U.S. ARMY CORPS OF ENGINEERS

BORING NO. 92-53 DATE: BEGIN 7-30-92 PAGE 1 / 2
JOB NO. 146549 COMPLETE _____ Thin Walled Tube
PROJECT Proposed site of new disposal area ☒ 3" ☐ 6"
LOCATION near Seadrift, Texas, sta. 70+00
ELEVATION OF HOLE _____
MANUFACTURER'S DESIGNATION OF DRILL RIG Rodco Failing Buggy
GROUNDWATER: DEPTH 18.00* ft., ELEV. _____ ft., at end of Drilling
WEATHER Sunny & Hot
DRILLER Mark LOGGER Iraj Mostamand

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	4.5+	DK. Gray	Clay	Hard		-w/ roots
		2	1.00	Gray	Clay	stiff		
5		3	1.00	Gray	Clay	stiff		-w/calc nod & Fe st
		4	1.50	Gray & Y. Brown	Clay	stiff		-w/calc nod & Fe st, slickensided
10		5	2.50	Gray & Y. Brown	Clay	Very stiff		-w/ Fe st, slickensided
		6	3.00	" "	"	" "		-w/ Fe st, slickensided
		7	4.25	Gray & Y. Brown	Clay	Hard		-w/ Fe Nod, slickensided
15		8	4.50+	Gray & Y. Brown	Clay	Hard		-w/calc nod & Fe st, slickensided
		9	4.50+	Gray & Y. Brown	Clay	Hard		-w/calc nod & Fe st, slickensided -sand @ 18'
								* Encounter water @ 18'
20	X	10	1/1/2	Gray	Sand	V. Loose	silt	
25	X	11	5/5/8	Gray	Sand	M. Dense	silt	
30	X	12	6/10/15	Gray	Sand	M. Dense	silt	
35	X	13	15/18/20	Gray	Sand	Dense	silt	-w/ sand stone

GEOTEST ENGINEERING, INC.

U.S. ARMY CORPS OF ENGINEERS

BORING NO. 92-53 DATE: BEGIN 7-30-92 PAGE 2 / 2

JOB NO. 146549 COMPLETE 7-30-92 Thin Walled Tube

PROJECT Disposal area for channel to Victoria ☒ 3" ☐ 6"

LOCATION near Seadrift, Tx sta 70+00

ELEVATION OF HOLE

MANUFACTURER'S DESIGNATION OF DRILL RIG Acco Failing Buggy

GROUNDWATER: DEPTH 18.00 ft., ELEV. ____ ft., at end of Drilling

WEATHER Sunny & Hot

DRILLER Mark Thornton LOGGER Iraj Mostamand

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
35								
40	X	14	9/26/30	Gray	Sand	V. Dense	silt	w/ sand stone -lost water circulation at 40' used one Bag of Drilling mud
45	X	15	7/9/14	Gray	Sand	M. Dense	silt	
50	X	16	5/7/7	Gray	Sand	M. Dense	silt	-w/sand stone
								Bottom of 92-53 @ 50' -water level at The End of drilling 9.00 ft'
55								
60								
65								
70								

GEOTEST ENGINEERING, INC.

SUMMARY OF LABORATORY TEST RESULTS

Project: Proposed new Disposal area for channel to victoria project, near Seadrift, Texas
Contract No. DACW64-92-D-0001 Delivery Order No. 0023

