

BORING LOG NO. B-9

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PROJECT: Galveston Bay Sand Reclamation Project

CLIENT: Atkins North America, Inc.
Houston, Texas

SITE: Galveston Bay
Galveston, Texas

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 29.30864° Longitude: -94.83576°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
DEPTH												
	CLAY , gray, very soft, with shell fragments				WOH							
4.0					WOH							
	POORLY GRADED SAND WITH SILT (SP-SM) , gray, loose to medium dense, with shell fragments	5			2-2-3 N=5							10
					5-6-8 N=14							
		10			4-4-2 N=6							
					3-4-8 N=12							
					6-6-8 N=14							11
15					9-10-10 N=20							
	CLAY , gray and tan, soft to very stiff, with ferrous nodules				1-1-1 N=2							
		20			2.0 (HP)							
	- reddish brown and light gray, with calcareous nodules below 20 feet				2.75 (HP)							
					2.5 (HP)							
25.0		25			3.0 (HP)							
	Boring Terminated at 25 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Dry augered to 18 feet; wet rotary thereafter.

Abandonment Method:
Not applicable

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

- WOH = Weight of Hammer.
- Water depth of about 10 feet at the time of our field program.

WATER LEVEL OBSERVATIONS

Not applicable

Terracon
551 League City Pkwy Ste F
League City, TX

Boring Started: 07-12-2017

Drill Rig: Truck

Project No.: 91175047

Boring Completed: 07-12-2017

Driller: Van and Sons

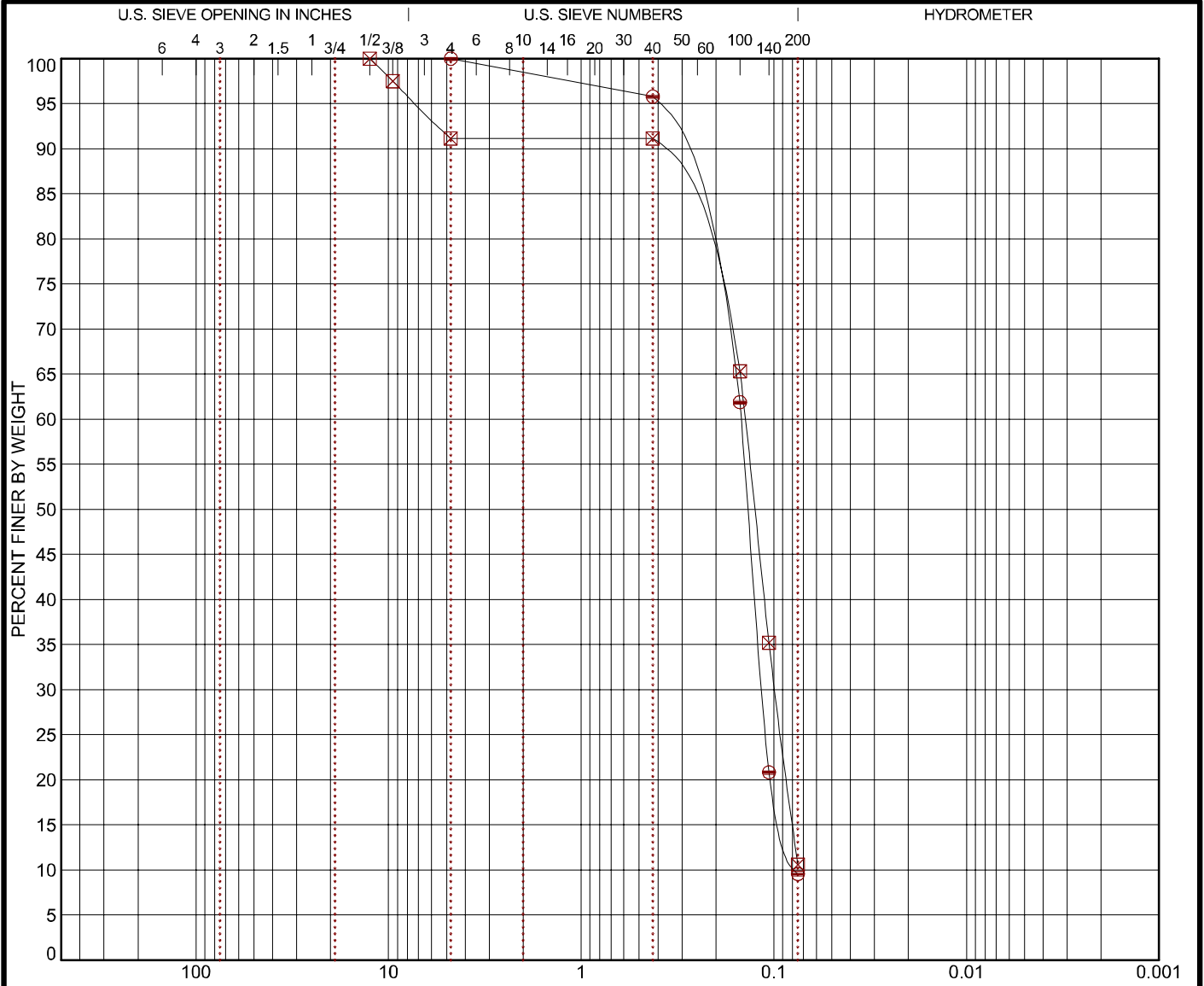
Exhibit: A-11

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 91175047 REV1 GALVESTON BAY SAN.GPJ TERRACON_DATATEMPLATE.GDT 11/2/17

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. 91175091_ATKINS_NORTH_GRAINSIZE_TEMP 91175047 GALVESTON BAY SAN.GPJ TERRACON_DATATEMPLATE.GDT 11/6/17



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification				WC (%)	LL	PL	PI	Cc	Cu
⊖ B-9	4.5 - 6	POORLY GRADED SAND WITH SILT (SP-SM)								1.17	1.94
⊗ B-9	12.5 - 14	POORLY GRADED SAND WITH SILT (SP-SM)								0.92	1.90
Boring ID	Depth	D ₁₀₀	D ₈₅	D ₅₀	D ₁₀	%Gravel	%Sand	%Silt	%Fines	%Clay	
⊖ B-9	4.5 - 6	4.75	0.305	0.136	0.076	0.0	90.4		9.6		
⊗ B-9	12.5 - 14	12.5	0.332	0.126		8.8	80.6		10.6		

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SITE: Galveston Bay Galveston, Texas				CLIENT: Atkins North America, Inc. Houston, Texas			
				EXHIBIT: A-26			

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League City, TX