

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET	SAMPLE NO.	SAMPLE NO.	PEN./TORVANE SFT.-BLOW COUNT	BORING NO. <u>99-6</u> DATE: BEGIN <u>4-26-99</u> PAGE <u>1/2</u>				
				JOB NO. <u>1140114808</u> COMPLETE <u>4-26-99</u> Thin Walled Tube				
				PROJECT <u>Neches River Salt Water Barrier</u> ☒ 3" ☐ 6"				
				LOCATION <u>N=876015.83, E=3543211.88</u>				
				ELEVATION OF HOLE <u>-0.2</u>				
				MANUFACTURER'S DESIGNATION OF DRILL RIG <u>DNR75, w/ Barge</u>				
				GROUNDWATER: DEPTH <u>*</u> ft., ELEV. <u> </u> ft., at end of Drilling				
				WEATHER <u>cloudy</u>				
				DRILLER <u>Dempsey Cecan</u> LOGGER <u>Tray Mastamand</u>				
				COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0	J 1	0.00		Gray	Clay	V. soft		- 3' of water - w/ decayed wood - sample fell out of Tube 0-2'
	J 2	0.00		Gray	Clay	V. soft		- w/ decayed wood
5	J 3	0.00		Gray	Clay	V. soft		- w/ decayed wood - sample fell out of Tube 4-11'
	J 4	0.00		Gray	Clay	V. soft		- w/ decayed wood - Set 10' of casing total casing below mudline 5.5'
	J 5	0.00		Gray	Clay	V. soft		- w/ decayed wood
10	J 6	0.00		Gray	Clay	V. soft		- w/ decayed wood
	J 7	0.00		Gray	Clay	V. soft		- w/ decayed wood
15	J 8	0.00		Gray	Clay	V. soft		- w/ decayed wood
	J 9	0.00		Gray	Clay	V. soft		- w/ decayed wood - sample fell out of Tube 16-18'
	J 10			Gray	Sand	M. Dense	Silt	- w/ decayed wood
20	X 11	5.78		Gray	Sand	M. Dense	Silt	- w/ pea gravel & decayed wood
	12	3.20		olive gray	Clay	V. stiff	Silt	- w/ silt PKTS
	13	3.25		olive gray	Clay	V. stiff	Silt	- w/ silt PKTS
25	14	3.25		olive gray	Clay	V. stiff	Silt	- w/ silt PKTS
	15	2.50		Yellowish Brown & Gray	Clay	V. stiff		- w/ Fernod, Fer stains, SLKS
	16	3.00		Yellowish Brown & Gray	Clay	V. stiff		- w/ calc & Fer nod Fer stains, SLKS
30	17	3.25		Yellowish Brown & Gray	Clay	V. stiff		- w/ calc & Fer nod Fer stains, SLKS
	18	3.50		Yellowish Brown & Gray	Clay	V. stiff		- w/ Fer nod & Fer stains, SLKS
35	19	4.00		Yellowish Brown	Clay	V. stiff	Silt	- w/ Fer stains

Mudline

(10)