Boring No. 92-53

S#	Depth (ft.)	PP (tsf)	SPT Blows per foot	Visual Classification	U S C	M C (%)	Dry Unit Wt. (pcf)	Wet Unit Wt. (pcf)	LL (%)	PL (%)	Mechanical Analysis % passing					Torvane Shear Strength (tsf)	qu (tsf)
											#4	#10	#40	#100	#200		
1	0-2	4.5+		Dark gray,Clay,Hard,w/roots	C H	15.6											
2	2-4	0.75		Gray,Clay,Medium stiff,w/calcareous and ferrous nodules	C H	41.5											
3	4-6	1.00		Yellowish gray,Clay,Stiff,w/calcareous nodules ferrous stains sand pkts and blocky structure	C H	43.7	78.4	112.7	89	33	100.0	98.9	97.3	95.6	93.6		0.87
4	6-8	1.50		Yellowish gray,Clay,Stiff,w/calcareous nodules and ferrous stains,Slickensided	C H	38.5											
5	8-10	2.50		Yellowish gray,Clay,Very stiff,w/calcareous nodules and ferrous stains,Slickensided	C H	34.2											
6	10-12	3.00		Yellowish gray,Clay,Very stiff,w/calcareous nodules and ferrous stains,Slickensided	C H	31.8											
7	12-14	3.00		Yellowish gray&Gray,Clay,Very stiff,w/calcareous nodules ferrous stains and sand pkts,Slickensided	C H	27.2	97.6	124.1	71	28	99.5	98.9	98.4	97.4	94.2		1.61
8	14-16	2.75		Yellowish gray,Clay,Very stiff,w/calcareous nodules and ferrous stains,Slickensided	C H	33.9											
9	16-18	2.50		Yellowish gray,Clay,Very stiff,w/ferrous stains and sand seams,Slickensided	C H	30.1											
10	18.5-20		3	Gray,Sand,Loose,Silty	S P-S M						100.0	99.9	99.8	70.9	9.3		
11	23.5-25		13	Gray,Sand,Medium dense,Silty	S M												
12	28.5-30		25	Gray,Sand,Medium dense,Silty	S M						100.0	99.8	98.4	51.6	23.9		
13	33.5-35		38	Gray,Sand,Dense,Silty,w/sand stone	S M												
14	38.5-40		56	Gray,Sand,Very dense,Silty,w/sand stone	S M												
15	43.5-45		23	Gray,Sand,Medium dense,Silty	S M						100.0	99.9	99.6	49.6	17.6		
16	48.5-50		14	Gray,Sand,Medium dense,Silty,w/sand stone	S M												

S#: Sample Number, PP: Pocket Penetrometer Reading, USC: Unified Soil Classification, MC: Moisture Content
qu: Unconfined Compressive Strength, WOH: Weight of Hammer, WOP: Weight of Pipe

JOB NO. 14G599 DATE 8/11/92

PROJECT Proposed Disposal area for Channel to Victoria Project

AREA near Seadrift, Texas

BORING NO. 92-53 SAMPLE NO. 3 DEPTH 4-6 ft

SPECIMEN NO. 1

CLASSIFICATION
Yellowish Gray,Clay,stiff,w/calc nod&fe st sand pkts & blocky strusture

Tare No.	GE2	Height	5.595 in.
Tare plus Wet Specimen	461.99 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	334.40 gm	Initial Area	6.290 sq in.
Water Weight	127.59 gm	Volume	35.194 cu in.
Tare Weight	42.59 gm	Volume of Solids	cu in.
Wet Specimen	1040.75 gm	Void Ratio	
Dry Specimen	724.13 gm	Saturation	%
Water Content	43.72 %	Dry Density	78.4 lb/cu ft
Specific Gravity of Solids			

