

DRILLING LOG		DIVISION S/W		INSTALLATION Galveston District		SHEET 1 OF 2 SHEETS	
1. PROJECT Naches River Solid water Pipeline				10. SIZE AND TYPE OF BIT.			
2. LOCATION (Coordinates or Station) Requiem Texas				11. DATUM FOR ELEVATION SHOWN (TBM or MSL)			
3. DRILLING AGENCY V. S. CEC				12. MANUFACTURER'S DESIGNATION OF DRILL PACEL BULLY			
4. HOLE NO. (As shown on drawing title and file number) 82-11				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 11 Jan	
5. NAME OF DRILLER P. Ann				14. TOTAL NUMBER CORE BOXES		UNDISTURBED 5-Cut	
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER		16. DATE HOLE 23 Mar 82	
7. THICKNESS OF OVERBURDEN				17. ELEVATION TOP OF HOLE		COMPLETED 24 Mar 82	
8. DEPTH DRILLED INTO ROCK				18. TOTAL CORE RECOVERY FOR BORING		%	
9. TOTAL DEPTH OF HOLE 55.0				19. SIGNATURE OF INSPECTOR R. S. Miller			

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			0.0 to 5.0			
	2.5	3"st	GR tan sand (CH) soft	125	1-C	
	5.0		5.0 to 7.5	125	2-C	
	7.5		GR. sand (CL) v/soft		3-I	
	10.0		GR. sand w/SP		4-5	
	12.5	SP, t SP, m				10.5 to 11.0 6 BL 11.0 to 11.5 8 BL
	15.0				5-J	
	17.5					15.5 to 16.0 9 16.0 to 16.5 18 BL
	20.0				6-J	
	22.5					20.5 to 21.0 12 21.0 to 21.5 20 BL
	25.0				7-I	
	27.5					25.0 to 25.5 13 25.5 to 26.0 24 BL
	30.0				8-J	
	32.5					30.0 to 30.5 11 30.5 to 31.0 22 BL
	35.0		35.0 to 44.5		9-J	
	37.5	3"st	GR. Latex sand cl w/DRG max soft		10-J	
	40.0			125	11-C	
	42.5		44.5 to		12-J	
	45.0		GR. CL (CH) v/stiff			
	47.5			3.00	13-C	
	50.0			3.00	14-C	

Results of Tests of Foundation Material

Boring No.	Field No.	SWD No.	Depth ft.	Mechanical Analysis			Atterberg Limits			Water Content %	Dry Density lb/cu ft	Test		Description
				Gr	Sa	Fi	LL	PL	PI			Type	Plate	
82-8	S-3 (jar)	A-10 671	10.0-15.0	1	82	17	NP	NP	NP	45.3				SM SAND, silty, gray, wet.
82-9	S-1 (jar)	A-10 672	0.0- 5.0	0	20	80	64	17	47	55.4				CH CLAY, sandy, gray, very moist.
	S-2 (jar)	A-10 673	5.0-10.0							27.5				SC SAND, clayey, gray, very moist, some small roots.
	S-3 (jar)	A-10 674	10.0-15.0							28.2				SC SAND, clayey, gray, very moist.
82-10	S-1 (jar)	A-10 675	0.0- 5.0							51.9				CH CLAY, sandy, gray, very moist, some small roots.
	S-2 (jar)	A-10 676	5.0-10.0							29.3				SC SAND, clayey, gray, very moist.
	S-3 (jar)	A-10 677	10.0-15.0	0	83	17	NP	NP	NP	27.3				SM SAND, silty, gray, very moist, organic.
82-11	S-1 (ctn)	A-10 678	0.0- 2.5 *0.8							47.1	75			CL CLAY, gray, very moist, soft, organic, some roots.
	S-2 (ctn)	A-10 679	2.5- 5.0 *0.8	0	23	77	68	21	47	36.8	82	UC	47	CH CLAY, sandy, grayish brown, moist, soft.
	S-3 (jar)	A-10 680	5.0- 7.5							26.9				SM SAND, silty, gray, moist.
	S-4 (jar)	A-10 681	7.5-10.0							27.4				SP SAND, gray, wet.

*Actual length of sample in feet.

