

SUMMARY OF LABORATORY TESTS

Project No. 08.18.918

Client: United States Army Corps of Engineers

Project: Galveston Channel and Pelican Island PA

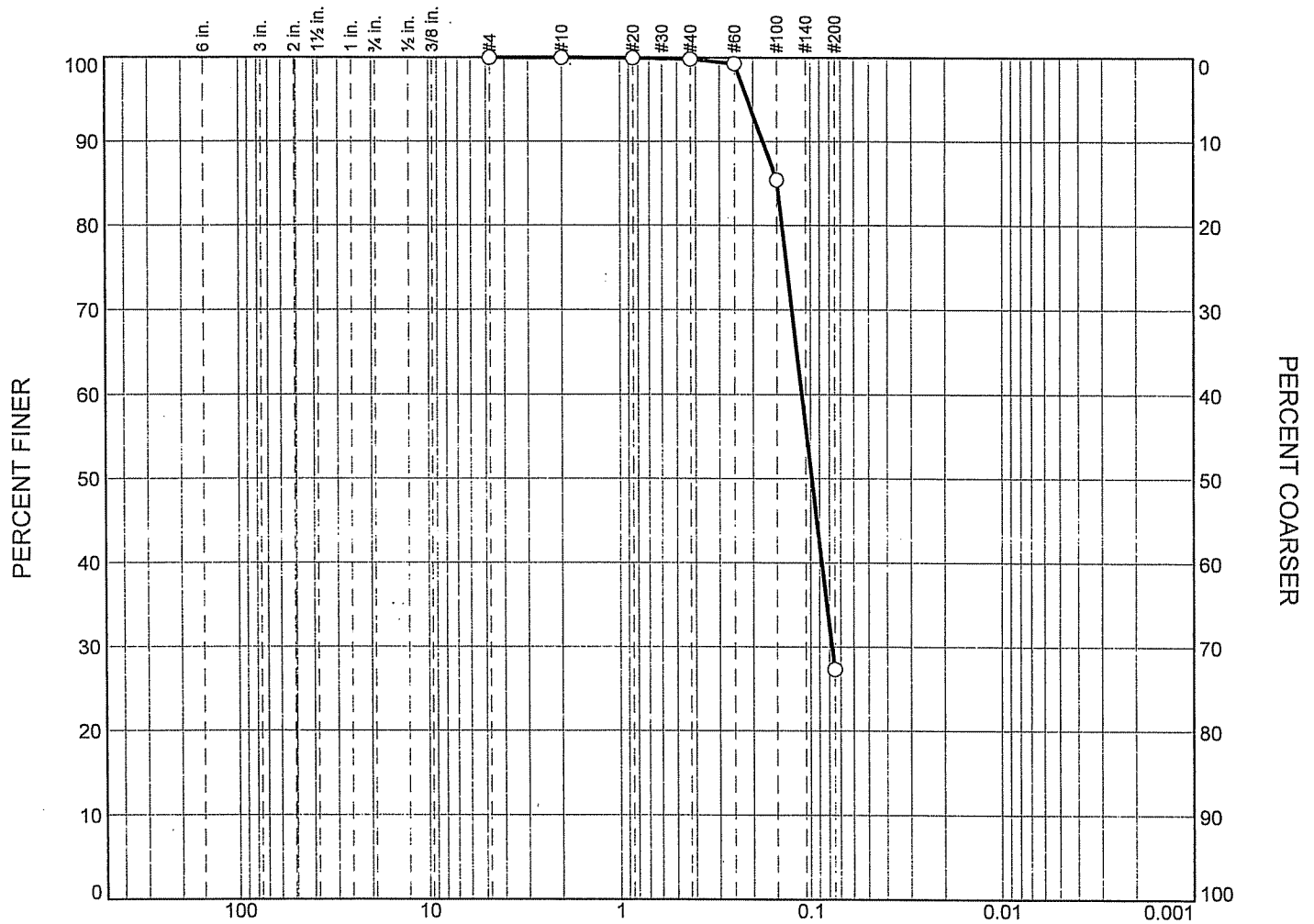
Contract No. DACW64-03-D-0008, Task Order No. 0077