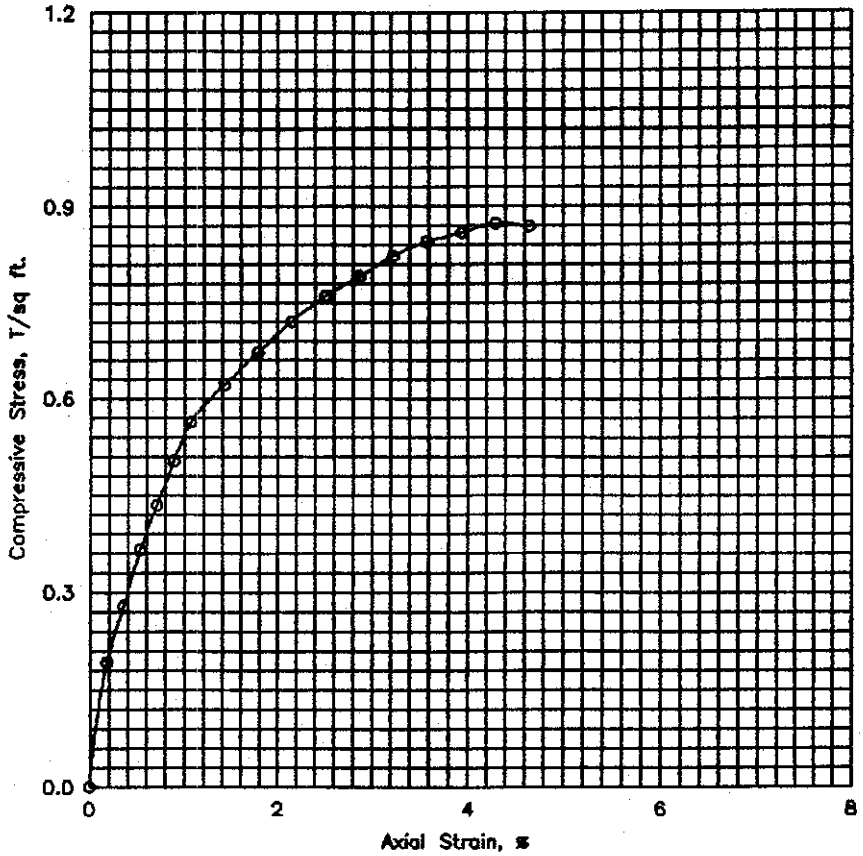
LL = 89 PL = 33 PI = 56

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
.4	20.	.020	32.0	24.5	.004	6.31	.280
.6	30.	.030	42.0	32.2	.005	6.32	.366
.7	40.	.040	50.0	38.3	.007	6.34	.435
.9	50.	.050	58.0	44.4	.009	6.35	.504
1.0	60.	.060	65.0	49.8	.011	6.36	.564
1.4	80.	.080	72.0	55.2	.014	6.38	.622
1.7	100.	.100	78.0	59.7	.018	6.40	.672
2.0	120.	.120	84.0	64.3	.021	6.43	.721
2.3	140.	.140	89.0	68.2	.025	6.45	.761
2.6	160.	.160	93.0	71.2	.029	6.48	.792
2.9	180.	.180	97.0	74.3	.032	6.50	.823
3.2	200.	.200	100.0	76.6	.036	6.52	.845
3.5	220.	.220	102.0	78.1	.039	6.55	.859
3.8	240.	.240	104.0	79.7	.043	6.57	.873
4.1	260.	.260	104.0	79.7	.046	6.60	.869

Job No. 14G599

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_o	43.7 %	%	%	%
	Void ratio	e_o				
	Saturation	S_o	%	%	%	%
	Dry density, lb/cu ft	γ_d	78.4			
Time to failure, min		t_f	3.78			
Unconfined compressive strength, T/sq ft		q_u	.87			
Undrained shear strength, T/sq ft		S_u	.44			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_o	2.830			
Initial specimen height, in.		H_o	5.595			

Classification Yellowish Gray,Clay,stiff,w/calc nod&fe st sand pkts & blocky strusture

LL	89	PL	33	PI	56	G_s	

Remarks

Project Proposed Disposal area for Channel to Victoria Project

Area near Seadrift, Texas

Boring No. 92-53 | Sample No. 3

Depth El 4-6 ft | Date 8/11/92

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE

JOB NO. 14G599 DATE 8/11/92

PROJECT Proposed Disposal area for Channel to Victoria Project

AREA near Seadrift, Texas

BORING NO. 92-53 SAMPLE NO. 7 DEPTH 12-14 ft

SPECIMEN NO. 1

CLASSIFICATION
Yellowish Gray&Gray,Clay,Very stiff,w/calc nod&fe st sand pkts,slickensided

Tare No.	KL-35	Height	5.595 in.
Tare plus Wet Specimen	636.69 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	509.76 gm	Initial Area	6.290 sq in.
Water Weight	126.93 gm	Volume	35.194 cu in.
Tare Weight	42.40 gm	Volume of Solids	cu in.
Wet Specimen	1146.41 gm	Void Ratio	
Dry Specimen	901.56 gm	Saturation	%
Water Content	27.16 %	Dry Density	97.6 lb/cu ft
Specific Gravity of Solids			

