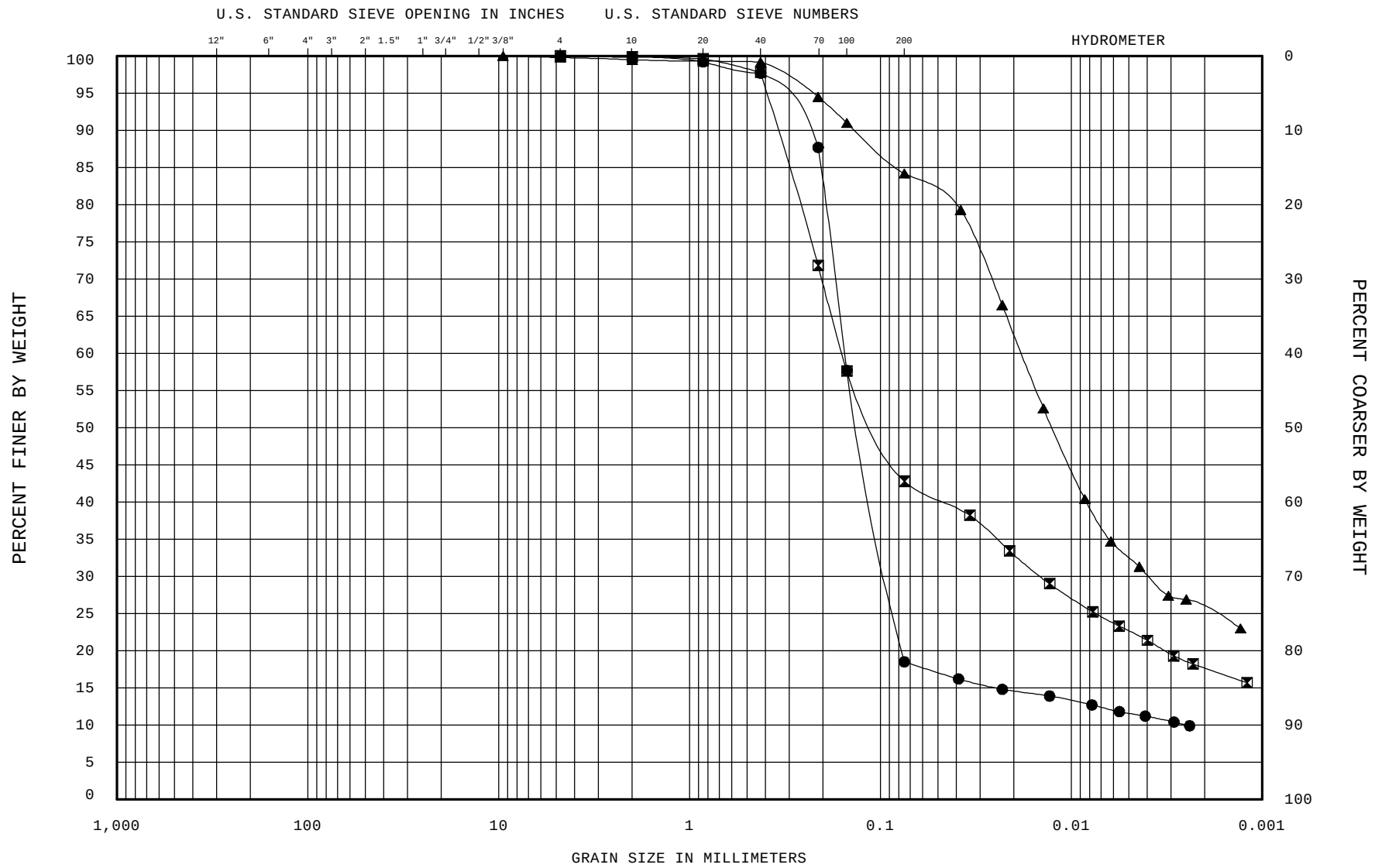
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-229*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 2-4	2.5-9.0	SILTY SAND	SM	28.2			
—⊠—	Jar-6	12.5-14.0	CLAYEY SAND	SC	32.9			
—▲—	Jars 8-11	17.5-26.5	FAT CLAY with SAND	CH	42.6	51	22	29
— —								

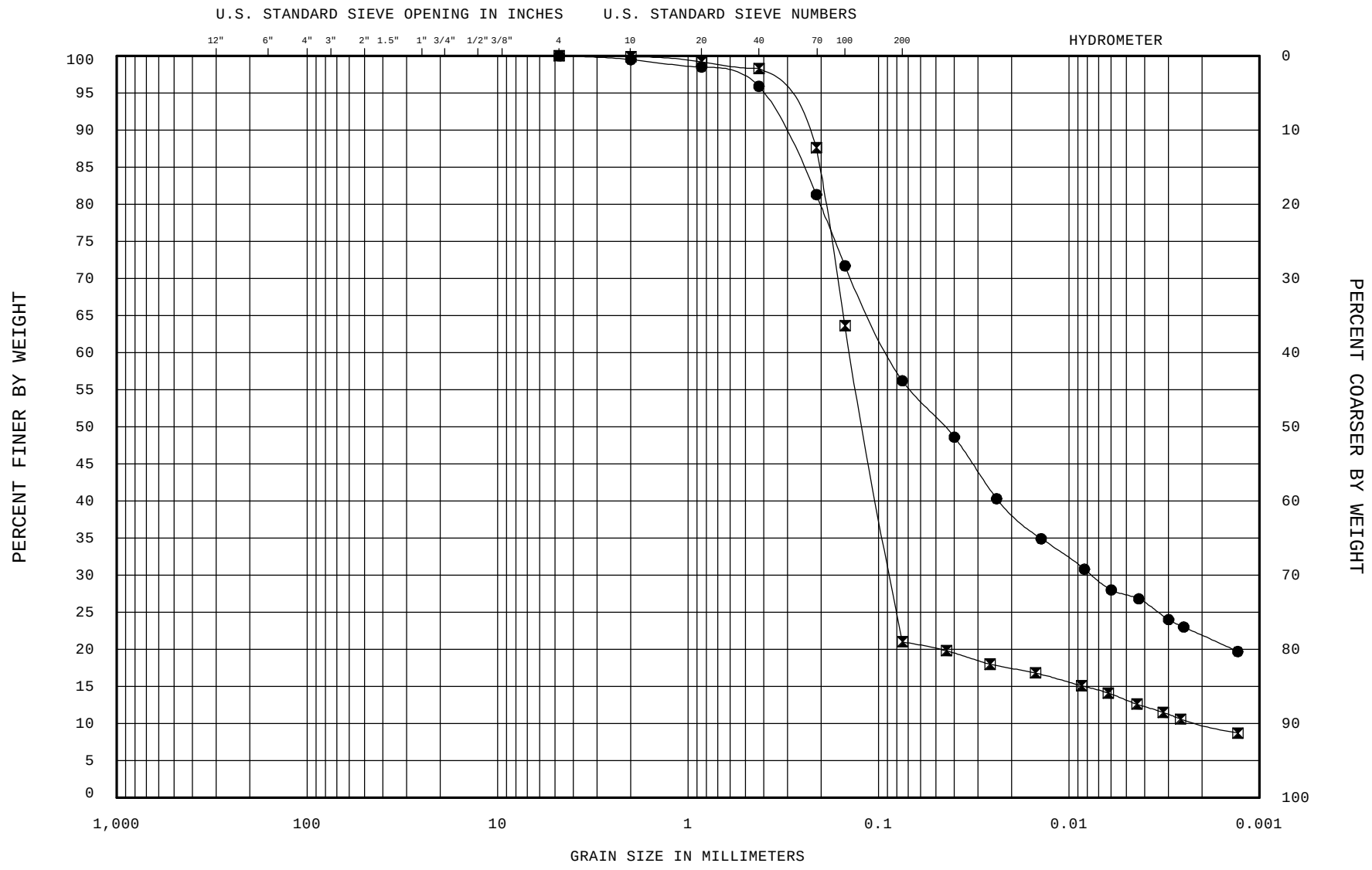
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-230*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-3	5.0-6.5	SANDY LEAN CLAY	CL	33.4	37	17	20
—⊠—	Jars 8-11	17.5-26.5	SILTY SAND	SM	32.5			
— —								
— —								

