REVIEWED BY: LAA DATE 8/23, 8/
DATE

SUMMARY OF QUESTIONABLE
ERRONEOUS OR MISSING DATA
FOR

PROJECT: LABORATORY TESTING OF SOILS SAMPLES, CONTRACT NO. DACW64-~~93-M-0385~~ 92-D-0005 D.O. 0018

BORING NO.	SAMPLE NO.	COMMENTS ON TEST RESULTS
93-284	1	UNIT DRY WEIGHT AND WET WEIGHT PERFORMED, NOT ORDERED
	6	TORVANE ORDERED, NOT PERFORMED — Field log indicated soft clay with sand Lab classification shows SM
93-285	1	unit Dry wt. Performed, Not ordered
93-286	5	UNIT DRY & WET WEIGHT PERFORMED, NOT ORDERED.
	10	DENSITY & BPF NOT GIVEN
	11	VISUAL CLASSIFICATION AND MOISTURE CONTENT PERFORMED, NOT ORDERED
93-290	8	MOISTURE CONTENT PERFORMED, NOT ORDERED Field log indicated "Sdsi", Lab shows clay. Geotest was contacted. Jay agreed to revise the classification.
93-291	6	BPF NOT GIVEN
93-302	5	TORVANE PERFORMED, NOT ORDERED
93-303	1,2	TORVANE PERFORMED, NOT ORDERED
	2	PLASTIC LIMIT PERFORMED, NOT ORDERED
93-304	3	PLASTIC LIMIT PERFORMED, NOT ORDERED
	5,6,7	TORVANE PERFORMED, NOT ORDERED
93-306	1	TORVANE PERFORMED, NOT ORDERED
	6	UNCONFINED (.94) FIRM, PP(1.50) STIFF unconfined ≈ 1.00 stiff is O.K.
93-307	2	PLASTIC LIMIT PERFORMED, NOT ORDERED
93-312	2,5,9	PLASTIC LIMIT PERFORMED, NOT ORDERED
93-315	5	TORVANE PERFORMED, NOT ORDERED

U.S. ARMY CORPS OF ENGINEERS

BORING NO. 93-290 DATE: BEGIN 7-7-93 PAGE 1 / 1
JOB NO. 146630 COMPLETE 7-7-93 Thin Walled Tube
PROJECT Brazos Island Harbor Project. ■ 3" □ 6"
LOCATION Brownsville ship channel near Brownsville, Tx
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Ardco K-4X4
GROUNDWATER: DEPTH 1' ft., ELEV. ____ ft., at end of Drilling
WEATHER cloudy & Hot
DRILLER Scott Gregurek LOGGER Troy Mostamand

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSIS-TENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	1.75	Brown	Clay	Stiff		
		2	2.00	Brown	Clay	Very Stiff		
5		3	2.25	Brown	Clay	Very Stiff		
		4	2.00	Brown	Clay	Very Stiff		
		5	1.25	Brown	Clay	Stiff	Silty	
10		6	0.75	Brown	Clay	M. Stiff	Silty	
		7	0.50	Brown	Clay	M. Stiff	Silty	-w/silt layer
15		8		Gray	Silt	Loose	Sand	-w/cl sms
	X	9	3/4/4	Gray	Silt	Loose	Sand	-w/cl sms
	X	10	2/3/4	Gray	Silt	Loose	Sand	
20								Bottom of 93-290 @ 20'
25								
30								
35								

GEOTEST ENGINEERING INC

Project : Brazos Island Harbor Project, Brownsville Shipchannel near Brownsville, Texas
Contract No. DACW64-92-D-0005 Delivery order No. 0018

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 93-290

S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	M c (%)	Dry Unit Wt (pcf)	Wet Unit Wt (pcf)	L L (%)	P L (%)	Mechanical Analysis % Passing #4	#10	#40	#100	#200	Torvane Shear Strength (tsf)	q u (tsf)
1	0 - 2	2.50		Dark gray,Clay,Very stiff	C H	27.2											
2	2 - 4	3.50		Light brown,Clay,Very stiff	C H	23.3											
3	4 - 6	1.75		Brown,Clay,Stiff	C H	23.0	100.3	123.4	58		100.0	100.0	99.3	98.8	98.5		1.54
4	6 - 8	1.50		Light brown,Clay,Stiff	C H	27.3											
5	8 - 10	1.50		Light brown,Clay,Stiff,Silty	C L	24.2											
6	10 - 12	0.75		Light brown,Clay,Medium stiff,Silty	C L	25.4	101.6	127.4	30	16	100.0	100.0	100.0	99.5	97.3		0.80
7	12 - 14	1.50		Light brown,Clay,Stiff,Silty	C L	27.1											
8	14 - 16			Gray,Silt,Loose,Sandy,w/clay seams	M L	25.7											
9	16.5 - 18		8	Light brown&gray,Sand,Loose,Silty	S M						100.0	100.0	100.0	91.2	26.3		
10	18.5 - 20		7	Light brown&gray,Sand,Loose,Silty	S M												

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

Geotest Engineering, Inc.

