

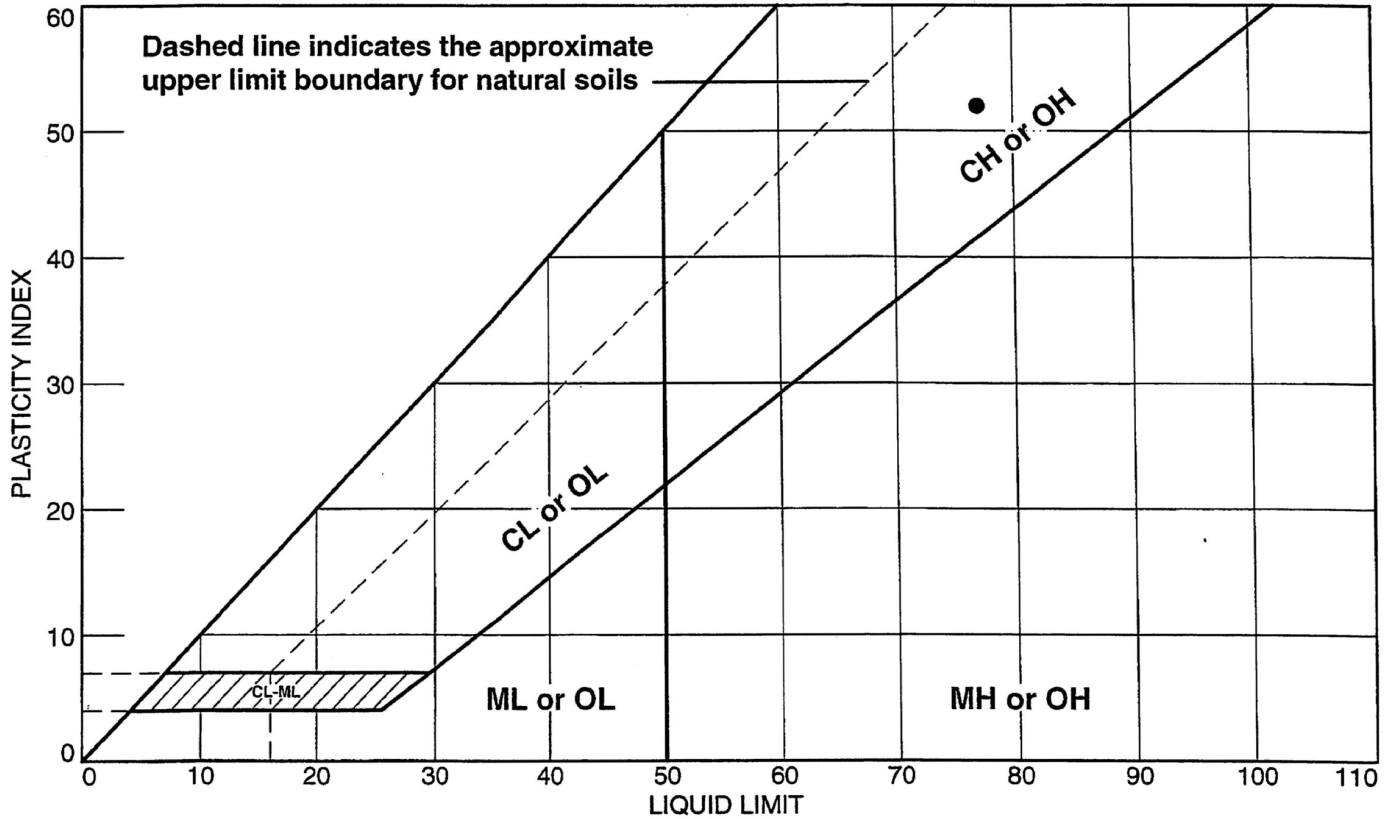
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.8	4.6	5.4	9.8	84.8	94.6

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
						0.0034	0.0051	0.0129	0.0917

Fineness Modulus
0.06

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA							
SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
• Boring B-2182A	SS-24	108.2-109.7	27.6	25	77	52	CH

MACTEC, Inc. Raleigh, North Carolina	Client: Bechtel Project: Exelon Texas COL (Victoria)
	Project No.: 6468071777

Figure **NA**

Tested By: CS Checked By: LBJ ZHU 4/30/08

LIQUID AND PLASTIC LIMIT TEST DATA

4/9/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2182A

Depth: 108.2-109.7

Sample Number: SS-24

Material Description: Pale Brown Fat CLAY

USCS: CH

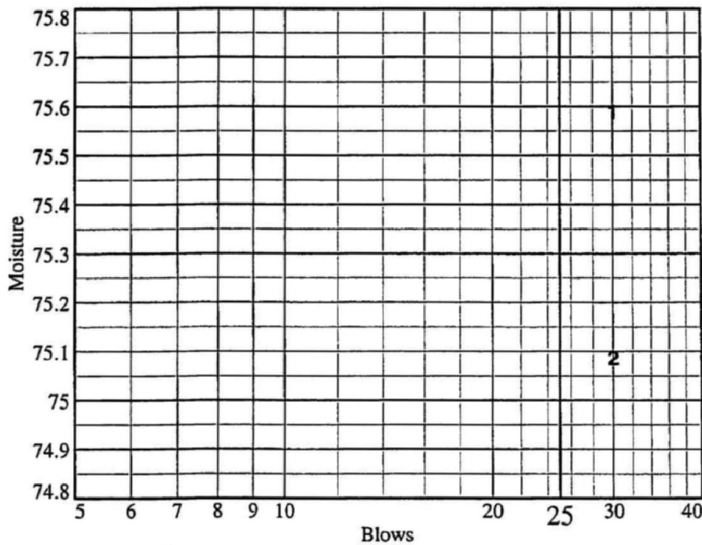
AASHTO: A-7-6(57)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.21	25.40				
Dry+Tare	21.72	21.12				
Tare	15.78	15.42				
# Blows	30	30				
Moisture	75.6	75.1				