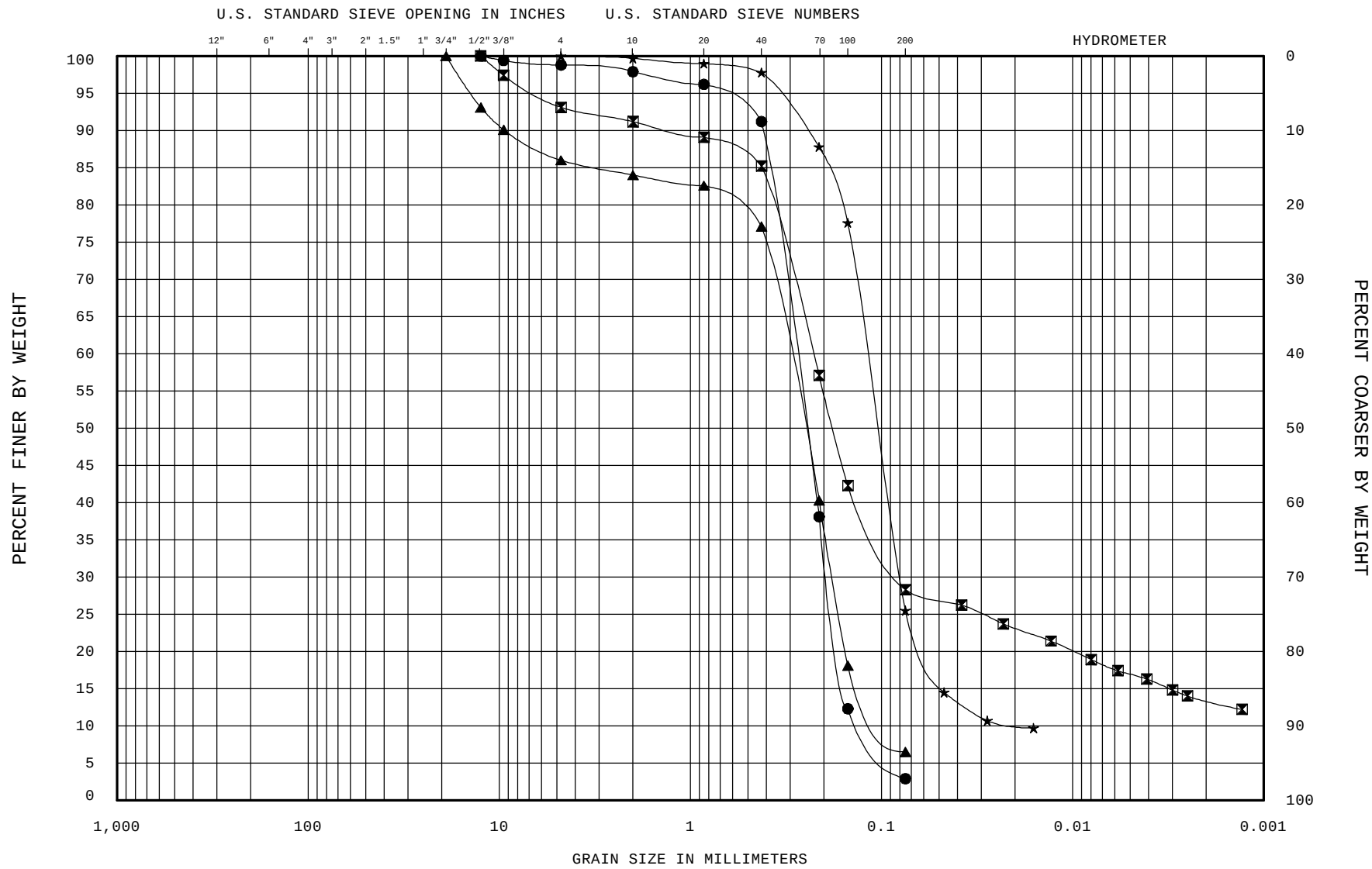
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-231*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jars 1-4	0.0-9.0	POORLY GRADED SAND	SP	26.0			
—⊠—	Jar-5	10.0-11.5	CLAYEY SAND	SC	26.0			
—▲—	Jar-6	12.5-14.0	POORLY GRADED SAND with SILT	SP-SM	20.6			
—★—	Jars 9-11	20.0-26.5	SILTY SAND	SM	30.4			

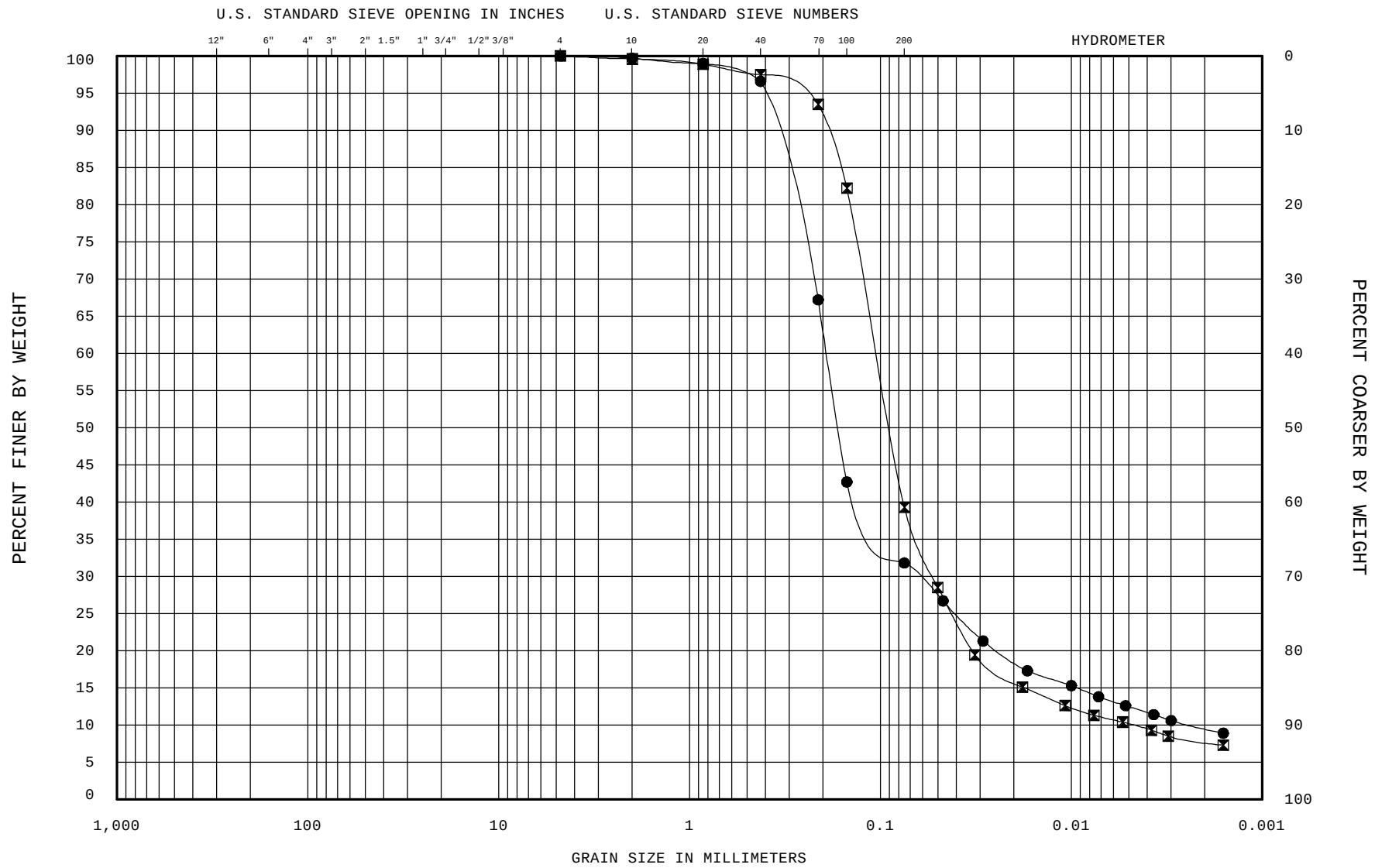
REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-232*

DATE: *Dec 2004*



COBBLES	GRAVEL		SAND			SILT or CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI
—●—	Jar-3	5.0-6.5	SILTY SAND	SM	22.3			
—⊠—	Jar-7	15.0-16.5	SILTY SAND	SM	22.6			
— —								
— —								

REMARKS :

