

May 31, 2006
 Attn.: Mr. Hugo E. Bermudez, P.E.
 RETL Job No.: G106337

PROPOSED SAN LUIS PASS PROJECT
 West Galveston Bay
 Freeport, Texas

	BORING B-8					
SIEVE SIZE	0-2.5'	2.5'-5'	5'-7.5'	7.5'-10'	10'-12.5'	12.5'-15'
#10	100	100	100	100	99	100
#20	100	100	100	100	99	100
#40	99	100	100	99	98	100
#60	99	100	100	99	98	100
#70	98	99	100	99	97	99
#80	96	98	99	98	96	99
#100	86	94	79	91	82	99
#120	64	73	51	59	48	98
#140	44	45	24	25	25	96
#200	24.4	24.7	8.2	7.2	12.2	88
#230	21.5	21.0	6.7	5.6	10.7	85
Color	2.5Y 4/1	2.5Y 4/1	2.5Y 3/1	2.5Y 5/2	2.5Y 4/1	10YR 3/6
Description	Dark Gray	Dark Gray	Very Dark Gray	Gray Brown	Dark Gray	Dark Yellow Brown

	BORING B-9				BORING B-10					
SIEVE SIZE	0-2.5'	2.5'-5'	5'-7.5'	7.5'-10'	0-2.5'	2.5'-5'	5'-7.5'	7.5'-10'	10'-12.5'	12.5'-15'
#10	100	100	100	100	100	100	100	100	100	99
#20	99	100	100	100	100	99	100	100	100	98
#40	99	100	100	99	100	99	99	100	99	97
#60	99	100	99	99	100	99	98	100	99	95
#70	98	99	98	99	98	98	94	99	98	88
#80	97	98	95	98	93	95	82	99	95	78
#100	71	65	72	91	73	65	47	96	51	42
#120	29	27	30	55	34	27	24	59	23	23
#140	10	10	12	28	14	11	11	25	11	12
#200	2.0	2.7	4.3	15.3	4.7	4.5	4.0	10.0	3.9	4.9
#230	1.6	2.4	3.8	11.1	3.7	4.1	3.4	2.7	3.3	4.4
Color	2.5Y 5/3	2.5Y 5/2	2.5Y 5/2	2.5Y 6/2	2.5Y 5/2	2.5Y 5/2	2.5Y 6/2	2.5Y 6/2	2.5Y 5/2	2.5Y 5/2
Description	Lt Olive Brown	Gray Brown	Gray Brown	Lt Brown Gray	Gray Brown	Gray Brown	Lt Brown Gray	Lt Brown Gray	Gray Brown	Gray Brown

