U.S. ARMY CORPS OF ENGINEERS

BORING NO. 99-24 DATE: BEGIN 4-27 99 PAGE 1 / 2
JOB NO. 1140114808 COMPLETE 4-27-99 Thin Walled Tube
PROJECT Hechs River Saltwater Barrier ■ 3" □ 6"
LOCATION N = 876478.33, E = 3543205.39
ELEVATION OF HOLE -0.7
MANUFACTURER'S DESIGNATION OF DRILL RIG DNR75 w/Barge & Track Buggy
GROUNDWATER: DEPTH # ft., ELEV. ____ ft., at end of Drilling
WEATHER Sunny & Hot
DRILLER Dempsey Gowen LOGGER Iraj Mostamand

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
Mud Line 0		1	0.00	Gray	Clay	V.soft		* 2 1/2 of water -w/decayed wood
	J	2	0.00	Gray	Clay	V.soft		-w/decayed wood 2-10' - sample Fell out of Tube
5	J	3	0.00	Gray	Clay	V.soft		2-6'
		4	0.00	Gray	Clay	V.soft		-set 10' of casing Total casing below mudline 6'
	J	5	0.00	Gray	Clay	V.soft		-sample Fell out of Tube 8-10'
10		6	0.00	Gray	Clay	V-soft		-w/decayed wood
		7	0.00	Gray	Clay	V.soft		-w/decayed wood
15	X	8	2 3 4	Gray	Sand	Loose	silt	-w/decayed wood
		9	2.50	Brown & gray	clay	V.stiff		-w/Fer stains, slks
20		10	2.50	Brown & gray	clay	V.stiff		-w/Fer stains, slks
		11	1.00	Yellowish Brown & gray	Clay	stiff	silt	-w/sa sms
25		12	1.00	Gray	Clay	stiff	silt	-w/sa sms
		13	1.25	Gray & Yellowish gray	Clay	stiff	silt	-w/sa sms
		14	3.25	Yellowish gray & gray	Clay	V.stiff	silt	-w/sa sms & Fer nod
30		15	3.25	Yellowish Brown & GY	clay	V.stiff	silt	-w/sa sms & Fer stains
		16	3.25	Brown & gray	Clay	V.stiff		-w/calc nod & fer stains, slks
35		17	4.50+	Yellowish Brown & GY	clay	V.stiff		-w/sa sms & Fer stains

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U.S. ARMY CORPS OF ENGINEERS

BORING NO. 99-24 DATE: BEGIN 4-27-99 PAGE 2 / 2
JOB NO. 11401148-08 COMPLETE 4-27-99 Thin Walled Tu
PROJECT Neches River Saltwater Barrier ■ 3" □ 6"
LOCATION N=876478.33, E=3543205.39
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG DNR 75 w/Barge & Tra
GROUNDWATER: DEPTH * ft., ELEV. ft., at end of Drill
WEATHER Sunny
DRILLER Dempsey Cooper LOGGER Troy Mostamand

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
35								
		18	4.50†	Yellowish Brown & Gray	Clay	Hard	Silt	w/Sa sms & Fer stains
		19	4.50†	Yellowish Brown & Gray	Clay	Hard	Silt	w/Sa sms & Fer stains
40								J: Jar sample
45								
50								
55								
60								
65								
70								

