U.S. ARMY CORPS OF ENGINEERS

BORING NO. 91-283 DATE: BEGIN 12-31-91 PAGE 1 1
JOB NO. 146-531 COMPLETE 12/31/91 Thin Walled Tube
PROJECT C-IWW ☒ 3" ☐ 6"
LOCATION Sargent Creek sta 137+00
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Failing CFD
GROUNDWATER: DEPTH 0 ft., ELEV. ft., at end of Drilling
WEATHER cool cloudy
DRILLER D. Gearan LOGGER D. Crowell

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0								
	1		1.0	Tan	clay	stiff	silt	w/roots
	2		0.50	Gray	clay	M/stiff	silt	w/roots
5	3		1.0	Gray	clay	stiff	silt	Tan
	4		2.0	Tan	clay	M/stiff	silt	Gray
	5		1.5	Gray	Clay	stiff	silt	Tan
10	6		1.5	Tan	Clay	Stiff	silt	Gray
	7		1.0	Tan	Clay	Stiff	silt	Gray
15	8		1.0	Tan	Clay	Stiff	silt	Gray
	9		0.25	silt	Tan	Loose	clay	
20	10		0.50	clay	Tan	M.stiff	silt	
	11		0.25	clay	Tan	Soft	silt	Gray
	12		0.50	clay	Tan	M.stiff	silt	Grey
25	13		0.80	clay	Gray	M.stiff	silt	Tan
								Bottom of 91-283 @ 26'
30								
35								

GEOTEST ENGINEERING, INC

Project : Gulf Intracoastal Waterway, near Sargent Beach, Texas
Contract No. DACW64-92-D-0001 Delivery No. 0005

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-283

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					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0-2	1.00		Brown,Clay,Stiff,w/silt pockets	CH	32.9											
2	2-4	1.25		Brown,Clay,Stiff,w/calcareous and ferrous nod-ules	CH	31.6											
3	4-6	0.75		Gray&yellowish brown,Clay,Medium stiff,w/fe -rrous stains	CH	31.1	89.3	117.1	59	25	100.0	100.0	99.9	99.4	95.8		0.73
4	6-8	1.00		Brown,Clay,Stiff,w/ferrous stains	CH	33.8											
5	8-10	1.25		Gray & brown,Clay,Stiff,w/calcareous nodules, slickensided	CH	34.4											
6	10-12	1.50		Brown,Clay,Stiff,w/silt seams	CH	34.3											
7	12-14	1.50		Brown,Clay,Stiff,w/silt seams,slickensided	CH	36.4											
8	14-16	1.50		Brown,Clay,Stiff,w/silt seams,slickensided	CH	41.3											
9	16-18	0.50		Brown,Clay,Medium stiff,Silty,w/silt layer	CL	23.1			31	17							
10	18-20	0.50		Brown,Clay,Medium stiff,w/silt seams	CH	44.3											
11	20-22	0.50		Brown,Clay,Medium stiff,w/silt seams	CH	46.6											
12	22-24	1.00		Brown,Clay,Stiff	CH	40.5			62	24							
13	24-26	0.50		Dark gray & brown,Clay,Medium stiff,w/organic material	CH	62.4											

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

JOB NO. 14G533 DATE 1/29/92

PROJECT Gulf Intracostal Waterway near Sargent Beach, Texas

BORING NO. 91-283 SAMPLE NO. 3 DEPTH 4-6 ft

SPECIMEN NO. 1

CLASSIFICATION
Gray & yellowish brown,Clay,Medium stiff,w/ferrous stains

Tare No.	P-218	Height	5.595 in.
Tare plus Wet Specimen	495.22 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	387.74 gm	Initial Area	6.290 sq in.
Water Weight	107.48 gm	Volume	35.194 cu in.
Tare Weight	42.53 gm	Volume of Solids	cu in.
Wet Specimen	1081.71 gm	Void Ratio	
Dry Specimen	824.88 gm	Saturation	%
Water Content	31.13 %	Dry Density	89.3 lb/cu ft

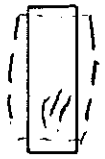
Specific Gravity of Solids
LL = 59 PL = 25 PI = 34

