Project: Neches River Saltwater Barrier

SUMMARY OF LABORATORY TEST RESULTS

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

Boring No. 99-16

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		Clay,w/organic material & decayed wood, Very soft,Gray	C H	98.9											
2	2 - 4	0.00		Clay,w/organic material & decayed wood, Very soft,Gray	C H	95.5											
3	4 - 6	0.00		Clay,w/organic material & decayed wood, Very soft,Gray	C H	61.2											
4	6 - 8	0.00		Clay,w/organic material & decayed wood, Very soft,Gray	C H	36.7											
5	8 - 10			Clayey Sand,w/wood,Loose,Gray	S C												
6	10-11.5		9	Sand,w/silt,Loose,Gray	SP-SM						100.0	100.0	95.1	20.1	8.1		
7	15-16.5		27	Silty Sand,Medium dense,Gray	S M												
8	20-21.5		34	Sand,Dense,Gray	S P						100.0	99.9	86.5	11.8	1.6		
9	22-24	3.25		Clay,w/fer stains&sand seams,Very stiff, Reddish brown & gray	C H	21.7											
10	24-26	3.75		Silty Clay,w/fer stains,Very stiff,Reddish brown & gray	C L	20.3	104.5	125.7	38.0	19.0							2.50
11	26-28	3.50		Clay,w/fer stains,slks,Very stiff,Gray & yellowish brown	C H	21.9											
12	28-30	3.00		Clay,w/fer stains,slks,Very stiff,Gray & yellowish brown	C H	25.6											
13	30-32	3.25		Clay,w/calc nod & fer stains,slks,Very stiff,Gray & yellowish brown	C H	25.4	97.2	121.9	69.0	27.0							1.85
14	32-34	2.75		Clay,w/calc nod & fer stains,slks,Very stiff,Reddish brown & gray	C H	24.4											
15	34-36	3.00		Clay,w/calc nod & fer stains,slks,Very stiff,Reddish brown & gray	C H	26.9											
16	36-38	2.50		Silty Clay,w/sand seams,Very stiff,Gray& brown	C L	17.0											
17	38-40	2.50		Silty Clay,w/fer stains & sand seams,Very stiff,Gray & brown	C L	17.4											
18	40-42	2.25		Silty Clay,w/fer stains & sand seams,Very stiff,Gray & brown	C L	26.1											
19	42-44	2.00		Silty Clay,w/fer stains & sand seams,Very stiff,Gray & brown	C L	25.4											
20	44-46	2.50		Clay,w/fer stains,slks,Very stiff,Red&gray	C H	37.8	81.0	111.3	93.0	32.0							2.29

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

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											#4	#10	#40	#100	#200		
21	46-48	2.50		Clay,w/fer stains,slks,Very stiff,Red&gray	C H	34.2											
22	48-50	2.75		Clay,w/fer stains & silt seams,slks,Very stiff,Red & gray	C H	33.2											
23	50-52	2.75		Clay,w/fer stains,slks,Very stiff,Red&gray	C H	33.2											
24	52-54	3.00		Clay,w/fer stains,slks,Very stiff,Red&gray	C H	32.7											
25	54-56	2.75		Clay,w/fer stains,slks,Very stiff,Red&gray	C H	24.4											
26	56-58	3.00		Clay,w/fer stains,slks,Very stiff,Red&gray	C H	29.6											
27	58-60	2.75		Clay,w/fer stains,slks,Very stiff,Reddish brown	C H	25.6											