LOG OF BORING B-8

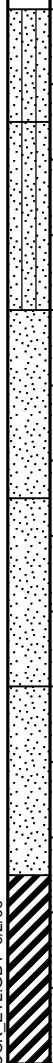
SHEET 1 of 1



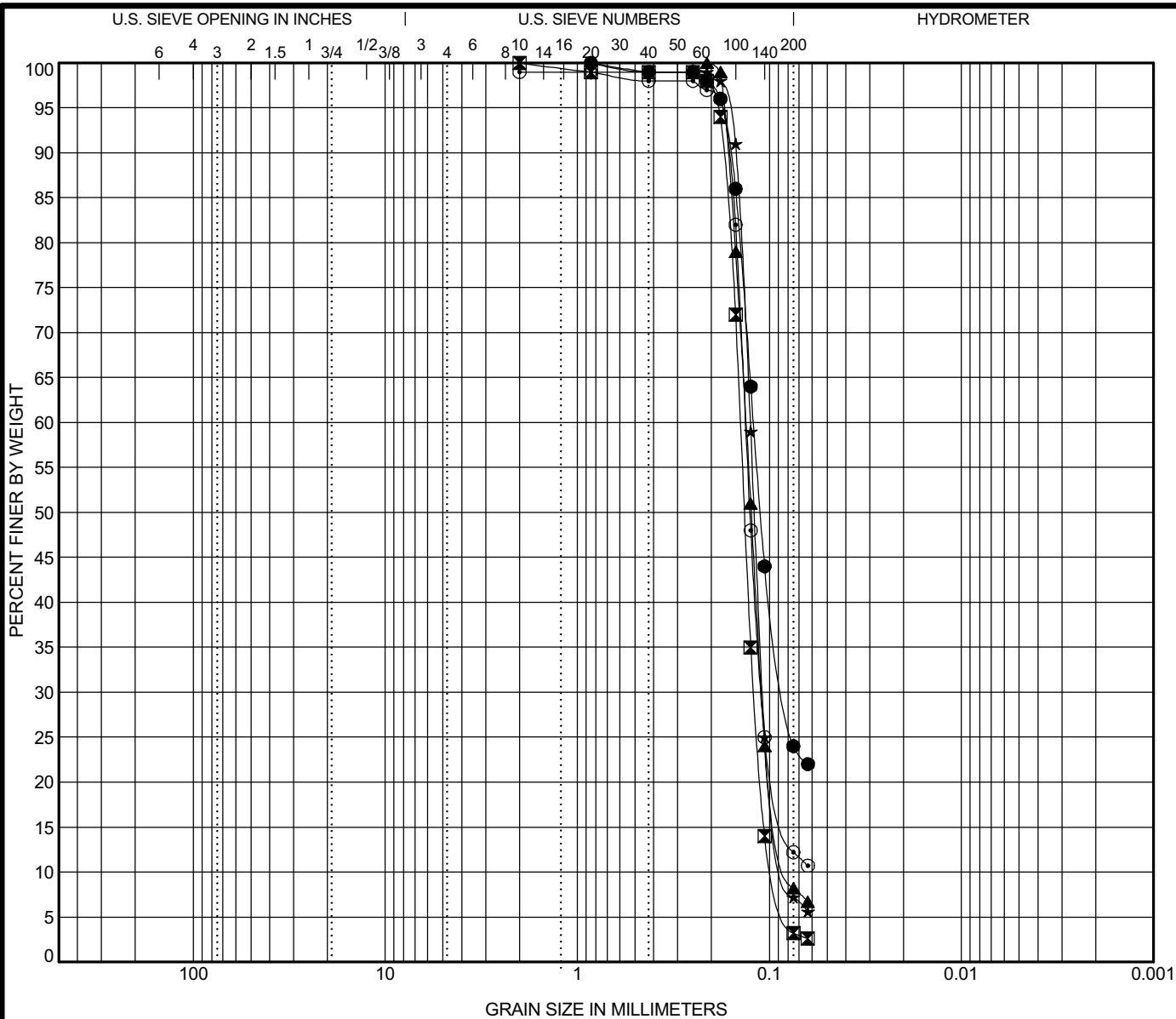
Rock Engineering and Testing Laboratory, Inc.
4910 Neptune Street
Corpus Christi, Texas 78405
Telephone: (361) 883-4555
Fax: (361) 883-4711

CLIENT: Coast and Harbor Engineering, Inc.
PROJECT: Proposed San Luis Pass Project
LOCATION: W. Galveston Bay; Freeport, Texas
NUMBER: G106337