Results of Tests of Foundation Material

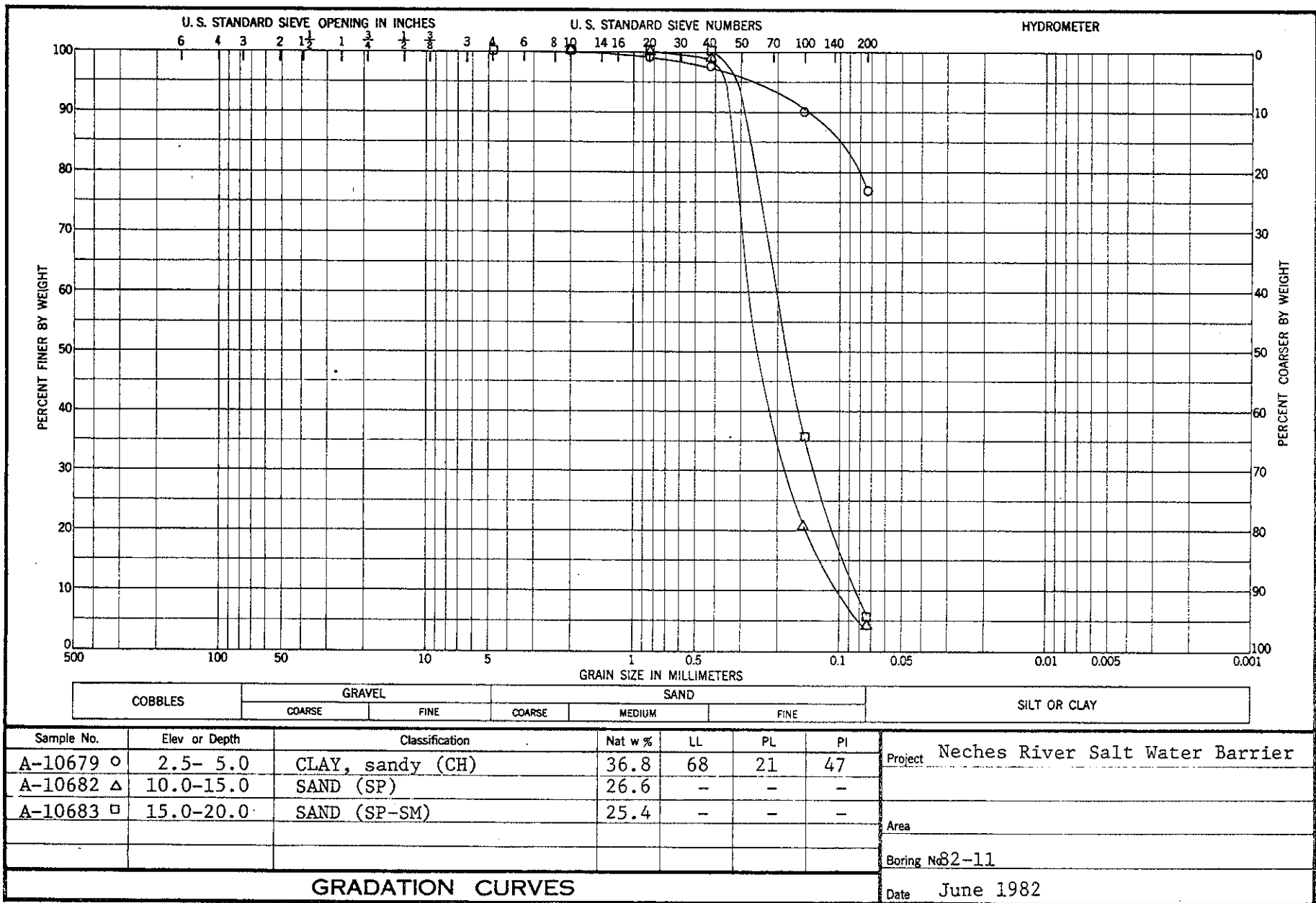
Boring No.	Field No.	SWD No.	Depth ft.	Mechanical Analysis			Atterberg Limits			Water Content %	Dry Density lb/cu ft	Test		Description
				Gr	Sa	Fi	LL	PL	PI			Type	Plate	
82-11	S-5 (jar)	A-10 682	10.0-15.0	0	96	4				26.6				SP SAND, gray, very moist.
	S-6 (jar)	A-10 683	15.0-20.0	0	94	6				25.4				SP-SM SAND, gray, wet.
	S-7 (jar)	A-10 684	20.0-25.0							25.5				SP-SM SAND, gray, very moist.
	S-8 (jar)	A-10 685	25.0-30.0							25.4				SP-SM SAND, gray, very moist.
	S-9 (jar)	A-10 686	30.0-35.0	0	92	8				25.7				SP-SM SAND, gray, wet.
	S-10 (jar)	A-10 687	35.0-37.5	0	64	36				46.3				SC SAND, clayey, gray, wet.
	S-11 (ctn)	A-10 688	37.5-40.0 *0.6	0	39	61	54	15	39	38.1	72	UC	48	CH CLAY, sandy, gray, very moist, soft, organic, very sandy from 37.9' - 38.1'.
	S-12 (jar)	A-10 689	40.0-44.5							24.2				SC SAND, clayey, gray, very moist, organic, some decayed wood.
	S-13 (ctn)	A-10 690	44.5-47.5 *0.8	0	5	95	36	14	22	26.2	99	UC	49	CL CLAY, gray and yellowish brown, moist, stiff.
	S-14 (ctn)	A-10 691	47.5-50.0 *1.0							25.9	100			CL CLAY, gray and yellowish brown, and olive brown, moist, very stiff.

