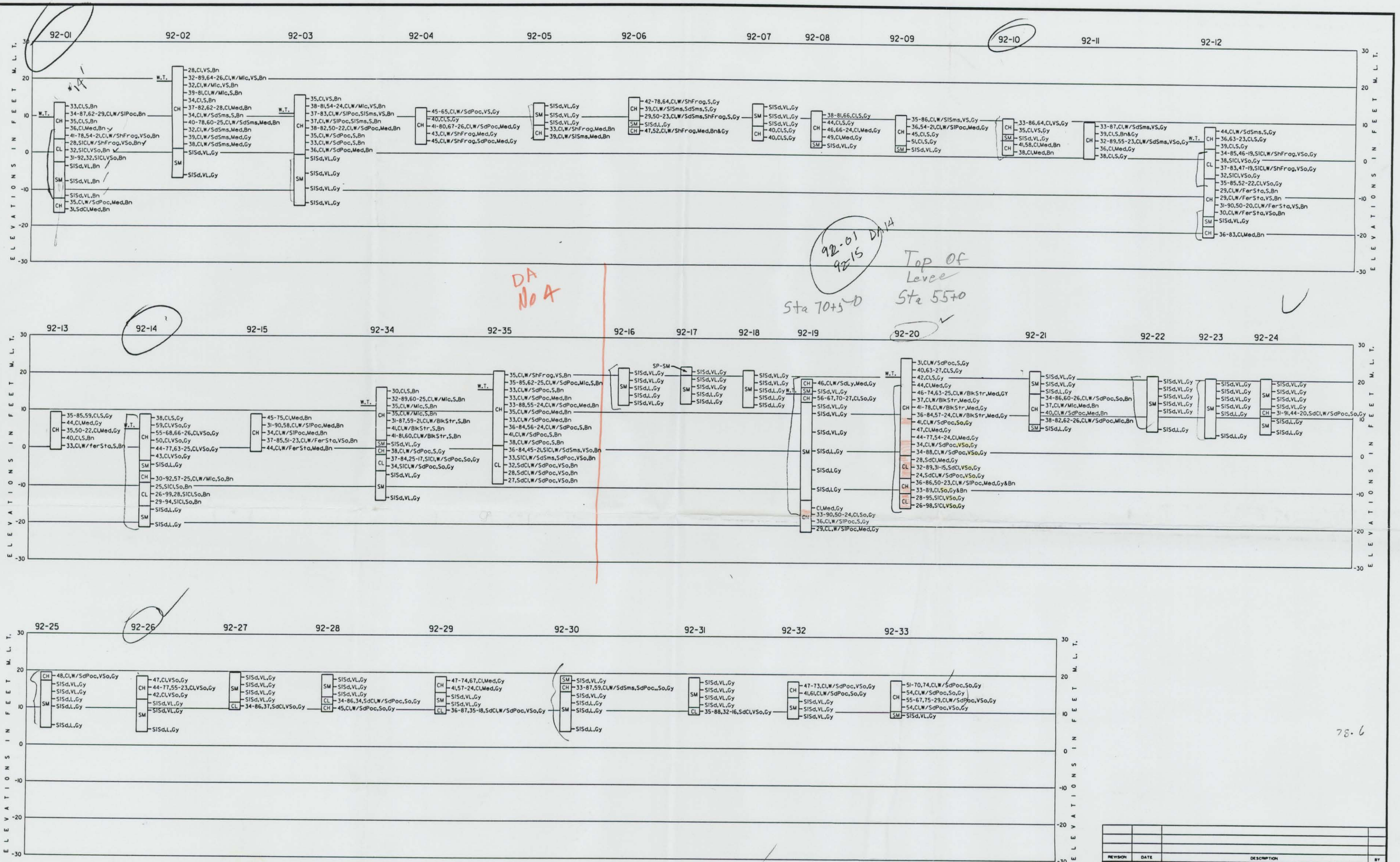




NOTE: SEE DRAWING NUMBER F-6 FOR SOILS NOTES.

