Project: Neches River Saltwater Barrier

SUMMARY OF LABORATORY TEST RESULTS

Contract No. DACW64-98-D-0002 Delivery Order No. 0010

Boring No. 99-10

S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	Mc (%)	Dry Unit Wt (pcf)	Wet Unit Wt (pcf)	L L (%)	PL (%)	Mechanical Analysis % Passing					Specific Gravity	q u (tsf)
											#4	#10	#40	#100	#200		
1	0 - 2	0.00		Silty Clay,w/decayed wood,Very soft, Gray	C L	32.6											
2	2 - 4	0.00		Silty Clay,w/decayed wood,Very soft, Gray	C L	39.2											
3	4 - 6	0.00		Silty Clay,w/decayed wood,Very soft, Gray	C L	39.4											
4	6 - 8	0.00		Silty Clay,w/decayed wood,Very soft, Gray	C L	45.5											
5	8 - 10	0.00		Silty Clay,w/decayed wood,Very soft, Gray	C L	27.8											
6	10-11.5		8	Sand,w/silt,Loose,Gray	SP-SM						100.0	100.0	50.2	8.4	5.4		
7	15-16.5		9	Sand,w/decayed wood & silt,Loose,Gray	SP-SM												
8	20-21.5		16	Sand,w/clay pockets,Medium dense,Gray	SP-SM						100.0	100.0	42.1	9.0	7.2		
9	25-26.5		21	Sand,w/silt,Medium dense,Gray	SP-SM												
10	26.5-28	2.50		Clay,w/fer stains & silt seams,slks,Very stiff,Olive gray	C H	22.3	103.7	1026.8	52.0	21.0							2.06
11	28-30	4.50+		Clay,w/fer stains & silt seams,slks,Hard, Olive gray	C H	19.9											
12	30-32	4.50+		Silty Clay,w/sandy silt seams,Hard,Olive gray	C L	20.7											
13	32-33.5		22	Silt,Medium dense,Yellowish brown&gray	M L	33.6					100.0	100.0	99.9	99.9	98.7		
14	37-38.5		28	Sandy Silt,Medium dense,Yellowish brown & gray	M L	32.0											
15	42-44	2.75		Clay,w/fer stains,slks,Very stiff,Reddish brown & gray	C H	31.5											
16	44-46	3.25		Clay,w/fer stains,slks,Very stiff,Reddish brown & gray	C H	31.1											
17	46-48	3.25		Clay,w/fer stains,slks,Very stiff,Reddish brown & gray	C H	33.0											
18	48-50	3.50		Clay,w/fer stains,slks,Very stiff,Reddish brown & gray	C H	32.1											
19	50-52	4.25		Clay,w/fer stains,slks,Very stiff,Reddish brown	C H	30.6											
20	52-54	3.50		Clay,w/fer stains,slks,Very stiff,Reddish brown	C H	32.2											

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classifcation, M c : Moisture Content
q u : Unconfined Compressive Strength, W O H : Weight of hammer, W O P : Weight of Pipe

Project: Neches River Saltwater Barrier

SUMMARY OF LABORATORY TEST RESULTS

Contract No. DACW64-98-D-0002 Delivery Order No. 0010

Boring No. 99-10

S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	Mc (%)	Dry Unit Wt (pcf)	Wet Unit Wt (pcf)	L L (%)	PL (%)	Mechanical Analysis % Passing					Specific Gravity	q u (tsf)
											#4	#10	#40	#100	#200		
21	54-56	3.50		Clay,w/fer stains,slks,Very stiff,Reddish brown	C H	30.6											
22	56-58	3.25		Clay,w/fer stains,slks,Very stiff,Reddish brown	C H	26.9											
23	58-60	1.25		Silty Clay,w/fer stains,Stiff,Reddish brown	C L	26.8											

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classifcation, M c : Moisture Content
q u : Unconfined Compressive Strength, W O H : Weight of hammer, W O P : Weight of Pipe