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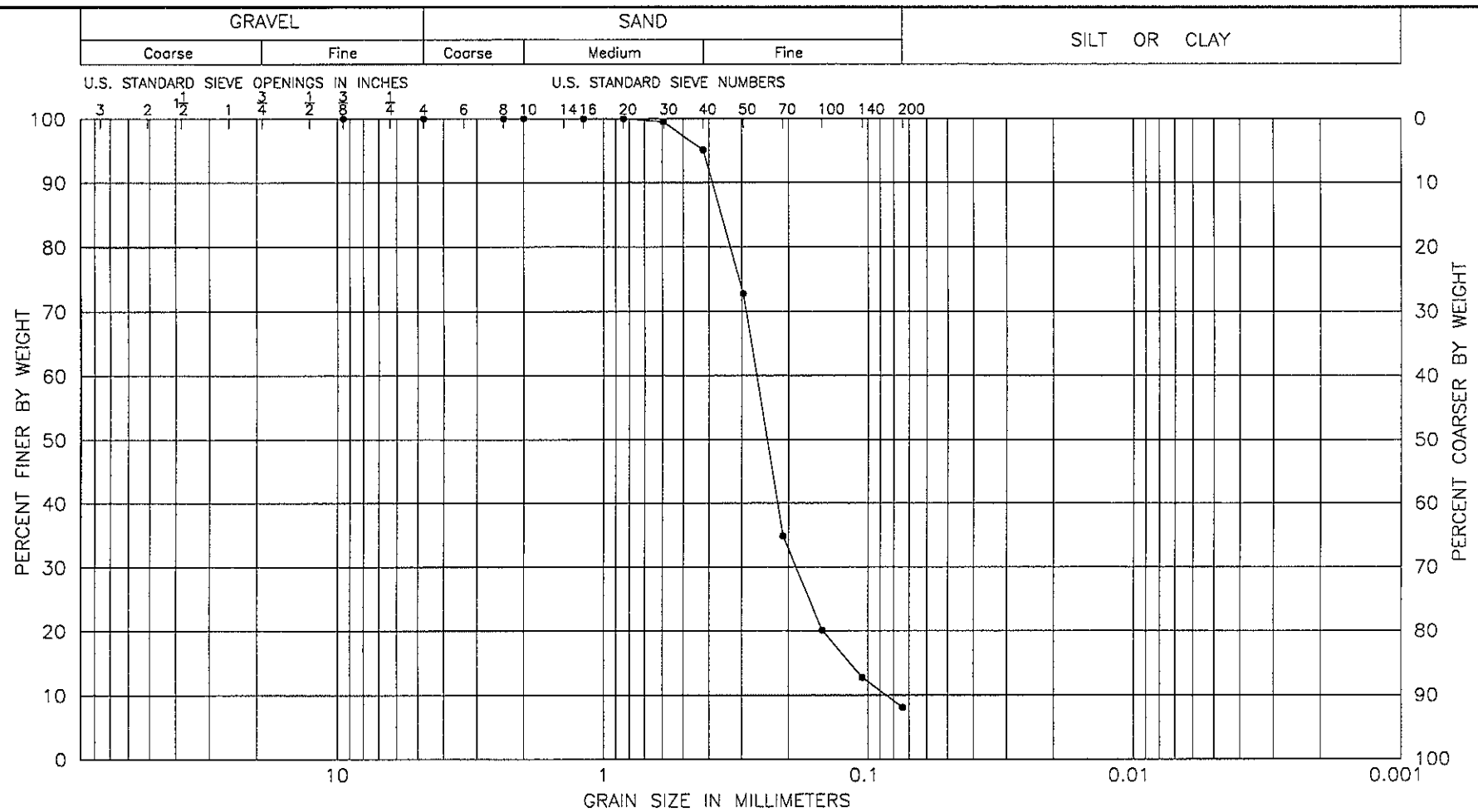
Job No. 1140114810



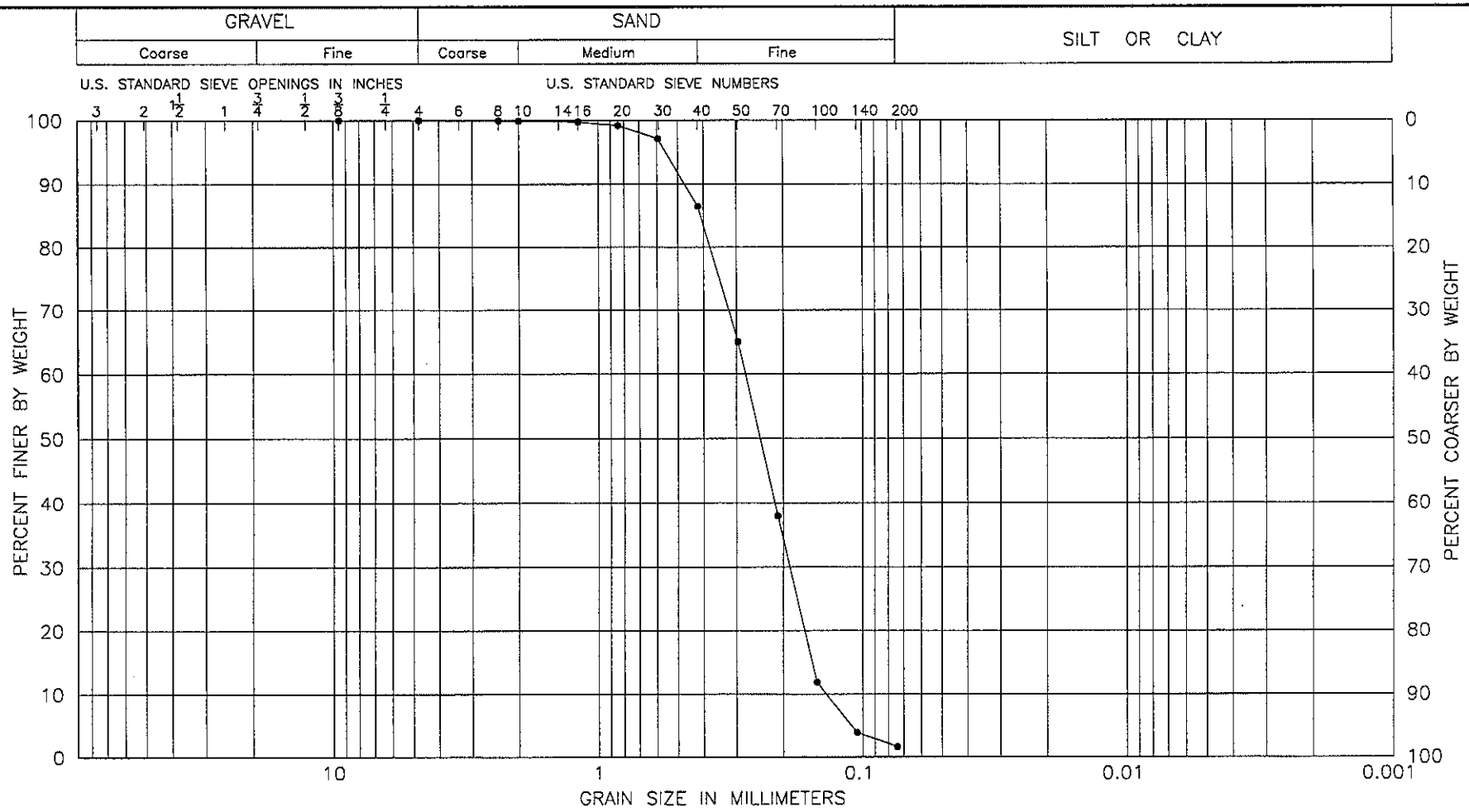
LEGEND	BORING NO.	SAMPLE NO.	DEPTH FT.	SAMPLE DESCRIPTION
●●●●●	99–16	6	10–11.5	Sand, w/silt, loose, gray

