13KM

U.S. ARMY CORPS OF ENGINEERS

BORING NO. 91-60 DATE: BEGIN 03-08-91 PAGE 1 / 1
JOB NO. 146.446 COMPLETE 03-08-91 Thin Walled Tube
PROJECT CHANNEL TO VICTORIA ☒ 3" ☐ 6"
LOCATION VICTORIA CHANNEL
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG F-36
GROUNDWATER: DEPTH 3 ft., ELEV. ____ ft., at end of Drilling
WEATHER SUNNY & CLEAR
DRILLER ROBERT TANKERSLEY LOGGER JOHN A. GENTRY

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1		GRAY	SAND			-W/ROOTS 0-2'
		2	1.0	GRAY	CLAY	Stiff		
		3	0.75			Medium Stiff		- W/SAND POCKETS 2'-6'
5		4	0.75					
	X	5	4/4/3	LIGHT GRAY	SAND	LOOSE		SILTY FINE
	X	6	1/1/1	GRAY	CLAY	SOFT		- W/ SAND LAYERS
10	X	7	1/1/1	GRAY	SAND	Very Loose	silty	~~SILTY~~ FINE
	X	8	1/1/1	"	"	"	"	"
15								
		9	2.5	LIGHT GRAY	CLAY	VERY STIFF		W/TAN W/SAND LAYERS 18'-24'
20		10	3.0	"	"	"		
		11	3.0	"	"	"		
25		12	3.0	"	"	"		
		13	3.0	"	"	"		
		14	3.5	"	"	"		- Slickensided below 28'
30								BOTTOM 91-60
35								

Project : Channel enlargement channel to Victoria, Victoria, Texas

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-60 El. 3.5'NGVD

Contract No. DACW64-91-D-0001 Delivery Order No.0009

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	0-1			Gray,Sand,Medium dense,Clayey,w/roots	SC	26.6											
2	1-2	1.50		Dark gray,Clay,Stiff,w/shell fragments and blocky structure	CH	41.5	79.8	113.0	73	27	100.0	100.0	99.9		99.3		.50
3	2-4	0.50		Yellowish gray,Clay,Medium stiff	CH	33.2											
4	4-6	1.50		Yellowish gray,Clay,Stiff,Silty	CL	27.7											
5	6.5-8		7	Yellowish gray,Sand,Loose,Silty,w/shell fragment	S M												
6	8.5-10		2	Dark gray,Clay,soft,Sandy,w/shell fragments	CL	31.6					100.0	99.9	99.3		55.8		
7	10.5-12		2	Dark gray,Sand,Very loose,Silty,w/shell fragment	S M												
8	13.5-15		2	Dark gray,Sand,Very loose,Silty,w/shell fragment	S M						99.1	98.9	97.7		24.5		
9	18-20	1.50		Yellowish brown,Clay,Stiff,w/sand pockets	CH	32.9	91.6	121.7									
10	20-22	3.25		Yellowish brown,Clay,Very stiff,w/sand seams and slickensided	CH	32.9											
11	22-24	2.25		Yellowish brown,Clay,Very stiff,w/sand seams and slickensided	CH	35.8											
12	24-26	3.00		Yellowish brown,Clay,Very stiff,w/sand seams and slickensided	CH	35.5											
13	26-28	3.00		Yellowish brown,Clay,Very stiff,w/sand seams and slickensided	CH	37.1	85.0	116.6	87	31	100.0	100.0	100.0		100.0		
14	28-30	3.00		Yellowish brown,Clay,Very stiff,Slickensided	CH	30.1											

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. 14G459 DATE 5/1/91

PROJECT CHANNEL ENLARGEMENT, CHANNEL TO VICTORIA, TEXAS

BORING NO. 91-60 SAMPLE NO. 2 DEPTH 1-2 ft

SPECIMEN NO. 1

CLASSIFICATION
Dark gray, Clay, Stiff, w/ shell fragments & blocky structures

Tare No.	P-28	Height	5.595 in.
Tare plus Wet Specimen	615.87 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	447.77 gm	Initial Area	6.290 sq in.
Water Weight	168.10 gm	Volume	35.194 cu in.
Tare Weight	42.68 gm	Volume of Solids	cu in.
Wet Specimen	1043.69 gm	Void Ratio	
Dry Specimen	737.61 gm	Saturation	%
Water Content	41.50 %	Dry Density	79.8 lb/cu ft