*Actual length of sample in feet.

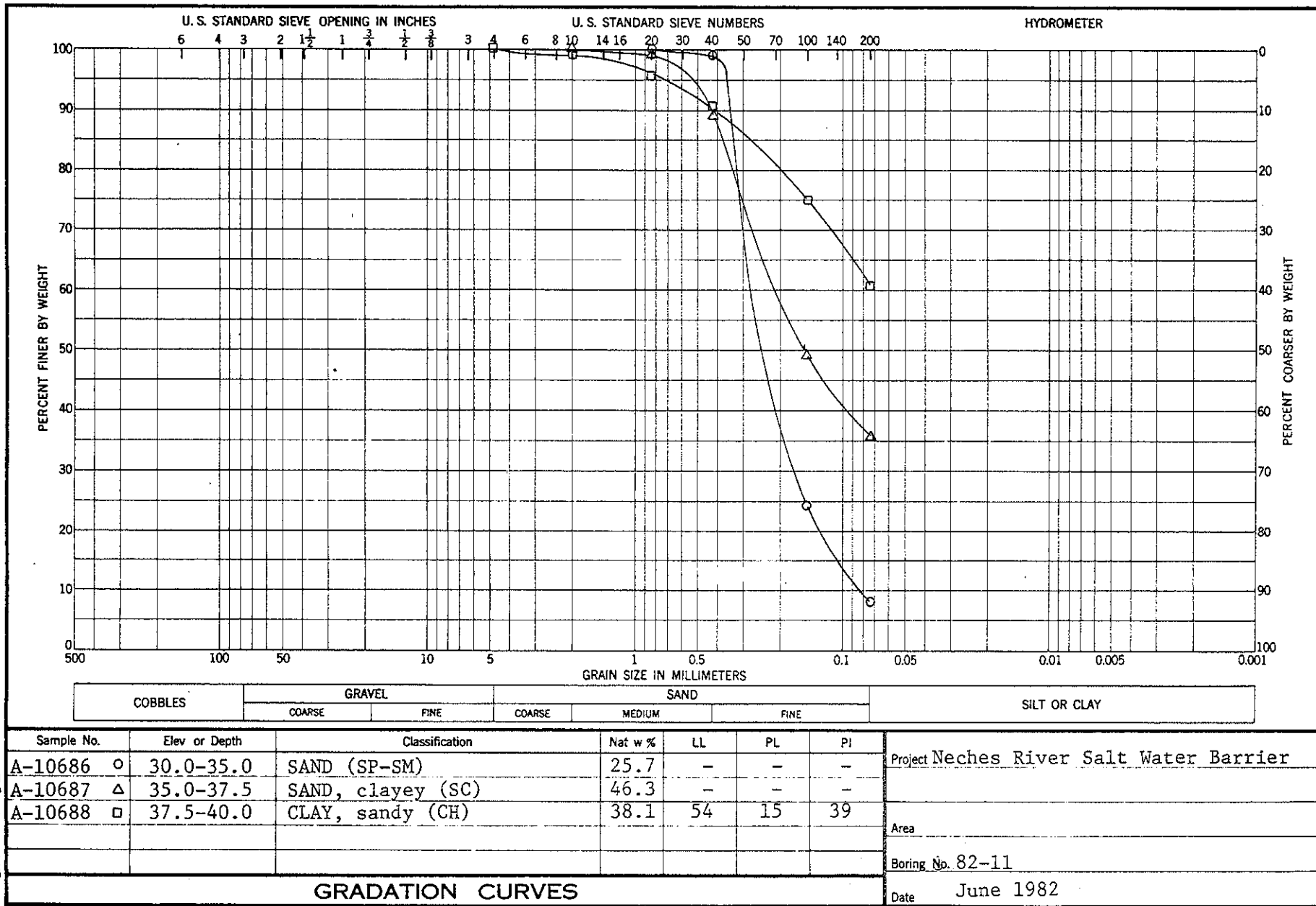
Results of Tests of Foundation Material

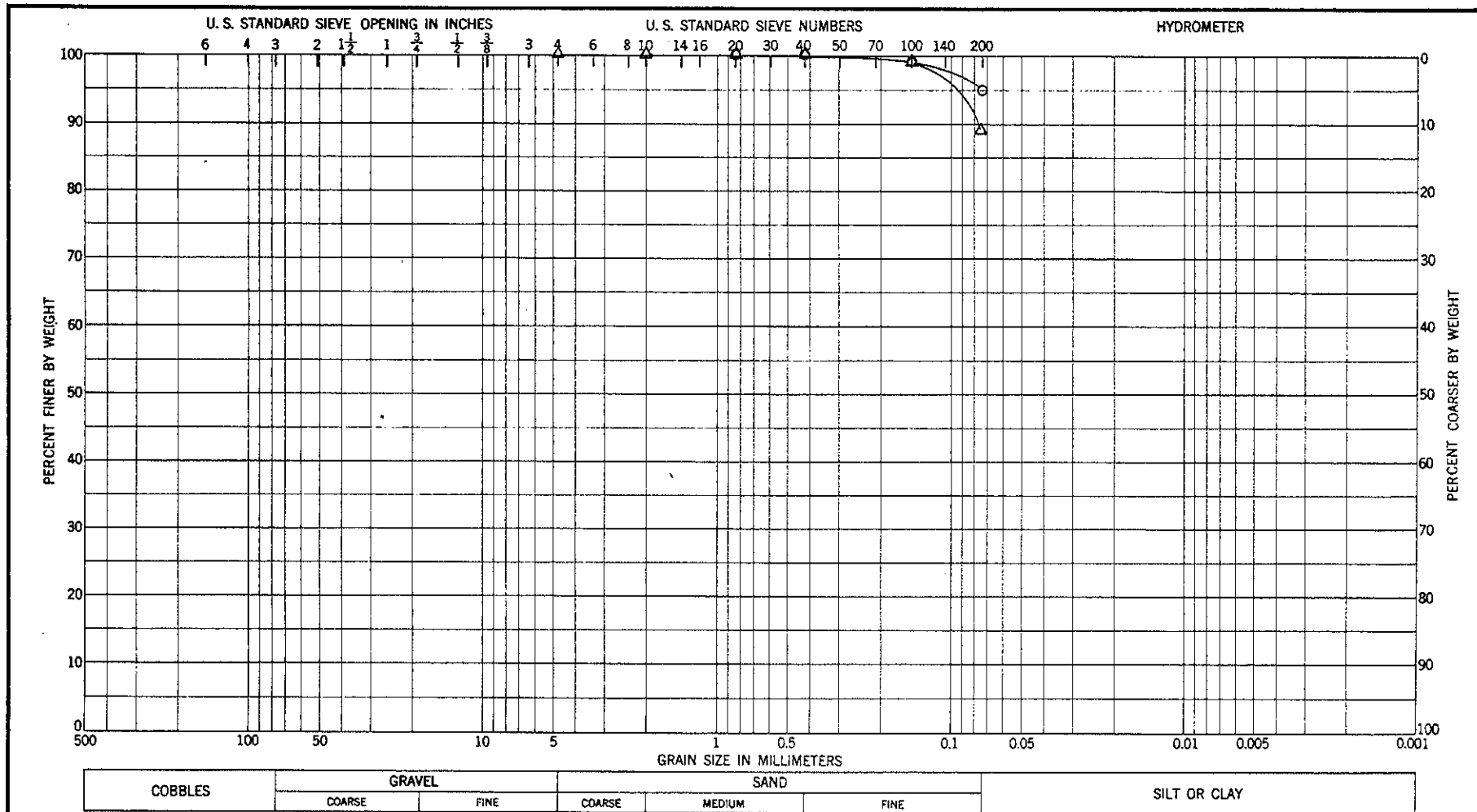
Boring No.	Field No.	SWD No.	Depth ft.	Mechanical Analysis			Atterberg Limits			Water Content %	Dry Density lb/cu ft	Test		Description
				Gr	Sa	Fi	LL	PL	PI			Type	Plate	
82-11	S-15 (ctn)	A-10 692	50.0-52.5 *0.8							23.5	105			CL CLAY, gray, moist, very stiff.
	S-16 (ctn)	A-10 693	52.5-55.0 *0.9	0	11	89	38	12	26	15.7	118	UC	50	CL CLAY, gray and yellowish brown, moist, very stiff.
82-14	S-1 (ctn)	A-10 694	0.0- 2.5 *0.9							35.7	82			CL CLAY, sandy, gray and yellowish brown, moist, soft, some organic matter on top and on one side.
	S-2 (ctn)	A-10 695	2.5- 5.0 *0.7							26.9	96			CL CLAY, sandy, brown and yellow, moist, medium consistency.
	S-3 (ctn)	A-10 696	5.0- 7.0 *0.8							24.4				SC SAND, clayey, gray and yellow, moist, soft.
	S-4 (ctn)	A-10 697	7.5-10.0 *0.7	0	74	26	31	18	13	33.1	82			SC SAND, clayey, dark gray, moist, organic, one root to 1" approximately 4" into sample.
	S-5 (ctn)	A-10 698	10.0-12.5 *0.8							43.4	70			SC SAND, clayey, moist, organic, some decayed wood.
	S-6 (ctn)	A-10 699	12.5-15.0 *0.6	0	64	36	36	14	22	34.6	80	UC	51	SC SAND, clayey, dark gray, moist, organic, some small roots.
	S-7 (ctn)	A-10 700	15.0-17.5 *0.7							45.0	74			SC SAND, clayey, dark gray, moist, organic.
	S-8 (ctn)	A-10 701	17.5-20.0 *0.7	0	56	44	50	14	36	47.7	70	UC	52	SC SAND, clayey, dark gray, very moist, organic, some small roots.