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DEPTH, FEET	SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>99-6</u> DATE: BEGIN <u>4-26-99</u> PAGE <u>2 / 2</u>				
				JOB NO. <u>1140114808</u> COMPLETE <u>4-26-99</u> Thin Walled Tube				
PROJECT <u>Nechus River Gattewater Barrier</u>				LOCATION <u>N=876015.83, E=3543211.88</u>				
ELEVATION OF HOLE				MANUFACTURER'S DESIGNATION OF DRILL RIG <u>DNR75, w/Barge</u>				
GROUNDWATER: DEPTH _____ ft., ELEV. _____ ft., at end of Drilling				WEATHER <u>Cloudy</u>				
DRILLER <u>Dempsey Geomex</u>				LOGGER <u>Frey Mostamand</u>				
				COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
-35								
	20	3.75		Reddish Brown Gray	Clay	V. stiff	silt	
	21	3.75		Reddish Brown Gray	Clay	V. stiff	silt	
-40	22	2.00		Reddish Brown Gray	Clay	V. stiff	silt	
	23	3.25		Reddish Brown Gray	Clay	V. stiff	silt	
-45	24	2.50		Yellowish Brown Gray	Clay	V. stiff		-w/ clay stone 44'-44.5'
	25	3.00		Reddish Brown Gray	Clay	V. stiff		-w/ Fer stains, SLKS
	26	3.00		Reddish Brown Gray	Clay	V. stiff		-w/ clay stone, Fer stains, SLKS
-50	27	3.25		Reddish Brown Gray	Clay	V. stiff		-w/ Fer stains, SLKS
	28	2.00		Reddish Brown Gray	Clay	V. stiff		-w/ calc nod & Fer stains, SLKS
-55	29	3.25		Reddish Brown Gray	Clay	V. stiff		-w/ Fer stains & silt sm, SLKS
	30	3.25		Reddish Brown Gray	Clay	V. stiff		-w/ Fer stains, SLKS
	31	3.25		Reddish Brown Gray	Clay	V. stiff		-w/ Fer stains, SLKS
-60								Ji Jar Sample
-65								
-70								

