

Job No. 0401-2906 Completion Date 5/10/90 Time _____ Field Log of Boring 90-74

Elevation _____ Location DISPOSAL AREA No. 2 Driller D. Findley

Lab. Tests	Soil Sample			Depth (ft)	Sample	Blows	Torvane Penet.	Logger <u>K. Bowen</u> 1 of 2	
	No.	Depth	Type					Comments	Description of Material
									Sand
									(8.0')
	1	3.5-5	J	5	X				
	2	8-10	Q	10		1.5			Sandy clay, stiff
		10-12						No recovery	(10.0')
									clayey sand,
									(12')
	3	13.5-15	J	15	X	1-2-2			Sandy clay, Firm
									(18.0')
	4	18.5-20	J	20	X	weight of hammer			clayey sand, Very loose
									- loose below 23'
	5	23.5-25	J	25	X	6-4-5			
	6	28.5-30	J	30	X	1-1-4			(30.0')
	7	30-32	Q			1.25			Sandy clay, stiff
	8	32-34	Q			1.0			
	9	34-36	Q	36		1.25			(36.0')
									clayey sand, loose
	10	38.5-40	J	40	X	2-4-4			- cont'd -

Remarks:

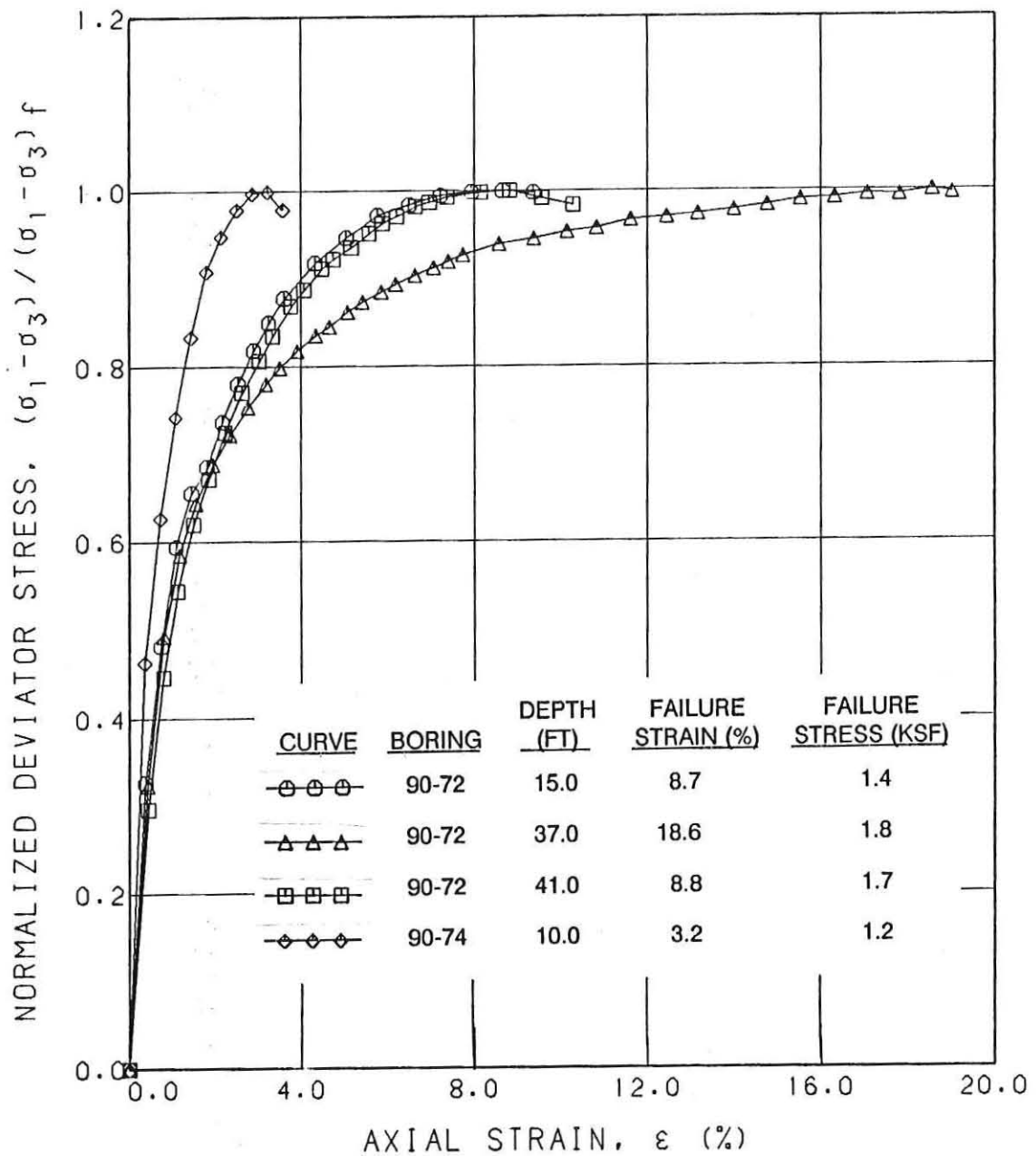
Boring Sealed? w/cuttings
 Dry Auger _____ to _____ ft
 Wet Rotary 0 to 40 ft
 Water First Noticed _____ ft