*Actual length of sample in feet.



SWEED-GL Report No. 13387





Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI	Project
A-10690	44.5-47.5	CLAY (CL)	26.2	36	14	22	
A-10693	52.5-55.0	CLAY (CL)	15.7	38	12	26	Neches River Salt Water Barrier
							Area
							Boring No. 82-11
GRADATION CURVES							Date June 1982

Project Neches River Salt Water Barrier

Area

Boring No. 82-11

Date June 1982

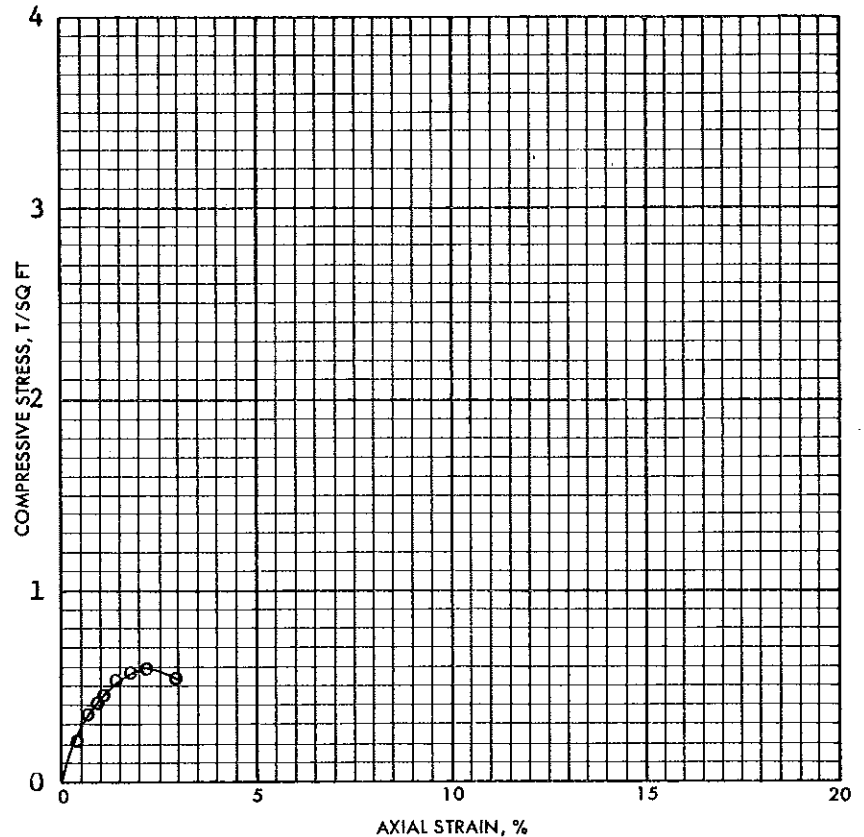
SWDED-CL Report No. 13387

Plate 18

FAILURE SKETCHES



☒ CONTROLLED STRESS
☐ CONTROLLED STRAIN

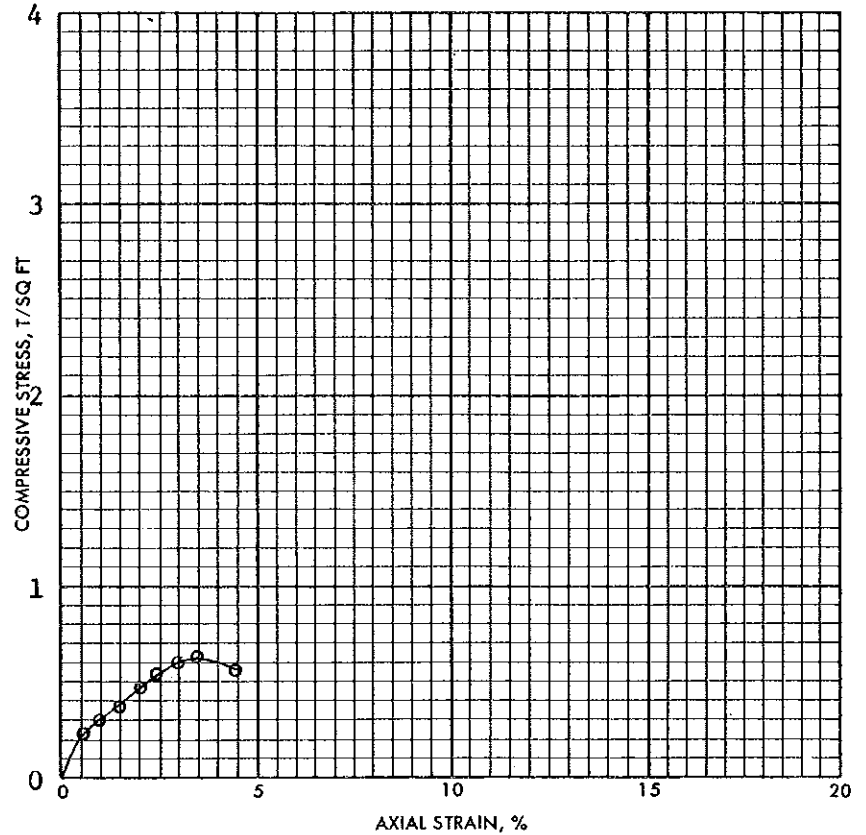


TEST NO.		1			
TYPE OF SPECIMEN		Undist			
INITIAL	WATER CONTENT	w_o	36.8 %	%	%
	VOID RATIO	e_o			
	SATURATION	S_o	%	%	%
	DRY DENSITY, LB/CU FT	γ_d	82		
TIME TO FAILURE, MIN		t_f	10		
UNCONFINED COMPRESSIVE STRENGTH, T/SQ FT		q_u	.6		
UNDRAINED SHEAR STRENGTH, T/SQ FT		s_u	.3		
SENSITIVITY RATIO		S_t			
INITIAL SPECIMEN DIAMETER, IN		D_o	2.7		
INITIAL SPECIMEN HEIGHT, IN.		H_o	5.0		
CLASSIFICATION CLAY, sandy (CH)					
LL 68		PL 21		PI 47	G_s
REMARKS		PROJECT Neches River			
		S-2			
		AREA			
		BORING NO. 82-11		SAMPLE NO. A-10679	
		DEPTH EL 2.5-5.0		DATE July 82	
UNCONFINED COMPRESSION TEST REPORT					