Liquid Limit= 77
 Plastic Limit= 25
 Plasticity Index= 52
 Natural Moisture= 27.6
 Liquidity Index= 0.1

Plastic Limit Data

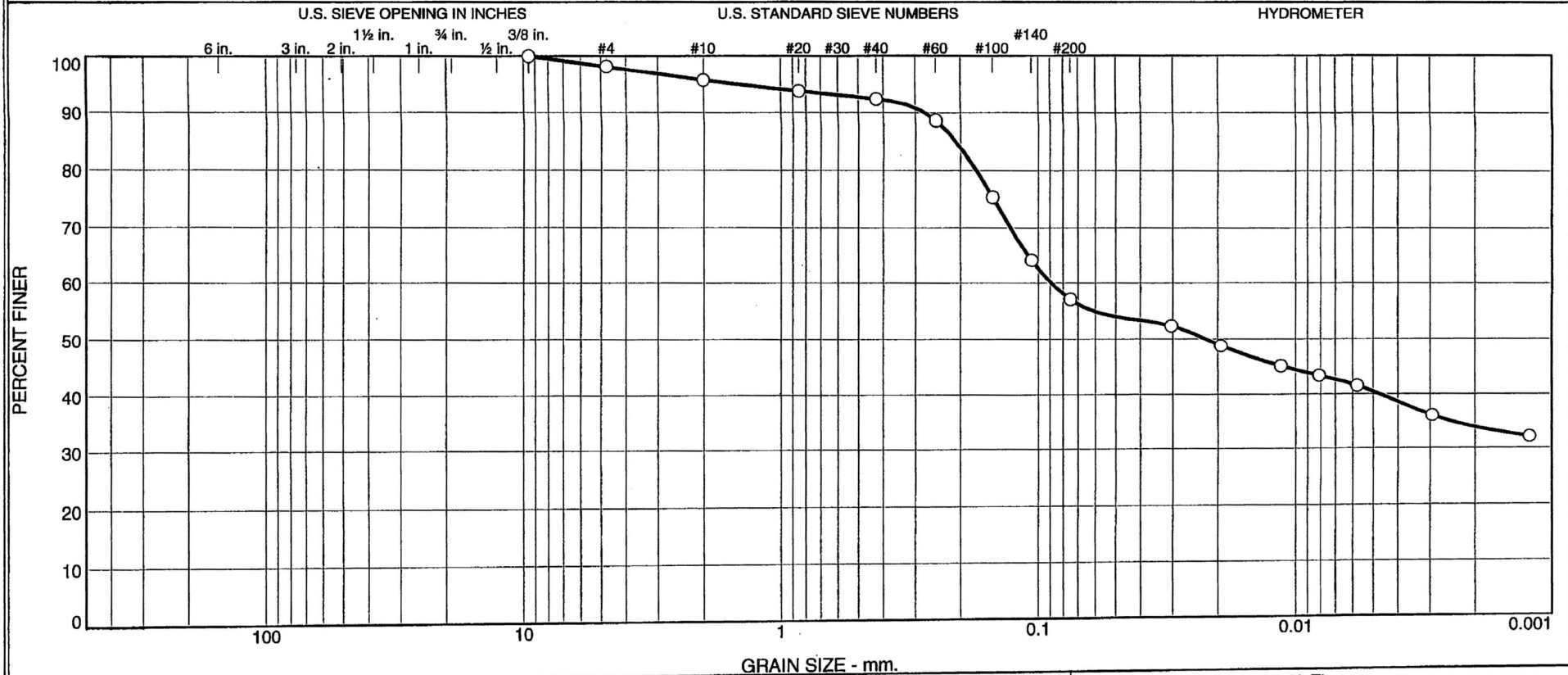
Run No.	1	2	3	4
Wet+Tare	22.25	23.54		
Dry+Tare	20.90	21.95		
Tare	15.52	15.67		
Moisture	25.1	25.3		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
149.20	118.42	6.70	27.6

MACTEC, Inc.