ENG FORM ENG2087JAMES ISLAND, MID-BAY FEASIBILITY STUDY.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

PROJECT: *James Island*
AREA: *Mid-Bay Feasibility Study*
Dorchester County, MD

BORING NO.: *JB-233*

DATE: *Dec 2004*

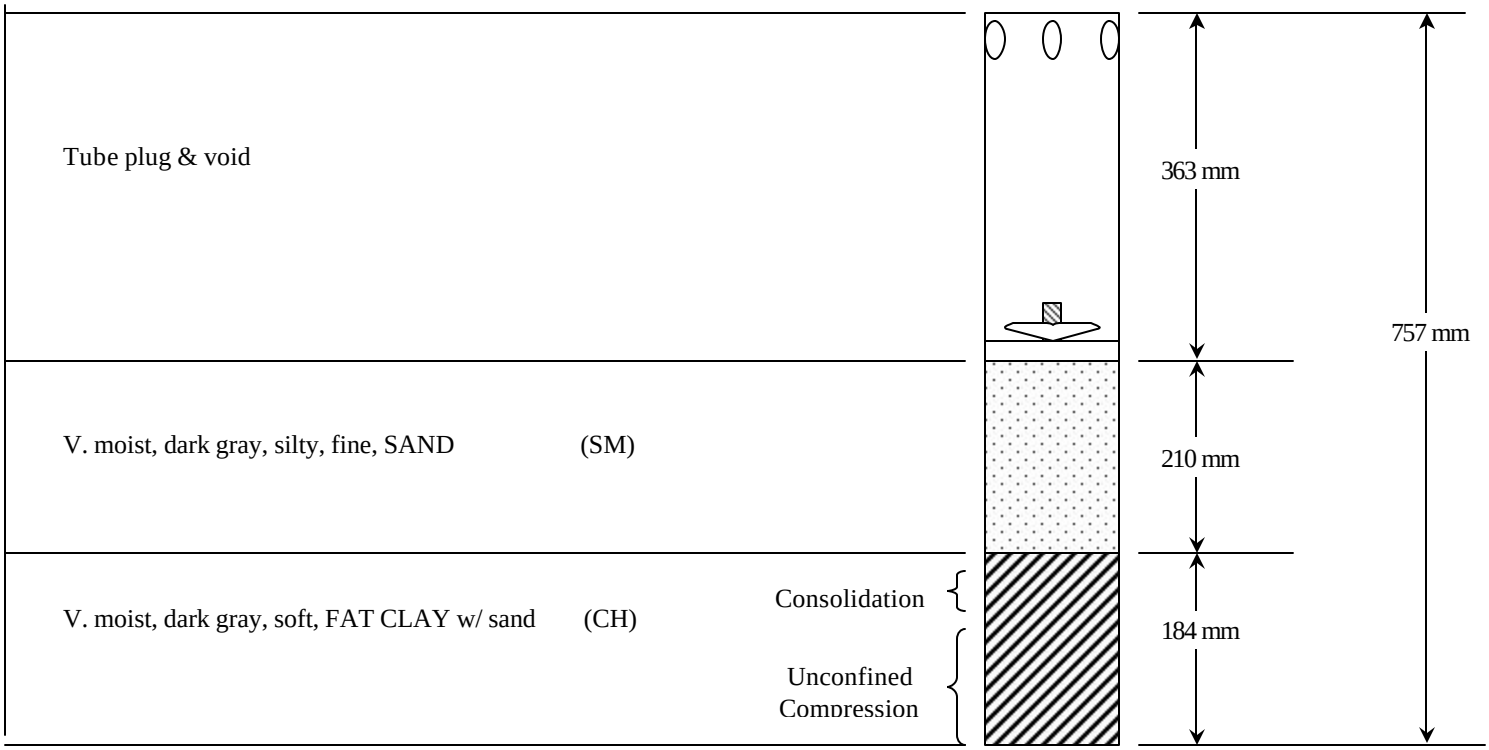
TUBE CLASSIFICATION

ASTM D2487

PROJECT: Mid-Bay Feasibility Study
James Island
AREA: Dorchester County, MD

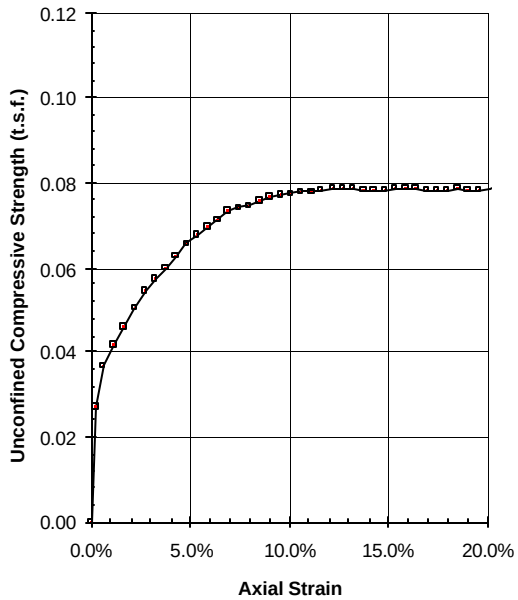
DATE: Nov 2004

Hole No.	Sample No.	Depth (ft)
DH-212A	Shelby-1	18.0-20.0



UNCONFINED COMPRESSION TEST

FAILURE SKETCHES



CONTROLLED STRAIN

TEST NO.		1	2	3	4
TYPE OF SPECIMEN		Undisturbed			
WATER CONTENT, %	w_o	52.4			
VOID RATIO	e_o	1.262			
SATURATION, %	S_o	100+			
DRY UNIT WEIGHT, LB./CU.FT .	γ_d	70.4			
TIME TO FAILURE, MIN.	t_f	------			
UNCONFINED COMPRESSIVE STRENGTH, TSF	q_u	0.08			
UNDRAINED SHEAR STRENGTH, TSF	s_u	0.04			
SENSITIVTY RATIO	S_t	------			
INITIAL SPECIMEN DIAMETER, IN.	D_o	2.84			
INITIAL SPECIMEN HEIGHT, IN.	H_o	6.00			

CLASSIFICATION: (ASTM D2487)

V. moist, dk gray, soft, FAT CLAY w/ sand (CH)

LL= 64	PL= 25	PI= 39 (ASTM D4318)	G_S= 2.55 (ASTM D854)

REMARKS:	**PROJECT:** James Island		
	Mid-Bay Feasiblity Study		
	AREA: Dorchester County, MD		
	Hole No.: DH-212A	**Sample No.:** Shelby-1	
	Depth (ft.): 18.0-20.0	**Date:** Feb.2005	
ENG FORM 3659 (Test method: ASTM D2166)	**UNCONFINED COMPRESSION TEST REPORT**		

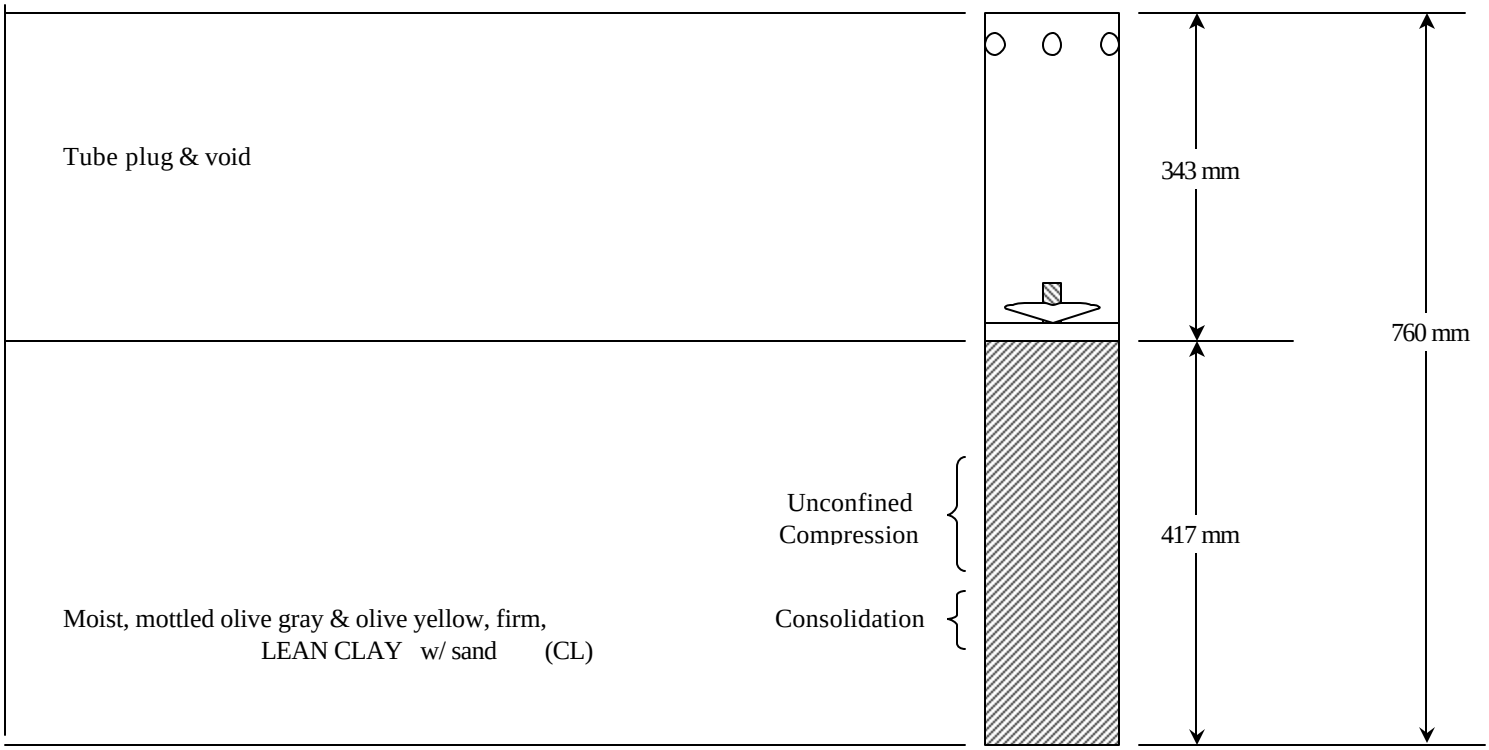
TUBE CLASSIFICATION

ASTM D2487

PROJECT: Mid-Bay Feasibility Study
James Island
AREA: Dorchester County, MD

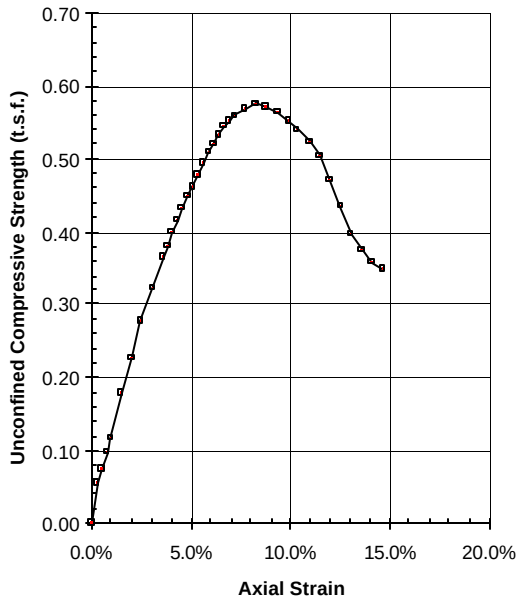
DATE: Nov 2004

Hole No.	Sample No.	Depth (ft)
DH-215A	Shelby-1	9.0-11.0



UNCONFINED COMPRESSION TEST

FAILURE SKETCHES



CONTROLLED STRAIN

TEST NO.		1	2	3	4
TYPE OF SPECIMEN		Undisturbed			
WATER CONTENT, %	w_o	26.6			
VOID RATIO	e_o	0.685			
SATURATION, %	S_o	100+			
DRY UNIT WEIGHT, LB./CU.FT .	γ_d	97.4			
TIME TO FAILURE, MIN.	t_f	8.0			
UNCONFINED COMPRESSIVE STRENGTH, TSF	q_u	0.58			
UNDRAINED SHEAR STRENGTH, TSF	s_u	0.29			
SENSITIVTY RATIO	S_t	------			
INITIAL SPECIMEN DIAMETER, IN.	D_o	2.86			
INITIAL SPECIMEN HEIGHT, IN.	H_o	5.67			

CLASSIFICATION: (ASTM D2487)

Moist, mottled olive gray & olive yell., firm, LEAN CLAY w/ sand (CL)

LL= 29	PL= 18	PI= 11 (ASTM D4318)	G_S= 2.63 (ASTM D854)

REMARKS:	**PROJECT:** James Island		
	Mid-Bay Feasiblity Study		
	AREA: Dorchester County, MD		
	Hole No.: DH-215A	**Sample No.:** Shelby-1	
	Depth (ft.): 9.0-11.0	**Date:** Feb.2005	
ENG FORM 3659 (Test method: ASTM D2166)	**UNCONFINED COMPRESSION TEST REPORT**		

TUBE CLASSIFICATION

ASTM D2487

PROJECT: Mid-Bay Feasibility Study
James Island
AREA: Dorchester County, MD

DATE: Nov 2004

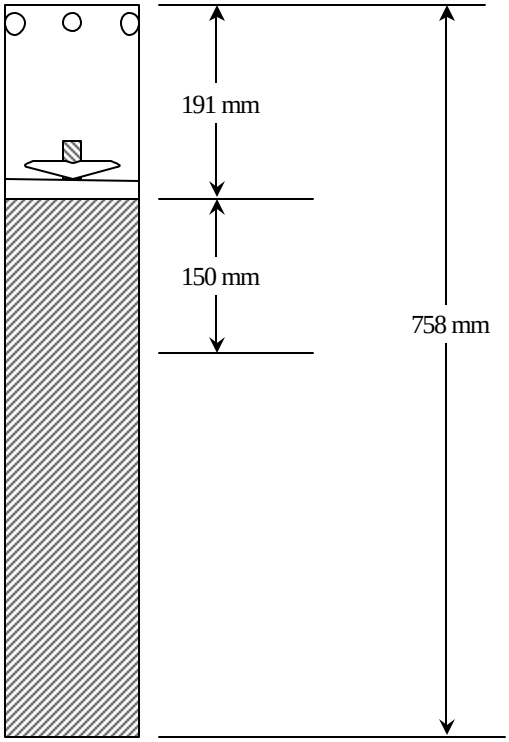
Hole No.	Sample No.	Depth (ft)
DH-217A	Shelby-1	6.0-8.0