DATE(S) DRILLED: 5/18/06 - 5/18/06

	FIELD DATA					LABORATORY DATA							DRILLING METHOD(S): Disturbed Samples			
SOIL SYMBOL	DEPTH (FT)	SAMPLE NUMBER	SAMPLES	N: BLOWS/FT P: TONS/SQ FT T: TONS/SQ FT PERCENT RECOVERY/ ROCK QUALITY DESIGNATION	MOISTURE CONTENT (%)	ATTERBERG LIMITS			DRY DENSITY POUNDS/CU.FT	COMPRESSIVE STRENGTH (TONS/SQ FT)	MINUS NO. 200 SIEVE (%)	GROUNDWATER INFORMATION: N/A				
						LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				SURFACE ELEVATION: N/A				
						LL	PL	PI				DESCRIPTION OF STRATUM				
												<u>WATER DEPTH= 2- FEET</u>				
	1	S-1									24	<u>SILTY CLAYEY SAND</u> , 2.5Y 4/1 dark gray.				
	2												Same as above, 2.5Y 4/1 dark gray.			
	3	S-2										25				
	4															
	5												<u>POORLY GRADED SAND</u> , 2.5Y 3/1 very dark gray.			
	6	S-3										8				
	7											Same as above, 2.5Y 5/2 gray brown.				
	8															
	9	S-4										7				
	10											Same as above, 2.5Y 4/1 dark gray.				
	11	S-5										11				
	12															