Project: Neches River Saltwater Barrier

SUMMARY OF LABORATORY TEST RESULTS

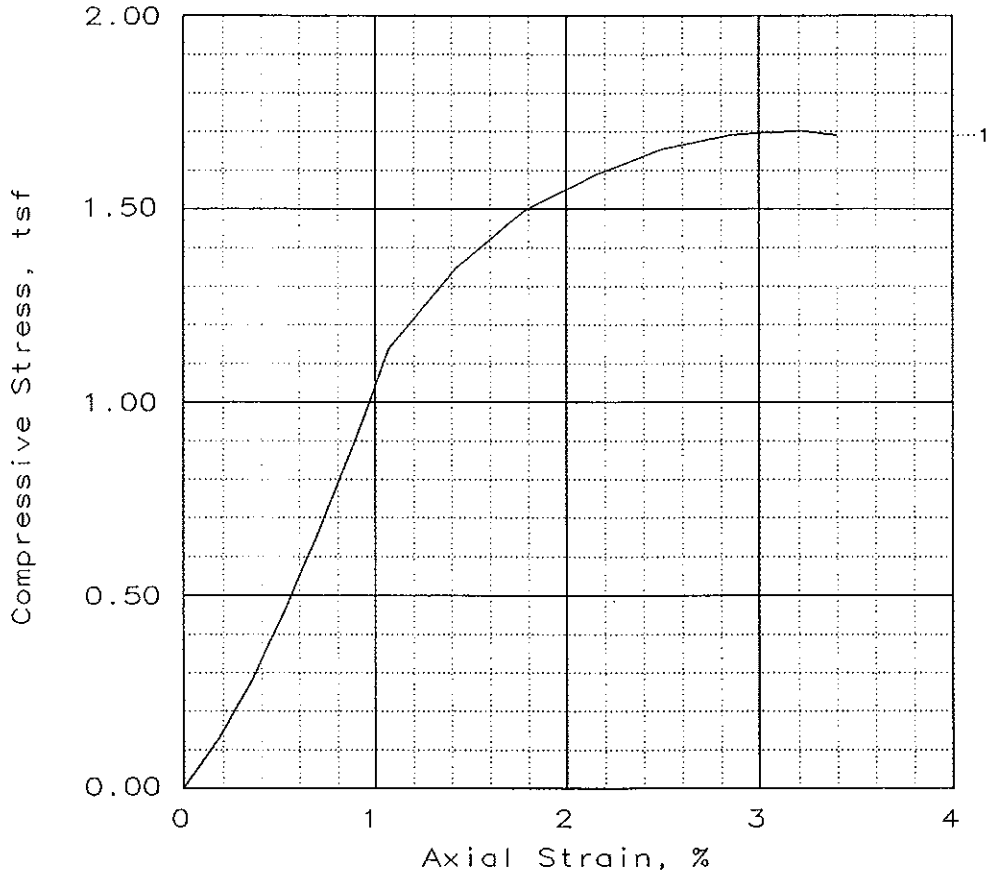
Contract No. DACW64-98-D-0002 Delivery Order No. 0010

Boring No. 99-24

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 #4	#10	#40	#100	#200	Specific Gravity	q u (tsf)
1	0 - 2	0.00		Clay,w/decayed wood,Very soft,Gray	C H	107.3											
2	2 - 4	0.00		Clay,w/decayed wood,Very soft,Gray	C H	102.6											
3	4 - 6	0.00		Clay,w/decayed wood,Very soft,Gray	C H	104.8											
4	6 - 8	0.00		Clay,w/decayed wood,Very soft,Gray	C H	102.7											
5	8 - 10	0.00		Clay,w/decayed wood,Very soft,Gray	C H	101.2											
6	10 - 12	0.00		Clay,w/decayed wood,Very soft,Gray	C H	79.2											
7	12 - 14	0.00		Clay,w/decayed wood,Very soft,Gray	C H	79.4											
8	14-15.5		7	Silty sand,w/decayed wood,Loose,Gray	S M						100.0	100.0	73.3	26.8	23.2		
9	18-20	2.50		Clay,w/fer stains,slks,Very stiff,Brown&gray	C H	28.5	93.1	119.6	67.0	25.0							2.05
10	20-22	2.50		Clay,w/fer stains,slks,Very stiff,Brown&gray	C H	28.9	93.4	120.4	68.0	24.0							1.70
11	22-24	1.00		Silty Clay,w/sand seams,Stiff,Yellowish brown & gray	C L	18.2	105.7	124.9									1.23
12	24-26	1.00		Silty Clay,w/sand seams,Stiff,Gray	C L	17.3	107.0	125.4									1.18
13	26-28	1.25		Silty Clay,w/sand seams,Stiff,Gray&Yellowis gray	C L	19.2	104.4	124.4									1.24
14	28-30	3.25		Silty Clay,w/fer nod & sand seams,Very stiff,Yellowish gray & gray	C L	20.1											
15	30-32	3.25		Silty Clay,w/fer nod & sand seams,Very stiff,Yellowish gray & gray	C L	20.4	102.4	123.3									2.08
16	32-34	3.25		Clay,w/calc nod & fer stains,slks,Very stiff, brown & gray	C H	24.1											
17	34-36	4.50+		Silty Clay,w/fer stains & sand seams,Hard, Yellowish brown & gray	C L	17.8											
18	36-38	4.50+		Silty Clay,w/fer stains & sand seams,Hard, Yellowish brown & gray	C L	17.4											
19	38-40	4.50+		Silty Clay,w/fer stains & sand seams,Hard, Yellowish brown & gray	C L	17.8											