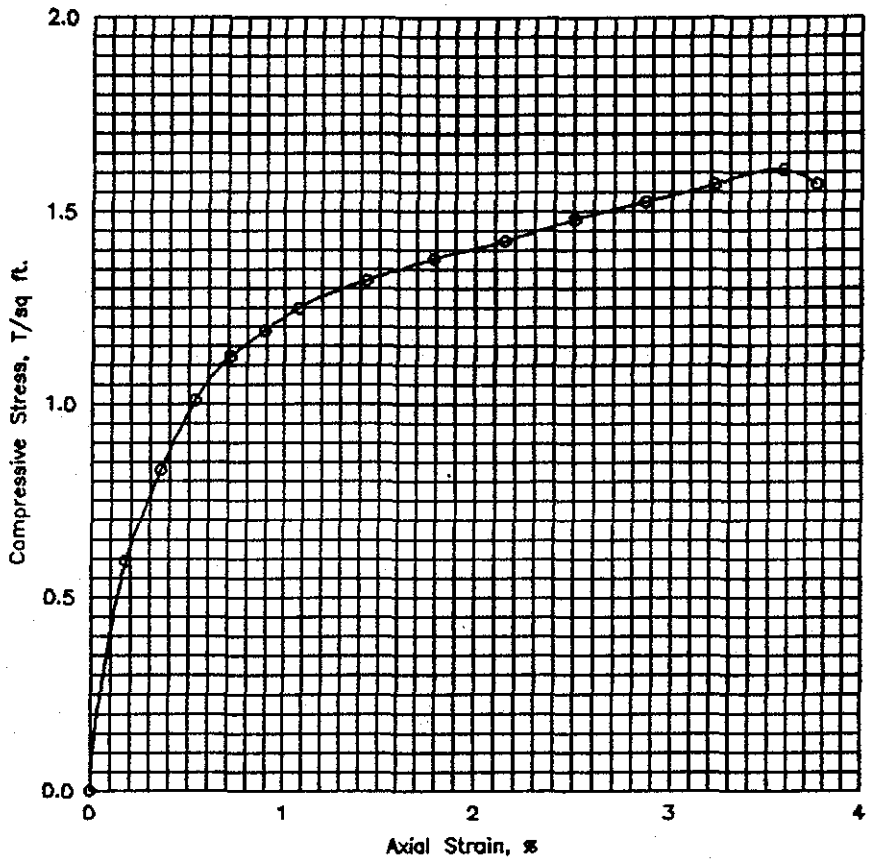
LL = 71 PL = 28 PI = 43

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	68.0	52.1	.002	6.30	.595
.4	20.	.020	95.0	72.8	.004	6.31	.830
.6	30.	.030	116.0	88.9	.005	6.32	1.012
.8	40.	.040	129.0	98.8	.007	6.34	1.123
1.0	50.	.050	137.0	104.9	.009	6.35	1.190
1.2	60.	.060	144.0	110.3	.011	6.36	1.249
1.5	80.	.080	153.0	117.2	.014	6.38	1.322
1.8	100.	.100	160.0	122.6	.018	6.40	1.378
2.1	120.	.120	166.0	127.2	.021	6.43	1.424
2.5	140.	.140	173.0	132.5	.025	6.45	1.479
2.9	160.	.160	179.0	137.1	.029	6.48	1.525
3.2	180.	.180	185.0	141.7	.032	6.50	1.570
3.6	200.	.200	190.0	145.5	.036	6.52	1.606
3.7	210.	.210	186.0	142.5	.038	6.54	1.570

Job No. 14G599

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	27.2 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	97.6			
Time to failure, min		t_f	3.57			
Unconfined compressive strength, T/sq ft		q_u	1.61			
Undrained shear strength, T/sq ft		S_u	.80			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Yellowish Gray&Gray,Clay,Very stiff,w/calc nod&fe st sand pkts,slickensided

LL	71	PL	28	PI	43	G_s	

Remarks

Project Proposed Disposal area for Channel to Victoria Project

Area near Seadrift, Texas

Boring No. 92-53 | Sample No. 7

Depth El 12-14 ft | Date 8/11/92

UNCONFINED COMPRESSION TEST REPORT

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PLATE XI-2

Geotest Engineering, Inc.

PLATE