REVISION		DATE	DESCRIPTION	BY
OFFICE OF THE DISTRICT ENGINEER U.S. ARMY ENGINEER DISTRICT, GALVESTON CORPS OF ENGINEERS GALVESTON, TEXAS				
DRAWN BY: P.B.S.		Brazos Island Harbor, Texas Brownsville Channel Dredging Inshore Reach No. 1 DISPOSAL AREAS Nos. 2 & 4 BORING LOGS		
CHECKED BY: J.T.F.		DATE: MAY 1992		
SUBMITTED BY: [Signature]		APPROVED BY: [Signature]		
Prepared under the direction of Brink P. Miller, Col., C.E., District Engineer		SCALE: AS SHOWN SPEC. DATE: DRAWING NUMBER F-7 SHEET 14 OF 17 FILE NO. RID 901-240		

Project : Disposal Areas Nos.2 and 4 for Brownsville Ship Channel
Brownsville, Texas
Contract No. DACW64-92-D-0001 Delivery order No. 0008

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 92-21

EI 21.9

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)	LL (%)	P L (%)	Mechanical Analysis % Passing					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0.5-2		1/1 - 12"	Gray,Sand,Very loose,Silty	S M												
2	2.5-4		2	Gray,Sand,Very loose,Silty	S M						100.0	99.9	99.4	79.4	24.1		
3	4.5-6		4	Gray,Sand,Loose,Silty	S M												
4	6-8	0.25		Brown,Clay,Soft,w/sand pockets	CH	34.0	86.4	115.8	60	26	100.0	99.6	99.4	98.9	98.5	0.12	0.21
5	8-10	0.50		Brown,Clay,Medium stiff,w/mica	CH	36.8										0.25	
6	10-12	0.50		Brown,Clay,Medium stiff,w/sand pockets	CH	40.4										0.25	
7	12-14	0.25		Brown,Clay,Soft,w/Sand pockets and mica	CH	38.0	82.1	113.3	62	26						0.12	0.26
8	14.5-16		5	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. 14G538

DATE 4/7/92

PROJECT Disposal Areas Nos.2 and 4 for Brownsvill Ship Channel,Brown

LOGGING NO. 92-21

SAMPLE NO. 4

DEPTH 6-8 ft

SPECIMEN NO. 1

CLASSIFICATION

Brown,Clay,Soft,w/sand pockets

Tare No.	KL-20	Height	5.595 in.
Tare plus Wet Specimen	321.87 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	250.92 gm	Initial Area	6.290 sq in.
Water Weight	70.95 gm	Volume	35.194 cu in.
Tare Weight	42.47 gm	Volume of Solids	cu in.
Wet Specimen	1069.74 gm	Void Ratio	
Dry Specimen	798.09 gm	Saturation	%
Water Content	34.04 %	Dry Density	86.4 lb/cu ft
Specific Gravity of Solids			
LL = 60	PL = 26	PI = 34	