	13	S-6											<u>FAT CLAY</u> , with sand, 10YR 3/6 dark yellow brown.			
	14											88				
	15												Boring terminated at a depth of 15' below the bay bottom.			
N - STANDARD PENETRATION TEST RESISTANCE P - POCKET PENETROMETER RESISTANCE T - POCKET TORVANE SHEAR STRENGTH												REMARKS: Soil Sampling performed by RETL at N29 deg 05' 37.6" W95 deg 07' 30.8"				

LOG OF BORING G106337.GPJ ROCK ETL GDT 6/2/06



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

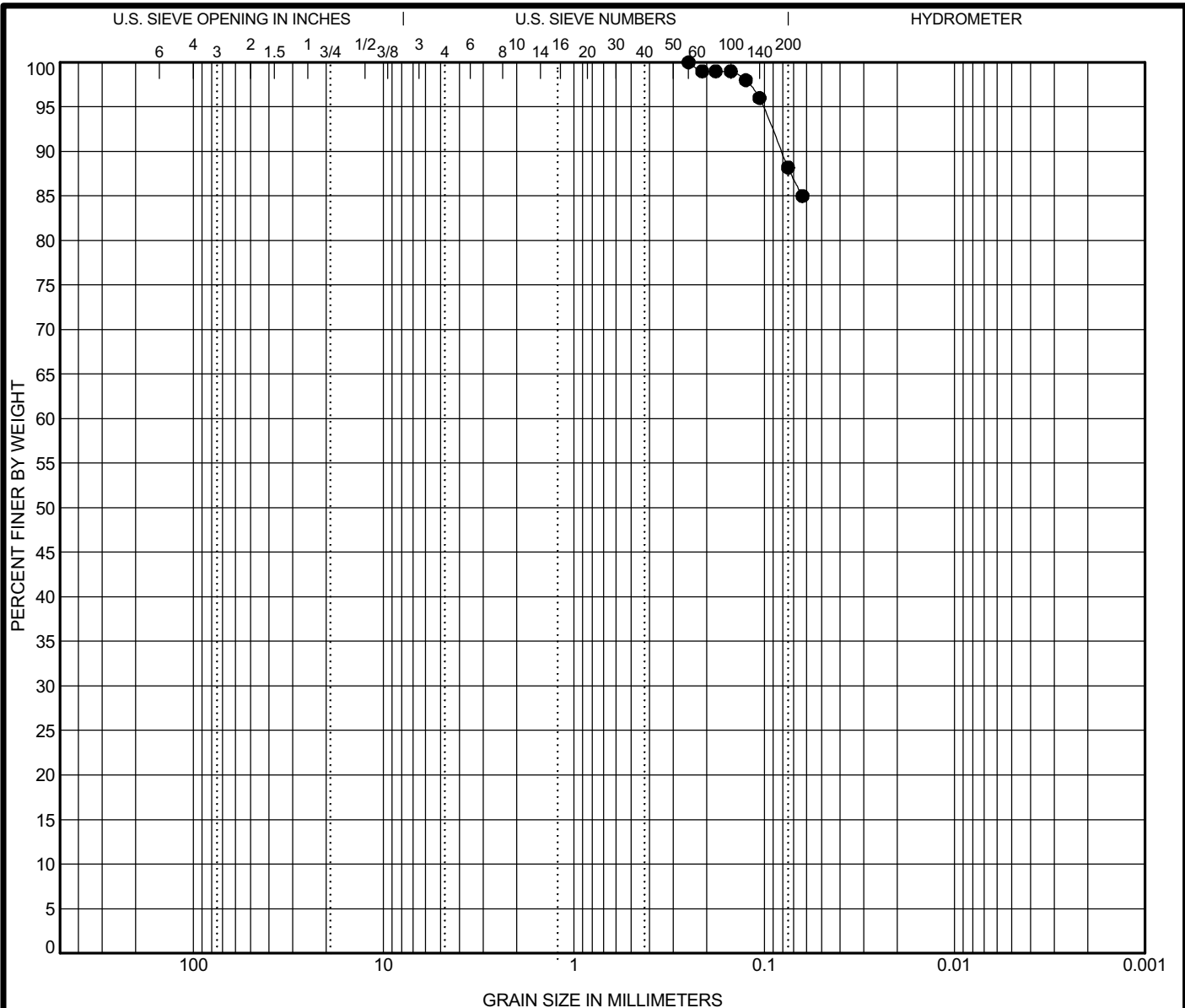
Specimen Identification			Classification					LL	PL	PI	Cc	Cu
●	B-8	1.0	POORLY GRADED SAND(SP)									
⊠	B-8	2.5									1.10	1.52
▲	B-8	5.0									1.17	1.70
★	B-8	7.5									1.18	1.59
⊙	B-8	10.0									1.56	2.30
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
●	B-8	1.0	0.85	0.121	0.083		0.0	76.0	24.0			
⊠	B-8	2.5	2	0.141	0.12	0.093	0.0	96.8	3.2			
▲	B-8	5.0	0.212	0.133	0.11	0.078	0.0	91.8	8.2			
★	B-8	7.5	0.85	0.126	0.109	0.079	0.0	92.8	7.2			
⊙	B-8	10.0	2	0.133	0.11	0.058	0.0	86.8	12.2			