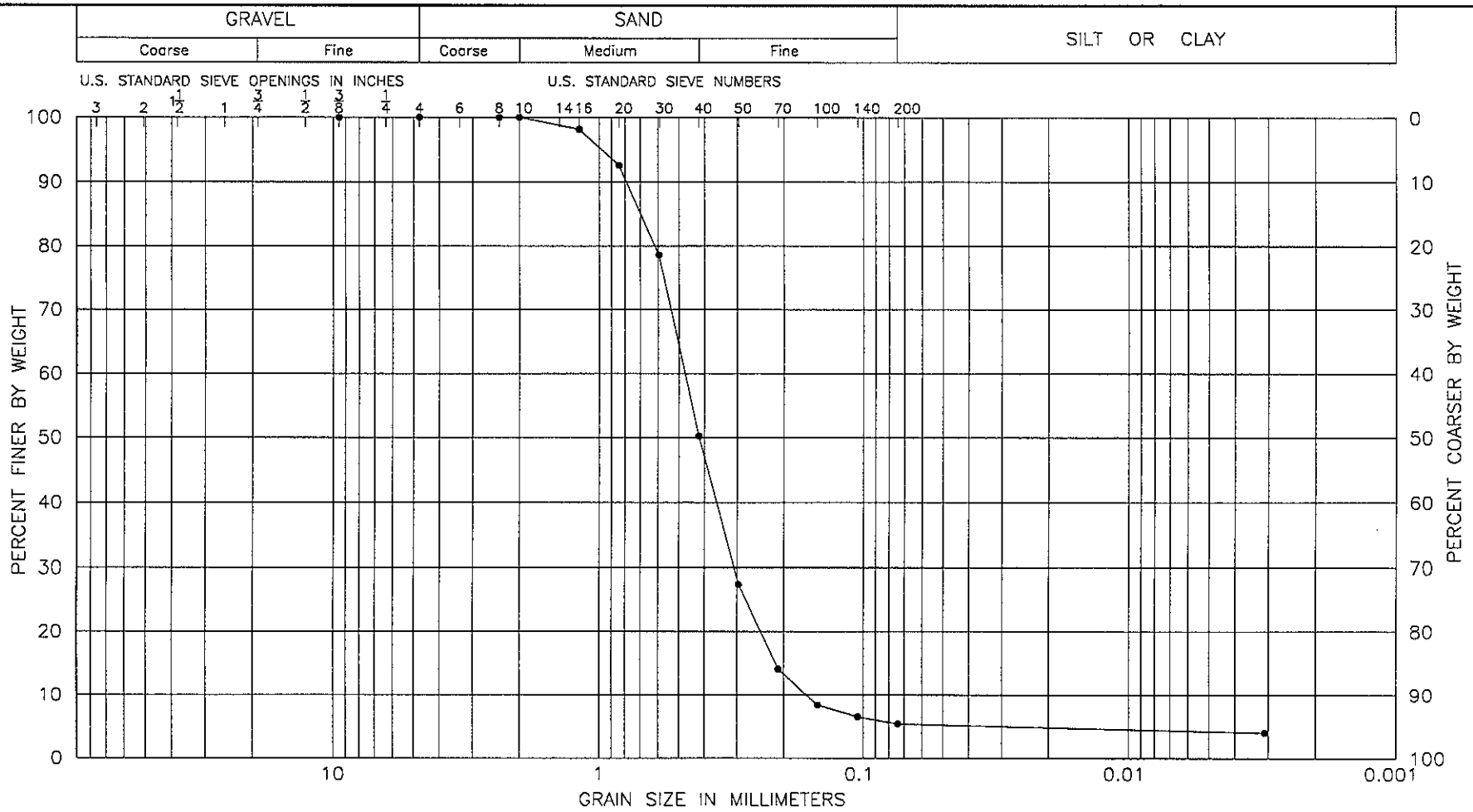
SUMMARY OF LABORATORY TEST RESULTS

Project:Neches river Saltwater barrier
Contract No. DACW64-98-D-0002

Boring No.	S#	Visual Classification	U S C	Mechanical Analysis % Passing																
				#2	#1 1/2	#1	#1/2	#3/4	#3/8	#4	#8	#10	#16	#20	#30	#40	#50	#70	#100	#140	#200
99-1	5	Sandy Silt,w/decayed wood & sand,very loose,gray	ML	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.8	99.6	98.2	87.4	68.3	50.3
99-1	8	Sand,w/decayed wood & silt,loose, gray	SP-SM	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	95.6	82.3	54.9	27.1	14.4	10.4	9.1	8.3	7.6
99-2	9	Sand,w/decayed wood,medium dense,gray	SP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	98.2	94.7	80.1	38.6	7.6	4.3	3.7	3.3
99-3	8	Sand,w/pea gravel,medium dense,gray	SP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.8	98.9	96.6	90.3	74.7	43.5	5.5	1.7	1.3	1.2
99-4	8	Silty Sand,w/roots,loose,gray	SM	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.3	97.4	89.7	69.7	46.7	33.0	27.8	23.7
99-5	7	Sand,medium dense,gray	SP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	97.3	88.3	63.6	28.4	6.7	4.5	4.0	3.7
99-5	8	Sand,w/pea gravel,medium dense,gray	SP	100.0	100.0	100.0	100.0	100.0	99.6	98.9	98.4	98.1	95.7	87.7	66.6	37.6	16.1	5.6	3.7	3.3	3.1