Particle Size Distribution Report / ASTM D- 422-63(2002)e1



GRAIN SIZE DISTRIBUTION TEST DATA

1/24/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2182A

Depth: 118.3-119.8

Sample Number: SS-25

Material Description: Brownish Gray Sandy Lean CLAY

Date: 11/29/07

Natural Moisture: 16.9

Liquid Limit: 39

Plastic Limit: 13

USCS Class.: CL

Testing Remarks: Specific gravity is assumed

Tested by: CS

Checked by: LBJ

Steve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
253.91	0.00	0.00	3/8	0.00	100.0
			#4	4.63	98.2
			#10	10.64	95.8
53.26	0.00	0.00	#20	1.09	93.8
			#40	1.89	92.4
			#60	3.94	88.7
			#100	11.38	75.3
			#140	17.59	64.2
			#200	21.51	57.1

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 95.8

Weight of hydrometer sample = 53.26

Hygroscopic moisture correction:

Moist weight and tare = 43.90

Dry weight and tare = 43.58

Tare weight = 31.80

Hygroscopic moisture = 2.7%

Table of composite correction values:

Temp., deg. C: 12.2 27.1

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

Hydrometer effective depth equation: $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	22.1	33.0	28.7	0.0131	34.0	10.7	0.0303	52.4
5.00	22.2	31.0	26.7	0.0131	32.0	11.0	0.0194	48.8
15.00	22.2	29.0	24.7	0.0131	30.0	11.4	0.0114	45.1
30.00	22.4	28.0	23.7	0.0131	29.0	11.5	0.0081	43.4
60.00	22.4	27.0	22.7	0.0131	28.0	11.7	0.0058	41.5
240.00	22.4	24.0	19.7	0.0131	25.0	12.2	0.0029	36.1
1440.00	21.9	22.0	17.6	0.0131	23.0	12.5	0.0012	32.2

MACTEC, Inc.

Fractional Components

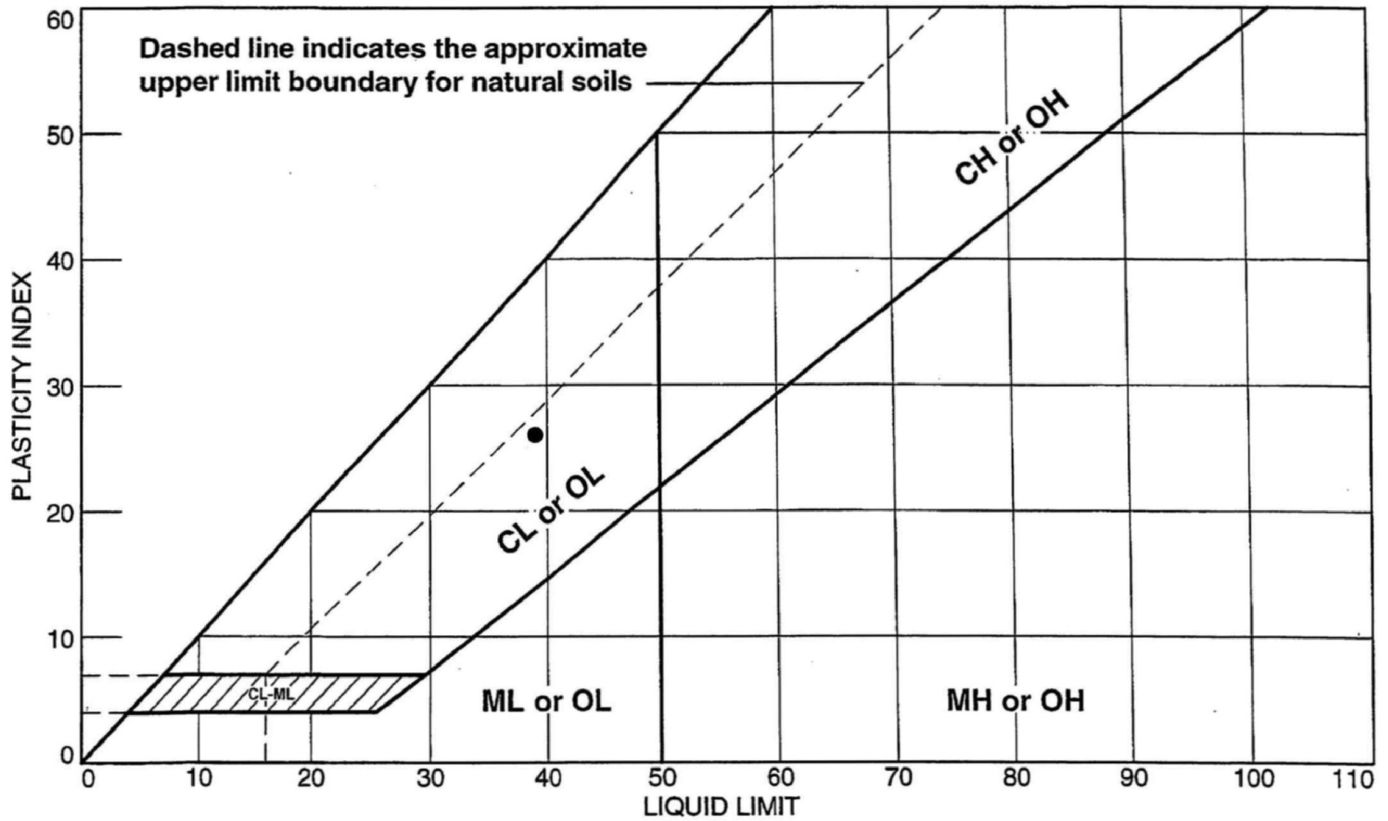
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.8	1.8	2.4	3.4	35.3	41.1	16.6	40.5	57.1

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
				0.0224	0.0891	0.1737	0.2084	0.2740	1.4374

Fineness Modulus
0.52

MACTEC, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA

	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
•	Boring B-2182A	SS-25	118.3-119.8	16.9	13	39	26	CL

MACTEC, Inc.