Tube plug & void

V. moist, dk. greenish gray, soft-firm, LEAN CLAY (CL)

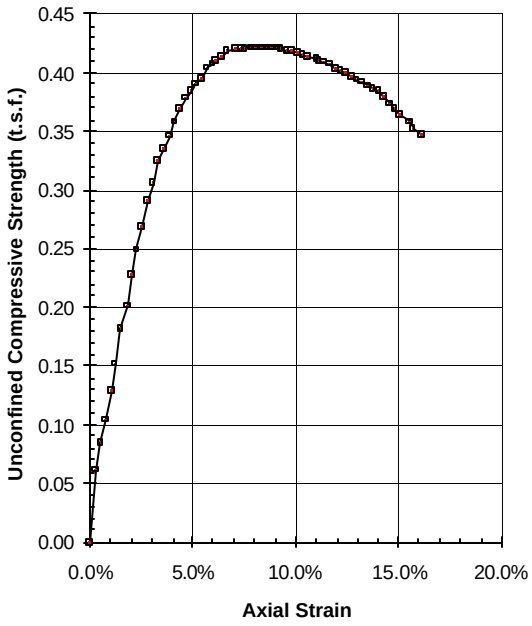
Unconfined Compression

Consolidation



UNCONFINED COMPRESSION TEST

FAILURE SKETCHES



CONTROLLED STRAIN

TEST NO.		1	2	3	4
TYPE OF SPECIMEN		Undisturbed			
WATER CONTENT, %	w_o	38.5			
VOID RATIO	e_o	0.964			
SATURATION, %	S_o	100+			
DRY UNIT WEIGHT, LB./CU.FT .	γ_d	82.3			
TIME TO FAILURE, MIN.	t_f	8.0			
UNCONFINED COMPRESSIVE STRENGTH, TSF	q_u	0.42			
UNDRAINED SHEAR STRENGTH, TSF	s_u	0.21			
SENSITIVTY RATIO	S_t	------			
INITIAL SPECIMEN DIAMETER, IN.	D_o	2.84			
INITIAL SPECIMEN HEIGHT, IN.	H_o	6.10			

CLASSIFICATION: (ASTM D2487)

V.moist, dk. greenish gray, soft-firm, LEAN CLAY (CL)

LL= 44	PL= 20	PI= 24 (ASTM D4318)	G_S= 2.59 (ASTM D854)

REMARKS:	**PROJECT:** James Island		
	Mid-Bay Feasiblity Study		
	AREA: Dorchester County, MD		
	Hole No.: DH-217A	**Sample No.:** Shelby-1	
	Depth (ft.): 6.0-8.0	**Date:** Feb.2005	
ENG FORM 3659 (Test method: ASTM D2166)	**UNCONFINED COMPRESSION TEST REPORT**		

TUBE CLASSIFICATION

ASTM D2487

PROJECT: Mid-Bay Feasibility Study
James Island
AREA: Dorchester County, MD

DATE: Nov 2004

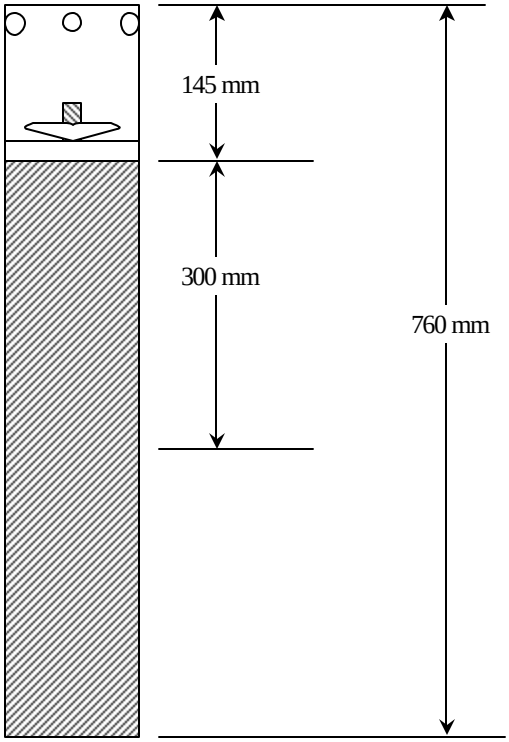
Hole No.	Sample No.	Depth (ft)
DH-218A	Shelby-1	8.0-10.0

Tube plug & void

V. moist, dk. greenish gray, soft-firm, LEAN CLAY w/sand (CL)

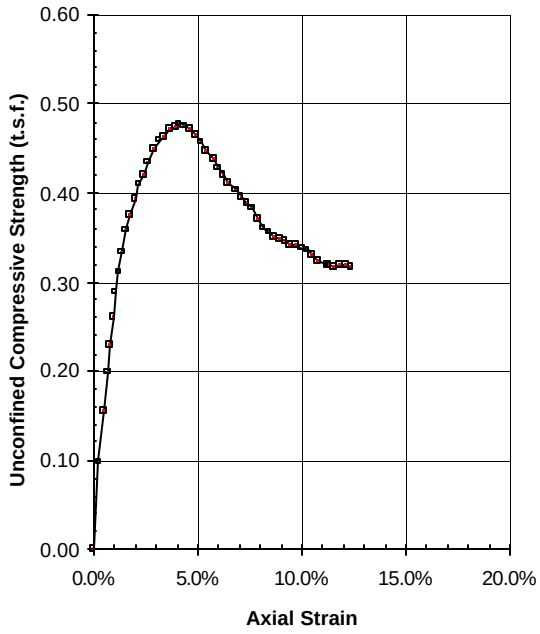
Unconfined Compression

Consolidation



UNCONFINED COMPRESSION TEST

FAILURE SKETCHES



CONTROLLED STRAIN

TEST NO.		1	2	3	4
TYPE OF SPECIMEN		Undisturbed			
WATER CONTENT, %	w_o	35.7			
VOID RATIO	e_o	0.842			
SATURATION, %	S_o	100+			
DRY UNIT WEIGHT, LB./CU.FT .	γ_d	86.4			
TIME TO FAILURE, MIN.	t_f	5.0			
UNCONFINED COMPRESSIVE STRENGTH, TSF	q_u	0.48			
UNDRAINED SHEAR STRENGTH, TSF	s_u	0.24			
SENSITIVTY RATIO	S_t	------			
INITIAL SPECIMEN DIAMETER, IN.	D_o	2.87			
INITIAL SPECIMEN HEIGHT, IN.	H_o	6.14			

CLASSIFICATION: (ASTM D2487)

V.moist, dk. greenish gray, soft-firm, LEAN CLAY w/ sand (CL)

LL= 42	PL= 19	PI= 23 (ASTM D4318)	G_S= 2.55 (ASTM D854)

REMARKS:	**PROJECT:** James Island		
	Mid-Bay Feasiblity Study		
	AREA: Dorchester County, MD		
	Hole No.: DH-218A	**Sample No.:** Shelby-1	
	Depth (ft.): 8.0-10.0	**Date:** Feb.2005	
ENG FORM 3659 (Test method: ASTM D2166)	**UNCONFINED COMPRESSION TEST REPORT**		

TUBE CLASSIFICATION

ASTM D2487

PROJECT: Mid-Bay Feasibility Study
James Island
AREA: Dorchester County, MD

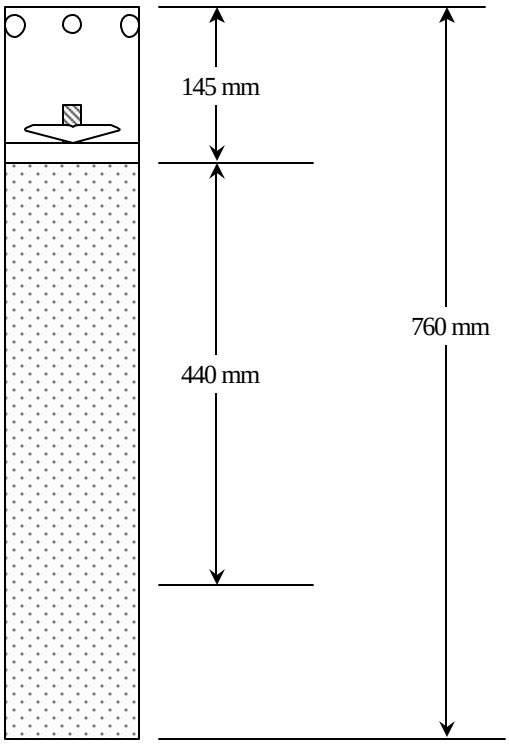
DATE: Nov 2004

Hole No.	Sample No.	Depth (ft)
DH-220A	Shelby-1	20.0-22.0

Tube plug & void

Moist, dk. greenish gray, fine, silty, SAND (SM)