FIGURE

GRAIN SIZE DISTRIBUTION CURVES

Geotest Engineering, Inc.

Job No. 1140114810



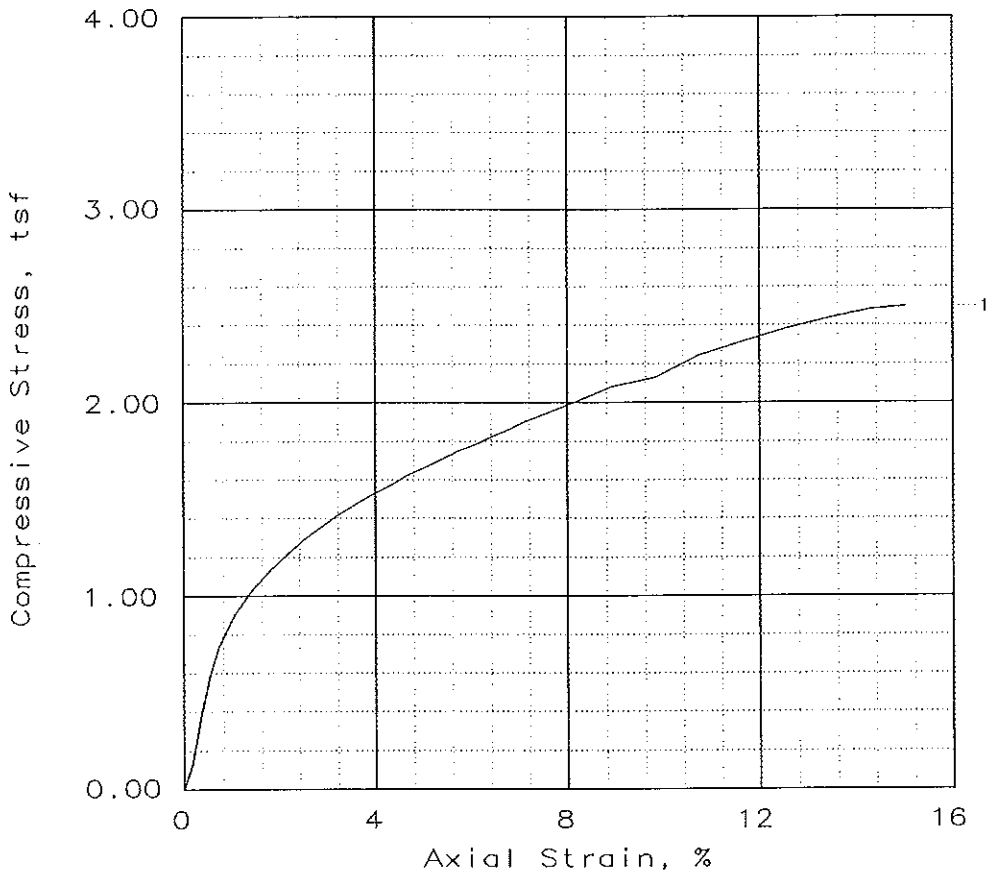
LEGEND	BORING NO.	SAMPLE NO.	DEPTH FT.	SAMPLE DESCRIPTION
●●●●●	99–16	8	20–21.5	Sand, dense, gray

FIGURE

GRAIN SIZE DISTRIBUTION CURVES

Geotest Engineering, Inc.