FAILURE SKETCHES

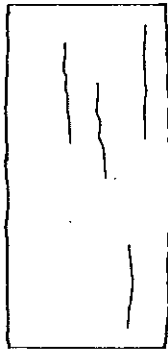


☒ CONTROLLED STRESS
☐ CONTROLLED STRAIN

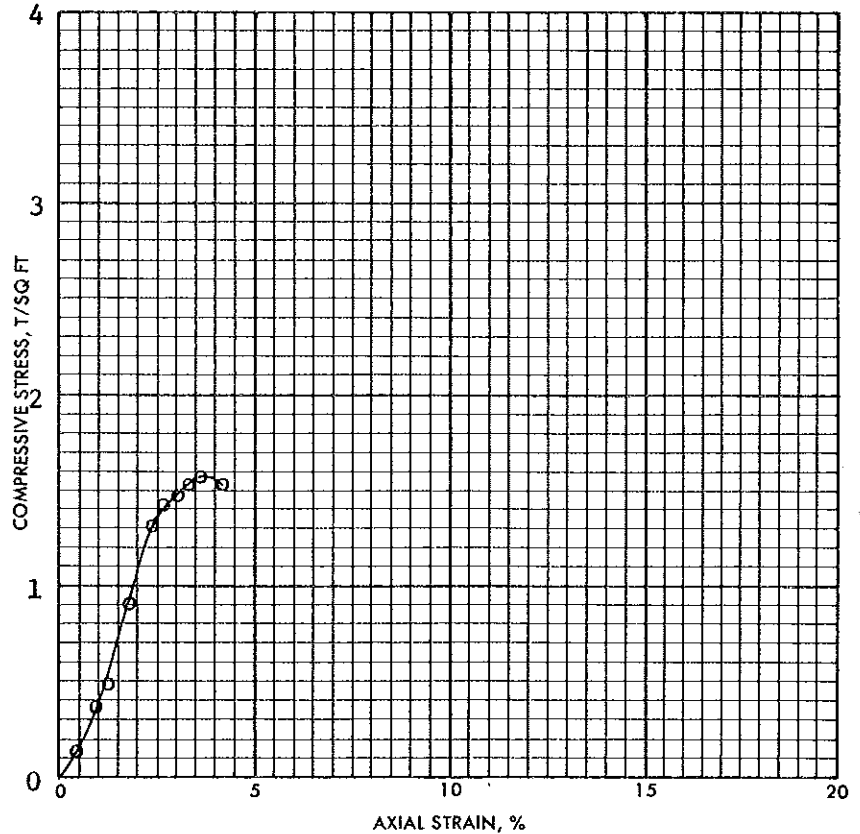


TEST NO.		1			
TYPE OF SPECIMEN		Undist			
INITIAL	WATER CONTENT	w_o	38.1 %	%	%
	VOID RATIO	e_o			
	SATURATION	S_o	%	%	%
	DRY DENSITY, LB/CU FT	γ_d	72		
TIME TO FAILURE, MIN		t_f	12		
UNCONFINED COMPRESSIVE STRENGTH, T/SQ FT		q_u	.6		
UNDRAINED SHEAR STRENGTH, T/SQ FT		s_u	.3		
SENSITIVITY RATIO		S_t			
INITIAL SPECIMEN DIAMETER, IN		D_o	1.7		
INITIAL SPECIMEN HEIGHT, IN.		H_o	3.2		
CLASSIFICATION CLAY, sandy (CH)					
LL	54	PL	15	PI	39
REMARKS		PROJECT Neches River			
		S-11			
		AREA			
		BORING NO. 82-11		SAMPLE NO. A-10688	
		DEPTH EL 37.5-40.0		DATE July 82	
UNCONFINED COMPRESSION TEST REPORT					