99-6	11	Sand,w/decayed wood & pea gravel,medium dense gray	SP	100.0	100.0	100.0	100.0	100.0	100.0	99.5	98.0	97.1	91.3	83.2	69.8	53.8	31.6	10.3	6.4	5.1	3.9
99-7	5	Sand,w/silt,loose,gray	SP-SM	100.0	100.0	100.0	100.0	100.0	100.0	99.8	98.6	98.1	95.4	87.4	69.6	46.5	28.1	13.8	7.8	6.3	5.7
99-7	7	Sand,w/silt & pea gravel, medium dense, gray	SP-SM	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.7	92.3	73.1	44.9	23.0	9.9	6.3	5.6	5.2
99-8	5	Sand,w/pea gravel, loose, gray	SP	100.0	100.0	100.0	100.0	100.0	100.0	99.7	98.8	98.1	93.0	79.7	53.1	28.1	18.1	10.6	6.3	5.4	4.9
99-8	7	Sand, w/decayed wood & gravel,medium dense, gray	SP-SM	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	98.5	91.2	77.4	54.4	32.2	17.8	10.2	8.1	7.1	6.5
99-8	15	Clayey Silt,w/sand,medium dense,yellowish gray	ML	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.9	99.8	99.5	93.3	82.2	64.6
99-10	6	Sand,loose,gray	SP-SM	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.2	92.6	78.6	50.2	27.4	14.1	8.4	6.5	5.4
99-10	8	Sand,w/silt,clay pockets,medium dense,gray	SP-SM	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.1	91.3	71.5	42.1	20.2	10.9	9.0	8.0	7.2
99-10	13	Silt,medium dense,yelllowish brown & gray	ML	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.9	99.9	99.9	99.9	99.8	98.7
99-11	6	Sity Sand,medium dense,gray	SM	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.3	96.4	76.6	32.5	18.7	14.3

