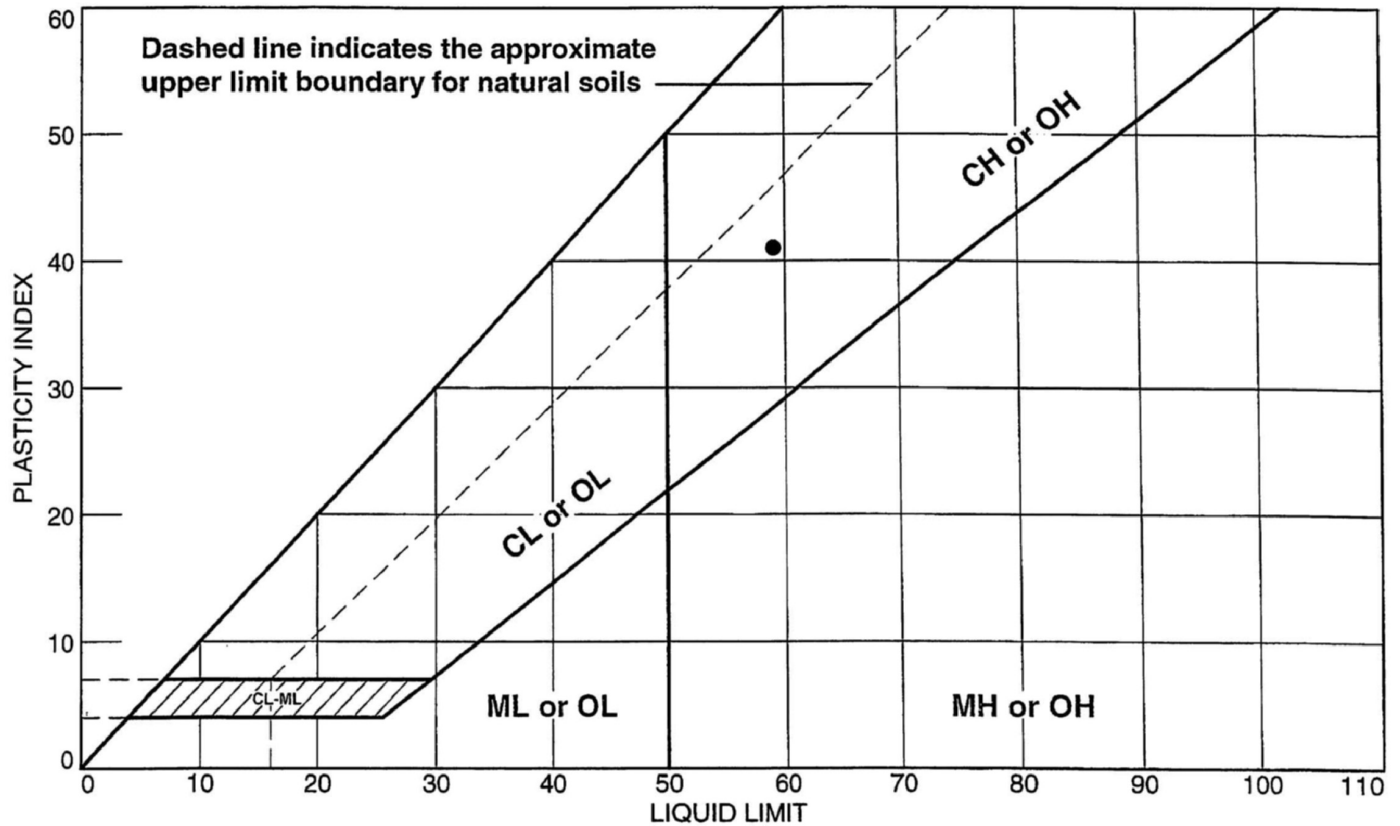


LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA							
SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
• Boring B-2302A	SS-8	23.5-25.0	20.7	18	59	41	CH

MACTEC, Inc.

Raleigh, North Carolina

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project No.: 6468071777

Figure *NA*

Tested By: CS

Checked By: LBJ DSC 4-2-08

LIQUID AND PLASTIC LIMIT TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 23.5-25.0

Sample Number: SS-8

Material Description: Light Gray and Olive Yellow Fat CLAY with sand

USCS: CH

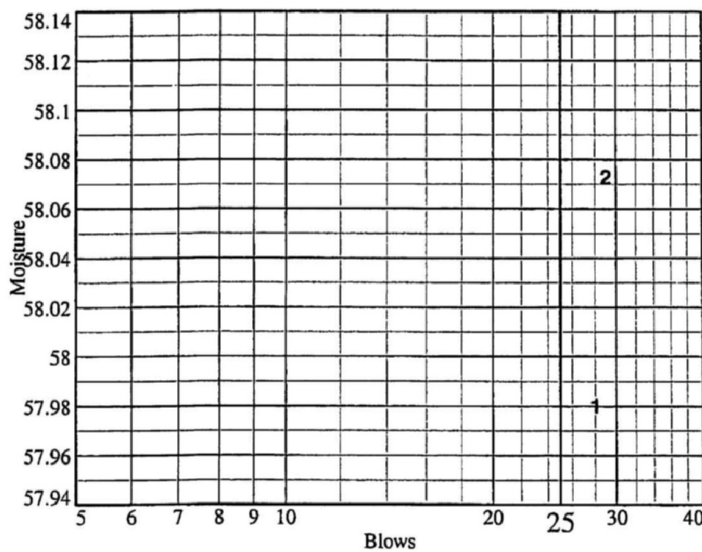
AASHTO: A-7-6(35)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	32.96	33.18				
Dry+Tare	26.53	26.67				
Tare	15.44	15.46				
# Blows	28	29				
Moisture	58.0	58.1				



Liquid Limit= 59
Plastic Limit= 18
Plasticity Index= 41
Natural Moisture= 20.7
Liquidity Index= 0.1