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

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	1.70			
Undrained shear strength, tsf	0.85			
Failure strain, %	3.2			
Strain rate, %/min	1.07			
Water content, %	28.9			
Wet density, pcf	120.4			
Dry density, pcf	93.4			
Saturation, %	99.3			
Void ratio	0.7716			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Clay,w/fer stains, slks,Very stiff,Brown & gray

LL = 68	PL = 24	PI = 44	ASS. GS= 2.65	Type: Undisturbed

Project No.: 1140114813

Date: 6-7-99

Remarks:

Client: U.S Army Corps of Engineers
Galveston District Office

Project: Neches River Saltwater Barrier

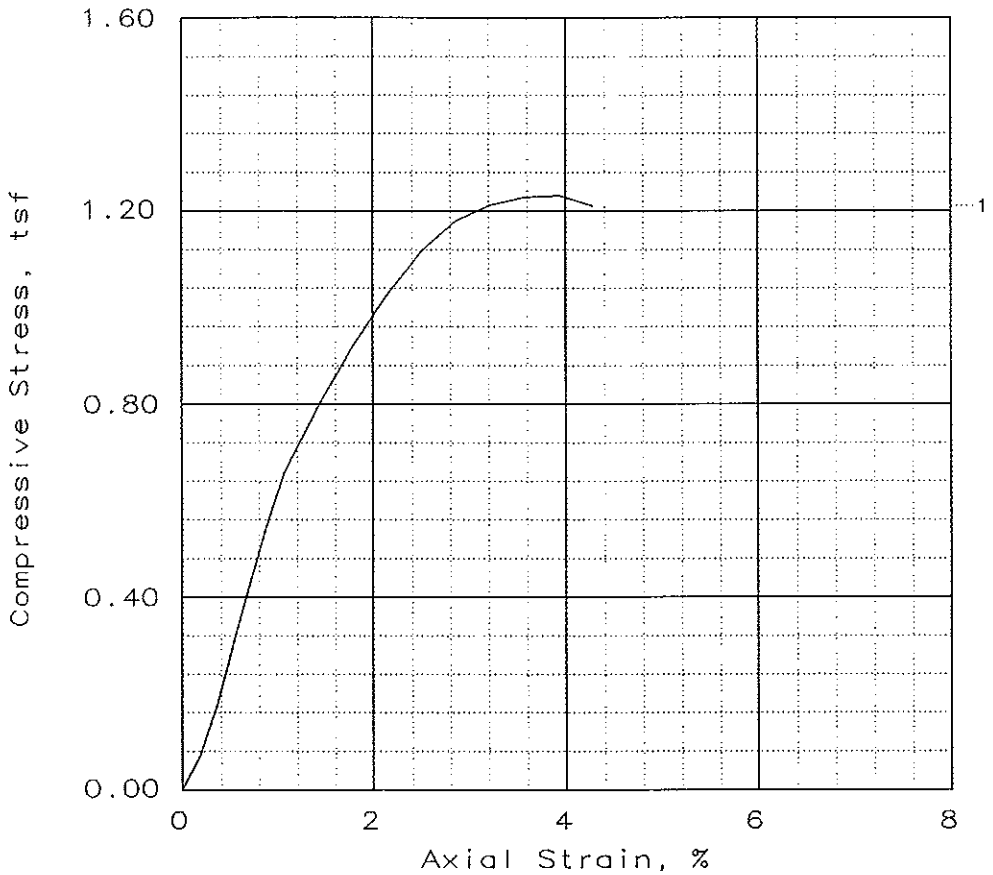
Location: Boring No. 99-24
Sample No. 10 Depth: 20-22 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