SUMMARY OF LABORATORY TEST RESULTS

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

Boring No. 99-6

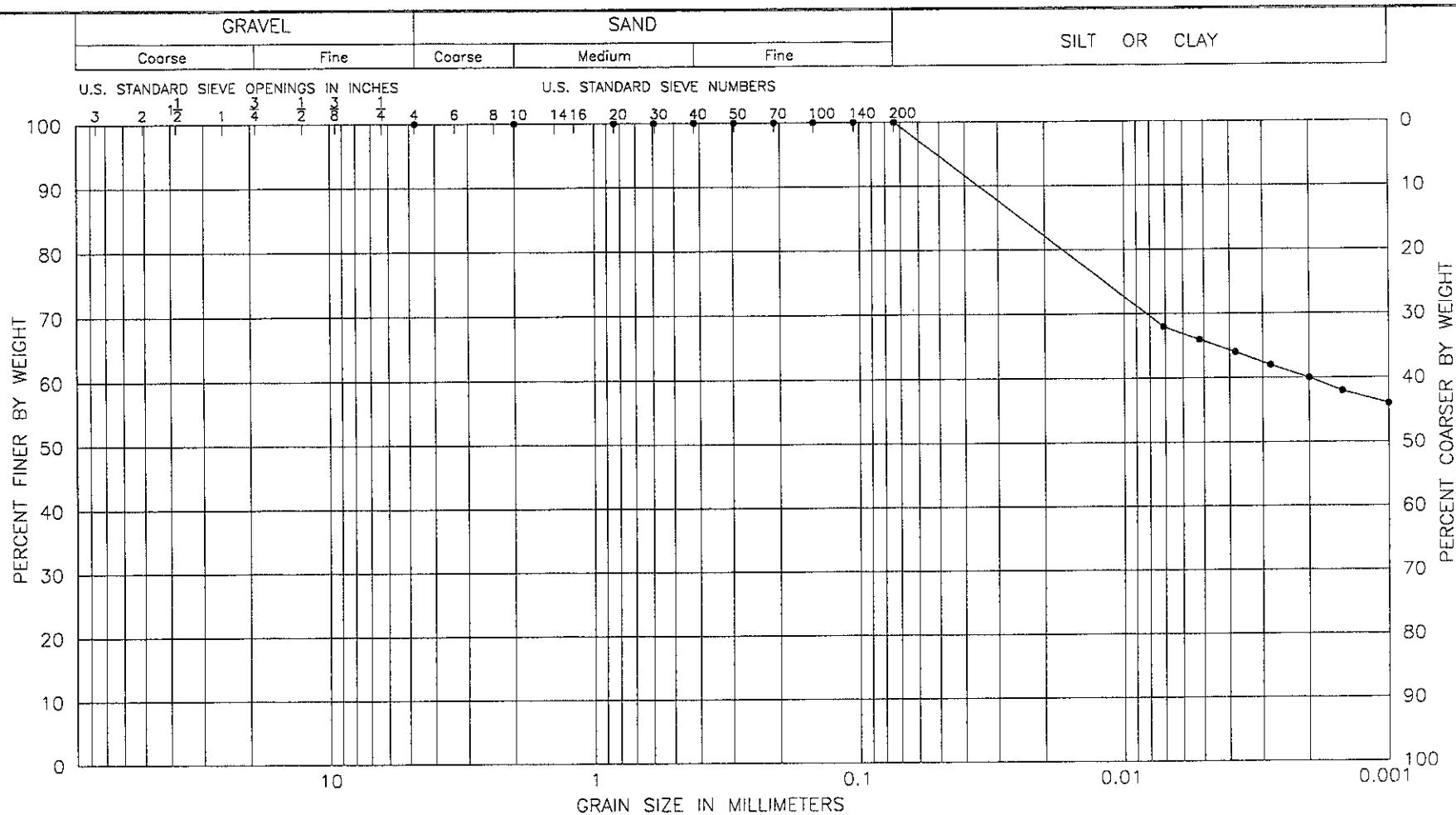
S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	Mc (%)	Dry Unit Wt (pcf)	Wet Unit Wt (pcf)	L L (%)	P L (%)	Mechanical Analysis % Passing					Specific Gravity	q u (tsf)
											#4	#10	#40	#100	#200		
1	0 - 2	0.00		Clay,w/decayed wood,Very soft,Gray	C H	133.9											
2	2 - 4	0.00		Clay,w/decayed wood,Very soft,Gray	C H	109.8											
3	4 - 6	0.00		Clay,w/decayed wood,Very soft,Gray	C H	102.5											
4	6 - 8	0.00		Clay,w/decayed wood,Very soft,Gray	C H	93.8			102.0	44.0	100.0	100.0	100.0	100.0	100.0		
5	8 - 10	0.00		Clay,w/decayed wood,Very soft,Gray	C H	86.9											
6	10 - 12	0.00		Clay,w/decayed wood,Very soft,Gray	C H	88.2											
7	12 - 14	0.00		Clay,w/decayed wood,Very soft,Gray	C H	80.1											
8	14 - 16	0.00		Clay,w/decayed wood,Very soft,Gray	C H	78.9	51.9	92.9	99.0	42.0	100.0	100.0	100.0	100.0	100.0		
9	16 - 18	0.00		Clay,w/decayed wood,Very soft,Gray	C H	74.5											
10	18 - 20			Silty Sand,w/decayed wood,Medium dense,Gray	S M	45.2											
11	20-21.5		15	Sand,w/decayed wood & pea gravel, Medium dense,Gray	S P						99.5	97.1	53.8	6.4	3.9		
12	20.5-22	3.00		Silty Clay,w/silt pockets,Very stiff,Olive gray	C L	19.5											
13	22-24	3.25		Silty Clay,w/silt pockets,Very stiff,Olive gray	C L	21.1											
14	24-26	3.25		Silty Clay,w/silt pockets,Very stiff,Olive gray	C L	22.7	101.4	124.5	47.0	21.0							2.04
15	26-28	2.50		Clay,w/fer nod & fer Stains,slks,Very stiff, Yellowish brown & gray	C H	21.2											
16	28-30	3.00		Clay,w/calc & fer nod & fer stains,slks, Very stiff, Yellowish brown & gray	C H	23.8											
17	30-32	3.25		Clay,w/calc & fer nod & fer stains,slks, Very stiff, Yellowish brown & gray	C H	23.4											
18	32-34	3.50		Clay,w/fer nod & fer Stains,slks,Very stiff, Brown & gray	C H	27.2											
19	34-36	4.00		Silty Clay,w/fer stains,Very stiff, Yellowish Brown	C L	19.7											
20	36-38	3.75		Silty Clay,Very stiff,Reddish brown & gray	C L	17.7											