Plastic Limit Data

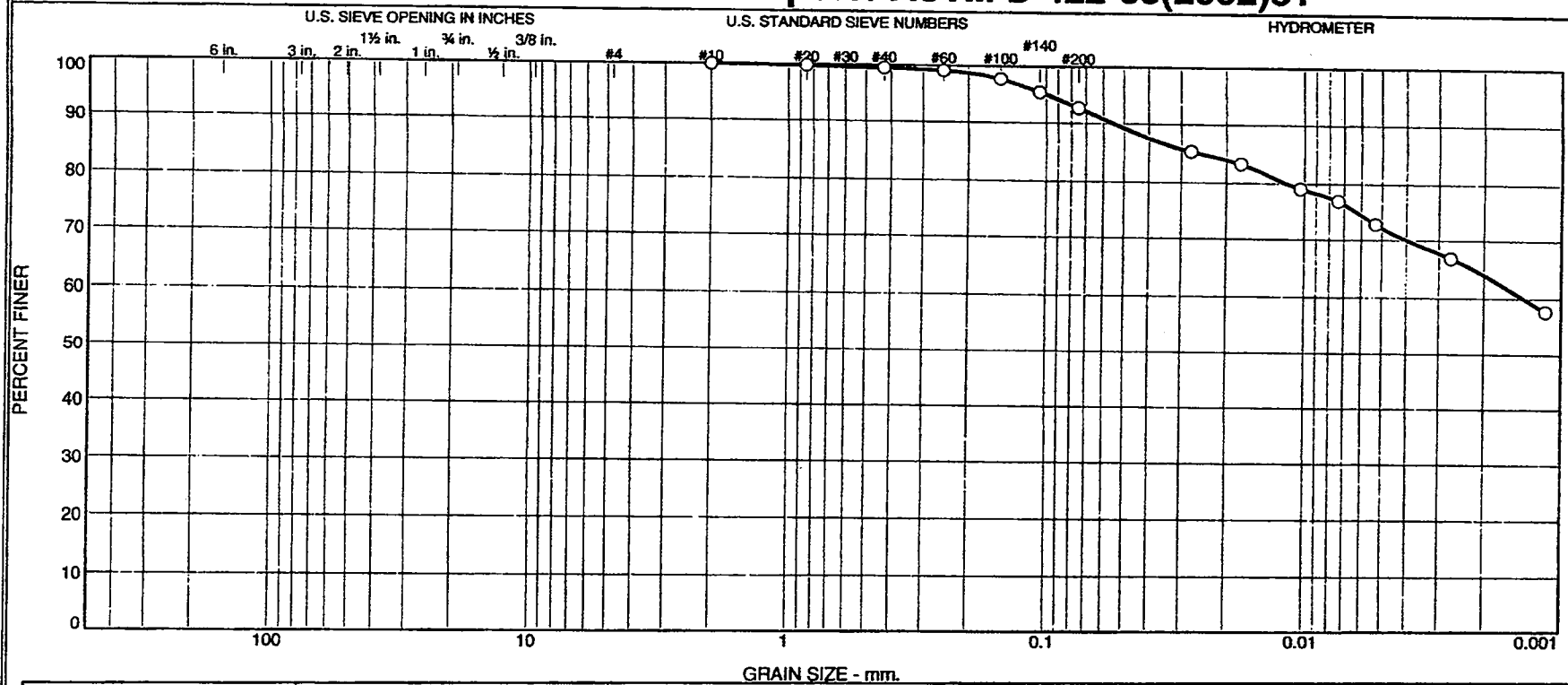
Run No.	1	2	3	4
Wet+Tare	24.12	22.82		
Dry+Tare	22.84	21.68		
Tare	15.41	15.40		
Moisture	17.2	18.2		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
139.29	116.55	6.66	20.7

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	0.5	6.9	20.4	72.2

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2302A	SS-9	28.5-30.0	1-2-08	CH	Pale Yellow and Brownish Yellow Fat CLAY	29.2	81	23

Client Bechtel	MACTEC, Inc.	○ Specific Gravity is assumed
Project Exelon Texas COL (Victoria Reservoir)		
Project No. 6468071777	Figure <i>NA</i>	Raleigh, North Carolina

Tested By: CS

Checked By: LBJ DSC 4-2-08

GRAIN SIZE DISTRIBUTION TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 28.5-30.0

Sample Number: SS-9

Material Description: Pale Yellow and Brownish Yellow Fat CLAY

Date: 1-2-08

Natural Moisture: 29.2

Liquid Limit: 81

Plastic Limit: 23

USCS Class.: CH

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
177.37	0.00	0.00	#10	0.00	100.0
48.36	0.00	0.00	#20	0.10	99.8
			#40	0.25	99.5
			#60	0.43	99.1
			#100	1.15	97.6
			#140	2.28	95.3
			#200	3.58	92.6

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 48.36

Hygroscopic moisture correction:

Moist weight and tare = 28.18

Dry weight and tare = 27.78

Tare weight = 15.47

Hygroscopic moisture = 3.2%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

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	45.0	40.5	0.0132	46.0	8.8	0.0275	85.4
5.00	21.7	44.0	39.5	0.0132	45.0	8.9	0.0176	83.3
15.00	21.7	42.0	37.5	0.0132	43.0	9.2	0.0103	79.1
30.00	21.7	41.0	36.5	0.0132	42.0	9.4	0.0074	77.0
60.00	21.9	39.0	34.5	0.0131	40.0	9.7	0.0053	72.9
240.00	22.5	36.0	31.7	0.0130	37.0	10.2	0.0027	66.9
1440.00	21.3	32.0	27.3	0.0132	33.0	10.9	0.0012	57.7

MACTEC, Inc.

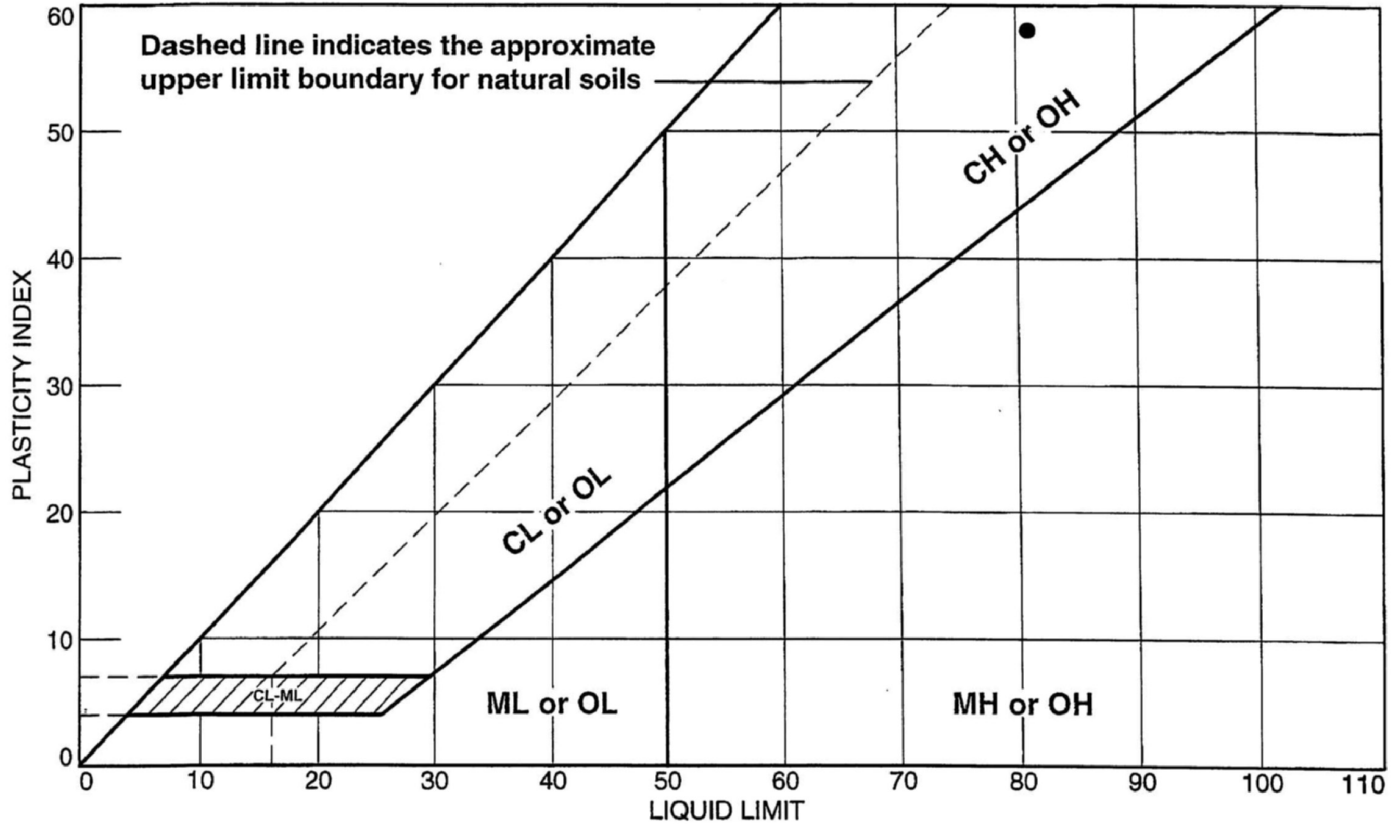
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.5	6.9	7.4	20.4	72.2	92.6