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	2.50			
Undrained shear strength, tsf	1.25			
Failure strain, %	15.0			
Strain rate, %/min	1.07			
Water content, %	20.3			
Wet density, pcf	125.7			
Dry density, pcf	104.5			
Saturation, %	90.5			
Void ratio	0.6006			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Silty Clay,w/fer stains,V s,Rdish Bn & gray

LL = 38	PL = 19	PI = 19	ASS. GS= 2.68	Type: Undisturbed

Project No.: 1140114810
Date: 6-07-99
Remarks:
Assumed Specific gravity

Fig. No.: ——

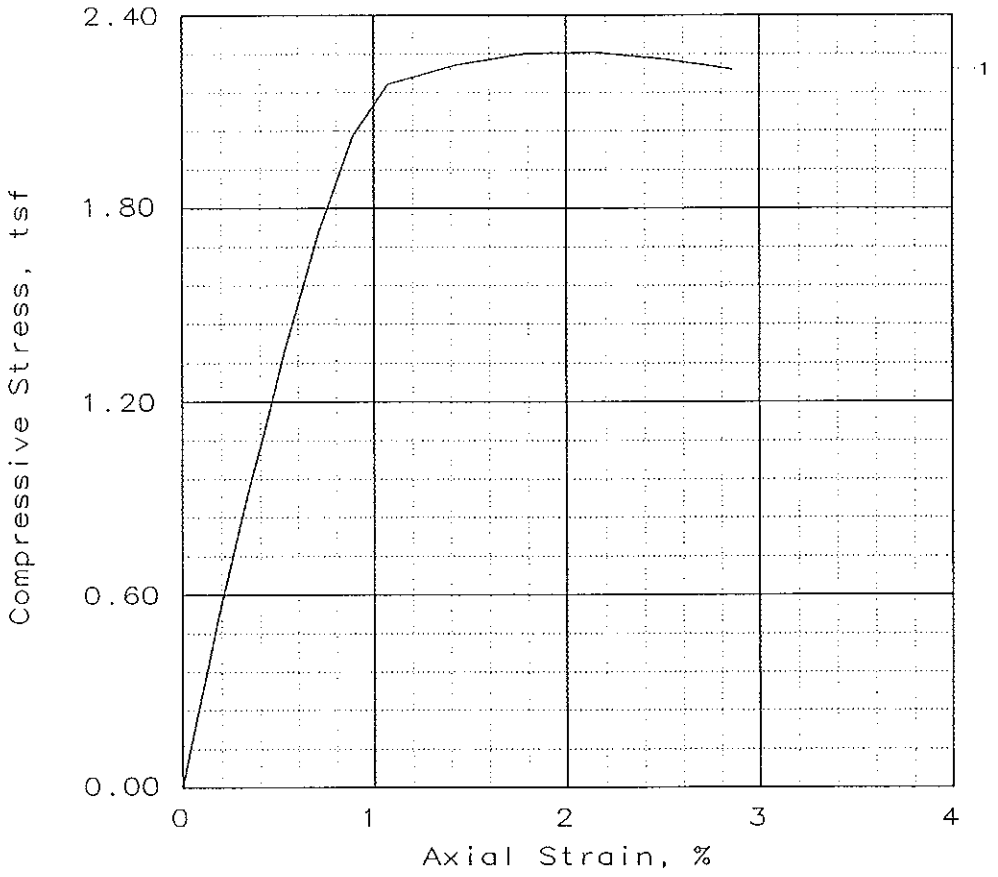
Client: U.S Army Corps of Engineers
Galveston office District
Project: Neches River Saltwater Barrier

Location: Boring No. 99-16
Sample No. 10 Depth: 24-26 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	2.29			
Undrained shear strength, tsf	1.14			
Failure strain, %	2.1			
Strain rate, %/min	1.07			
Water content, %	37.5			
Wet density, pcf	111.3			
Dry density, pcf	81.0			
Saturation, %	94.2			
Void ratio	1.0660			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: CI,w/fer stains, slks,Very stiff,Red & gray

LL = 93	PL = 32	PI = 61	ASS. GS= 2.68	Type: Undisturbed

Project No.: 1140114810
Date: 6-07-99
Remarks:
Assumed Specific gravity

Fig. No.: ———

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

Location: Boring No. 99-16
Sample No. 20 Depth: 44-46 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.