Project : Brazos Island Harbor Project, Brownsville Shipchannel near Brownsville, Texas
Contract No. DACW64-92-D-0005 Delivery order No. 0018

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 93-290

S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	M c (%)	Dry Unit Wt (pcf)	Wet Unit Wt (pcf)	L L (%)	P L (%)	Mechanical Analysis % Passing #4	#10	#40	#100	#200	Torvane Shear Strength (tsf)	q u (tsf)
1	0 - 2	2.50		Dark gray,Clay,Very stiff	C H	27.2											
2	2 - 4	3.50		Light brown,Clay,Very stiff	C H	23.3											
3	4 - 6	1.75		Brown,Clay,Stiff	C H	23.0	100.3	123.4	58		100.0	100.0	99.3	98.8	98.5		1.54
4	6 - 8	1.50		Light brown,Clay,Stiff	C H	27.3											
5	8 - 10	1.50		Light brown,Clay,Stiff,Silty	C L	24.2											
6	10 - 12	0.75		Light brown,Clay,Medium stiff,Silty	C L	25.4	101.6	127.4	30	16	100.0	100.0	100.0	99.5	97.3		0.80
7	12 - 14	1.50		Light brown,Clay,Stiff,Silty	C L	27.1											
8	14 - 16			Gray,Silt,Loose,Sandy,w/clay seams	M L	25.7											
9	16.5 - 18		8	Light brown&gray,Sand,Loose,Silty	S M						100.0	100.0	100.0	91.2	26.3		
10	18.5 - 20		7	Light brown&gray,Sand,Loose,Silty	S M												

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

Geotest Engineering, Inc.

JOB NO. 14G634 DATE 8/2/93

PROJECT Brazos Island Harbor Project
Brownsville Shipchannel

AREA near Brownsville, Texas

BORING NO. 93-290 SAMPLE NO. 3 DEPTH 4-6 ft

SPECIMEN NO. 1

CLASSIFICATION
Brown,Clay,Stiff

Tare No.	P-28	Height	5.595 in.
Tare plus Wet Specimen	670.08 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	552.73 gm	Initial Area	6.290 sq in.
Water Weight	117.35 gm	Volume	35.194 cu in.
Tare Weight	43.02 gm	Volume of Solids	cu in.
Wet Specimen	1140.13 gm	Void Ratio	
Dry Specimen	926.76 gm	Saturation	%
Water Content	23.02 %	Dry Density	100.3 lb/cu ft
Specific Gravity of Solids			