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
					0.0014	0.0117	0.0251	0.0544	0.1021

Fineness Modulus
0.04

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-2302A	SS-9	28.5-30.0	29.2	23	81	58	CH

MACTEC, Inc.

Raleigh, North Carolina

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project No.: 6468071777

Figure *NA*

Tested By: CS

Checked By: LBJ DSC 4-2-08

LIQUID AND PLASTIC LIMIT TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 28.5-30.0

Sample Number: SS-9

Material Description: Pale Yellow and Brownish Yellow Fat CLAY

USCS: CH

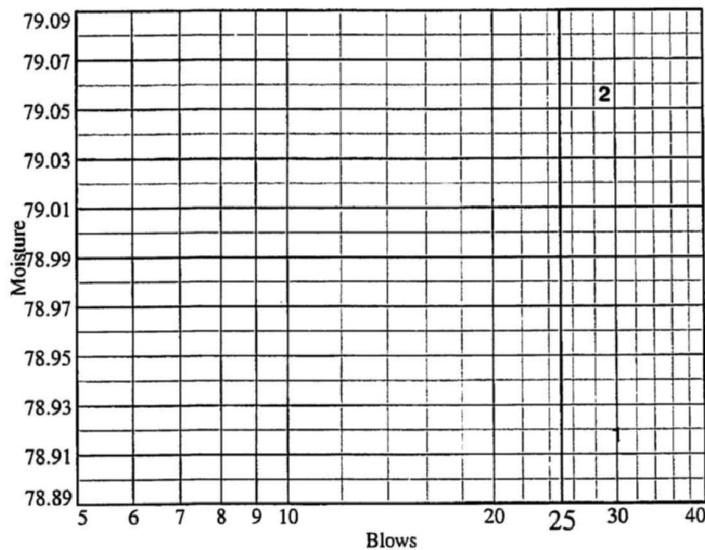
AASHTO: A-7-6(61)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.04	27.66				
Dry+Tare	20.81	22.30				
Tare	15.45	15.52				
# Blows	30	29				
Moisture	78.9	79.1				



Liquid Limit= 81
Plastic Limit= 23
Plasticity Index= 58
Natural Moisture= 29.2
Liquidity Index= 0.1

Plastic Limit Data

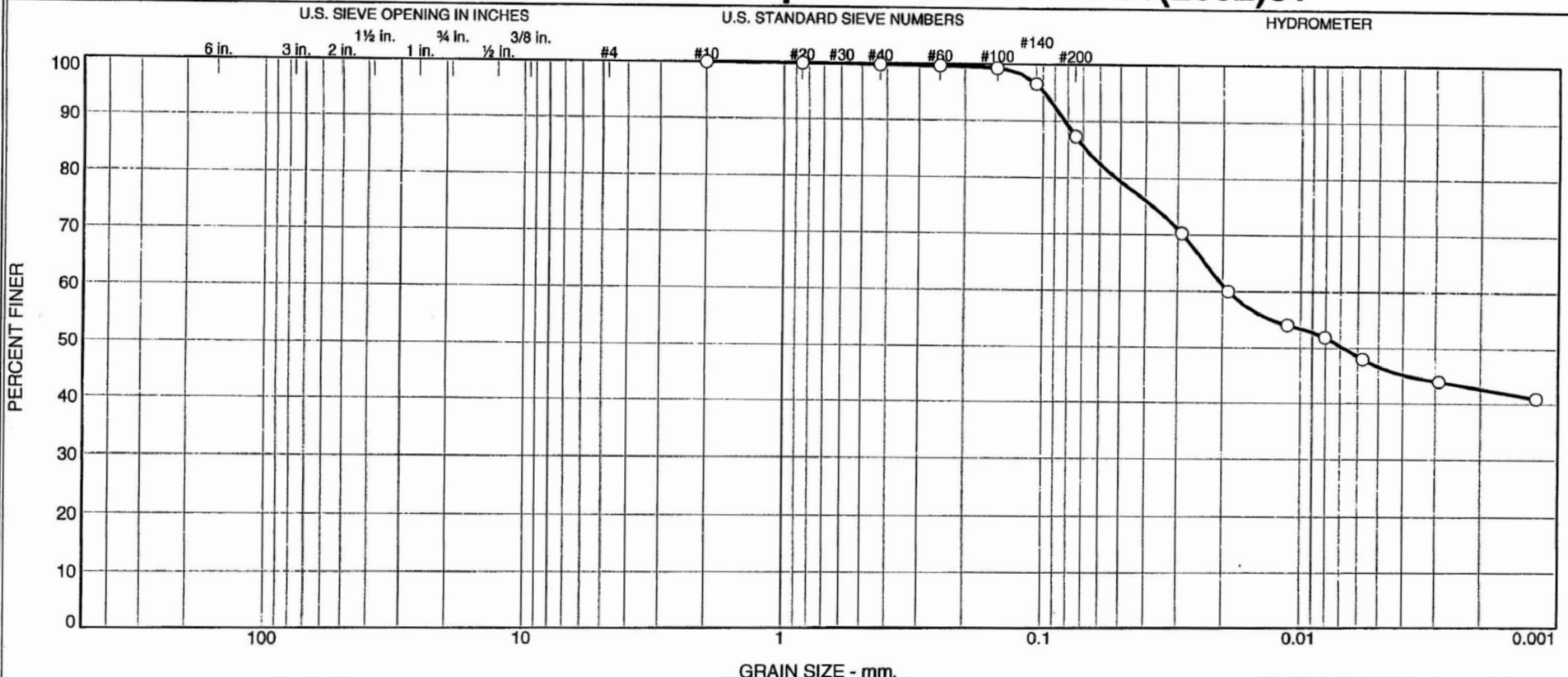
Run No.	1	2	3	4
Wet+Tare	23.01	24.15		
Dry+Tare	21.59	22.54		
Tare	15.50	15.46		
Moisture	23.3	22.7		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
117.77	93.26	9.35	29.2