Boring No.	Sample No.	Depth (ft)	Soil Description	USCS	Water Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plast. Index	Finer than #200 Sieve (%)	Lab Vane (tsf)	Uc/UU. Compr. (tsf)	Failure Strain (%)	Conf. Pres. (psi)	Failure Type
	2	1-2	Gray FAT CLAY	CH	116.0		124	36	88	98.3					
	3	2-3	Gray FAT CLAY	CH											
	4	3-4	Gray FAT CLAY	CH	56.7		122	30	92	98.1					
	5	4-5	Gray FAT CLAY	CH											
	6	5-6	Gray FAT CLAY	CH	84.6										
07-166															
	1	0-1	Tan SILTY SAND	SM											
	2	1-2	Gray SILTY SAND	SM						27.3					
	3	2-3	Gray SILTY SAND	SM											
	4	3-4	Gray SILTY SAND	SM											
	5	4-5	Gray FAT CLAY; sand seams	CH	72.2		77	25	52	89.4					
	6	5-6	Gray FAT CLAY	CH											
07-167															
	1	0-1	Gray and brown FAT CLAY	CH											
	2	1-2	Brown and gray FAT CLAY	CH	69.3		109	30	79	97.3					
	3	2-3	Gray and brown FAT CLAY	CH											
	4	3-4	Gray and brown FAT CLAY	CH	61.9		101	29	72	98.0					
	5	4-5	Gray and brown FAT CLAY	CH											
	6	5-6	Gray and brown FAT CLAY	CH	61.0										
07-168															
	1	0-1	Reddish-brown and gray FAT CLAY	CH											
	2	1-2	Gray FAT CLAY	CH	89.2		118	31	87	95.2					
	3	2-3	Gray FAT CLAY	CH											
	4	3-4	Gray FAT CLAY	CH	79.1										
	5	4-5	Gray FAT CLAY	CH											
	6	5-6	Gray FAT CLAY; shell fragments	CH	73.9		101	30	71	92.3					
07-169															
	1	0-1	Gray FAT CLAY	CH											
	2	1-2	Gray FAT CLAY	CH	100.7		113	32	81	97.7					
	3	2-3	Gray and brown FAT CLAY	CH											
	4	3-4	Gray and brown FAT CLAY	CH	72.9		97	30	67	96.0					
	5	4-5	Gray FAT CLAY	CH											
	6	5-6	Gray FAT CLAY	CH	76.5										
07-170															
	1	0-1	Gray FAT CLAY; organics	CH											
	2	1-2	Gray and brown FAT CLAY; organics	CH	67.0		94	27	67	98.2					
	3	2-3	Gray and brown FAT CLAY; organics	CH											

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TOLUNAY-WONG  ENGINEERS, INC.

Particle Size Analysis - ASTM D 422



GRAIN SIZE - mm.

	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.2	72.5	27.3	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	07-166		1-2	Gray SILTY SAND	SM

**Tolunay-Wong
Engineers, Inc.
Houston, Texas**

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GRAIN SIZE DISTRIBUTION TEST DATA

7/16/2008

Client: United States Army Corps of Engineers

Project: Galveston Channel and Pelican Island PA

Contract No. DACW64-03-D-0008, Task Order No. 0077

Project Number: 08.18.918

Location: 07-166

Depth: 1-2

Material Description: Gray SILTY SAND

USCS: SM

Material specification: (no specification envelope)

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
294.74	179.73	179.73	3"					
			0.75"					
			#4	179.73	100.0			
			#10	179.74	100.0			
			#20	179.79	99.9			
			#40	179.92	99.8			
			#60	180.55	99.3			
			#100	196.52	85.4			
			#200	263.33	27.3			

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.2	72.5	72.7			27.3

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
			0.0774	0.0983	0.1108	0.1406	0.1493	0.1776	0.2135

Fineness Modulus

0.15