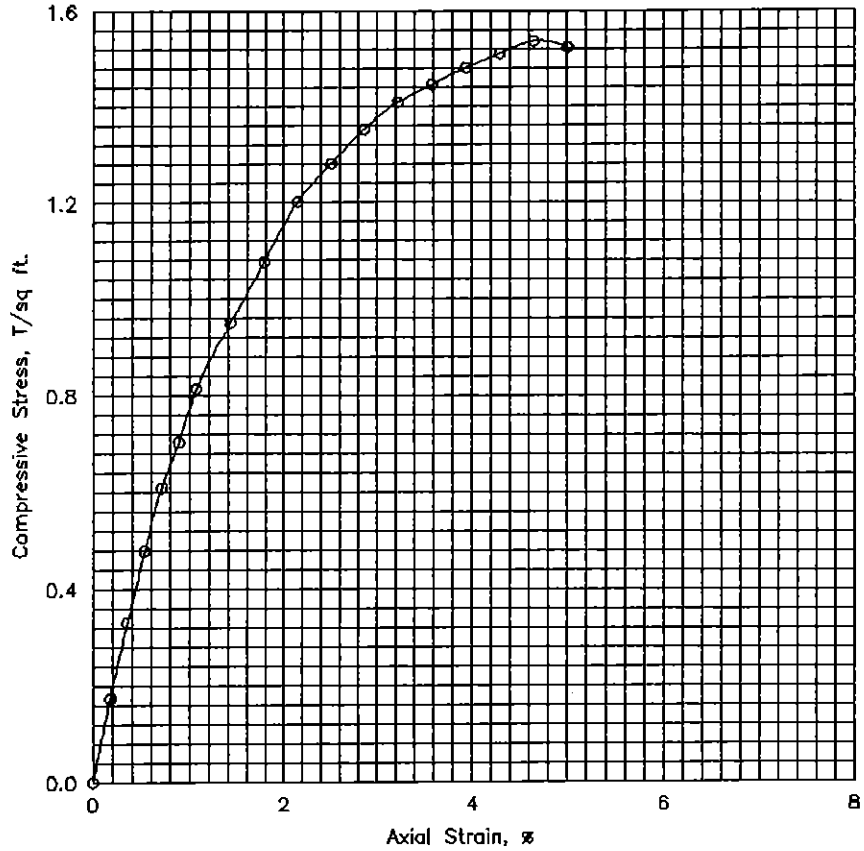
LL = 58 PL = PI =

Proving Ring No. 10170
Proving Ring Constant, K = .766 lbs/div.

Elapsed Time min.	Dial Reading 0.001"	Cumulative Change in.	Proving Ring Dial Reading	Axial Load lb	Axial Strain	Area Corr. sq in.	Compr. Stress tsf
.0	0.	.000	.0	.0	.000	6.29	.000
.3	10.	.010	20.0	15.3	.002	6.30	.175
.5	20.	.020	38.0	29.1	.004	6.31	.332
.7	30.	.030	55.0	42.1	.005	6.32	.480
.9	40.	.040	70.0	53.6	.007	6.34	.609
1.1	50.	.050	81.0	62.0	.009	6.35	.704
1.3	60.	.060	94.0	72.0	.011	6.36	.815
1.6	80.	.080	110.0	84.3	.014	6.38	.951
2.0	100.	.100	125.0	95.8	.018	6.40	1.076
2.3	120.	.120	140.0	107.2	.021	6.43	1.201
2.7	140.	.140	150.0	114.9	.025	6.45	1.282
3.1	160.	.160	159.0	121.8	.029	6.48	1.354
3.4	180.	.180	166.0	127.2	.032	6.50	1.409
3.8	200.	.200	171.0	131.0	.036	6.52	1.446
4.0	220.	.220	176.0	134.8	.039	6.55	1.482
4.4	240.	.240	180.0	137.9	.043	6.57	1.511
4.7	260.	.260	184.0	140.9	.046	6.60	1.538
5.0	280.	.280	183.0	140.2	.050	6.62	1.524

Job No. 14G634

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	23.0 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	100.3			
Time to failure, min		t_f	4.73			
Unconfined compressive strength, T/sq ft		q_u	1.54			
Undrained shear strength, T/sq ft		S_u	.77			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Brown,Clay,Stiff

LL	58	PL	PI	G_s

Remarks

Project Brazos Island Harbor Project	
Brownsville Shipchannel	
Area near Brownsville, Texas	
Boring No. 93-290	Sample No. 3
Depth El 4-6 ft	Date 8/2/93
UNCONFINED COMPRESSION TEST REPORT	

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE

JOB NO. 14G634 DATE 8/2/93

PROJECT Brazos Island Harbor Project
Brownsville Shipchannel

AREA near Brownsville, Texas

BORING NO. 93-290 SAMPLE NO. 6 DEPTH 10-12 ft

SPECIMEN NO. 1

CLASSIFICATION
Light brown,Clay,Medium stiff,Silty

Tare No.	GE-50	Height	5.595 in.
Tare plus Wet Specimen	529.35 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	430.79 gm	Initial Area	6.290 sq in.
Water Weight	98.56 gm	Volume	35.194 cu in.
Tare Weight	42.79 gm	Volume of Solids	cu in.
Wet Specimen	1177.30 gm	Void Ratio	
Dry Specimen	938.82 gm	Saturation	%
Water Content	25.40 %	Dry Density	101.6 lb/cu ft