Raleigh, North Carolina

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project No.: 6468071777

Figure NA

Tested By: CS

Checked By: LBJ

DSC 1-25-08

LIQUID AND PLASTIC LIMIT TEST DATA

1/24/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2182A

Depth: 118.3-119.8

Sample Number: SS-25

Material Description: Brownish Gray Sandy Lean CLAY

USCS: CL

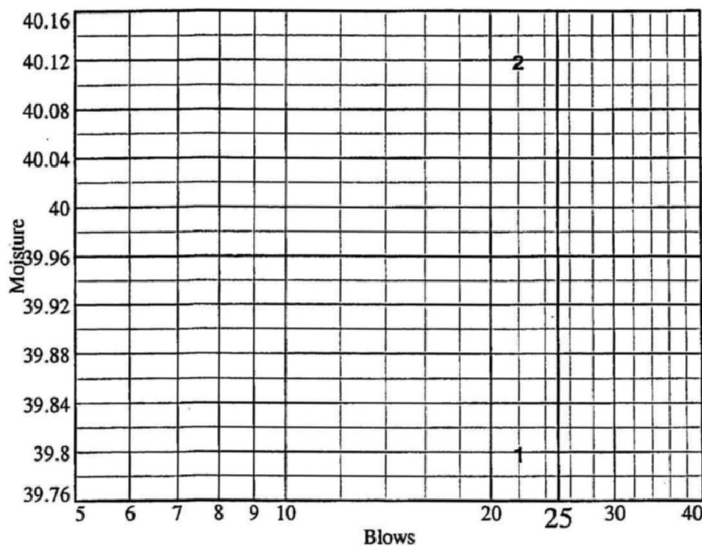
AASHTO: A-6(11)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.92	34.38				
Dry+Tare	24.37	28.98				
Tare	15.45	15.52				
# Blows	22	22				
Moisture	39.8	40.1				



Liquid Limit= 39
Plastic Limit= 13
Plasticity Index= 26
Natural Moisture= 16.9
Liquidity Index= 0.1

Plastic Limit Data

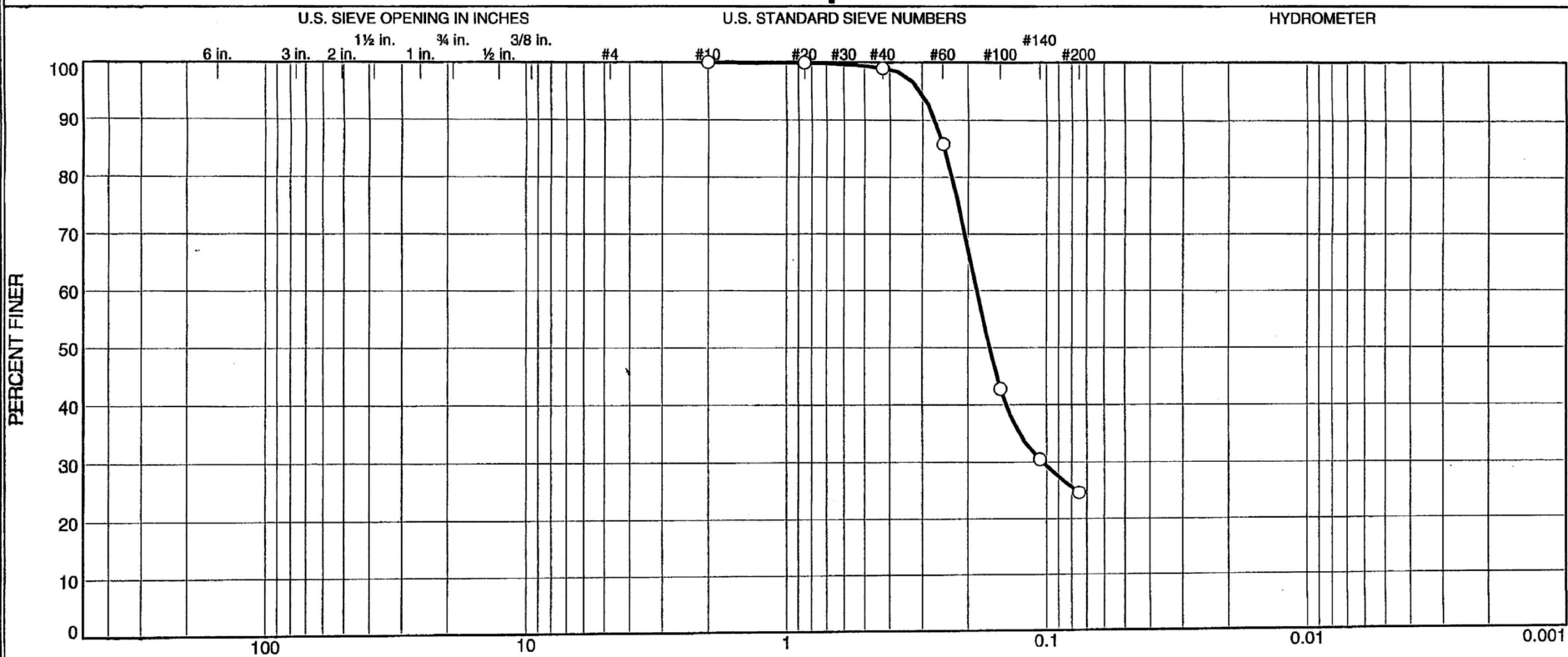
Run No.	1	2	3	4
Wet+Tare	23.52	22.70		
Dry+Tare	22.60	21.9		
Tare	15.49	15.74		
Moisture	12.9	13.0		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
127.70	110.25	6.80	16.9

MACTEC, Inc.