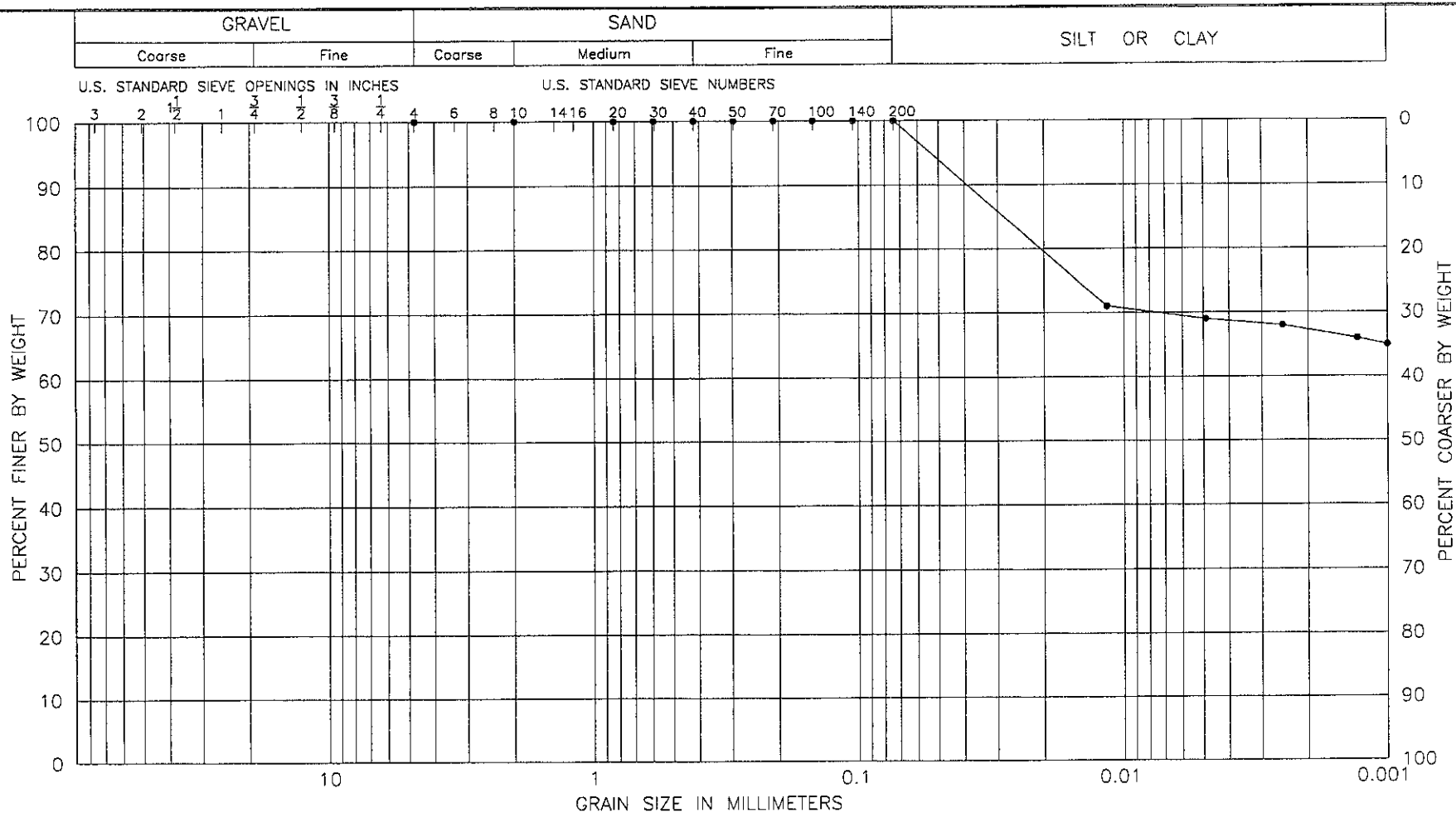
S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classification, M c : Moisture Content
q u : Unconfined Compressive Strength, W O H : Weight of hammer, W O P : Weight of Pipe