S#: Sample Number, U S C: Unified Soil Classification

Job No. 1140114810



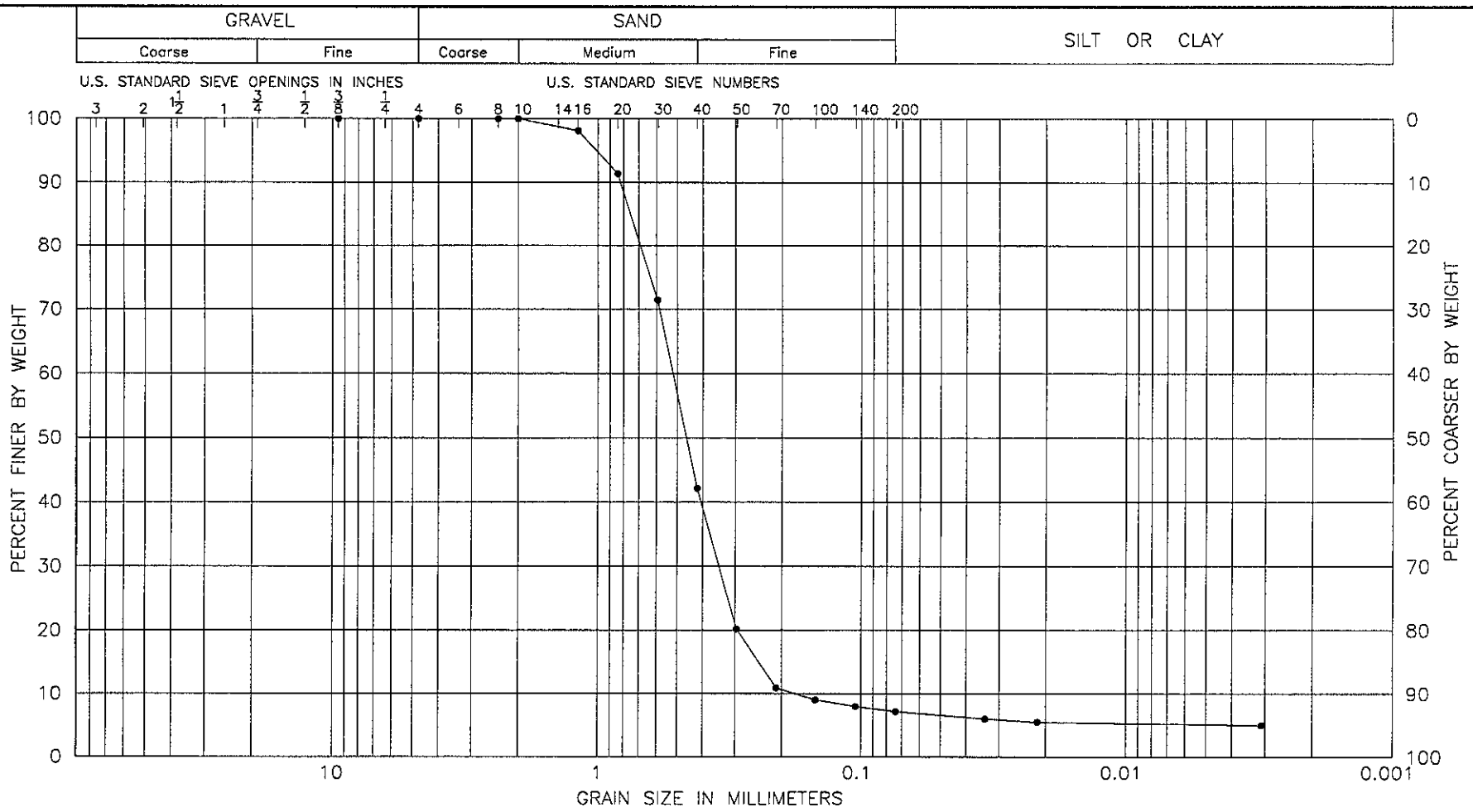
LEGEND	BORING NO.	SAMPLE NO.	DEPTH FT.	SAMPLE DESCRIPTION
●●●●●	99–10	6	10–11.5	Sand, loose, gray

GRAIN SIZE DISTRIBUTION CURVES

FIGURE

Geotest Engineering, Inc.