Particle Size Distribution Report / ASTM D 6913-04e1



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	1.1	74.2	24.7	

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2182A	SS-26a	128.3-129.0	11/30/07	SC	Light Gray Clayey SAND (Visual)	ND	ND	ND

Client Bechtel	MACTEC, Inc.	○ SIEVE ANALYSIS ONLY. Specific gravity = 2.660 (ASTM-D-854-06)
Project Exelon Texas COL (Victoria)		
Project No. 6468071777		
Figure NA	Raleigh, North Carolina	

Tested By: CS

Checked By: I.R.I

DSC 1-26-08

GRAIN SIZE DISTRIBUTION TEST DATA

1/25/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2182A

Depth: 128.3-129.0

Sample Number: SS-26a

Material Description: Light Gray Clayey SAND (Visual)

Date: 11/30/07

Natural Moisture: ND

Liquid Limit: ND

Plastic Limit: ND

USCS Class.: SC

Testing Remarks: SIEVE ANALYSIS ONLY.

Specific gravity = 2.660 (ASTM-D-854-06)

Tested by: CS

Checked by: LBJ

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
268.65	0.00	0.00	#10	0.00	100.0
102.24	0.00	0.00	#20	0.09	99.9
			#40	1.09	98.9
			#60	14.47	85.8
			#100	58.53	42.8
			#140	71.03	30.5
			#200	76.99	24.7

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	1.1	74.2	75.3			24.7

D10	D15	D20	D30	D50	D60	D80	D85	D90	D95
			0.1031	0.1655	0.1852	0.2309	0.2469	0.2686	0.3057

Fineness Modulus
0.63

MACTEC, Inc.

**MACTEC ENGINEERING AND CONSULTING, INC.
RALEIGH, NORTH CAROLINA**

**REPORT OF THE STANDARD TEST METHOD FOR SPECIFIC GRAVITY OF SOILS
Performed in General Accordance with ASTM D 854-06 (Method B)**

PROJECT NAME: EXELON COL PROJECT [VICTORIA]

PROJECT NUMBER: 6468071777

DATE: 12/15/07

SAMPLE IDENTIFICATION: B-2182A SS-26A

(A) Mass of oven-dried soil, grams:		49.78
(B) Mass of pycnometer filled with water at test temperature (T), grams:		654.84
(C) Mass of pycnometer, water and soil, grams:		685.92
(T) Temperature of pycnometer, water and soil, °C when mass (C) determined:		22.9
(G) Specific Gravity at observed temperature:	$A / [A + (B - C)]$	2.662
(F)	Correction factor:	0.99936
(G x F)	SPECIFIC GRAVITY @ 20°C:	2.660

MATERIAL TESTED:

- # 4

- # 10

PREPARATION METHOD:

DRY

WET (dispersed)

REMARKS: Estimated % Passing # 4 : 100%

Clayey SAND (SC) - visual

EQUIPMENT USED

SCALES : 3.1.99

OVEN : 5.1.16

THERMOMETER : 5.1.01

PYCNOMETER : P-5

TESTED BY: CS

\\Test Reports\Soils\SPECIFIC GRAVITY(ref).xls

REVIEWED BY:

Brian Johnson

DSC 1-25-08

GRAIN SIZE DISTRIBUTION TEST DATA

1/25/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2182A

Depth: 129.0-129.8

Sample Number: SS-26b

Material Description: Light Gray Lean CLAY with sand

Date: 11/30/07

Natural Moisture: 13.0

Liquid Limit: 29

Plastic Limit: 15

USCS Class.: CL

Testing Remarks: Specific gravity is assumed

Tested by: CS

Checked by: LBJ

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
203.88	0.00	0.00	#10	0.00	100.0
49.14	0.00	0.00	#20	1.39	97.2
			#40	2.31	95.3
			#60	3.45	93.0
			#100	6.40	87.0
			#140	8.49	82.7
			#200	11.65	76.3

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 49.14

Hygroscopic moisture correction:

Moist weight and tare = 27.95

Dry weight and tare = 27.80

Tare weight = 15.47

Hygroscopic moisture = 1.2%

Table of composite correction values:

Temp., deg. C: 12.2 27.1

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

Hydrometer effective depth equation: $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	37.0	32.6	0.0131	38.0	10.1	0.0295	66.4
5.00	21.9	34.0	29.6	0.0131	35.0	10.6	0.0191	60.3
15.00	22.0	30.0	25.6	0.0131	31.0	11.2	0.0113	52.2
30.00	22.1	26.0	21.7	0.0131	27.0	11.9	0.0082	44.1
60.00	22.0	21.0	16.6	0.0131	22.0	12.7	0.0060	33.9
265.00	22.3	14.0	9.7	0.0131	15.0	13.8	0.0030	19.8
1440.00	21.6	12.0	7.5	0.0132	13.0	14.2	0.0013	15.3

MACTEC, Inc.