Consolidation



TUBE CLASSIFICATION

ASTM D2487

PROJECT: Mid-Bay Feasibility Study
James Island
AREA: Dorchester County, MD

DATE: Nov 2004

Hole No.	Sample No.	Depth (ft)
DH-229A	Shelby-1	6.0-8.0

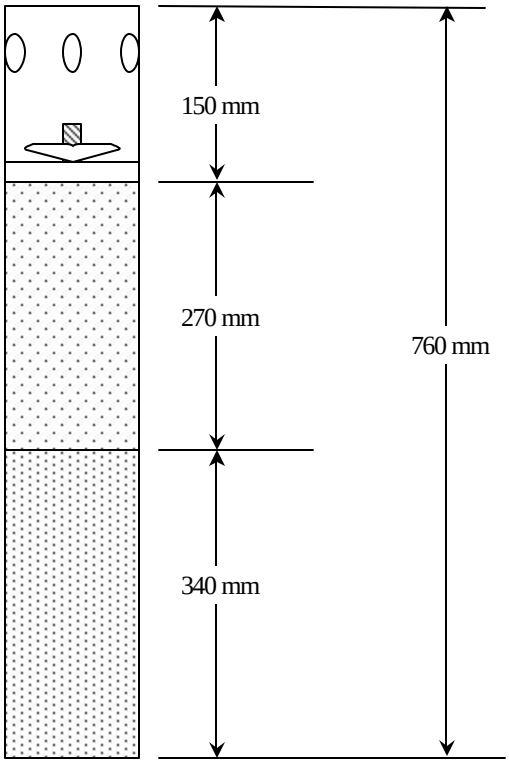
Tube plug & void

V. moist, dk greenish gray, v. fine, silty, SAND (SM)

V. moist, dk greenish gray, v. fine, clayey, SAND (SC)

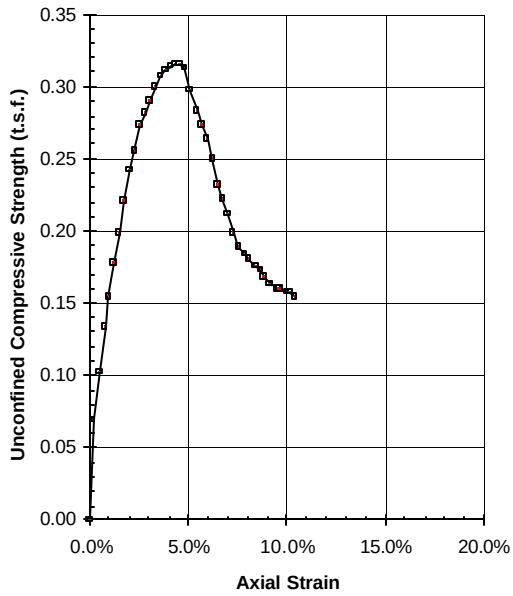
Unconfined Compression

Consolidation



UNCONFINED COMPRESSION TEST

FAILURE SKETCHES



CONTROLLED STRAIN

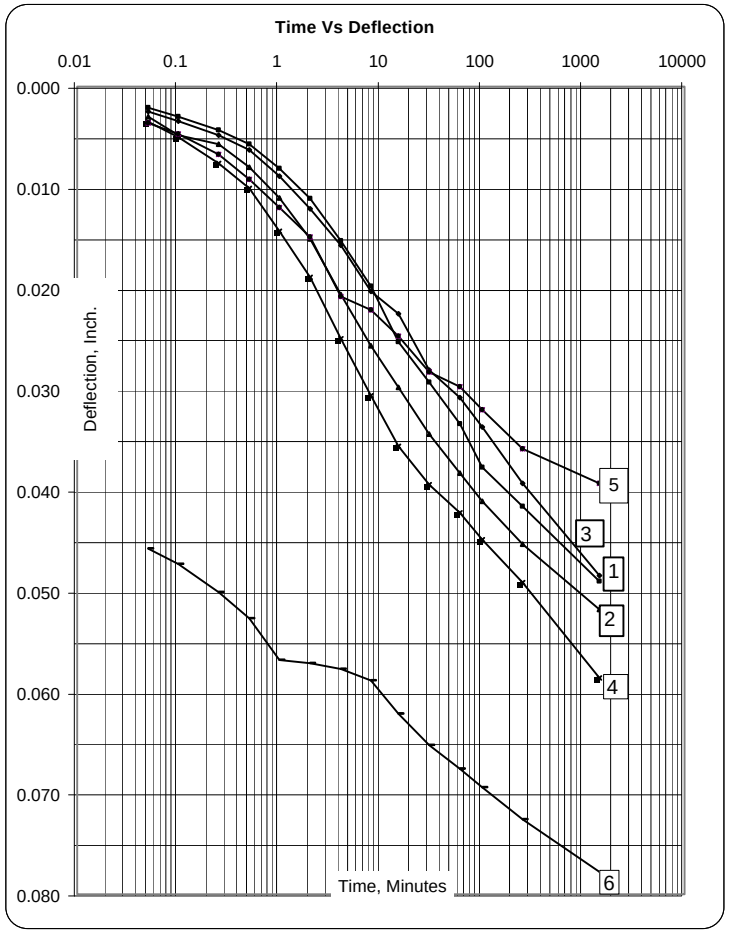
TEST NO.		1	2	3	4
TYPE OF SPECIMEN		Undisturbed			
WATER CONTENT, %	w_o	32.2			
VOID RATIO	e_o	0.787			
SATURATION, %	S_o	100+			
DRY UNIT WEIGHT, LB./CU.FT .	γ_d	88.7			
TIME TO FAILURE, MIN.	t_f	4.5			
UNCONFINED COMPRESSIVE STRENGTH, TSF	q_u	0.32			
UNDRAINED SHEAR STRENGTH, TSF	s_u	0.16			
SENSITIVTY RATIO	S_t	------			
INITIAL SPECIMEN DIAMETER, IN.	D_o	2.87			
INITIAL SPECIMEN HEIGHT, IN.	H_o	6.11			

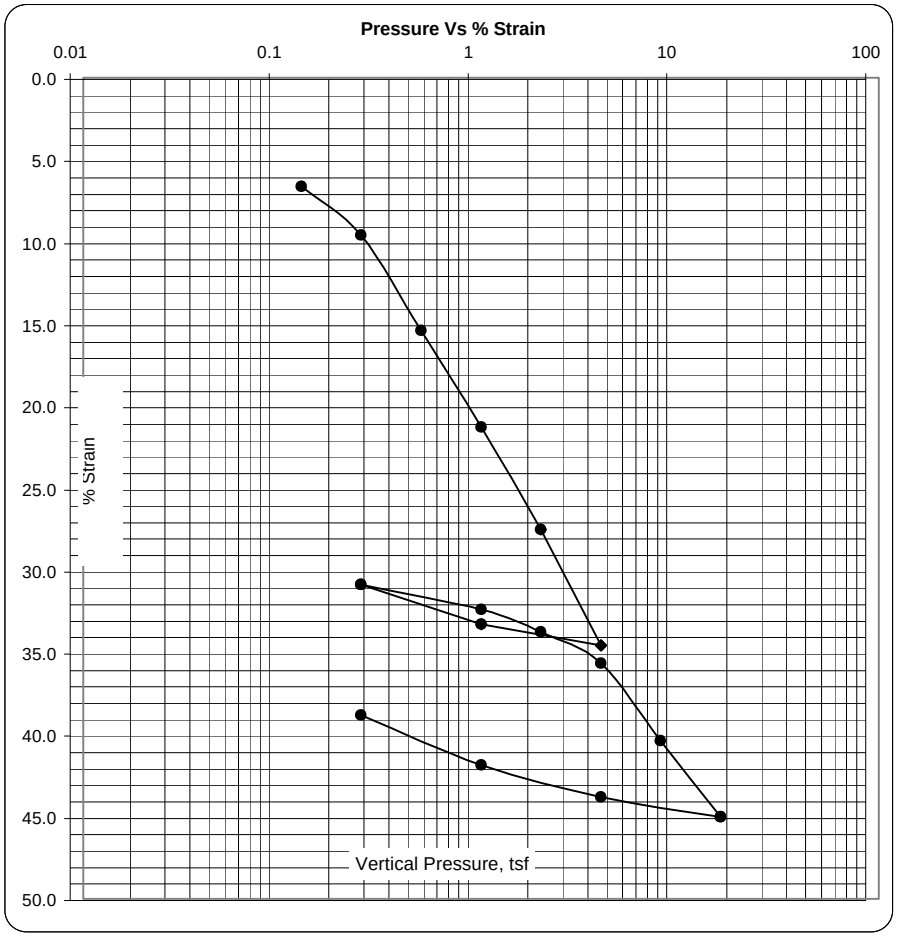
CLASSIFICATION: (ASTM D2487)

V. moist, dk greenish gray, v. fine, clayey, SAND (SC)

LL= 38	PL= 16	PI= 22 (ASTM D4318)	G_S= 2.54 (ASTM D854)

REMARKS:	**PROJECT:** James Island		
	Mid-Bay Feasiblity Study		
	AREA: Dorchester County, MD		
	Hole No.: DH-229A	**Sample No.:** Shelby-1	
	Depth (ft.): 6.0-8.0	**Date:** Feb.2005	
ENG FORM 3659 (Test method: ASTM D2166)	**UNCONFINED COMPRESSION TEST REPORT**		





One-Dimensional Consolidation Test (ASTMD-2435)

Curve	ssure Increr	C_v	T_{50}	T_{90}	Description of Specimen:		Dark gray lean clay		
No.	TSF	cm²/sec	Min.	Min.	Nat.Water Content (%)	44.8	(From Trims.)	**Consolidation Properties**	
1	0.125	1.9E-03	2.1	9.0	Liquid Limit (%)	48	(From Trims.)	Compression Ratio (Cc')	
2	0.25	1.2E-03	2.8	12.3	Plastic Limit (%)	22	(From Trims.)	Recompression Ratio (Cr')	
3	0.5	1.4E-03	2.2	9.6	Plastic Index (%)	26	(From Trims.)	Swelling Ratio (Cs')	
4	1	1.2E-03	2.4	10.2	Specific Gravity	2.76	(From Trims.)	Preconsolidation Stress, Pc (tsf)	
5	2	1.3E-03	2.1	9.0	**Test Specimen Properties**			Existing Overburden Stress, Po (tsf)	
6	4	1.6E-03	1.6	6.8	Diameter,inch.	2.500			
7	8	2.1E-03	1.1	4.8	Initial And Final Thickness, inch.	0.850	0.622		
8	16	6.6E-03	0.3	1.4	Initial And Final Water Content (%)	115.8	100.7		
					Initial And Final Void Ratio	2.603	1.192		
					Initial And Final Saturation (%)	97.9	111.1		
					Unit Dry Weight (pcf)	46.4			

Project No	2004G677
Project Name	James Island
Boring No.	DH-203A
Sample No.	JB-203
Depth, ft.	3.0-5.0
Tested By	TV
Reviewed By	KAN
Date	04-Nov-04
File No.	2004677Con-203A