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	0.2	12.4	40.8	46.6

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2302A	SS-10	33.5-35.0	1-2-08	CL	Pale Yellow and Brownish Yellow Lean CLAY	20.4	46	16

Client Bechtel	MACTEC, Inc.	○ Specific Gravity = 2.690 (ASTM D854-06)
Project Exelon Texas COL (Victoria Reservoir)		
Project No. 6468071777	Figure <i>NA</i>	Raleigh, North Carolina

Tested By: CS

Checked By: LBJ *DSC 4-2-08*

Volume 3 Rev. 0 - 7/18/2008

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DCN# EXE808

GRAIN SIZE DISTRIBUTION TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 33.5-35.0

Sample Number: SS-10

Material Description: Pale Yellow and Brownish Yellow Lean CLAY

Date: 1-2-08

Natural Moisture: 20.4

Liquid Limit: 46

Plastic Limit: 16

USCS Class.: CL

Testing Remarks: Specific Gravity = 2.690 (ASTM D854-06)

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
198.46	0.00	0.00	#10	0.00	100.0
51.36	0.00	0.00	#20	0.05	99.9
			#40	0.11	99.8
			#60	0.18	99.6
			#100	0.37	99.3
			#140	1.76	96.6
			#200	6.48	87.4

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 51.36

Hygroscopic moisture correction:

Moist weight and tare = 28.86

Dry weight and tare = 28.66

Tare weight = 25.44

Hygroscopic moisture = 6.2%

Table of composite correction values:

Temp., deg. C: 13.0 29.8

Comp. corr.: -8.0 -2.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.690

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	22.2	39.0	34.3	0.0131	40.0	9.7	0.0290	70.3
5.00	22.2	34.0	29.3	0.0131	35.0	10.6	0.0191	60.0
15.00	22.4	31.0	26.4	0.0131	32.0	11.0	0.0112	54.0
30.00	22.3	30.0	25.3	0.0131	31.0	11.2	0.0080	51.9
60.00	22.5	28.0	23.4	0.0131	29.0	11.5	0.0057	47.9
240.00	22.6	26.0	21.4	0.0131	27.0	11.9	0.0029	43.9
1440.00	21.3	25.0	20.0	0.0133	26.0	12.0	0.0012	40.9

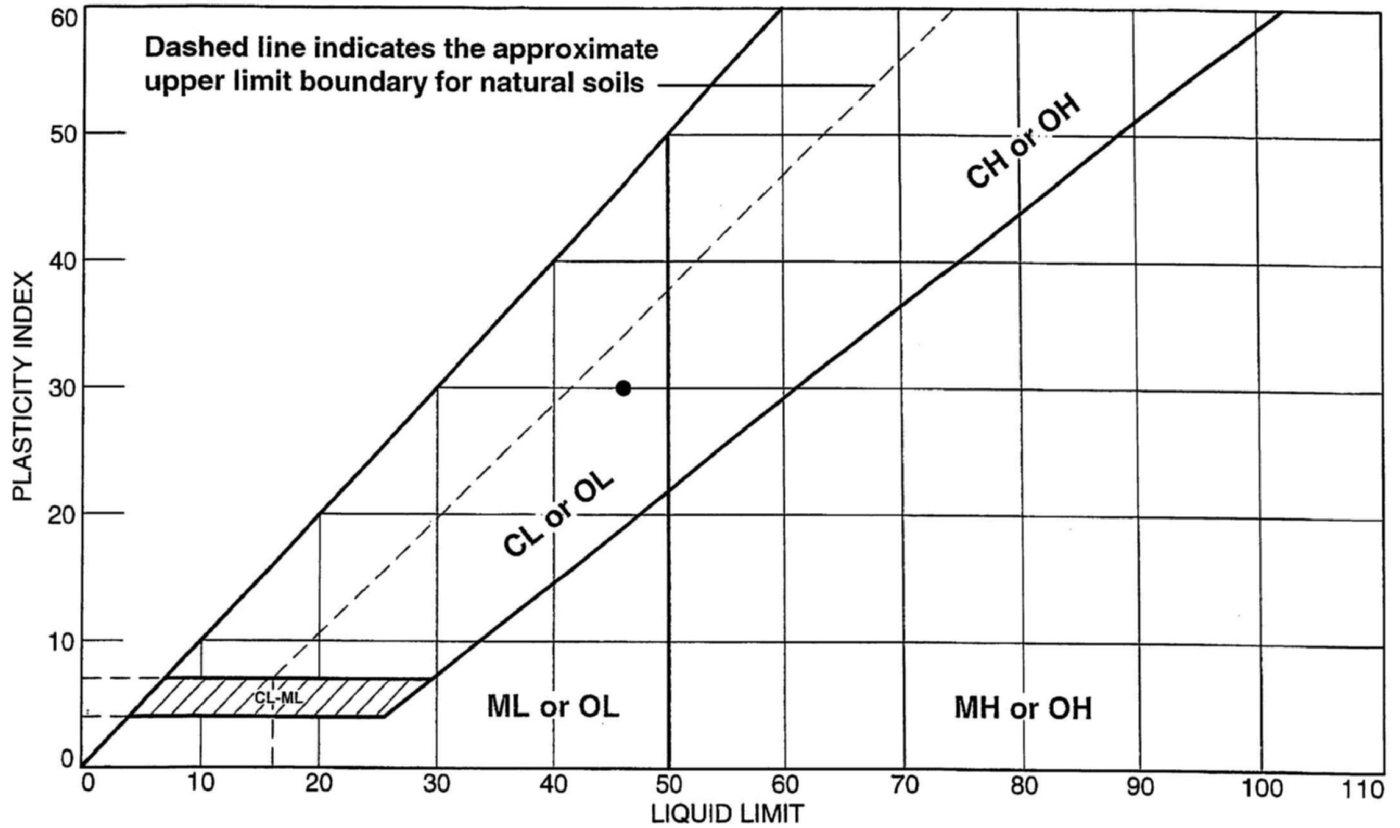
Fractional Components

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	12.4	12.6	40.8	46.6	87.4

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
				0.0068	0.0190	0.0520	0.0680	0.0823	0.0986

Fineness Modulus
0.01

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-2302A	SS-10	33.5-35.0	20.4	16	46	30	CL

MACTEC, Inc.