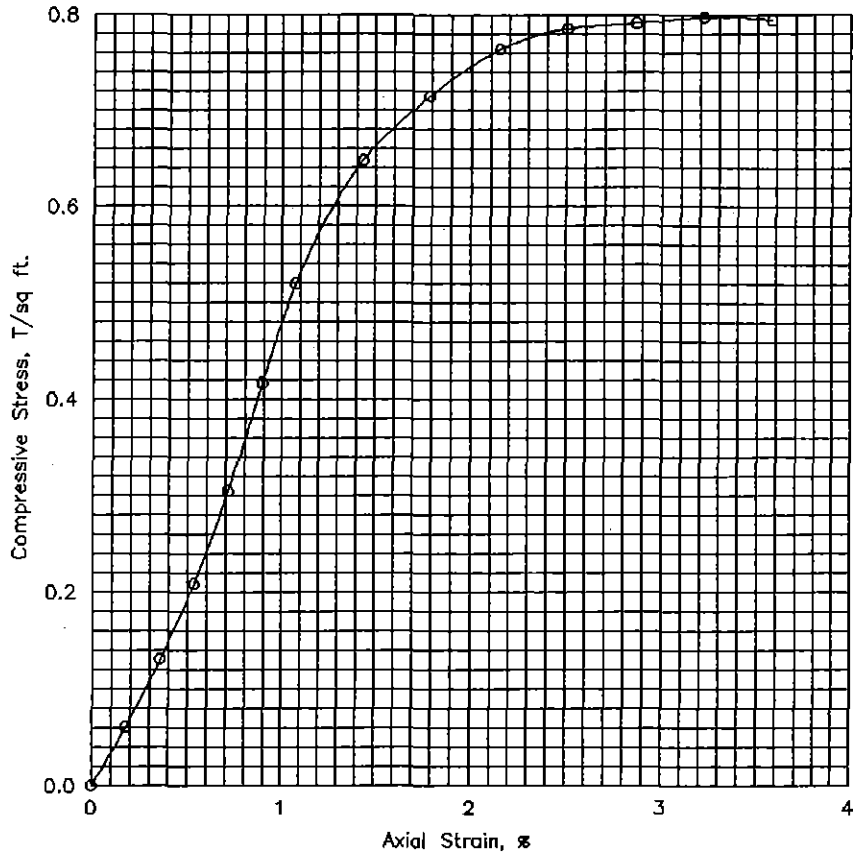
Specific Gravity of Solids
LL = 30 PL = 16 PI = 14

Proving Ring No. 10170
Proving Ring Constant, K = .766 lbs/div.

Elapsed Time min.	Dial Reading 0.001"	Cumulative Change in.	Proving Ring Dial Reading	Axial Load lb	Axial Strain	Area Corr. sq in.	Compr. Stress tsf
.0	0.	.000	.0	.0	.000	6.29	.000
.3	10.	.010	7.0	5.4	.002	6.30	.061
.4	20.	.020	15.0	11.5	.004	6.31	.131
.6	30.	.030	24.0	18.4	.005	6.32	.209
.8	40.	.040	35.0	26.8	.007	6.34	.305
.9	50.	.050	48.0	36.8	.009	6.35	.417
1.1	60.	.060	60.0	46.0	.011	6.36	.520
1.4	80.	.080	75.0	57.4	.014	6.38	.648
1.8	100.	.100	83.0	63.6	.018	6.40	.715
2.1	120.	.120	89.0	68.2	.021	6.43	.764
2.4	140.	.140	92.0	70.5	.025	6.45	.786
2.8	160.	.160	93.0	71.2	.029	6.48	.792
3.1	180.	.180	94.0	72.0	.032	6.50	.798
3.5	200.	.200	94.0	72.0	.036	6.52	.795

Job No. 14G634

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	25.4 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	101.6			
Time to failure, min		t_f	3.07			
Unconfined compressive strength, T/sq ft		q_u	.80			
Undrained shear strength, T/sq ft		S_u	.40			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Light brown,Clay,Medium stiff,Silty

LL	30	PL	16	PI	14	G_s	

Remarks

Project Brazos Island Harbor Project	
Brownsville Shipchannel	
Area near Brownsville, Texas	
Boring No. 93-290	Sample No. 6
Depth El 10-12 ft	Date 8/2/93
UNCONFINED COMPRESSION TEST REPORT	

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE

July - 7 93

B.I.H. DISPOSAL AREA NO. 7

	CORE BORING	COORDINATES X	Y	N.G. ELEV.
1	93-287	2383453.79	111575.35	16.58
2	93-288	2383436.80	111066.77	11.95
3	93-289	2383374.07	110464.25	12.20
4	93-290	2382897.16	110196.68	12.09
5	93-291	2382591.22	109981.03	12.07
6	93-292	2382291.49	109638.88	12.96
7	93-293	2381679.22	108909.68	12.04
8 *	93-294			
9	93-295	2379514.51	108372.33	10.17
10	93-296	2378761.80	107960.82	10.07
11	93-297	2378293.91	107778.32	9.86
12	93-298	2377829.21	107589.17	9.80
13	93-299	2377365.46	107404.67	9.91
14	93-300	2376904.99	107220.19	9.8
15	93-301	2376438.60	107038.62	9.75
16	93-302	2375977.69	106850.65	9.66
17 *	93-303			
18	93-304	2375768.65	107744.19	9.92
19	93-305	2376232.67	107932.15	10.1
20	93-306	2376693.94	108120.23	10.28
21	93-307	2377157.54	108305.60	10.32
22	93-308	2377622.55	108490.28	10.51
23	93-309	2378086.61	108679.32	10.18
24	93-310	2378551.34	108868.16	9.99