Fig. No.: ——

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	1.23			
Undrained shear strength, tsf	0.62			
Failure strain, %	3.9			
Strain rate, %/min	1.07			
Water content, %	18.2			
Wet density, pcf	124.9			
Dry density, pcf	105.7			
Saturation, %	85.1			
Void ratio	0.5655			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Silty Clay,w/sand sms,Stiff,Yellowish brown&Gy

			ASS. GS= 2.65	Type: Undisturbed

Project No.: 1140114813

Date: 6-7-99

Remarks:

Client: U.S Army Corps of Engineers
Galveston District Office

Project: Neches River Saltwater Barrier

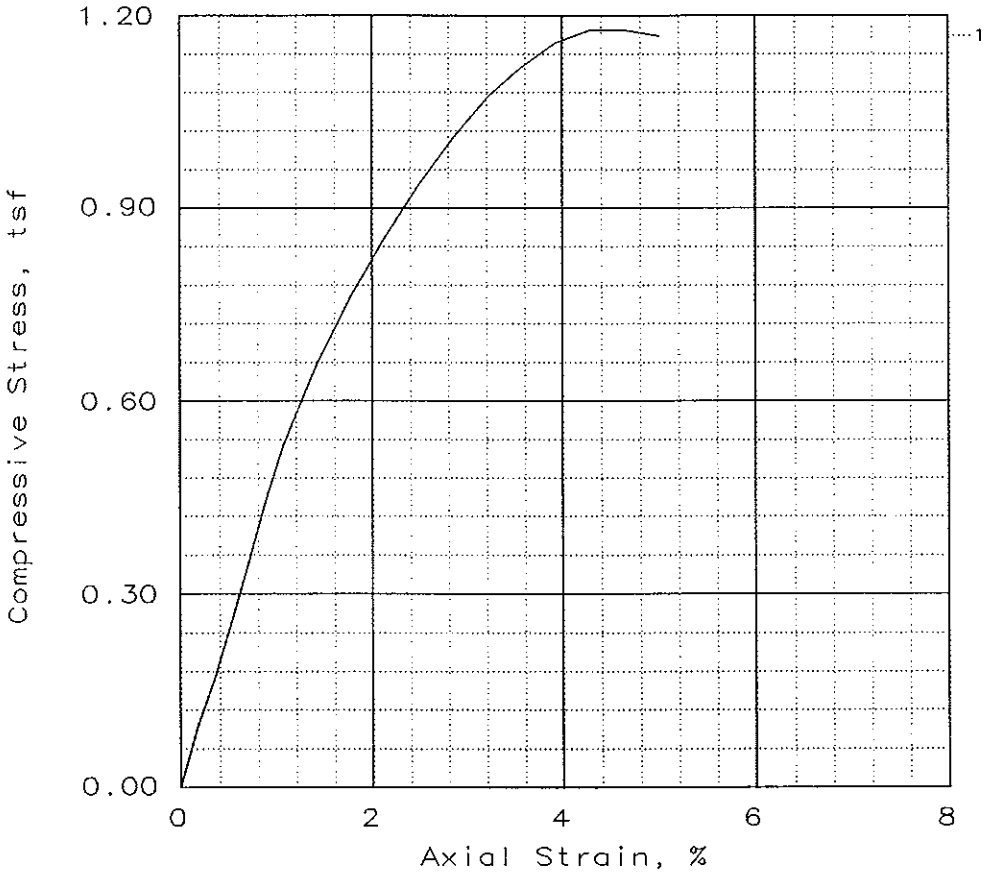
Location: Boring No. 99-24
Sample No. 11 Depth: 22-24 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