Raleigh, North Carolina

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project No.: 6468071777

Figure **NA**

Tested By: CS

Checked By: LBJ

DSC 4-2-08

LIQUID AND PLASTIC LIMIT TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 33.5-35.0

Sample Number: SS-10

Material Description: Pale Yellow and Brownish Yellow Lean CLAY

USCS: CL

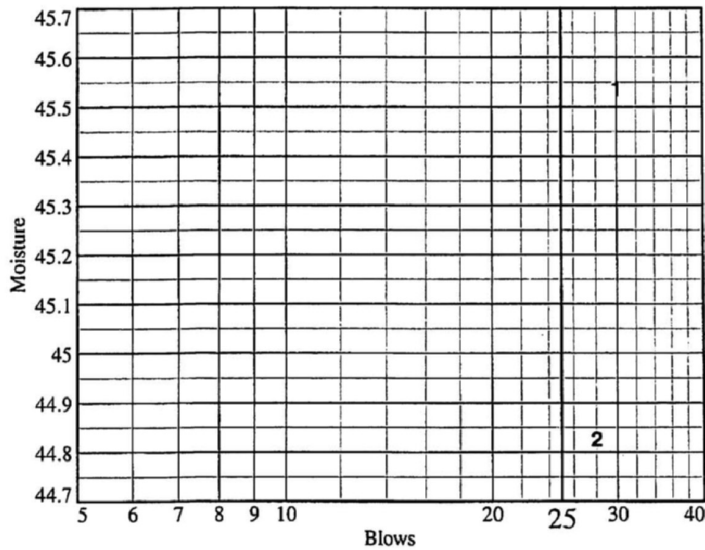
AASHTO: A-7-6(26)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.02	23.95				
Dry+Tare	20.03	21.35				
Tare	15.66	15.55				
# Blows	30	28				
Moisture	45.5	44.8				



Liquid Limit= 46
Plastic Limit= 16
Plasticity Index= 30
Natural Moisture= 20.4
Liquidity Index= 0.1

Plastic Limit Data

Run No.	1	2	3	4
Wet+Tare	25.74	25.60		
Dry+Tare	24.30	24.20		
Tare	15.44	15.49		
Moisture	16.3	16.1		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
130.45	109.96	9.32	20.4

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: 4/1/08

SAMPLE IDENTIFICATION: B-2302A SS-10

(A) Mass of oven-dried soil, grams:	50.57
(B) Mass of pycnometer filled with water at test temperature (T), grams:	655.70
(C) Mass of pycnometer, water and soil, grams:	687.48
(T) Temperature of pycnometer, water and soil, °C when mass (C) determined:	21.7
(G) Specific Gravity at observed temperature:	A / [B - (C - A)]
(F) Correction factor:	0.99963
(G x F) SPECIFIC GRAVITY @ 20°C:	2.690

MATERIAL TESTED:

- # 4

- # 10

PREPARATION METHOD:

DRY

WET (dispersed)

REMARKS: Estimated % Passing # 4 : 100%

Lean CLAY (CL)

EQUIPMENT USED

SCALES : 3.1.19

OVEN : 5.1.16

THERMOMETER : 5.1.01

PYCNOMETER : P-3

TESTED BY: CS

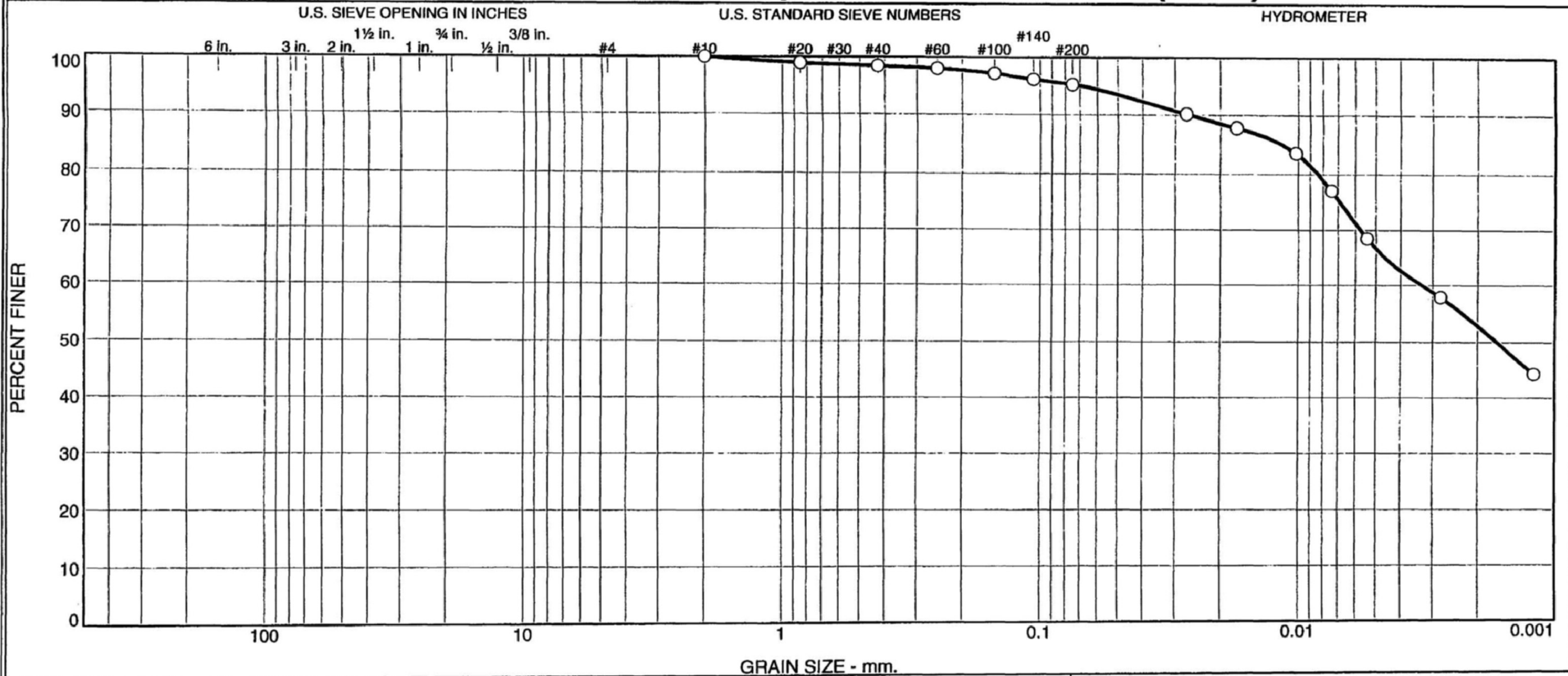
\\Test Reports\Soils\SPECIFIC GRAVITY(ref).xls

REVIEWED BY:

Brian Johnson

DSC 4-1-08

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	1.6	3.2	28.5	66.7

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2302A	SS-11	38.5-40.0	1-2-08	CH	Pale Yellow and Brownish Yellow Fat CLAY	22.6	69	22

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

Tested By: CS

Checked By: LBJ

DSC 4-2-08

GRAIN SIZE DISTRIBUTION TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 38.5-40.0