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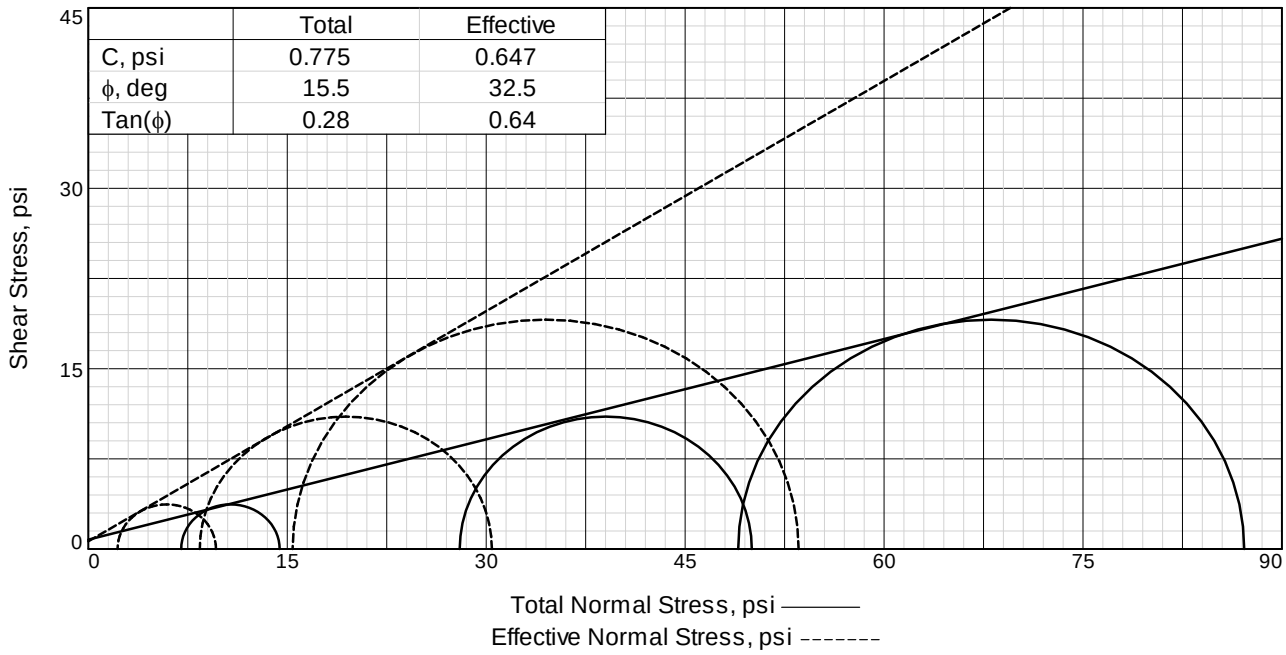
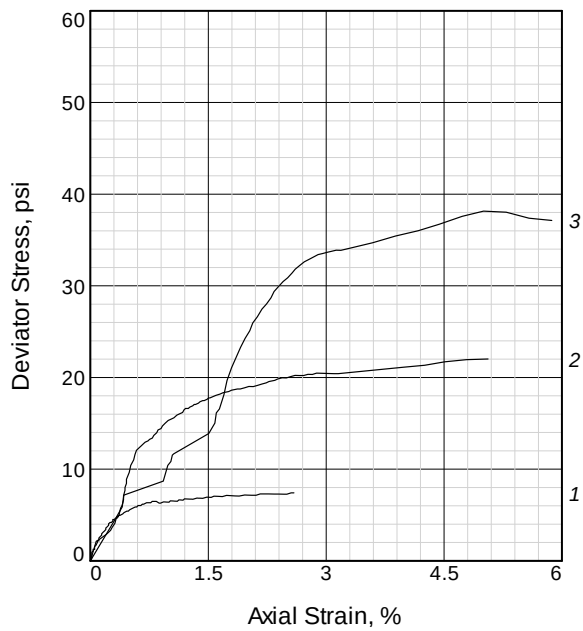




Sample No.		1	2	3
Initial	Water Content,	77.1	77.1	77.1
	Dry Density, pcf	54.8	54.8	54.8
	Saturation,	99.2	99.2	99.2
	Void Ratio	2.1456	2.1456	2.1456
	Diameter, in.	2.860	2.860	2.860
	Height, in.	5.600	5.600	5.600
At Test	Water Content,	43.6	43.6	43.6
	Dry Density, pcf	54.8	54.8	54.8
	Saturation,	56.1	56.1	56.1
	Void Ratio	2.1456	2.1456	2.1456
	Diameter, in.	2.860	2.898	2.974
	Height, in.	5.600	5.455	5.179
Strain rate, in./min.		0.003	0.003	0.003
Eff. Cell Pressure, psi		7.00	28.00	49.00
Fail. Stress, psi		7.42	22.03	38.16
Excess Pore Pr., psi		4.80	19.60	33.60
Strain, %		2.6	5.1	5.0
Ult. Stress, psi				
Excess Pore Pr., psi				
Strain, %				
$\bar{\sigma}_1$ Failure, psi		9.62	30.43	53.56
$\bar{\sigma}_3$ Failure, psi		2.20	8.40	15.40

Type of Test:
CU with Pore Pressures

Sample Type: Undisturbed

Description: Dark gray lean clay

LL= 48 **PL=** 22 **PI=** 26

Specific Gravity= 2.76

Remarks: Staged sample

Client: Corp. of Engineers

Project: James Island

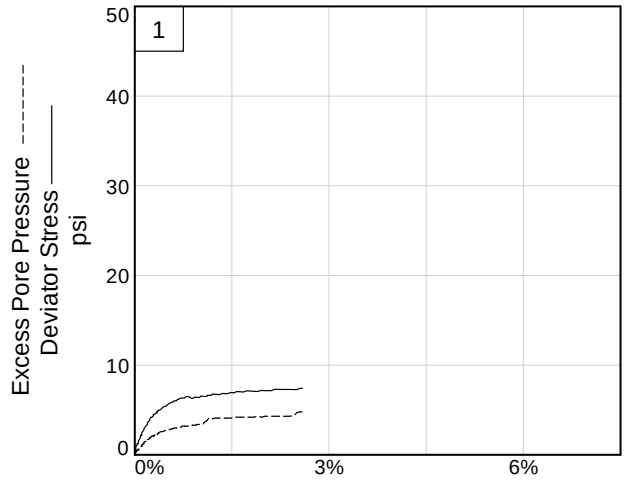
Source of Sample: JB-203 **Depth:** 3'-5'

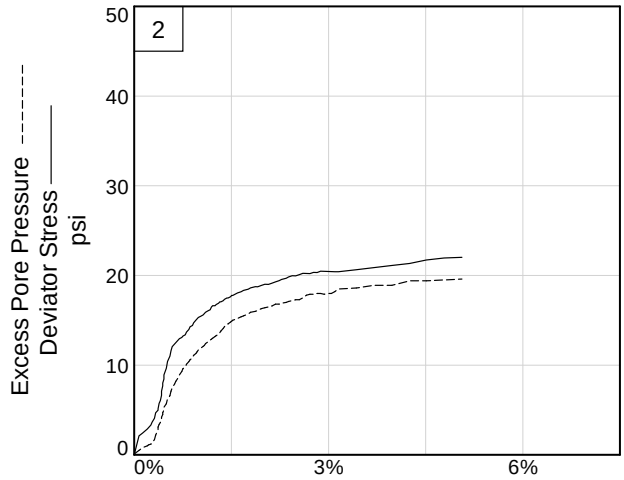
Sample Number: JB-203

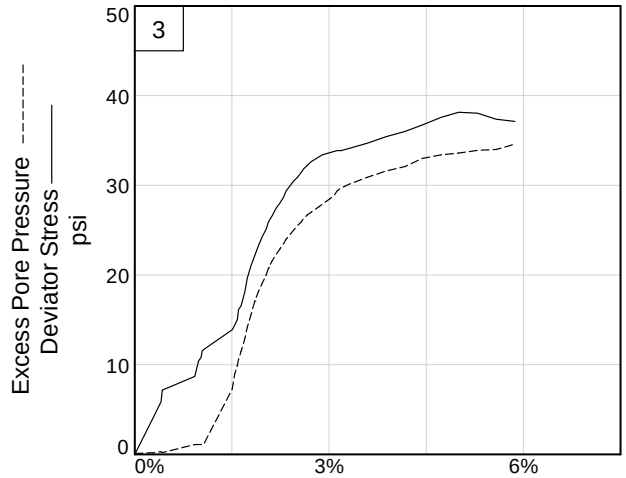
Proj. No.: 04G677 **Date:** 30 Nov. 2004

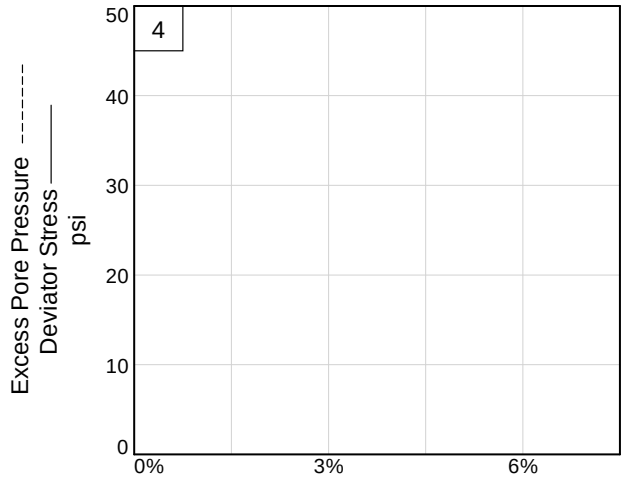
TRIAXIAL SHEAR TEST REPORT

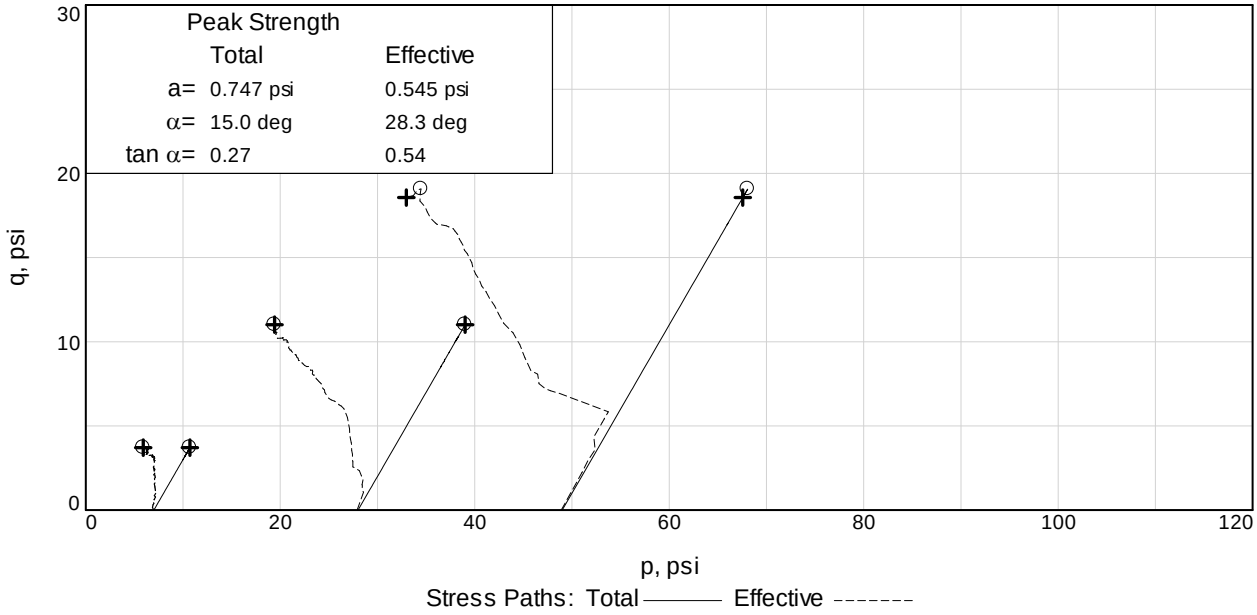
GeoSystems Consultants, Inc.