Job No. 1140114810



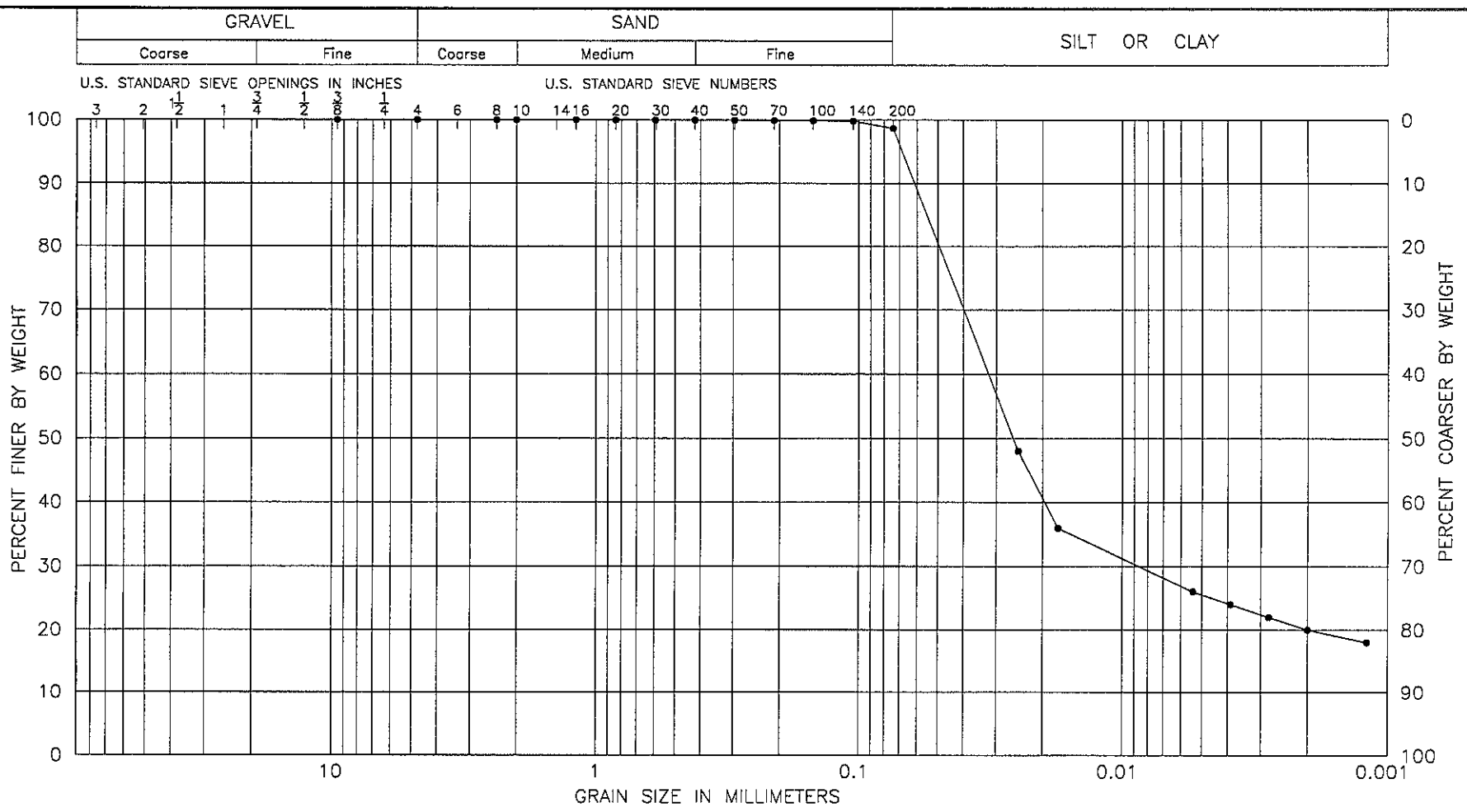
LEGEND	BORING NO.	SAMPLE NO.	DEPTH FT.	SAMPLE DESCRIPTION
●●●●●	99–10	8	20–21.5	Sand, w/silt, clay pockets, medium dense, gray

FIGURE

GRAIN SIZE DISTRIBUTION CURVES

Geotest Engineering, Inc.