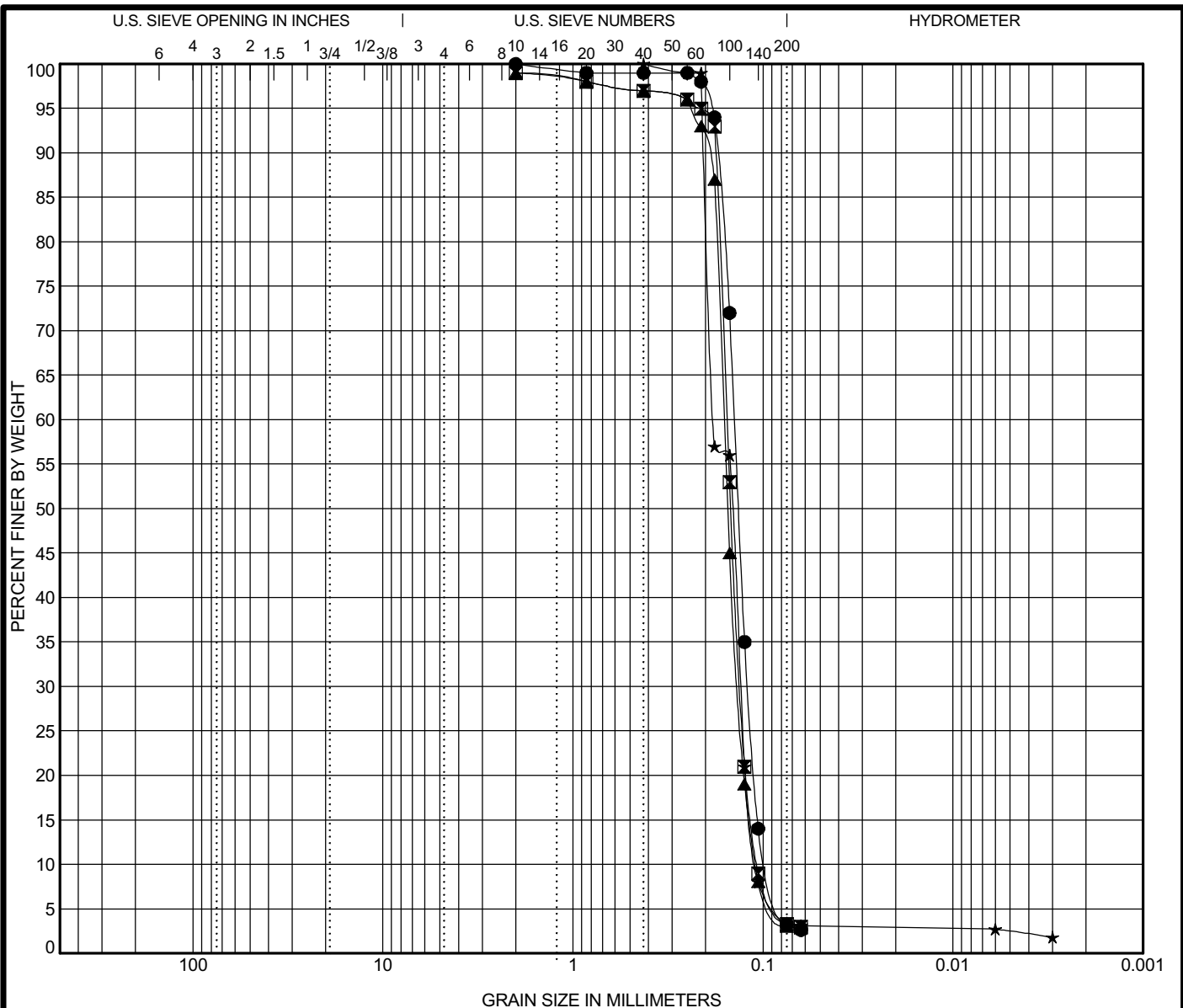


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GRAIN SIZE DISTRIBUTION

Project: Proposed San Luis Pass Project
 Location: W. Galveston Bay, Freeport, Texas
 Number: G106337





COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Classification				LL	PL	PI	Cc	Cu
●	B-15 1.0	POORLY GRADED SAND(SP)							1.10	1.52
☒	B-15 2.5	POORLY GRADED SAND(SP)							1.04	1.44
▲	B-15 5.0	POORLY GRADED SAND(SP)							1.04	1.47
★	B-15 7.5	POORLY GRADED SAND(SP)							0.87	1.68

Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	B-15 1.0	2	0.141	0.12	0.093	0.0	96.8	3.2	
☒	B-15 2.5	2	0.155	0.132	0.107	0.0	95.7	3.3	
▲	B-15 5.0	2	0.16	0.135	0.109	0.0	96.0	3.0	
★	B-15 7.5	0.425	0.182	0.131	0.109	0.0	96.6	3.4	

GRAIN SIZE DISTRIBUTION

Project: Proposed San Luis Pass Project
Location: W. Galveston Bay, Freeport, Texas
Number: G106337