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 99-6

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





LEGEND	BORING NO.	SAMPLE NO.	DEPTH FT.	SAMPLE DESCRIPTION
•••••	99-6	8	14-16	Clay,w/decayed wood,gray

GRAIN SIZE DISTRIBUTION CURVES

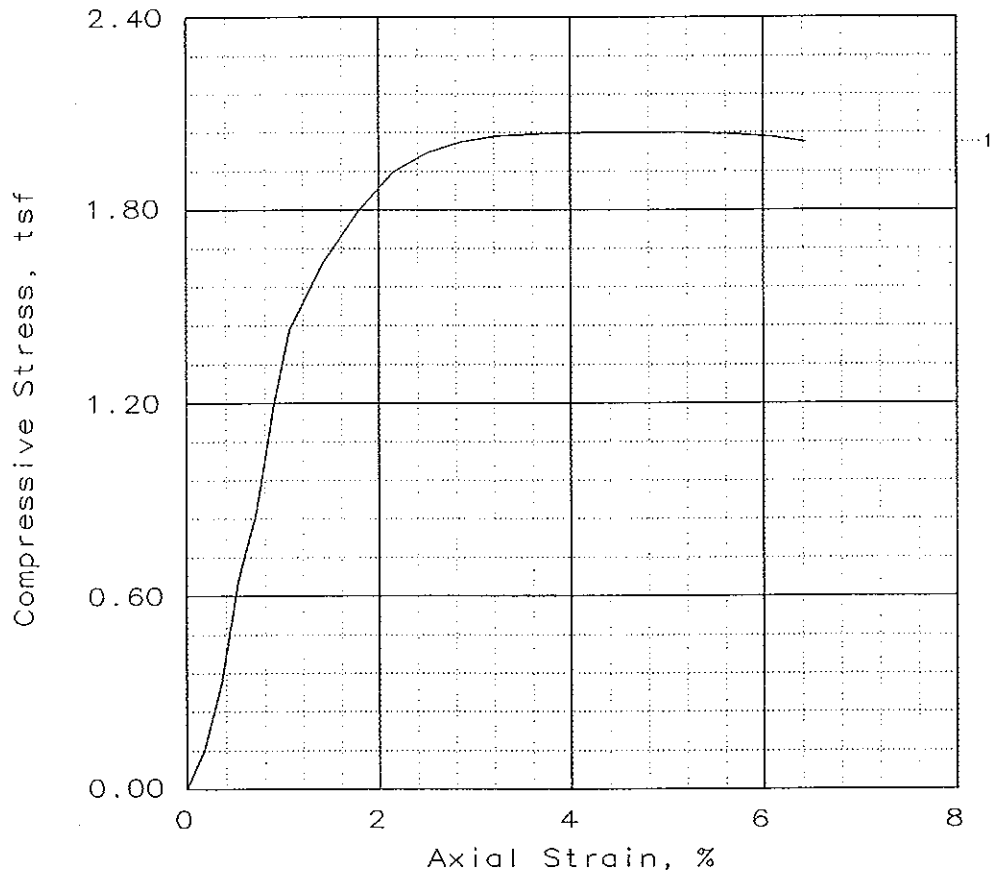
SUMMARY OF LABORATORY TEST RESULTS

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	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	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

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	2.04			
Undrained shear strength, tsf	1.02			
Failure strain, %	5.0			
Strain rate, %/min	1.07			
Water content, %	22.7			
Wet density, pcf	124.5			
Dry density, pcf	101.4			
Saturation, %	93.8			
Void ratio	0.6496			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Silty Clay,w/silt poc,Very stiff,Olive gray

LL = 47 PL = 21 PI = 26 ASS. GS= 2.68 Type: Undisturbed

Project No.: 1140114810

Date: 6-10-99

Remarks:

Assumed Specific gravity

Client: U.S Army Corps of Engineers

Galveston office District

Project: Neches River Saltwater Barrier

Location: Boring No. 99-6

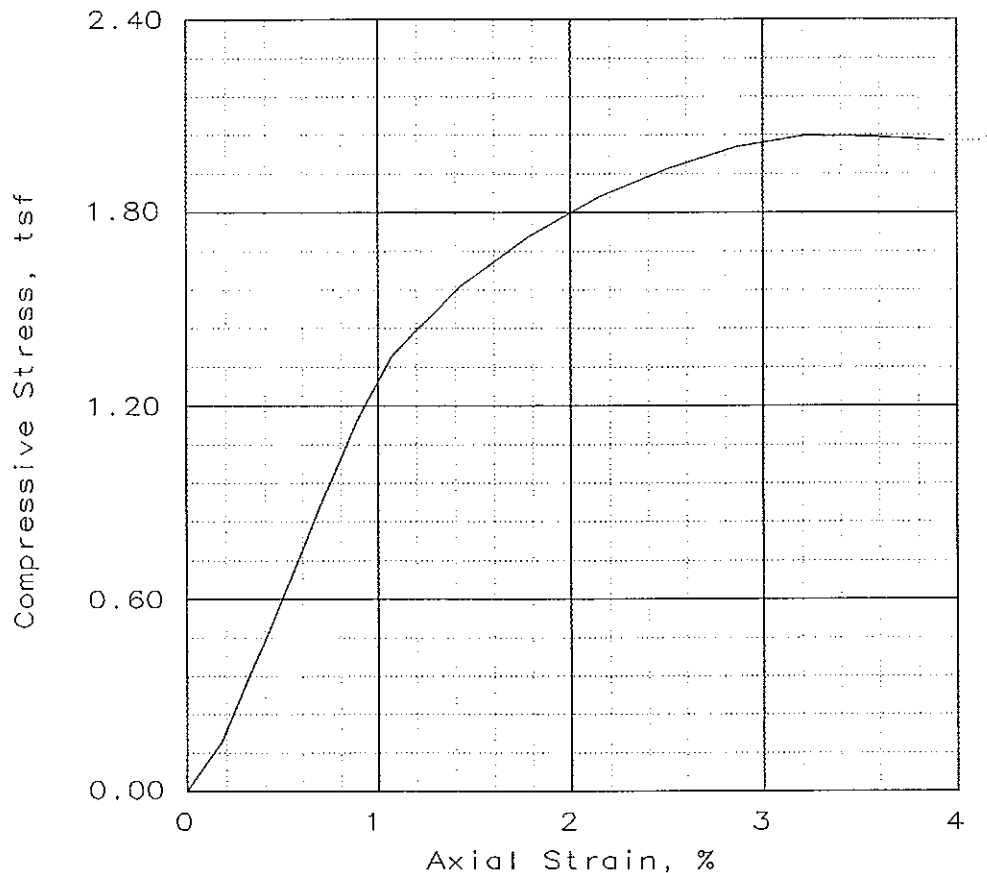
Sample No. 14 Depth: 24-26 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

Fig. No.: _____

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	2.04			
Undrained shear strength, tsf	1.02			
Failure strain, %	3.2			
Strain rate, %/min	1.07			
Water content, %	24.8			
Wet density, pcf	122.9			
Dry density, pcf	98.5			
Saturation, %	95.2			
Void ratio	0.6990			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Silty Clay, Very stiff, Reddish brown & gray

LL = 45 PL = 19 PI = 26 ASS. GS= 2.68 Type: Undisturbed

Project No.: 1140114810

Date: 6-10-99

Remarks:

Assumed Specific gravity

Client: U.S Army Corps of Engineers

Galveston office District

Project: Neches River Saltwater Barrier

Location: Boring No. 99-6

Sample No. 23 Depth: 42-44 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

Fig. No.: _____