Job No. 1140114810



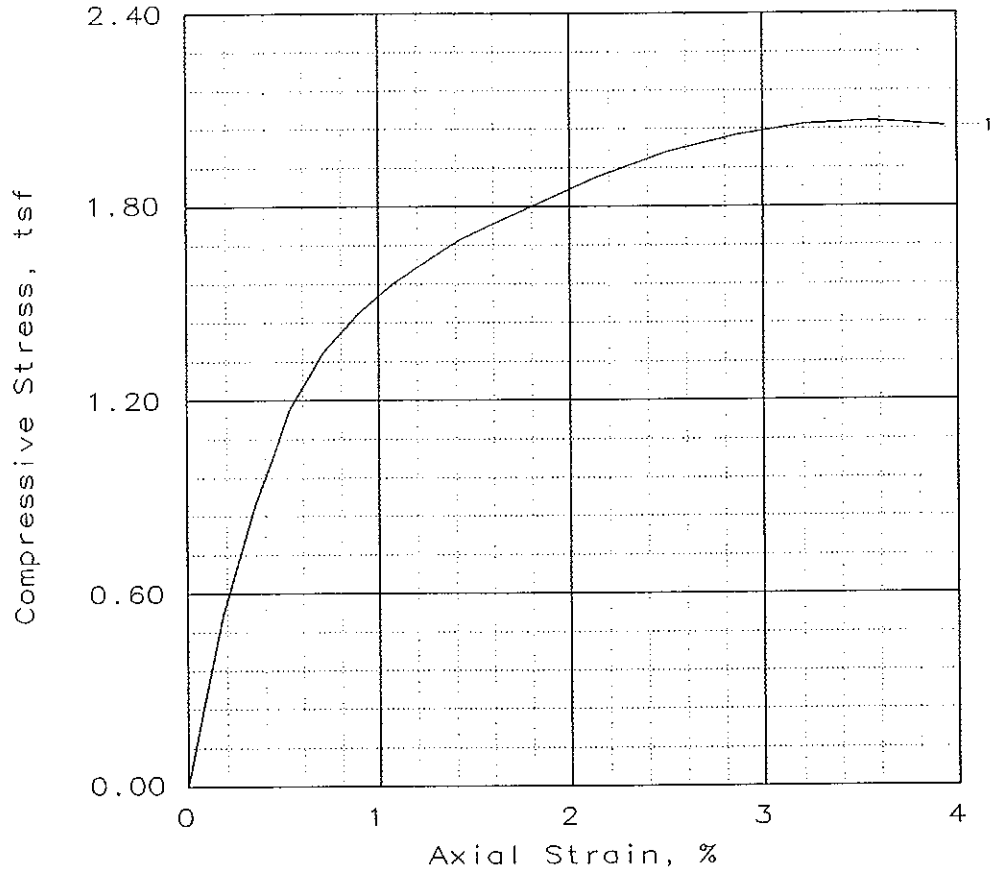
LEGEND	BORING NO.	SAMPLE NO.	DEPTH FT.	SAMPLE DESCRIPTION
●●●●●	99–10	13	32–33.5	Silt, medium dense, yellowish brown & gray

FIGURE

GRAIN SIZE DISTRIBUTION CURVES

Geotest Engineering, Inc.

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	2.06			
Undrained shear strength, tsf	1.03			
Failure strain, %	3.6			
Strain rate, %/min	1.07			
Water content, %	22.3			
Wet density, pcf	126.8			
Dry density, pcf	103.7			
Saturation, %	97.4			
Void ratio	0.6133			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Clay,w/fer stains& silt sms,slks,V Stiff,Ol Gy

LL = 52	PL = 21	PI = 31	ASS. GS= 2.68	Type: Undisturbed

Project No.: 1140114810
Date: 6-08-99
Remarks:
Assumed Specific gravity

Fig. No.: ——

Client: U.S Army Corps of Engineers
Galveston office District
Project: Neches River Saltwater Barrier

Location: Boring No. 99-10
Sample No. 10 Depth: 26.5-28 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.