FAILURE SKETCHES



☒ CONTROLLED STRESS
☐ CONTROLLED STRAIN

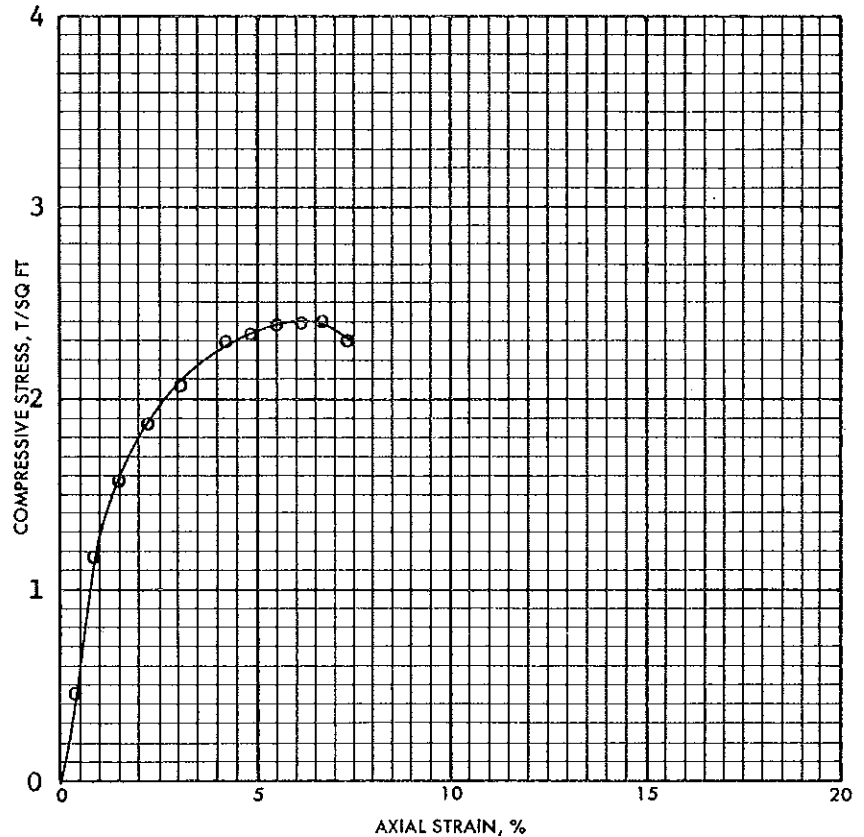


TEST NO.		1			
TYPE OF SPECIMEN		Undist			
INITIAL	WATER CONTENT	w_o	26.2 %	%	%
	VOID RATIO	e_o			
	SATURATION	S_o	%	%	%
	DRY DENSITY, LB/CU FT	γ_d	99		
TIME TO FAILURE, MIN		t_f	13		
UNCONFINED COMPRESSIVE STRENGTH, T/SQ FT		q_u	1.6		
UNDRAINED SHEAR STRENGTH, T/SQ FT		s_u	.8		
SENSITIVITY RATIO		S_t			
INITIAL SPECIMEN DIAMETER, IN		D_o	2.7		
INITIAL SPECIMEN HEIGHT, IN.		H_o	6.3		
CLASSIFICATION CLAY (CL)					
LL	36	PL	14	PI	22
REMARKS		PROJECT Neches River			
		S-13			
		AREA			
		BORING NO. 82-11		SAMPLE NO. A-10690	
		DEPTH EL 44.5-47.5		DATE July 82	
UNCONFINED COMPRESSION TEST REPORT					

FAILURE SKETCHES



☒ CONTROLLED STRESS
☐ CONTROLLED STRAIN



TEST NO.		1			
TYPE OF SPECIMEN		Undist			
INITIAL	WATER CONTENT	w_o	15.7 %	%	%
	VOID RATIO	e_o			
	SATURATION	S_o	%	%	%
	DRY DENSITY, LB/CU FT	γ_d	118		
TIME TO FAILURE, MIN		t_f	17		
UNCONFINED COMPRESSIVE STRENGTH, T/SQ FT		q_u	2.4		
UNDRAINED SHEAR STRENGTH, T/SQ FT		s_u	1.2		
SENSITIVITY RATIO		S_t			
INITIAL SPECIMEN DIAMETER, IN		D_o	2.7		
INITIAL SPECIMEN HEIGHT, IN.		H_o	6.8		
CLASSIFICATION CLAY (CL)					
LL 38	PL 12	PI 26	C_u		
REMARKS		PROJECT Neches River			
		S-16			
		AREA			
		BORING NO. 82-11		SAMPLE NO. A-10693	
		DEPTH EL 52.5-55.0		DATE July 82	
UNCONFINED COMPRESSION TEST REPORT					