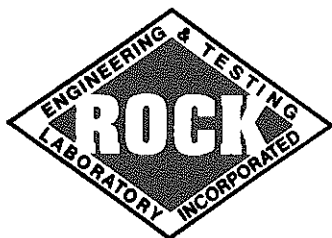


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KEY TO SOIL CLASSIFICATIONS AND SYMBOLS						
UNIFIED SOIL CLASSIFICATION SYSTEM					TERMS CHARACTERIZING SOIL STRUCTURE	
Major Divisions		Letter	Symbol	NAME		
			Hatching	Color		
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW		RED	Well - graded gravels or gravel - sand mixtures, little or no fines	SLICKENSIDED - having inclined planes Of weakness that are slick and glossy in appearance
		GP			Poorly-graded gravels or gravel - sand mixtures, little or no fines	FISSURED - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical
		GM		YELLOW	Silty gravels, gravel - sand - silt mixtures	LAMINATED (VARVED) - composed of thin layers of varying color and texture, usually grading from sand or silt at the bottom to clay at the top.
		GC			Clayey gravels, gravel - sand - clay mixtures	
	SAND AND SANDY SOILS	SW		RED	Well - graded sands or gravelly sands, little or no fines	CRUMBLY - cohesive soils which break into small blocks or crumbs on drying
		SP			Poorly - graded sands or gravelly sands, little or no fines	CALCAREOUS - containing appreciable quantities of calcium carbonate, generally nodular.
		SM		YELLOW	Silty sands, sand - silt mixtures	WELL GRADED - having wide range in grain sizes and substantial amounts of all intermediate particle sizes.
		SC			Clayey sands, sand - clay mixtures	POORLY GRADED - predominantly of one grain size (uniformly graded) or having a range of sizes with some intermediate size missing (gap or skip graded)
FINE GRAINED SOILS	SILTS AND CLAYS LL < 50	ML		GREEN	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with	SYMBOLS FOR TEST DATA M/C = 15 - Natural moisture content in percent. $\gamma = 95$ - Dry unit weight in lbs/cu ft. Qu = 1.23 - Unconfined compression strength in tons/ sq ft. 51 - 21 - 30 - Liquid limit, Plastic limit, and Plasticity index. 30% FINER - Percent finer than No. 200 mesh sieve 30 B/F - Blows per foot, standard penetration test. ▼ - Ground water table.
		CL			Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
		OL			Organic silts and organic silt-clays of low plasticity	
	SILTS AND CLAYS LL > 50	MH		BLUE	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
		CH			Inorganic clays of high plasticity, fat-clays	
		OH			Organic clays of medium to high plasticity, organic silts	
HIGHLY ORGANIC SOILS	P ₁		ORANGE	Peat and other highly organic soils		
TERMS DESCRIBING CONSISTENCY OF SOIL (2)						
COARSE GRAINED SOILS			FINE GRAINED SOILS			
DESCRIPTIVE TERM	NO. BLOWS / FT. STANDARD PEN. TEST		DESCRIPTIVE TERM	NO. BLOWS / FT. STANDARD PEN. TEST	UNCONFINED COMPRESSION TONS PER SQ. FT.	
Very loose	0 - 4		Very Soft	< 2	< 0.25	
Loose	4 - 10		Soft	2 - 4	0.25 - 0.50	
Firm (medium)	10 - 30		Plastic (med. Stiff)	4 - 8	0.50- 1.00	
Dense	30 - 50		Stiff	8 - 15	1.0 - 2.00	
Very Dense	over 50		Very Stiff	15 - 30	2.00 - 4.00	
			Hard	over 30	over 4.00	

Field classification for "Consistency" is determined with a 0.25" diameter penetrometer.



- GEOTECHNICAL ENGINEERING
- CONSTRUCTION MATERIALS
ENGINEERING & TESTING
- SOILS • ASPHALT • CONCRETE

July 26, 2006

Coast and Harbor Engineering, Inc.
3410 Far West Boulevard, Suite #210
Austin, Texas 78731

Attn: Mr. Hugo E. Bermudez, P.E.

SUBJECT: Supplement No. 1

**SUBSURFACE INVESTIGATION AND LABORATORY TESTING
PROGRAM FOR THE PROPOSED SAN LUIS PASS PROJECT**

West Galveston Bay

Freeport, Texas

RETL Job No.: G106337

Dear Mr. Bermudez,

After discussing the laboratory test results with Mr. Josh Carter, of Coast and Harbor Engineering, Inc. and upon review of our GPS coordinates, it appears as if Boring Location B-8 was performed west of the location indicated on the Boring Location Plan provided in the above referenced report. RETL has obtained soil samples from the correct location, as indicated on the Boring Location Plan, and is issuing this pre-punched report as Supplement No. 1. Please disregard the laboratory results for boring B-8 provided in the original report and replace them with the laboratory test results presented herewith.