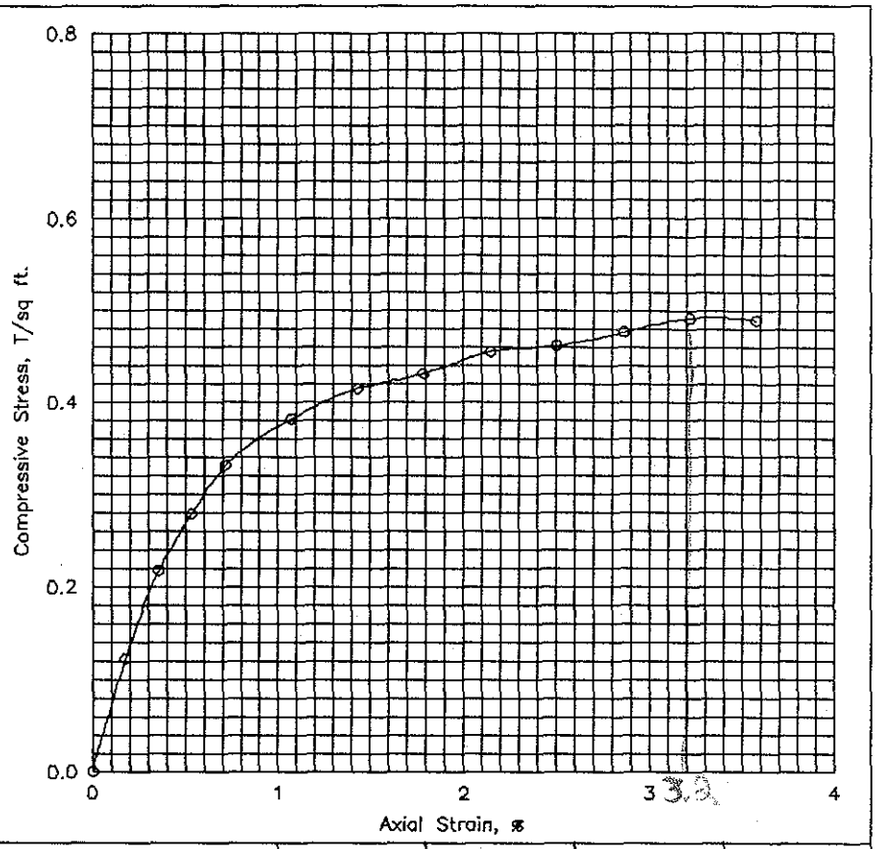
Specific Gravity of Solids
LL = 73 PL = 27 PI = 46

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	14.0	10.7	.002	6.30	.123
.5	20.	.020	25.0	19.1	.004	6.31	.218
.7	30.	.030	32.0	24.5	.005	6.32	.279
.9	40.	.040	38.0	29.1	.007	6.34	.331
1.2	60.	.060	44.0	33.7	.011	6.36	.382
1.6	80.	.080	48.0	36.8	.014	6.38	.415
1.9	100.	.100	50.0	38.3	.018	6.40	.431
2.2	120.	.120	53.0	40.6	.021	6.43	.455
2.5	140.	.140	54.0	41.4	.025	6.45	.462
2.8	160.	.160	56.0	42.9	.029	6.48	.477
3.2	180.	.180	58.0	44.4	.032	6.50	.492
3.5	200.	.200	58.0	44.4	.036	6.52	.490

Job No. 146459

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	41.5 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	79.8			
Time to failure, min		t_f	3.18			
Unconfined compressive strength, T/sq ft		q_u	.49			
Undrained shear strength, T/sq ft		S_u	.25			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Dark gray, Clay, Stiff, w/ shell fragments & blocky structures

LL	PL	PI	G_s
73	27	46	

Remarks

Project CHANNEL ENLARGEMENT, CHANNEL TO VICTORIA

Area Victoria, Texas

Boring No. 91-60 | Sample No. 2

Depth 1-2 ft | Date 5/1/91
El

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 3659
1 JUN 65

PLATE XI-2