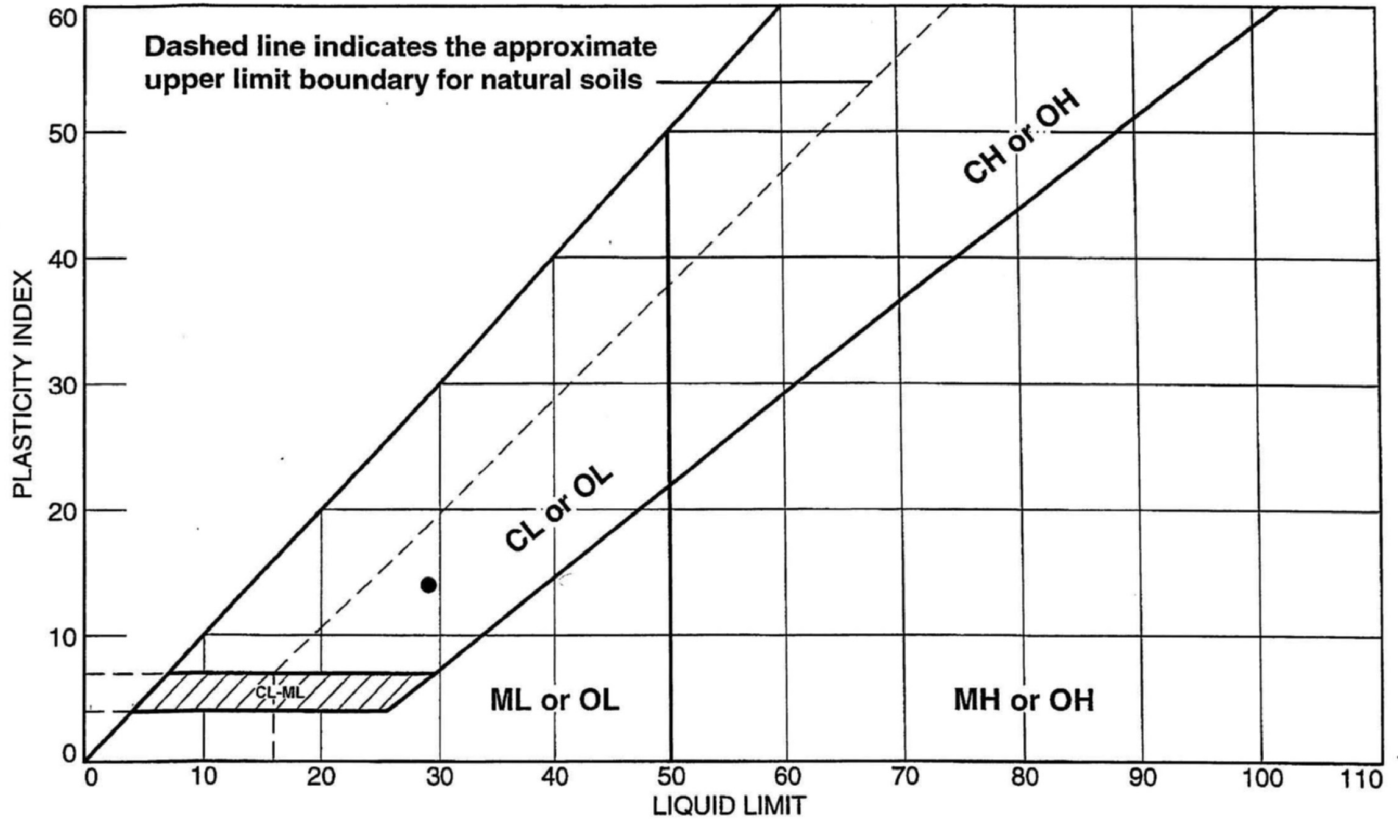
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	4.7	19.0	23.7	47.6	28.7	76.3

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
		0.0030	0.0053	0.0102	0.0187	0.0912	0.1257	0.1912	0.3755

Fineness Modulus
0.24

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
•	Boring B-2182A	SS-26b	129.0-129.8	13.0	15	29	14	CL

MACTEC, Inc. Raleigh, North Carolina	Client: Bechtel Project: Exelon Texas COL (Victoria)
	Project No.: 6468071777

Figure **NA**

Tested By: CS

Checked By: LBJ DSC 1-26-08

LIQUID AND PLASTIC LIMIT TEST DATA

1/25/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2182A

Depth: 129.0-129.8

Sample Number: SS-26b

Material Description: Light Gray Lean CLAY with sand

USCS: CL

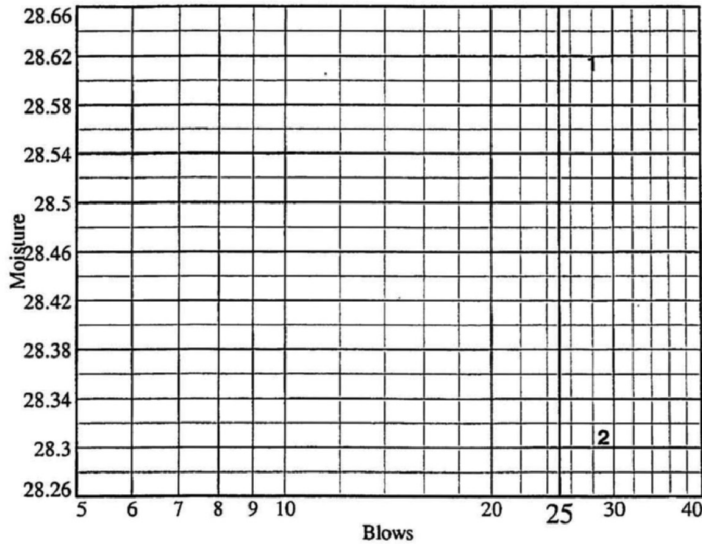
AASHTO: A-6(8)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.31	28.76				
Dry+Tare	25.44	25.83				
Tare	15.41	15.48				
# Blows	28	29				
Moisture	28.6	28.3				