Depth to Water 6.3' Caved at _____ Date 5/14/90 Time _____ ;

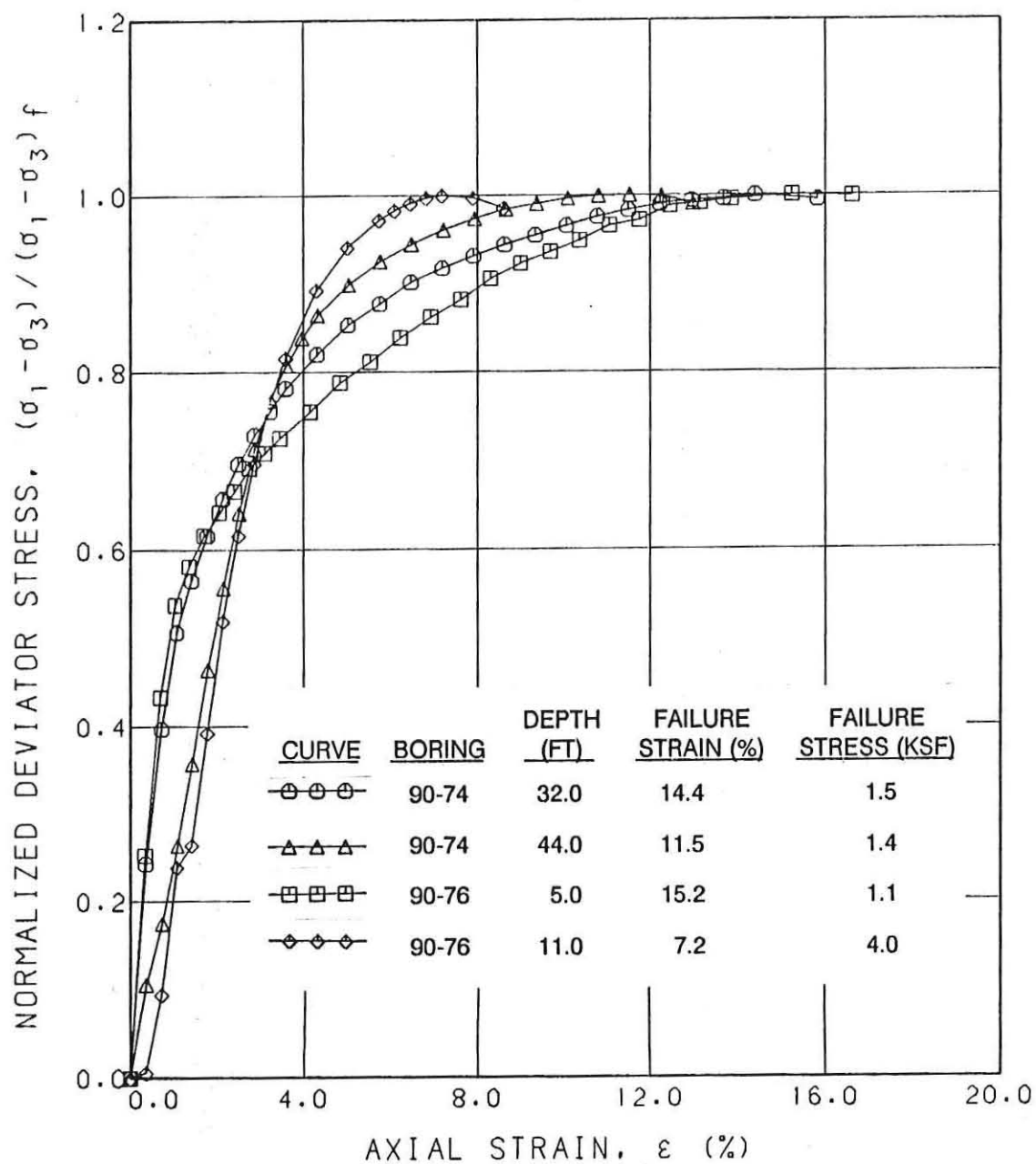
SUMMARY OF TEST RESULTS
Galveston District, Corps of Engineers
Delivery Order No. 0016
Brazos Island Harbor
Brownsville Ship Channel