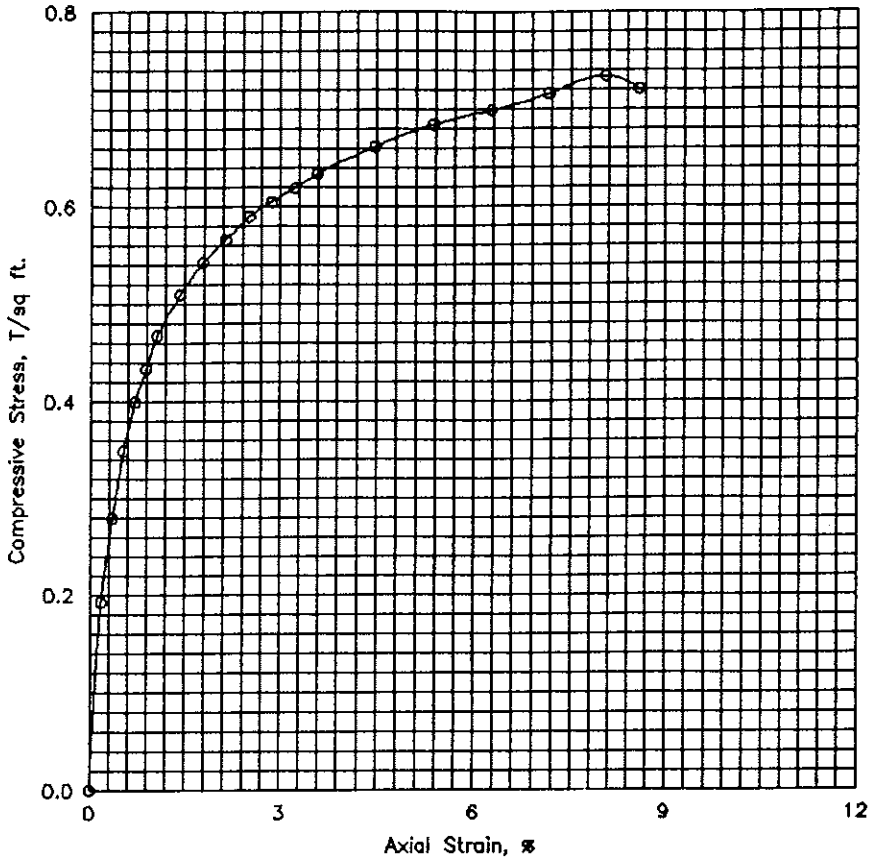
Proving Ring No. 10170
Proving Ring Constant, K = .766 lbs/div.

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
.2	10.	.010	22.0	16.9	.002	6.30	.193
.3	20.	.020	32.0	24.5	.004	6.31	.280
.5	30.	.030	40.0	30.6	.005	6.32	.349
.7	40.	.040	46.0	35.2	.007	6.34	.400
.9	50.	.050	50.0	38.3	.009	6.35	.434
1.1	60.	.060	54.0	41.4	.011	6.36	.468
1.4	80.	.080	59.0	45.2	.014	6.38	.510
1.7	100.	.100	63.0	48.3	.018	6.40	.543
2.0	120.	.120	66.0	50.6	.021	6.43	.566
2.4	140.	.140	69.0	52.9	.025	6.45	.590
2.8	160.	.160	71.0	54.4	.029	6.48	.605
3.1	180.	.180	73.0	55.9	.032	6.50	.619
3.4	200.	.200	75.0	57.4	.036	6.52	.634
4.2	250.	.250	79.0	60.5	.045	6.58	.662
5.1	300.	.300	82.5	63.2	.054	6.65	.685
5.8	350.	.350	85.0	65.1	.063	6.71	.699
6.6	400.	.400	88.0	67.4	.071	6.77	.716
7.5	450.	.450	91.0	69.7	.080	6.84	.734
7.9	480.	.480	90.0	68.9	.086	6.88	.721

Job No. 14G533

Failure Sketches





☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	31.1 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	89.3			
Time to failure, min		t_f	7.47			
Unconfined compressive strength, T/sq ft		q_u	.73			
Undrained shear strength, T/sq ft		S_u	.37			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Gray & yellowish brown,Clay,Medium stiff,w/ferrous stains

LL	59	PL	25	PI	34	G_s	

Remarks

Project Gulf Intracostal Waterway

Area Near Sargent Beach, Texas

Boring No. 91-283 | Sample No. 3

Depth El 4-6 ft | Date 1/29/92

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 3659
1 JUN 65

PLATE XI-2