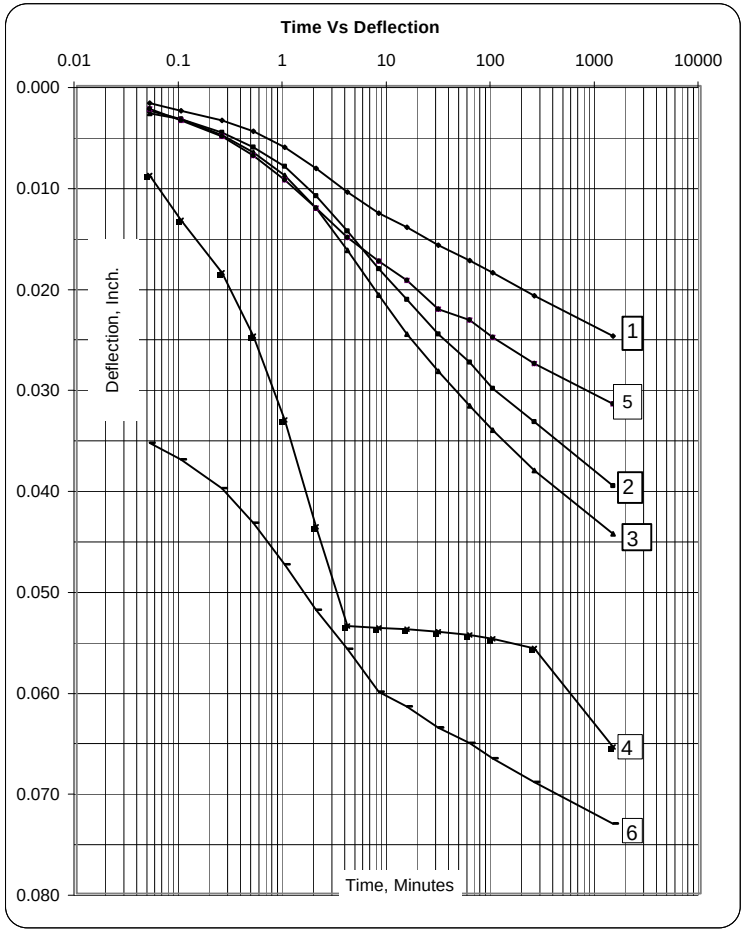


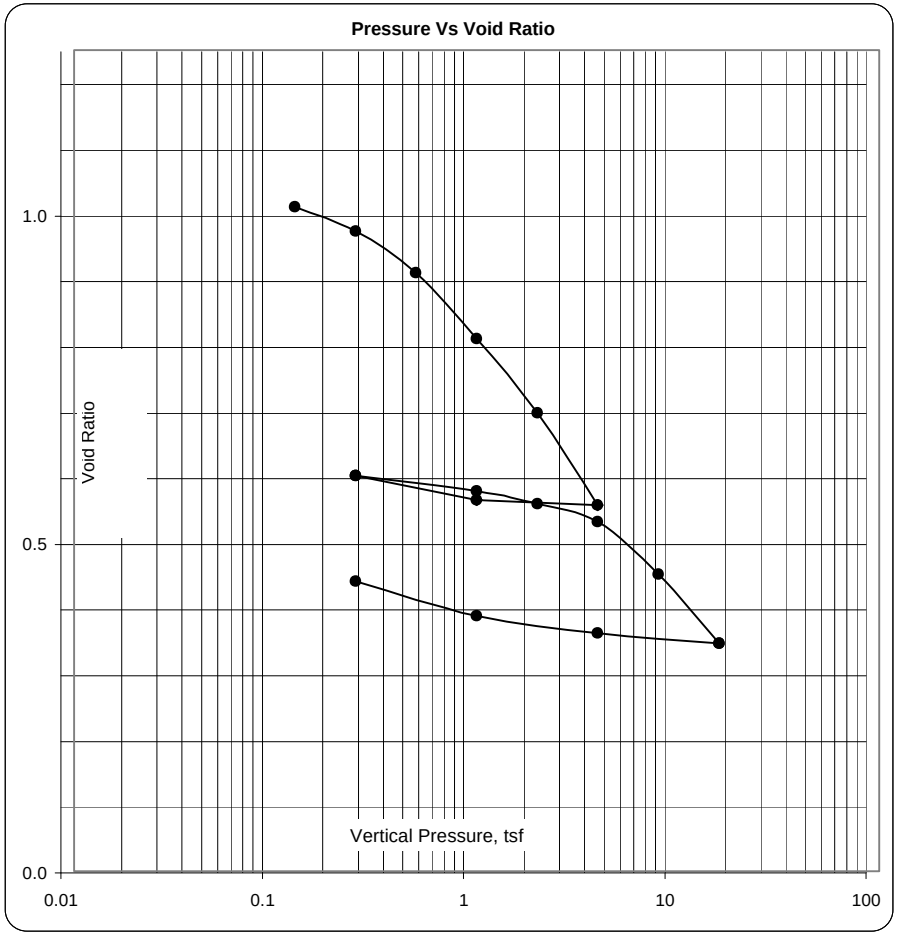




Client: Corp. of Engineers
Project: James Island
Source of Sample: JB-203 **Depth:** 3'-5' **Sample Number:** JB-203
Project No.: 04G677

GeoSystems Consultants, Inc.





One-Dimensional Consolidation Test (ASTMD-2435)

Curve	Pressure	C_v	T_{50}	$T9_0$	Description of Specimen:			Dark gray fat clay with sand			
No.	TSF	cm²/sec.	Min.	Min.	Nat.Water Content (%)	44.800	(From Trims.)	**Consolidation Properties**			
1	0.125	2.0E-03	1.8	7.8	Liquid Limit (%)	101.000	(From Trims.)	Compression Ratio (Cc)		Project No	2004G677
2	0.25	3.5E-03	1	4.4	Plastic Limit (%)	31.0	(From Trims.)	Recompression Ratio (Cr)		Project Name	James Island
3	0.5	2.8E-03	1.2	5.3	Plastic Index (%)	70.000	(From Trims.)	Swelling Ratio (Cs)			
4	1	2.7E-03	1.2	5.3	Specific Gravity	2.6	(From Trims.)	Preconsolidation Stress, Pc (tsf)		Boring No.	DH-204A
5	2	1.5E-03	2.1	9.0	**Test Specimen Properties**			Existing Overburden Stress, Po (tsf)		Sample No.	JB-204
6	4	2.8E-03	1	4.4	Diameter,inch.	2.490				Depth, ft.	15.0-17.0
7	8	4.6E-03	0.6	2.6	Initial And Final Thickness, inch.	0.850	0.622			Tested By	TV
8	16	4.3E-03	0.6	2.6	Initial And Final Water Content (%)	115.8	100.7			Reviewed By	KAN
					Initial And Final Void Ratio	1.115	0.810			Date	04-Nov-04
					Initial And Final Saturation (%)	45.1	85.2			File No.	2004677Con-204A
					Unit Dry Weight (pcf)	79.1					

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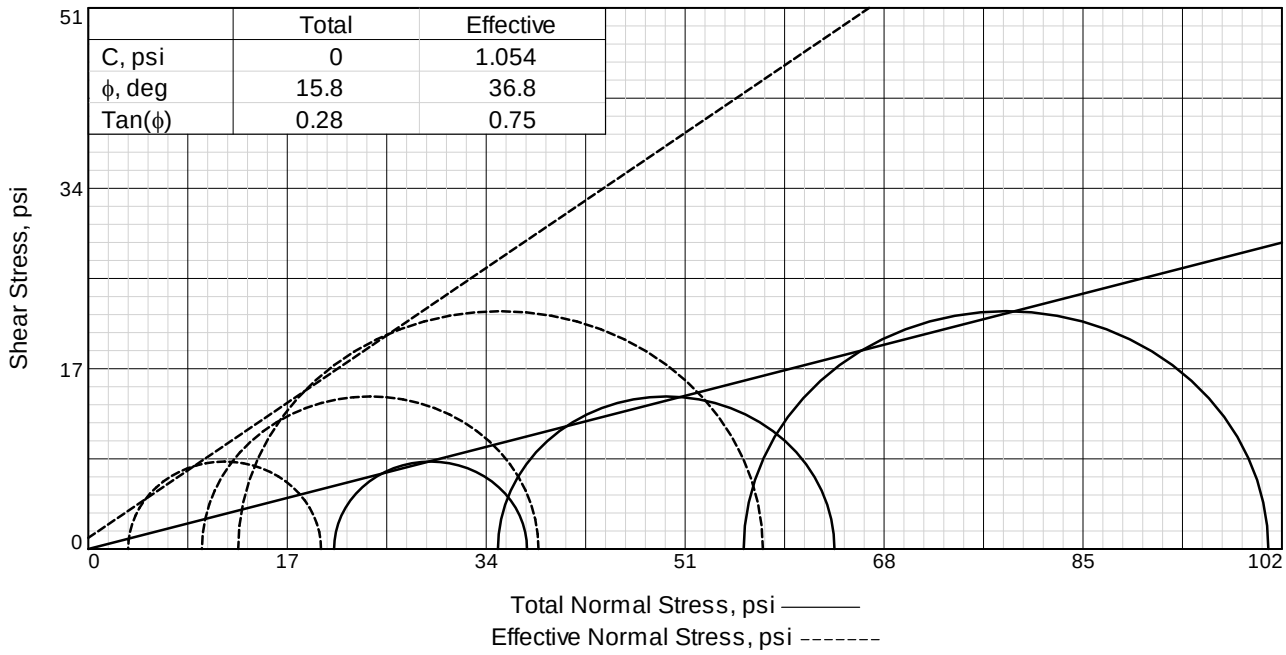
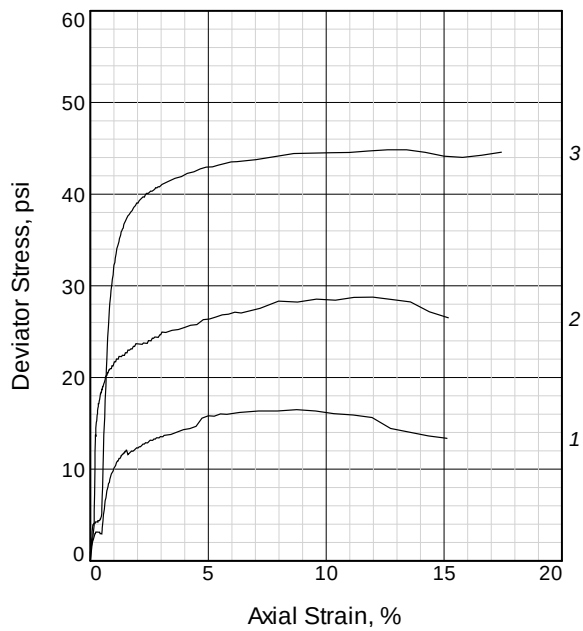