	BORING B-8					
SIEVE SIZE	0-2.5'	2.5'-5'	5'-7.5'	7.5'-10'	10'-12.5'	12.5'-15'
#10	99	100	99	100	99	99
#20	97	99	97	99	99	98
#40	96	99	96	99	97	96
#60	95	98	95	98	95	94
#70	93	97	93	97	93	91
#80	90	94	89	94	87	85
#100	77	68	71	51	63	62
#120	42	35	31	28	27	30
#140	22	19	20	15	13	12
#200	4.2	5.3	6.4	6.3	3.4	3.3
#230	3.6	4.6	5.7	5.9	3.1	3.0
Color	2.5Y 5/2	2.5Y 4/2	2.5Y 5/1	2.5Y 5/2	2.5Y 4/1	10YR 3/1
Description	Gray Brown	Dark Gray Brown	Gray	Gray Brown	Gray	Very Dark Gray

Rock Engineering & Testing Laboratory, Inc.

4910 NEPTUNE STREET • CORPUS CHRISTI, TEXAS, 78405

OFFICE: (361) 883-4555 • FAX: (361) 883-4711 • www.rocketlinc.com

July 26, 2006

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RETL Job No.: G106337

Supplement No. 1

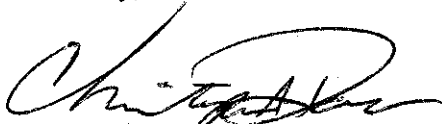
PROPOSED SAN LUIS PASS PROJECT

Freeport, Texas

Often, because of design and construction details, that occur on a project, questions arise concerning soil conditions and Rock Engineering and Testing Laboratory, Inc. (RETL), would be pleased to continue it's role as the Geotechnical Engineer during project implementation.

Please feel free to contact RETL if you have any further questions concerning this project. RETL appreciates the opportunity to work with you on this project and looks forward working together again.

Sincerely,



Christopher A. Rock, P.E.

Branch Manager

Attachments:

Boring Logs B-8

Grain Size Analysis B-8

LOG OF BORING B-8

SHEET 1 of 1



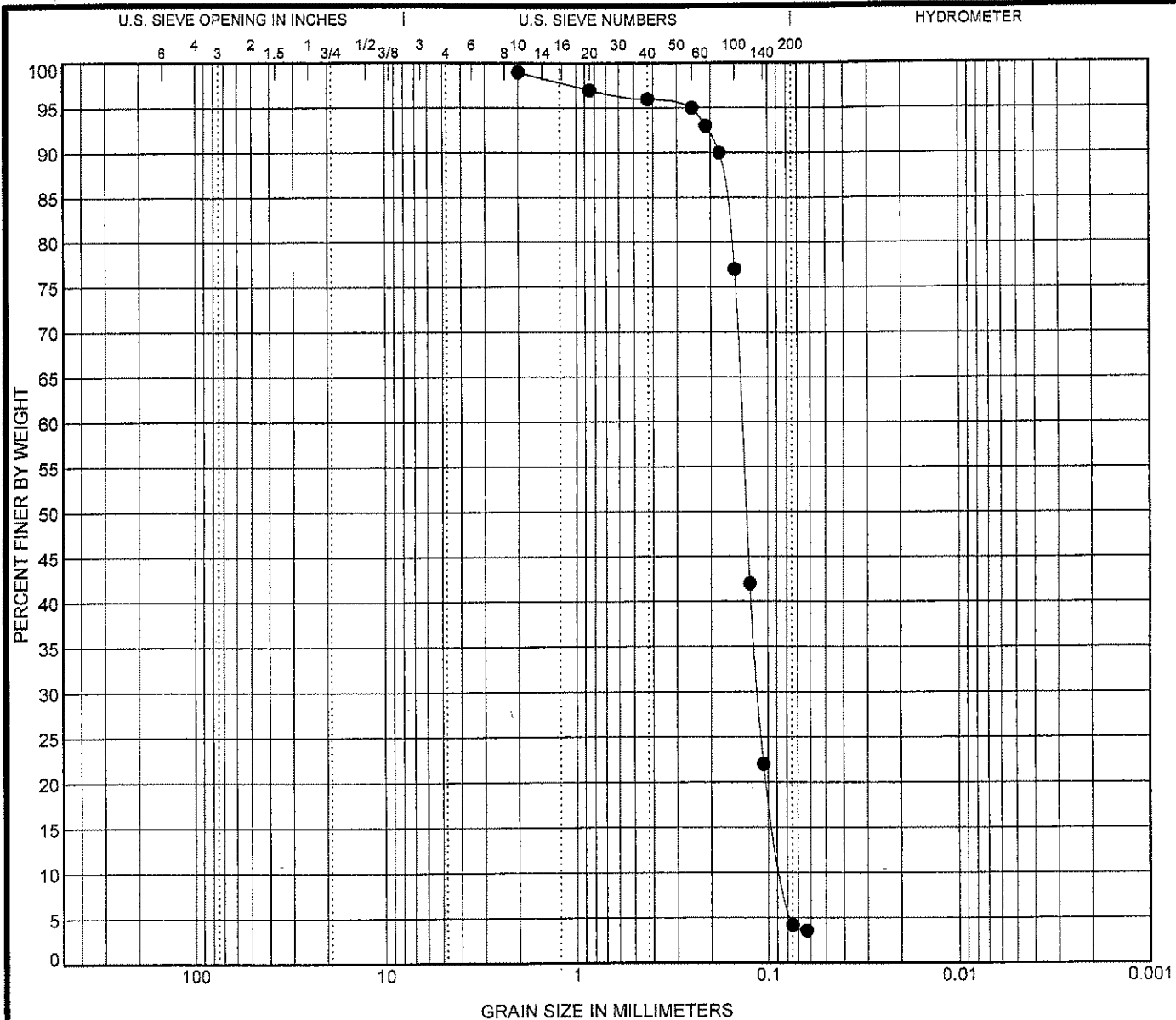
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LOCATION: W. Galveston Bay; Freeport, Texas
NUMBER: G106337