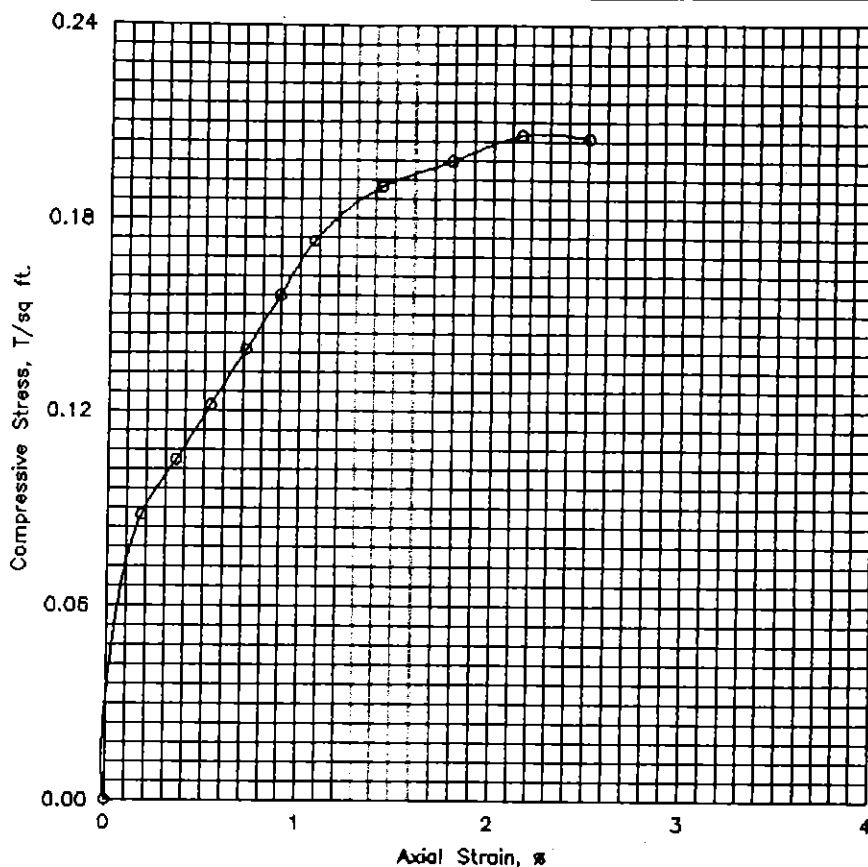
Proving Ring No. 10170

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	10.0	7.7	.002	6.30	.088
.3	20.	.020	12.0	9.2	.004	6.31	.105
.5	30.	.030	14.0	10.7	.005	6.32	.122
.7	40.	.040	16.0	12.3	.007	6.34	.139
.9	50.	.050	18.0	13.8	.009	6.35	.156
1.0	60.	.060	20.0	15.3	.011	6.36	.173
1.3	80.	.080	22.0	16.9	.014	6.38	.190
1.6	100.	.100	23.0	17.6	.018	6.40	.198
1.9	120.	.120	24.0	18.4	.021	6.43	.206
2.2	140.	.140	24.0	18.4	.025	6.45	.205

Job No. 14G538

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	34.0 %		
	Void ratio	e_0			
	Saturation	S_0	%		
	Dry density, lb/cu ft	γ_d	86.4		
Time to failure, min		t_f	1.88		
Unconfined compressive strength, T/sq ft		q_u	.21		
Undrained shear strength, T/sq ft		S_u	.10		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Brown, Clay, Soft, w/sand pockets					
LL	60	PL	26	PI	34
				G_o	
Remarks		Project Disposal Areas Nos. 2 and 4 for Brownsville			
		Area Ship Channel, Brownsville, Texas			
		Boring No. 92-21		Sample No. 4	
		Depth 6-8 ft		Date 4/7/92	
		UNCONFINED COMPRESSION TEST REPORT			

JOB NO. 14G538

DATE 4/7/92

PROJECT Disposal Areas Nos.2 and 4 for Brownsvill Ship Channel, Brown

CORING NO. 92-21

SAMPLE NO. 7

DEPTH 12-14 ft

SPECIMEN NO. 1

CLASSIFICATION

Brown, Clay, Soft, w/sand pockets and mica

Tare No.	KL-21	Height	5.595 in.
Tare plus Wet Specimen	605.56 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	450.43 gm	Initial Area	6.290 sq in.
Water Weight	155.13 gm	Volume	35.194 cu in.
Tare Weight	42.69 gm	Volume of Solids	cu in.
Wet Specimen	1047.34 gm	Void Ratio	
Dry Specimen	758.69 gm	Saturation	%
Water Content	38.05 %	Dry Density	82.1 lb/cu ft
Specific Gravity of Solids			
LL = 62	PL = 26	PI = 36	

