

Job No. 0401-2906 Completion Date 5/19/90 Time _____ Field Log of Boring 90-89

Elevation _____ Location DISPOSAL Area 7 Driller R. AGUILAR

Lab. Tests	Soil Sample			Depth (ft)	Sample	Blows	Torvane Penet.	Logger <u>W. CUTSHALL</u>	
	No.	Depth	Type					Comments	Description of Material
									SILTY CLAY, stiff, light brown
	1	3-5	Q				1.0		
	2	5-7	Q	5			3.5		- very stiff, 5' to 7'
	3	7-9	Q				1.0		
	4	9-11	Q	10			1.75		CLAY, stiff, brown
	5	11-13	J						- tan below 11' (12.5')
	6	13.5-15	J	15	X	4-4-4			SILTY SAND, loose, gray, fine (14')
									CLAYEY SILT, brown
	7	18-20	Q	20			2.25		- very stiff light gray silty clay below 18' (19.5')
	8	20-22	Q						SILTY SAND, medium-dense, gray, fine
	9	23.5-25	J	25	X	4-8-8			- light gray to 20' (25')

Remarks: Casing set to 5-ft depth

Boring Sealed? w/cuttings

Dry Auger _____ to _____ ft

Wet Rotary 0 to 25 ft

Water First Noticed _____ ft

Depth to Water 8.1' Caved at _____ Date _____ Time _____ ;

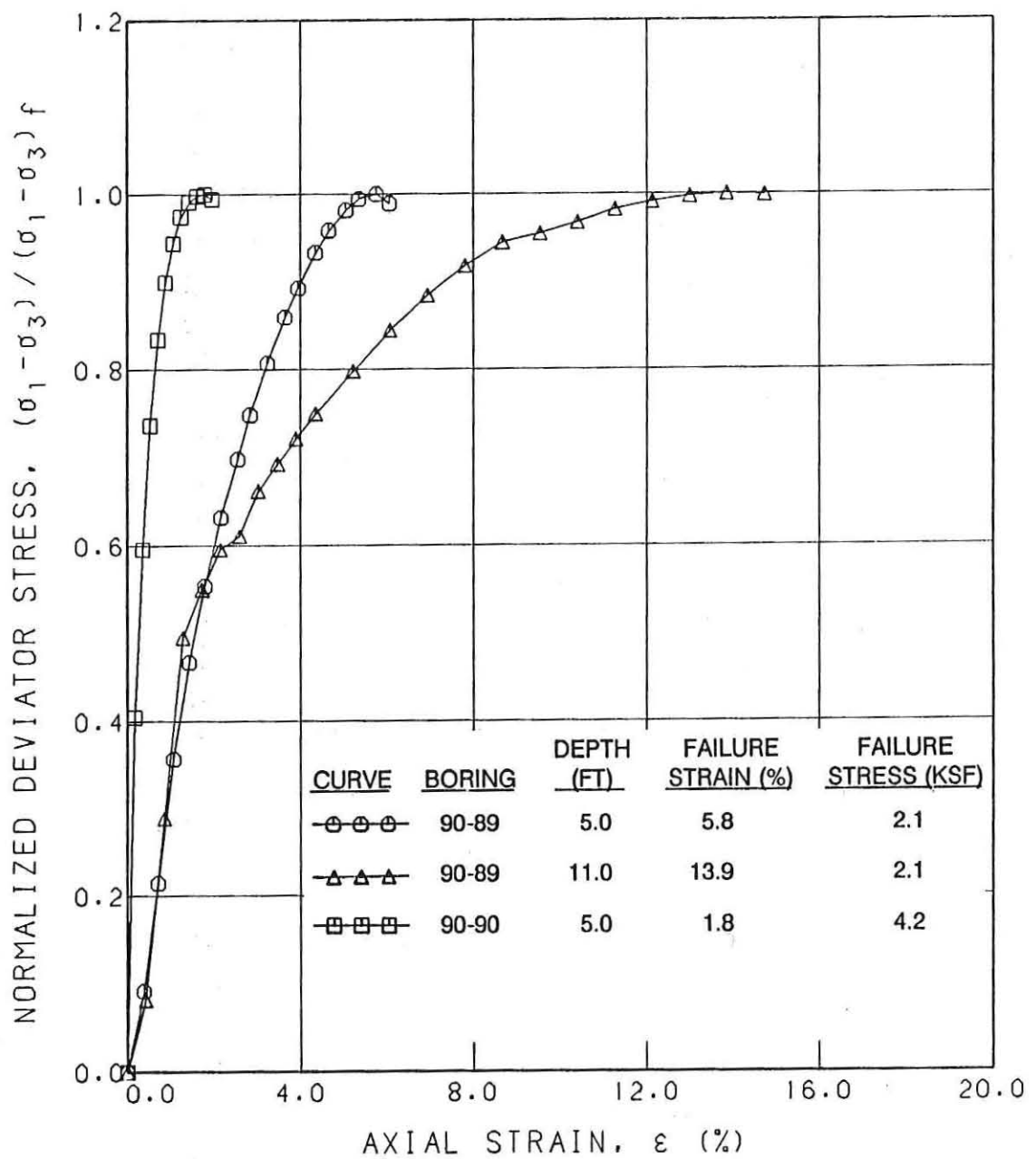
SUMMARY OF TEST RESULTS
Galveston District, Corps of Engineers
Delivery Order No. 0016
Brazos Island Harbor
Brownsville Ship Channel