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)
1.5.6															
90-74	1J	3.5-5	Brown CLAYEY SAND	SC											
90-74	2Q	8-10	Firm brown CLAY w/ num sand pockets	CH	57	73	55	23			100	97	69	0.6	0.3
90-74	3J	13.5-15	Brown CLAYEY SAND w/ clay pockets	SC	36						100	89	37		
90-74	4J	18.5-20	Gray SANDY CLAY w/ cl pkcts & shell frags	CL	30										
90-74	5J	23.5-25	Brown SANDY SILT	ML	24						100	98	53		
90-74	6J	28.5-30	Brown CLAY w/ silt pockets	CH											
90-74	7Q	30-32	Firm brown CLAY w/ silt pockets	CH	33	86	59	28				100	99	0.8	
90-74	8Q	32-34	Stiff brown CLAY w/ shell frag, si & sa pkcts	CH	34										
90-74	9	34-36	Brown SANDY SILT w/ cl & si cl sms	ML	77										
90-74	10J	38.5-40	Brown CLAY	CH	46		50				100	98	96		
90-74	11Q	40-42	Firm brown CLAY w/ si pkcts, sasi sms & fe stns	CH	26										
90-74	12Q	42-44	Firm brown CLAY w/ silt seams	CL	34	90	48	26			100	96		0.7	
90-74	13Q	44-46	Brown CLAY w/ si cl & sasi seams	CH	24										
90-74	14Q	46-48	Brown CLAY w/ silt seams	CH	24										