Sample Number: SS-11

Material Description: Pale Yellow and Brownish Yellow Fat CLAY

Date: 1-2-08

Natural Moisture: 22.6

Liquid Limit: 69

Plastic Limit: 22

USCS Class.: CH

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
211.93	0.00	0.00	#10	0.00	100.0
47.20	0.00	0.00	#20	0.51	98.9
			#40	0.74	98.4
			#60	0.94	98.0
			#100	1.35	97.1
			#140	1.85	96.1
			#200	2.27	95.2

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 47.20

Hygroscopic moisture correction:

Moist weight and tare = 28.30

Dry weight and tare = 27.86

Tare weight = 15.46

Hygroscopic moisture = 3.5%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

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	46.0	41.6	0.0131	47.0	8.6	0.0271	90.2
5.00	22.0	45.0	40.5	0.0131	46.0	8.8	0.0174	87.9
15.00	22.0	43.0	38.5	0.0131	44.0	9.1	0.0102	83.6
30.00	22.1	40.0	35.6	0.0131	41.0	9.6	0.0074	77.2
60.00	22.1	36.0	31.6	0.0131	37.0	10.2	0.0054	68.5
240.00	22.5	31.0	26.7	0.0130	32.0	11.0	0.0028	57.9
1440.00	21.4	25.0	20.4	0.0132	26.0	12.0	0.0012	44.2

MACTEC, Inc.

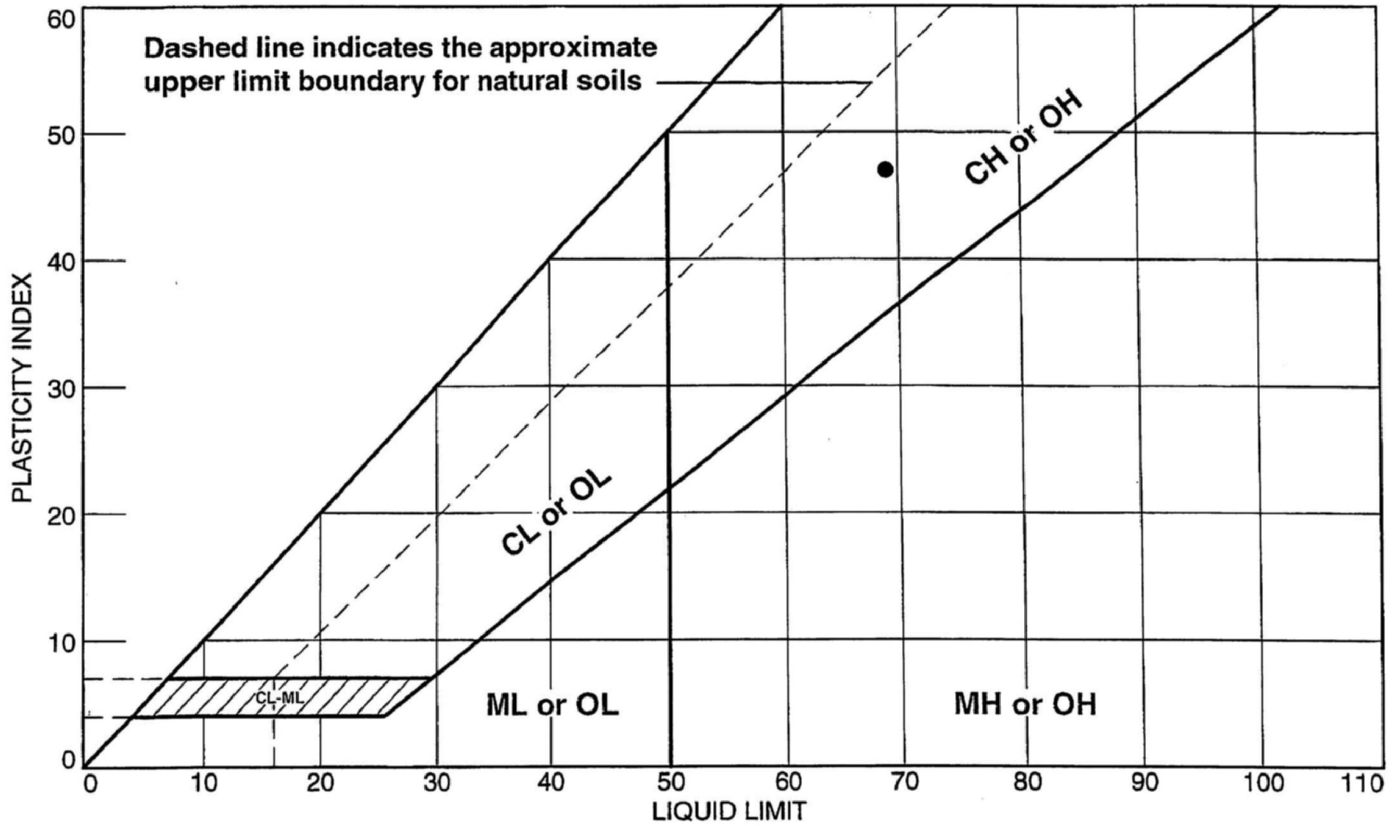
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	1.6	3.2	4.8	28.5	66.7	95.2

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
				0.0017	0.0033	0.0083	0.0114	0.0262	0.0707

Fineness Modulus
0.07

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-2302A	SS-11	38.5-40.0	22.6	22	69	47	CH

MACTEC, Inc.

Raleigh, North Carolina

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project No.: 6468071777

Figure NA

Tested By: CS

Checked By: LBJ DSC 4-2-08

LIQUID AND PLASTIC LIMIT TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 38.5-40.0

Sample Number: SS-11

Material Description: Pale Yellow and Brownish Yellow Fat CLAY

USCS: CH

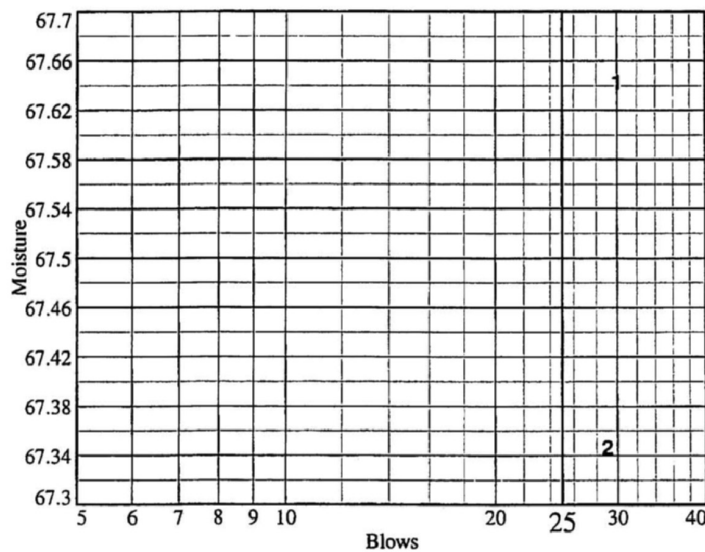
AASHTO: A-7-6(50)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.52	28.60				
Dry+Tare	22.67	23.32				
Tare	15.50	15.48				
# Blows	30	29				
Moisture	67.6	67.3				



Liquid Limit= 69
Plastic Limit= 22
Plasticity Index= 47
Natural Moisture= 22.6
Liquidity Index= 0.0

Plastic Limit Data

Run No.	1	2	3	4
Wet+Tare	23.03	22.97		
Dry+Tare	21.69	21.66		
Tare	15.52	15.53		
Moisture	21.7	21.4		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
125.01	103.18	6.80	22.6

MACTEC, Inc.