Liquid Limit= 29
 Plastic Limit= 15
 Plasticity Index= 14
 Natural Moisture= 13.0
 Liquidity Index= -0.1

Plastic Limit Data

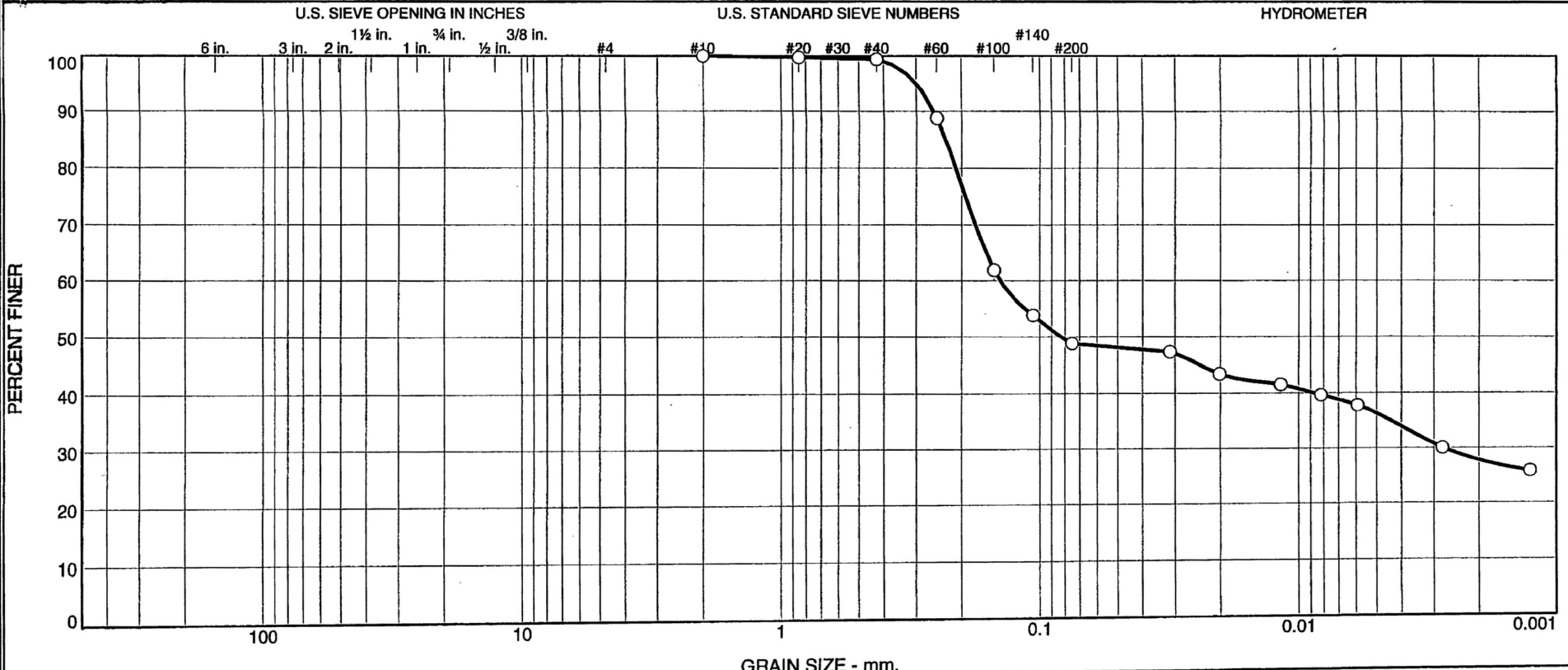
Run No.	1	2	3	4
Wet+Tare	23.19	24.41		
Dry+Tare	22.24	23.26		
Tare	15.50	15.64		
Moisture	14.1	15.1		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
79.85	71.46	6.86	13.0

MACTEC, Inc.

Particle Size Distribution Report / ASTM D 422-63(2002)e1



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.6	50.6	12.5	36.3

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2182A	SS-28a	148.3-148.8	11/30/07	SC	Pinkish Gray Clayey SAND	20.6	32	12

Client Bechtel	MACTEC, Inc.	○ Specific gravity is assumed
Project Exelon Texas COL (Victoria)		
Project No. 6468071777	Raleigh, North Carolina	
Figure NA		

Tested By: CS

Checked By: LBJ

DSC 1-26-08

GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2182A

Depth: 148.3-148.8

Sample Number: SS-28a

Material Description: Pinkish Gray Clayey SAND

Date: 11/30/07

Natural Moisture: 20.6

Liquid Limit: 32

Plastic Limit: 12

USCS Class.: SC

Testing Remarks: Specific gravity is assumed

Tested by: CS

Checked by: LBJ

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
143.98	0.00	0.00	#10	0.00	100.0
52.95	0.00	0.00	#20	0.15	99.7
			#40	0.32	99.4
			#60	5.87	88.9
			#100	20.17	61.9
			#140	24.42	53.9
			#200	27.12	48.8