Sample No.		1	2	3
Initial	Water Content,	52.4	48.3	43.3
	Dry Density, pcf	68.5	71.4	76.1
	Saturation,	98.4	97.5	98.0
	Void Ratio	1.4055	1.3072	1.1661
	Diameter, in.	2.860	2.860	2.860
	Height, in.	5.600	5.600	5.600
At Test	Water Content,	52.4	48.3	43.3
	Dry Density, pcf	69.1	72.4	76.9
	Saturation,	100.0	100.0	100.0
	Void Ratio	1.3834	1.2749	1.1423
	Diameter, in.	2.847	2.840	2.844
	Height, in.	5.600	5.600	5.600
Strain rate, in./min.		0.003	0.003	0.003
Eff. Cell Pressure, psi		21.00	35.00	56.00
Fail. Stress, psi		16.49	28.76	44.84
Excess Pore Pr., psi		17.60	25.30	43.20
Strain, %		8.8	12.0	12.6
Ult. Stress, psi				
Excess Pore Pr., psi				
Strain, %				
$\bar{\sigma}_1$ Failure, psi		19.89	38.46	57.64
$\bar{\sigma}_3$ Failure, psi		3.40	9.70	12.80

Type of Test:
CU with Pore Pressures

Sample Type: Undisturbed

Description: Dark grey fat clay with sand

LL= 101 **PL=** 31 **PI=** 70

Specific Gravity= 2.64

Remarks: 677CIU01.TXT : 21PSI
677CIU02.TXT : 35PSI
677CIU03.TXT : 56PSI

Client: Corp. of Engineers

Project: James Island

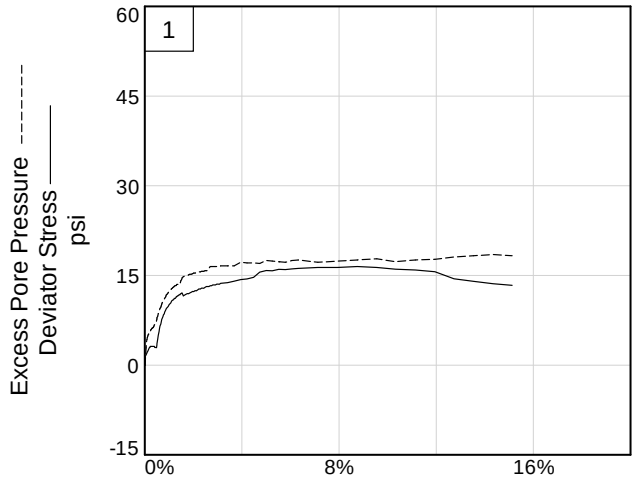
Source of Sample: James Island **Depth:** 15.0-17.0

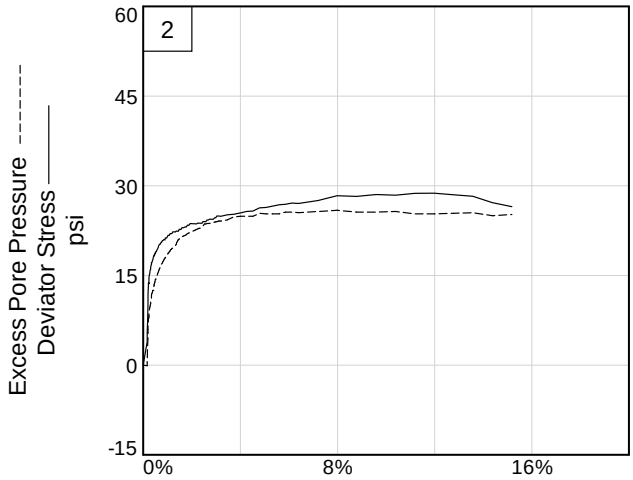
Sample Number: JB-204

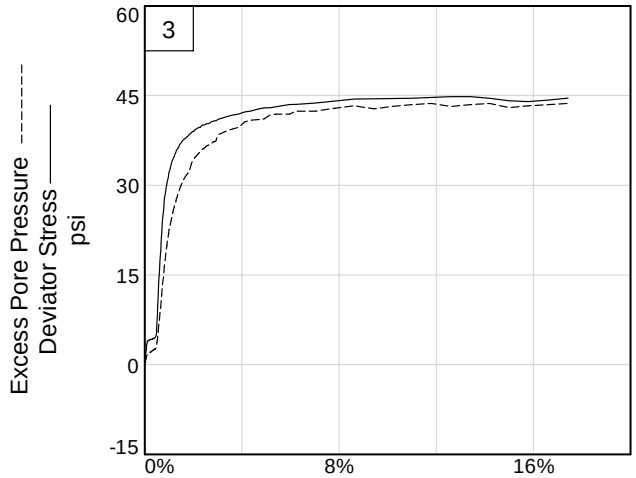
Proj. No.: 04G677 **Date:** 12 Nov. 2004

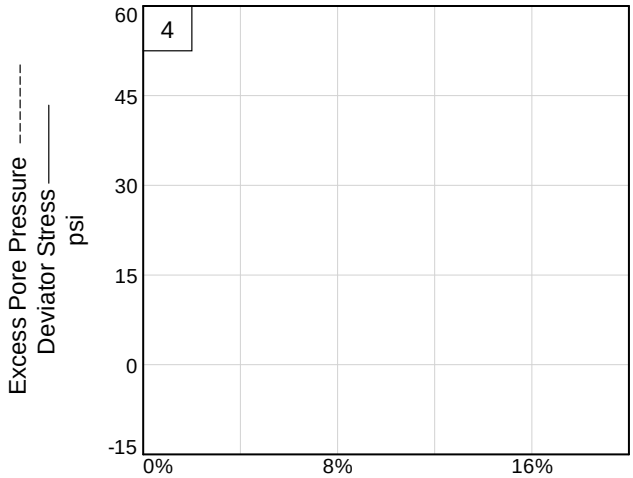
TRIAXIAL SHEAR TEST REPORT

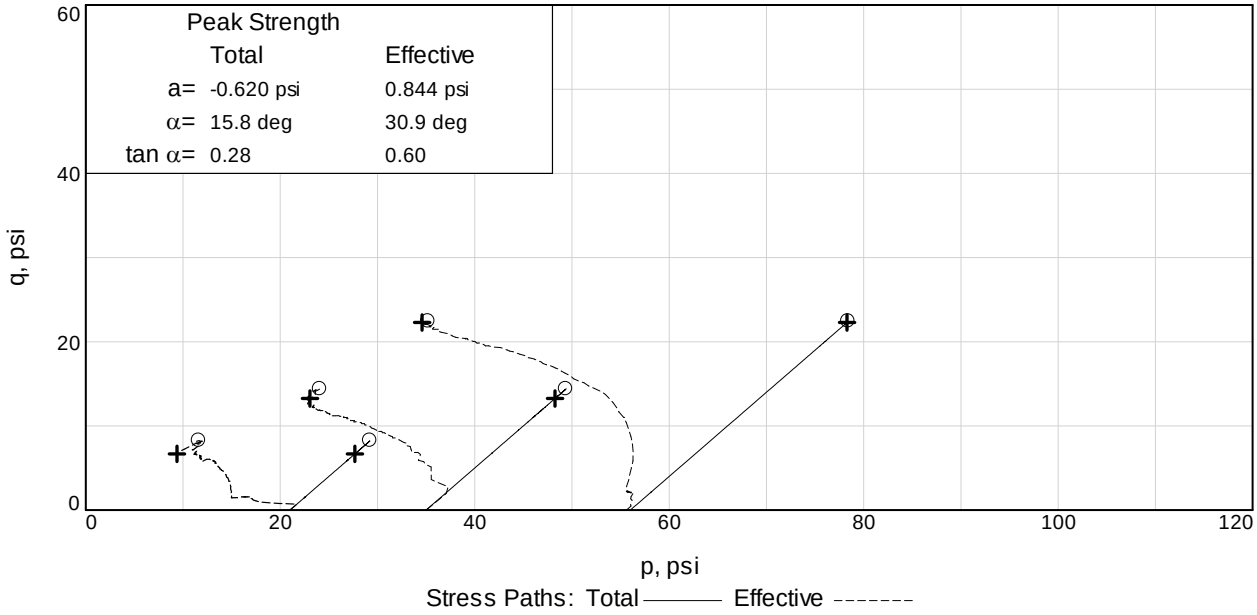
GeoSystems Consultants, Inc.











Client: Corp. of Engineers

Project: James Island

Source of Sample: James Island **Depth:** 15.0-17.0 **Sample Number:** JB-204

Project No.: 04G677

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