GRAIN SIZE DISTRIBUTION TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 43.5-45.0

Sample Number: SS-12

Material Description: Pale Yellow Lean CLAY with sand

Date: 1-2-08

Natural Moisture: 18.8

Liquid Limit: 48

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
239.75	0.00	0.00	#4	0.00	100.0
			#10	0.62	99.7
52.92	0.00	0.00	#20	1.86	96.2
			#40	2.88	94.3
			#60	3.64	92.9
			#100	5.99	88.5
			#140	9.87	81.1
			#200	14.65	72.1

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 99.7

Weight of hydrometer sample = 52.92

Hygroscopic moisture correction:

Moist weight and tare = 28.41

Dry weight and tare = 28.24

Tare weight = 15.91

Hygroscopic moisture = 1.4%

Table of composite correction values:

Temp., deg. C: 13.0 29.8

Comp. corr.: -8.0 -2.0

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	32.0	27.3	0.0131	33.0	10.9	0.0306	51.5
5.00	22.1	29.5	24.8	0.0131	30.5	11.3	0.0197	46.8
15.00	22.1	26.5	21.8	0.0131	27.5	11.8	0.0116	41.1
30.00	22.2	24.0	19.3	0.0131	25.0	12.2	0.0083	36.4
60.00	22.3	22.0	17.3	0.0131	23.0	12.5	0.0060	32.7
233.00	22.3	19.0	14.3	0.0131	20.0	13.0	0.0031	27.1
1440.00	21.4	18.0	13.0	0.0132	19.0	13.2	0.0013	24.6

MACTEC, Inc.

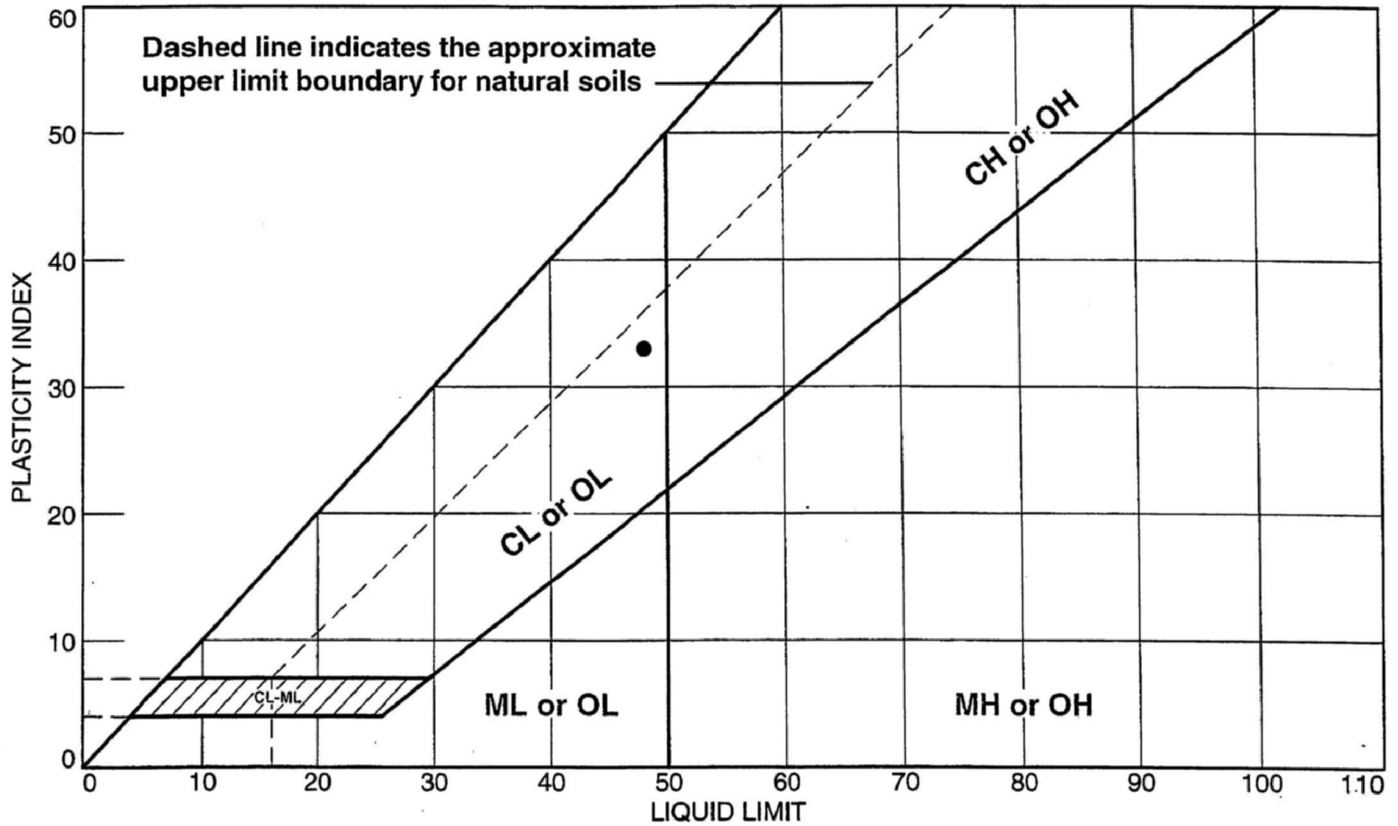
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.3	5.4	22.2	27.9	41.1	31.0	72.1

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
			0.0045	0.0273	0.0470	0.1013	0.1251	0.1677	0.5741

Fineness Modulus
0.25

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-2302A	SS-12	43.5-45.0	18.8	15	48	33	CL

MACTEC, Inc.
Raleigh, North Carolina

Client: Bechtel
 Project: Exelon Texas COL (Victoria Reservoir)

Project No.: 6468071777

Figure **NA**

Tested By: CS

Checked By: LBJ

DSC 4-2-08

LIQUID AND PLASTIC LIMIT TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 43.5-45.0