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 52.95

Hygroscopic moisture correction:

Moist weight and tare = 33.46

Dry weight and tare = 33.08

Tare weight = 20.59

Hygroscopic moisture = 3.0%

Table of composite correction values:

Temp., deg. C: 12.2 27.1

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

Hydrometer effective depth equation: $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.7	29.0	24.6	0.0132	30.0	11.4	0.0314	47.2
5.00	21.6	27.0	22.5	0.0132	28.0	11.7	0.0202	43.3
15.00	21.7	26.0	21.6	0.0132	27.0	11.9	0.0117	41.5
31.00	21.9	25.0	20.6	0.0131	26.0	12.0	0.0082	39.7
60.00	22.0	24.0	19.6	0.0131	25.0	12.2	0.0059	37.8
288.00	22.0	20.0	15.6	0.0131	21.0	12.9	0.0028	30.1
1440.00	21.4	18.0	13.5	0.0132	19.0	13.2	0.0013	25.9

MACTEC, Inc.

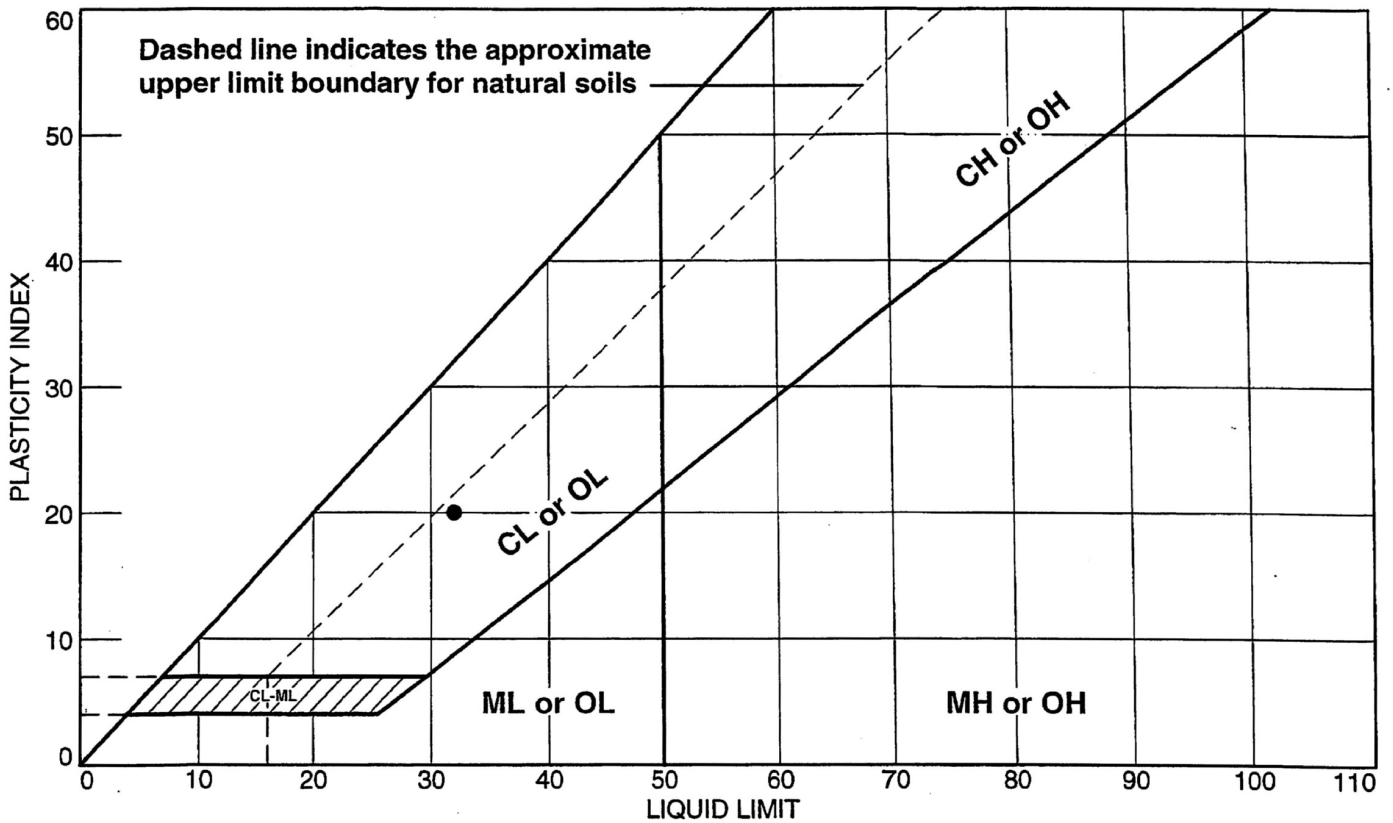
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.6	50.6	51.2	12.5	36.3	48.8

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
			0.0027	0.0830	0.1421	0.2106	0.2305	0.2565	0.2998

Fineness Modulus
0.44

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA

	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
•	Boring B-2182A	SS-28a	148.3-148.8	20.6	12	32	20	SC

MACTEC, Inc.

Raleigh, North Carolina

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project No.: 6468071777

Figure NA

Tested By: CS

Checked By: LBJ

DSC 1-26-08