Fig. No.: ____

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	1.18			
Undrained shear strength, tsf	0.59			
Failure strain, %	4.3			
Strain rate, %/min	1.07			
Water content, %	17.3			
Wet density, pcf	125.4			
Dry density, pcf	107.0			
Saturation, %	83.7			
Void ratio	0.5467			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Silty Clay,w/sand sms,Stiff,Gray

			ASS. GS= 2.65	Type: Undisturbed

Project No.: 1140114813
Date: 6-7-99
Remarks:

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

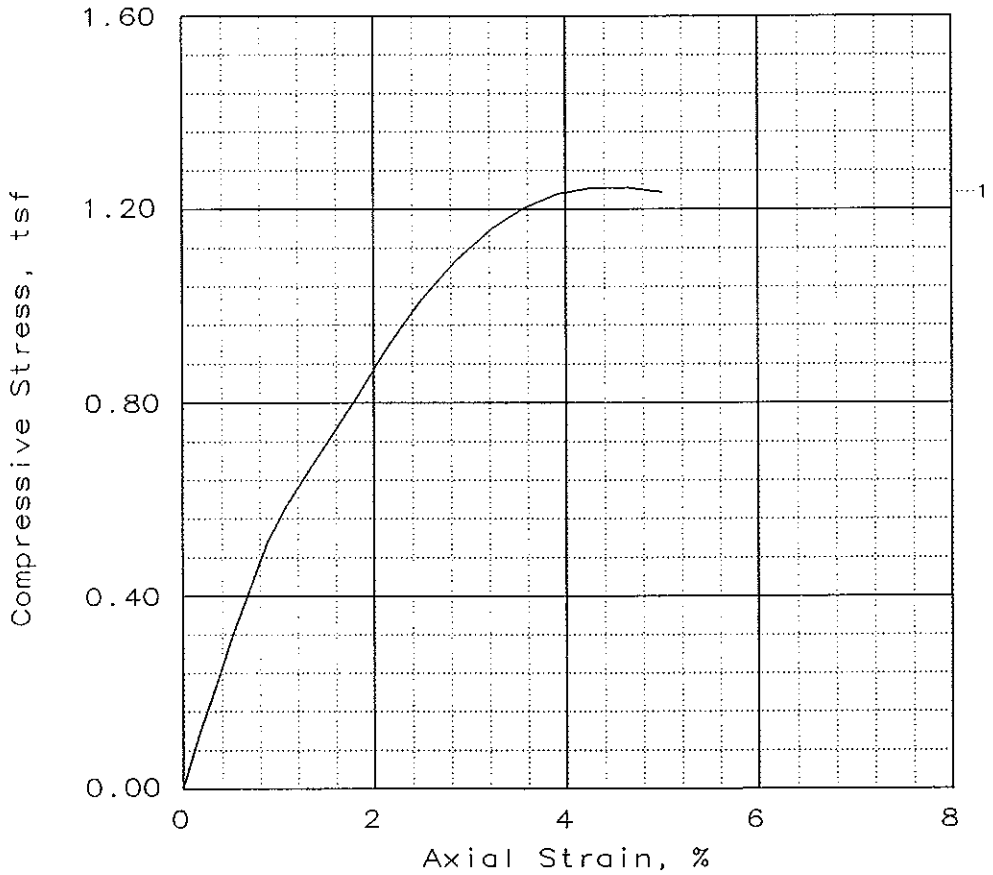
Location: Boring No. 99-24
Sample No. 12 Depth: 24-26 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