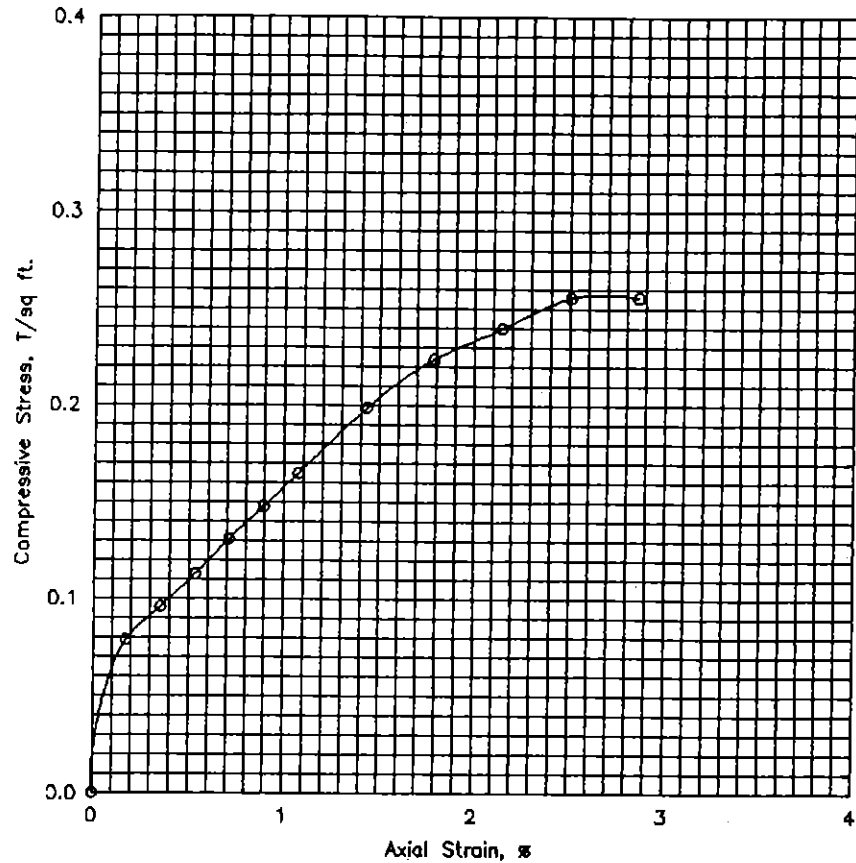
Proving Ring No. 10170

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	9.0	6.9	.002	6.30	.079
.4	20.	.020	11.0	8.4	.004	6.31	.096
.6	30.	.030	13.0	10.0	.005	6.32	.113
.7	40.	.040	15.0	11.5	.007	6.34	.131
.9	50.	.050	17.0	13.0	.009	6.35	.148
1.0	60.	.060	19.0	14.6	.011	6.36	.165
1.4	80.	.080	23.0	17.6	.014	6.38	.199
1.7	100.	.100	26.0	19.9	.018	6.40	.224
2.0	120.	.120	28.0	21.4	.021	6.43	.240
2.3	140.	.140	30.0	23.0	.025	6.45	.256
2.6	160.	.160	30.0	23.0	.029	6.48	.256

Job No. 140538

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	38.0 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_s	82.1		
Time to failure, min		t_f	2.32		
Unconfined compressive strength, T/sq ft		q_u	.26		
Undrained shear strength, T/sq ft		S_u	.13		
Sensitivity ratio		S_r			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		

Classification Brown, Clay, Soft, w/sand pockets and mica

LL	62	PL	26	PI	36	G_o
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Remarks	Project Disposal Areas Nos. 2 and 4 for Brownsville	
	Area Ship Channel, Brownsville, Texas	
	Boring No. 92-21	Sample No. 7
	Depth 12-14 ft El	Date 4/7/92
	UNCONFINED COMPRESSION TEST REPORT	

DATE 4/28/92 INITIALS LAA JC

SUMMARY OF QUESTIONABLE
ERRONEOUS OR MISSING DATA
FOR

CONTRACT NO. DACW64-92-D-0001

PROJECT: LABORATORY TESTING OF SOIL SAMPLES, DISPOSAL AREA NOS. 2 & 4 BROWNSVILLE SHIP CHANNEL, DELIVERY ORDER 0008

BORING NO.	SAMPLE NO.	COMMENTS ON TEST RESULTS
92-08	3	Pocket penetrometer results (0.75) indicate soil is medium torvane results (.75 doubled) indicates stiff.
92-12	1	Torvane performed not ordered
	2, 3	Pocket penetrometer results (1.00) indicate soil is stiff torvane results (.45 doubled) indicate medium
	14	Unit dry weight performed, not ordered
92-20	5 & 8	Pocket penetrometer results (0.50) indicate soil is medium torvane results (.25 doubled) indicate medium, unconfined results indicate soft.
	7	Pocket penetrometer results (0.50) indicate soil is medium torvane results (.25 doubled) indicate medium, unconfined results indicate very soft.
	18-20	Unit dry weight performed, not ordered
92-21	4	Pocket penetrometer results (.25) indicate soil is soft, unconfined results (.21) torvane results (.12 doubled) indicate very soft
92-24	5	Pocket penetrometer results (.25) indicate soil is soft, torvane results (0.24), unconfined results (.14) indicates very soft.