DATE(S) DRILLED: 6/19/06 - 6/19/06

	FIELD DATA				LABORATORY DATA							DRILLING METHOD(S):
SOIL SYMBOL	DEPTH (FT)	SAMPLE NUMBER	SAMPLES	N: BLOWS/FT P: TONS/SQ.FT T: TONS/SQ.FT PERCENT RECOVERY/ ROCK QUALITY DESIGNATION	MOISTURE CONTENT (%)	ATTEBERG LIMITS			DRY DENSITY POUNDS/CU.FT	COMPRESSIVE STRENGTH (TONS/SQ.FT)	MINUS NO. 200 SIEVE (%)	Disturbed Samples
						LIQUID LIMIT LL	PLASTIC LIMIT PL	PLASTICITY INDEX PI				GROUNDWATER INFORMATION:
												N/A
												SURFACE ELEVATION: N/A
DESCRIPTION OF STRATUM												
	1	S-1									4	<u>POORLY GRADED SAND</u> , 2.5Y 5/2 gray brown.
	2											
	3	S-2									5	Same as above, 2.5Y 4/2 dark gray brown.
	4											
	5											Same as above, 2.5Y 5/1 gray.
	6	S-3									6	
	7											<u>POORLY GRADED SAND</u> , 2.5Y 5/2 gray brown.
	8											
	9	S-4									6	
	10											Same as above, 2.5Y 4/1 gray.
	11	S-5									3	
	12											
	13											Same as above, 2.5Y 3/1 very dark gray.
	14	S-6									3	
	15											Boring terminated at a depth of 15' below the ground surface.
N - STANDARD PENETRATION TEST RESISTANCE P - POCKET PENETROMETER RESISTANCE T - POCKET TORVANE SHEAR STRENGTH												REMARKS: Soil Sampling performed by RETL at N29 deg 05' 37.6" W95 deg 07' 30.8"

LOG OF BORING G106337.GPJ ROCK ETL GDI 7/26/06



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● B-8 0.0	POORLY GRADED SAND(SP)				1.11	1.64

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-8 0.0	2	0.137	0.113	0.084	0.0	94.8	4.2	

US GRAIN SIZE G106337.GPJ US LAB GDT 7/26/06



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