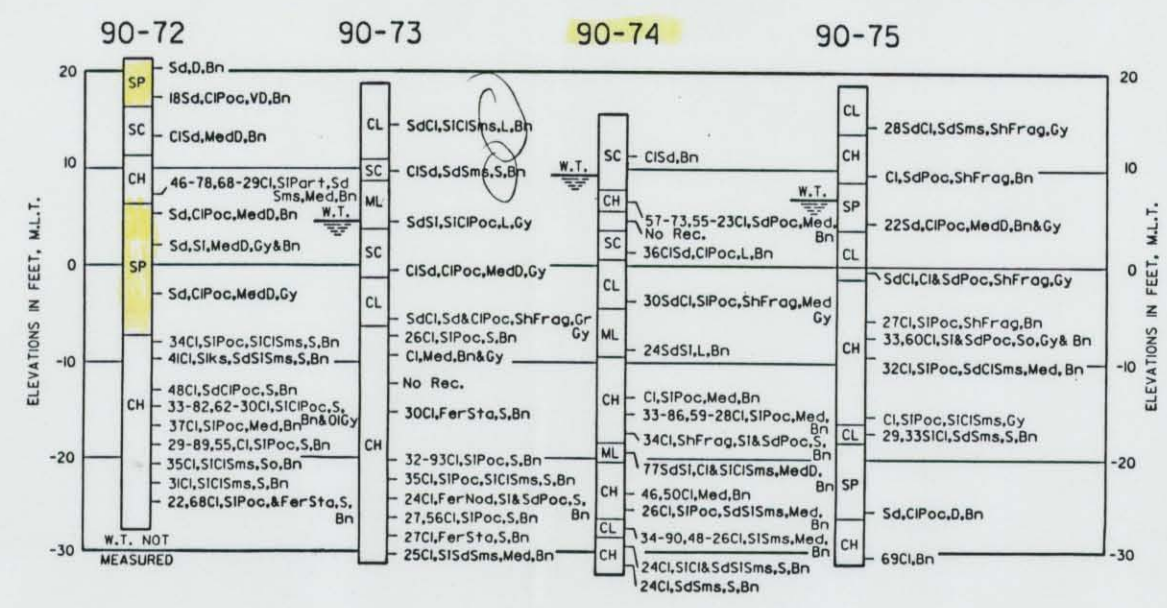
E1.
15.6



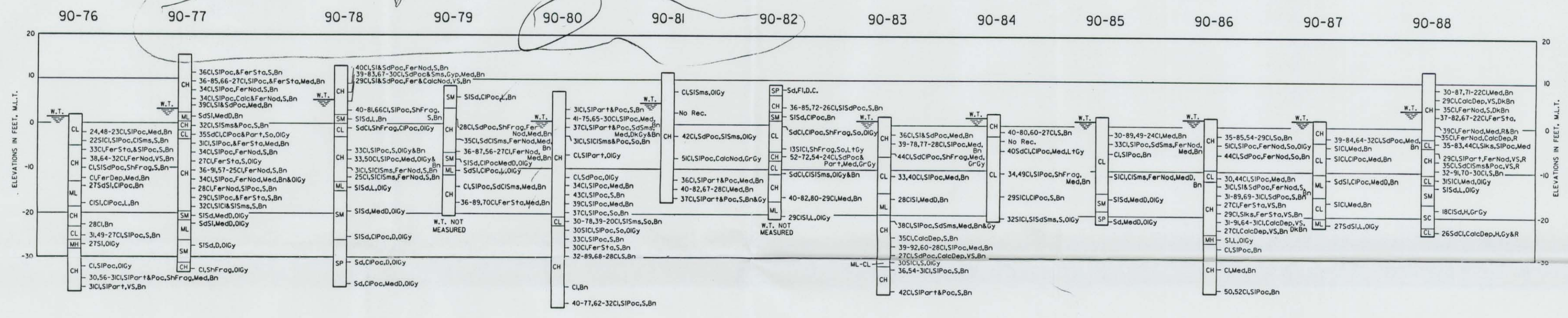
STRESS-STRAIN CURVES
UNCONFINED COMPRESSION TEST



STRESS-STRAIN CURVES
UNCONFINED COMPRESSION TEST



DISPOSAL AREA No. 2



DISPOSAL AREA No. 4

NOTES:

1. SOILS HAVE BEEN CLASSIFIED IN ACCORDANCE WITH MILITARY STANDARD 698 "UNIFIED SOIL CLASSIFICATION SYSTEM FOR ROADS, AIRFIELDS, EMBANKMENTS AND FOUNDATIONS." CONSISTENCY OF SOILS SUCH AS SOFT, MEDIUM, HARD, LOOSE, DENSE, ETC., ARE RELATIVE TERMS BASED ON ESTIMATED UNDISTURBED SHEAR STRENGTH OF THE MATERIAL AS DETERMINED BY VISUAL CLASSIFICATION, POCKET PENETROMETER TESTS AND PENETRATION RESISTANCE DURING SAMPLING.
2. FIGURES TO THE RIGHT OF BORING LOGS ARE WATER CONTENTS IN PERCENT OF THE DRY WEIGHT, DRY DENSITY, LIQUID LIMIT, PLASTIC LIMIT, AND BAR LINEAR SHRINKAGE. (MC-UOW), (LL-PL), (B.L.S.)
3. BORINGS WERE DRILLED USING WET ROTARY DRILLING TECHNIQUES AND UNDISTURBED SAMPLES WERE RECOVERED WITH A 3-INCH DIAMETER THIN WALL SAMPLER WHERE COHESIVE MATERIALS WERE ENCOUNTERED. WHERE COHESIONLESS MATERIALS WERE ENCOUNTERED, DISTURBED SAMPLES WERE TAKEN WITH A SPLIT SPOON SAMPLER DURING PERFORMANCE OF STANDARD PENETRATION TESTING.
4. WATER TABLE LEVELS SHOWN ON BORING LOGS WERE DETERMINED AFTER DRILLING BORINGS BY MEASURING THE TOP OF FLUID LEVELS IN THE BORINGS. INASMUCH AS WET ROTARY DRILLING TECHNIQUES AND DRILLING MUD WERE USED TO DRILL THE HOLES, THE LEVEL OF DRILLING FLUIDS IN THE BORE HOLES MAY NOT HAVE STABILIZED TO THE LEVEL OF THE ACTUAL WATER TABLE. ADDITIONALLY, WATER TABLES IN THE FIELD ARE LIKELY TO FLUCTUATE DEPENDING ON WEATHER CONDITIONS. THEREFORE, SOME VARIATION SHOULD BE ANTICIPATED BETWEEN WATER TABLES INDICATED AND WATER TABLES ENCOUNTERED IN THE FIELD.

VISUAL CLASSIFICATIONS

Bn Brownish	Gr Green(ish)	R Reddish	Sta Stains)
Cdc Colorous	Gy Gray(ish)	Rec Recovery	Y Very
Cl Clay(ey)	Gyp Gypsum	S Stiff	W.T. Water Table
D Dense	H Hard	Sd Sand(ly)	
D.C. Driller's Classification	L Loose	Sh Shale	
Dep Deposit(ion)	Lt Light	Sh Shelly	
Dk Dark	Med Medium	Sl Silty	
Fer Ferrous	Nod Nodules	Sls Silty	
Fl Fine(ist)	Ol Olive	Sks Sicken(ish)	
Frag Fragmental	Port Partic(les)	Sms Sems	
	Poc Pocket(ial)	So Soft	

LABORATORY CLASSIFICATION

SP POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES.
 SM SILTY SANDS, SAND-SILT MIXTURES.
 SC CLAYEY SANDS, SAND-CLAY MIXTURES.
 ML INORGANIC SILTS AND VERY FINE SANDS, WITH SLIGHT PLASTICITY.
 CL INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, LEAN CLAYS.
 MH INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS.
 CH INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.

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.		SUBMITTED BY David Campbell DIST. ENGINEER	
APPROVED BY David Campbell DIST. ENGINEER		DATE MAY 1992	
Prepared under the direction of Brink P. Miller, Col., C.E. District Engineer			
SCALE AS SHOWN		SPEC. DATE	
DRAWING NUMBER F-6		SHEET 13 OF 17 FILE NO. RIO 901-204	