Top El. 12.5

Boring Number	Sample Number	Sample Depth (ft)	Visual Classification	USCS	MC (%)	UDW (pcf)	LL	PL	PI	Gradation, % Passing Sieve No. 4 10 40 200	UNC Su (ksf)	TV Su (ksf)
90-88	1Q	3-5	Firm brown CLAY	CH	30	87	71	22		100 99 97	0.7	0.6
90-88	2Q	5-7	Very stiff dark brown CLAY w/ calcareous deps	CH	29							
90-88	3Q	7-9	Stiff dark brown CLAY w/ ferrous nodules	CH	35							
90-88	4Q	9-11	Firm brown CLAY w/ ferrous stains	CH	37	82	67	22		100 99 98 97	0.7	0.5
90-88	5Q	11-13	Firm red and brown CLAY w/ ferrous nods	CH	39							
90-88	6Q	13-15	Red CLAY w/ ferrous nods & calcareous deps	CH	35							
90-88	7Q	15-17	Red and gray CLAY sls w/ ferrous stns & silt pkcts	CL	35	83	44					
90-88	8Q	17-19	Very stiff red CLAY w/ silt parts & ferrous nods	CH	29							
90-88	9Q	19-21	Very stiff red CLAY w/ vert sacl sms & pkcts	CH	35							
90-88	10Q	21-23	Stiff brown CLAY	CH	32	91	70	30		100 99 98	1.7	
90-88	11J	23-25	Olive gray SILTY CLAY	CL	31					100 99 96		
90-88	12J	25-26.5	Olive gray fine SILTY SAND	SM								
90-88	13J	30-31.5	Greenish gray CLAYEY SAND	SC	18					100 78 30		
90-88	14J	35-36.5	Gray and red SANDY CLAY w/ calcareous deps	CL	26							
Top El. 11.3												
90-89	1Q	3-5	Stiff brown SANDY CLAY	CL	21	99	38	17		100 99 83	1.0	0.9
90-89	2Q	5-7	Stiff red CLAY w/ si pkcts, calc nods & fe stns	CH	25							
90-89	3Q	7-9	Stiff red CLAY w/ si cl sms, fe & calc nods	CH	24							
90-89	4Q	9-11	Stiff red CLAY w/ silt pkcts & ferrous stns	CH	29	95	41	17		100 99 99 90	1.1	0.6
90-89	5J	11-13	SANDY CLAY w/ clay pockets	CL	27							
90-89	6	13.5-15	Olive gray SANDY CLAY w/ clay sms & sand pkcts	CL	30					100 92 65		
90-89	7	18-20	Very stiff red SILTY CLAY w/ fe stns, calc deps & si pckt	CL	29		44					
90-89	8	20-22	Brown SANDY SILT	ML	21					100 98 57		
90-89	9	23.5-25	Olive gray SAND w/ clay pockets	SP	26							

Avg Stiff

$$\begin{aligned} \text{Average for Stiff} &= \frac{1.7 + 1.0}{2} = 1.35 \text{ ksf} \\ \text{Firm} &= \text{---} = 700 \\ \text{v/s} &= \text{---} = 1800 \text{ (assumed)} \end{aligned}$$



STRESS-STRAIN CURVES
UNCONFINED COMPRESSION TEST