Fig. No.: ——

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	1.24			
Undrained shear strength, tsf	0.62			
Failure strain, %	4.3			
Strain rate, %/min	1.07			
Water content, %	19.2			
Wet density, pcf	124.4			
Dry density, pcf	104.4			
Saturation, %	86.8			
Void ratio	0.5846			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Silty Clay,w/sand sms,Stiff,Yellowish Gray

			ASS. GS= 2.65	Type: Undisturbed

Project No.: 1140114813

Date: 6-7-99

Remarks:

Client: U.S Army Corps of Engineers
Galveston District Office

Project: Neches River Saltwater Barrier

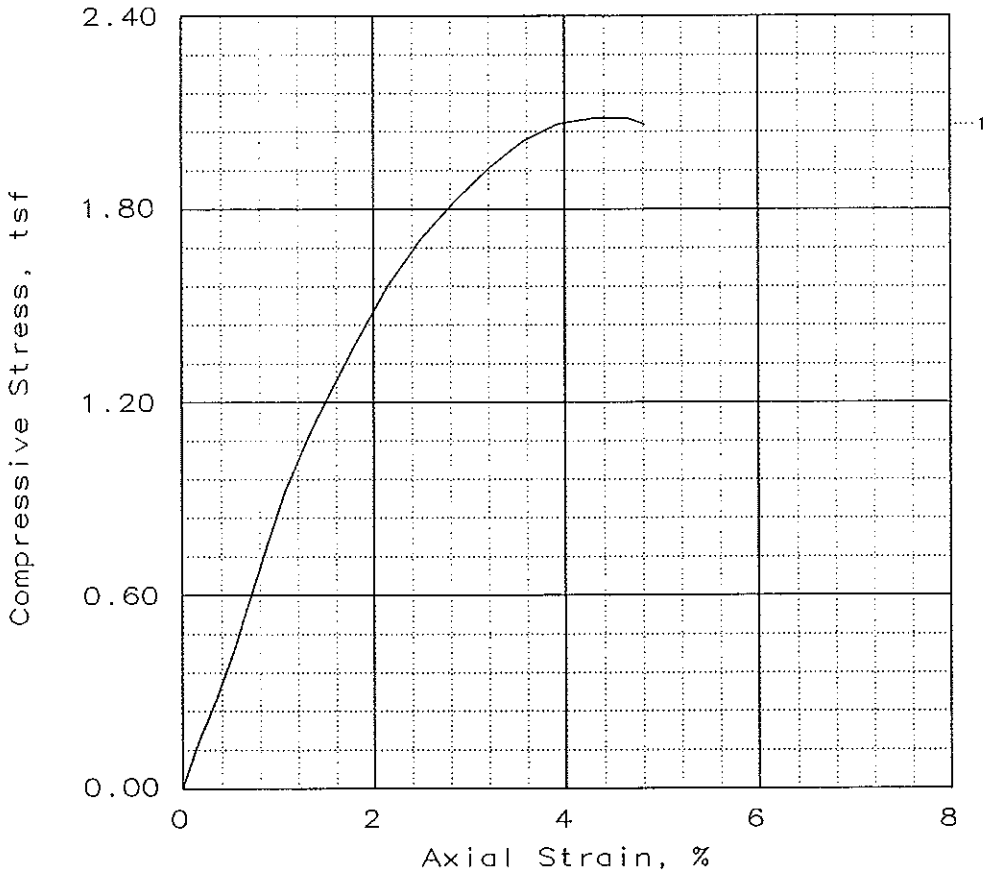
Location: Boring No. 99-24
Sample No. 13 Depth: 26-28 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

Fig. No.: ____

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	2.08			
Undrained shear strength, tsf	1.04			
Failure strain, %	4.6			
Strain rate, %/min	1.07			
Water content, %	20.4			
Wet density, pcf	123.3			
Dry density, pcf	102.4			
Saturation, %	87.9			
Void ratio	0.6150			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Silty Clay,w/fer nod&sd sms,V.S,Yish Gy & Gy

ASS. GS= 2.65 | Type: Undisturbed

Project No.: 1140114813

Date: 6-7-99

Remarks:

Fig. No.: ——

Client: U.S Army Corps of Engineers
Galveston District Office

Project: Neches River Saltwater Barrier

Location: Boring No. 99-24
Sample No. 15 Depth: 30-32 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

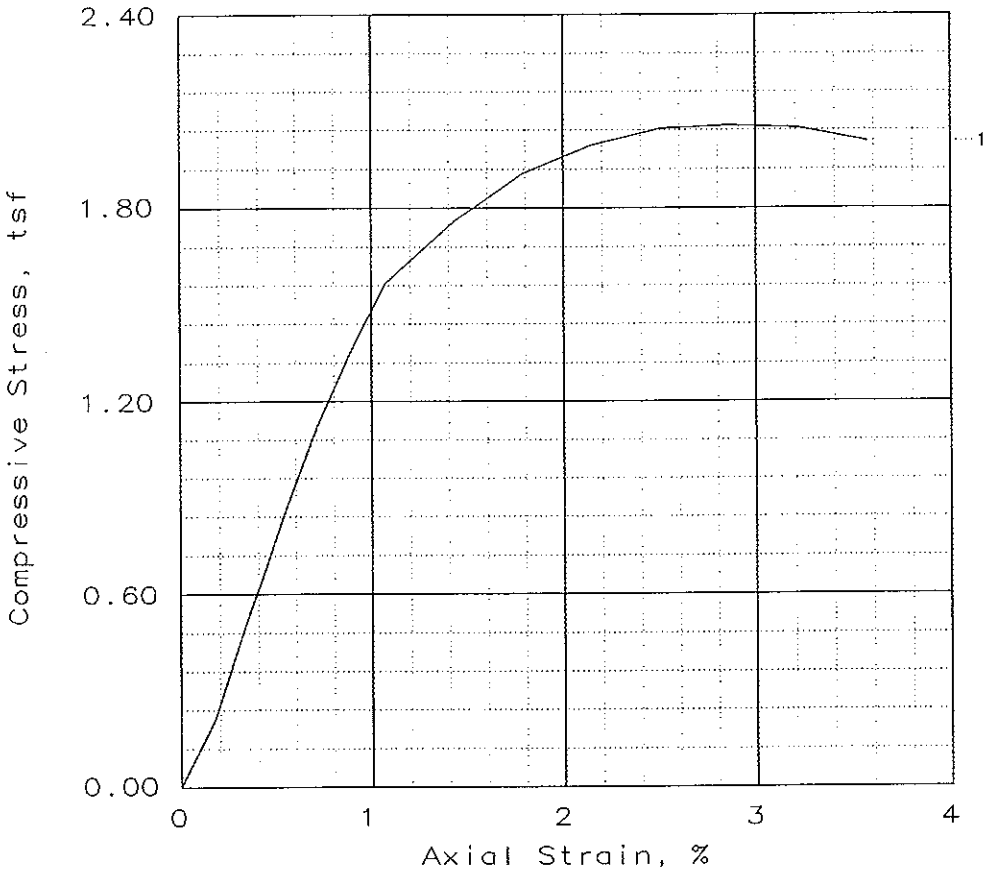
SUMMARY OF LABORATORY TEST RESULTS

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
99-24	8	Silty Sand,w/decayed wood,loose,gray	SM	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.4	89.5	80.7	73.3	64.7	45.2	26.8	24.5	23.2

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

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	2.05			
Undrained shear strength, tsf	1.03			
Failure strain, %	2.9			
Strain rate, %/min	1.07			
Water content, %	28.5			
Wet density, pcf	119.6			
Dry density, pcf	93.1			
Saturation, %	95.7			
Void ratio	0.7963			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Clay,w/fer stains, slks,Very stiff,Brown & gray

LL = 67	PL = 25	PI = 42	ASS. GS= 2.68	Type: Undisturbed

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

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

Location: Boring No. 99-24
Sample No. 9 Depth: 18-20 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

Fig. No.: ——