Sample Number: SS-12

Material Description: Pale Yellow Lean CLAY with sand

USCS: CL

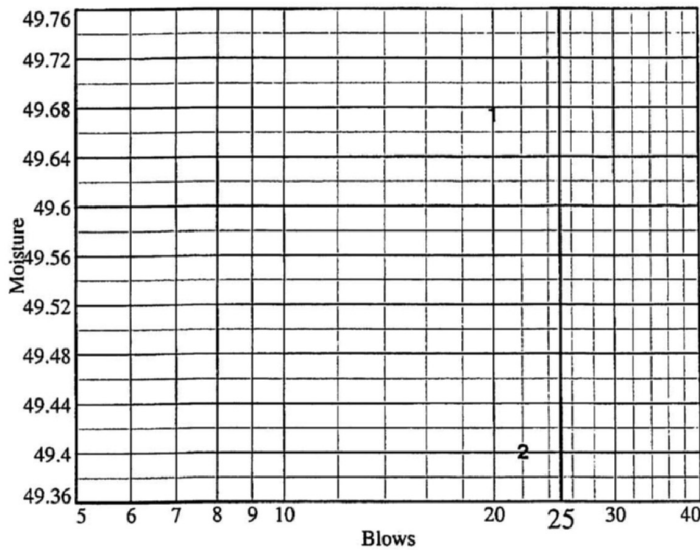
AASHTO: A-7-6(22)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.32	20.64				
Dry+Tare	20.03	18.99				
Tare	15.42	15.65				
# Blows	20	22				
Moisture	49.7	49.4				



Liquid Limit= 48
Plastic Limit= 15
Plasticity Index= 33
Natural Moisture= 18.8
Liquidity Index= 0.1

Plastic Limit Data

Run No.	1	2	3	4
Wet+Tare	23.38	23.98		
Dry+Tare	22.33	22.87		
Tare	15.56	15.52		
Moisture	15.5	15.1		

Natural Moisture Data

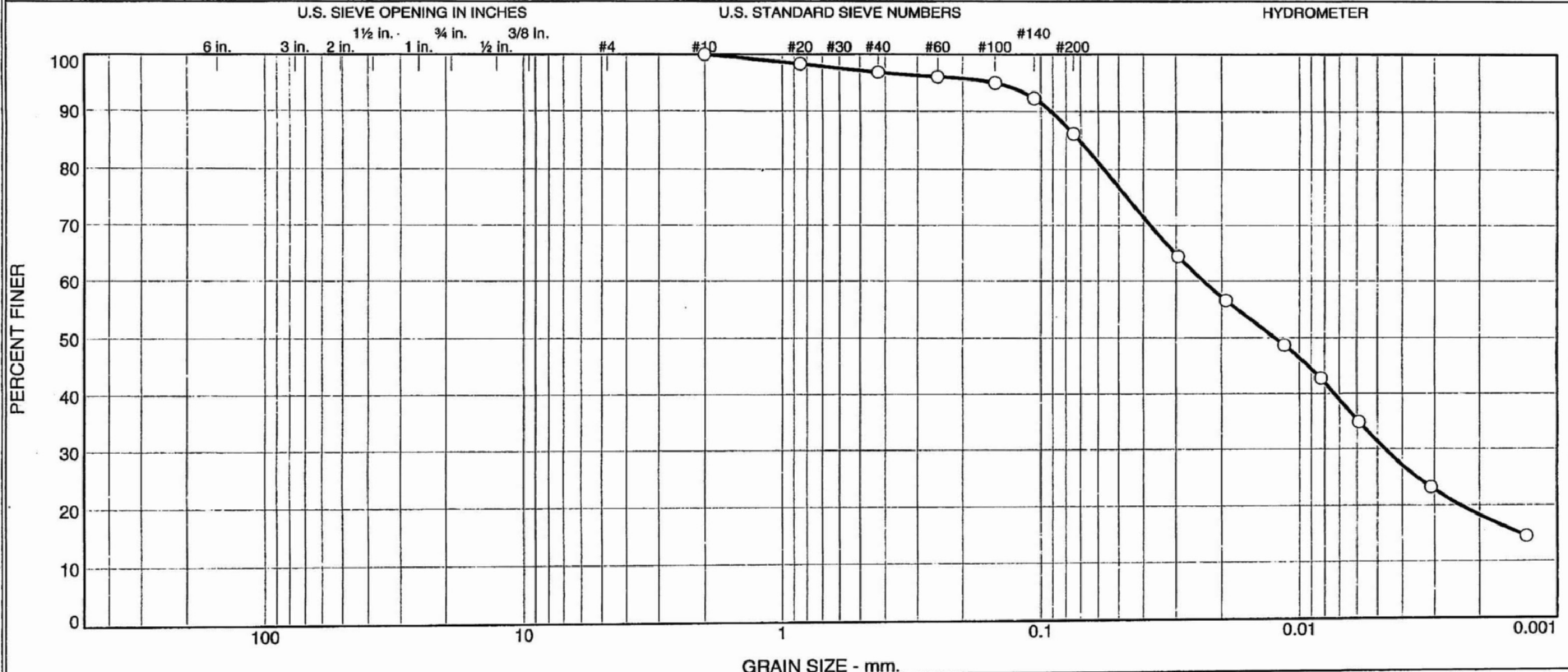
Wet+Tare	Dry+Tare	Tare	Moisture
106.24	90.44	6.51	18.8

MACTEC, Inc.

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

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GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	3.2	10.6	54.8	31.4

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2302A	SS-13	48.5-50.0	1-2-08	CL	Light Gray and Yellow Lean CLAY	20.1	38	13

Client Bechtel	MACTEC, Inc.	○ Specific Gravity is assumed
Project Exelon Texas COL (Victoria Reservoir)		
Project No. 6468071777		
Figure <i>NA</i>	Raleigh, North Carolina	

DCN# EXE808

Tested By: CS

Checked By: LBJ

DSC 4-2-08

GRAIN SIZE DISTRIBUTION TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 48.5-50.0

Sample Number: SS-13

Material Description: Light Gray and Yellow Lean CLAY

Date: 1-2-08

Natural Moisture: 20.1

Liquid Limit: 38

Plastic Limit: 13

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
233.18	0.00	0.00	#10	0.00	100.0
50.74	0.00	0.00	#20	0.86	98.3
			#40	1.62	96.8
			#60	2.03	96.0
			#100	2.58	94.9
			#140	3.91	92.3
			#200	6.98	86.2

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 50.74

Hygroscopic moisture correction:

Moist weight and tare = 28.38

Dry weight and tare = 28.16

Tare weight = 15.66

Hygroscopic moisture = 1.8%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

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	32.5	0.0131	38.0	10.1	0.0295	64.5
5.00	21.9	33.0	28.5	0.0131	34.0	10.7	0.0192	56.5
15.00	22.0	29.0	24.5	0.0131	30.0	11.4	0.0114	48.7
30.00	22.0	26.0	21.5	0.0131	27.0	11.9	0.0082	42.7
62.00	22.2	22.0	17.6	0.0131	23.0	12.5	0.0059	34.9
240.00	22.6	16.0	11.7	0.0130	17.0	13.5	0.0031	23.2
1440.00	21.2	12.0	7.3	0.0132	13.0	14.2	0.0013	14.5

MACTEC, Inc.

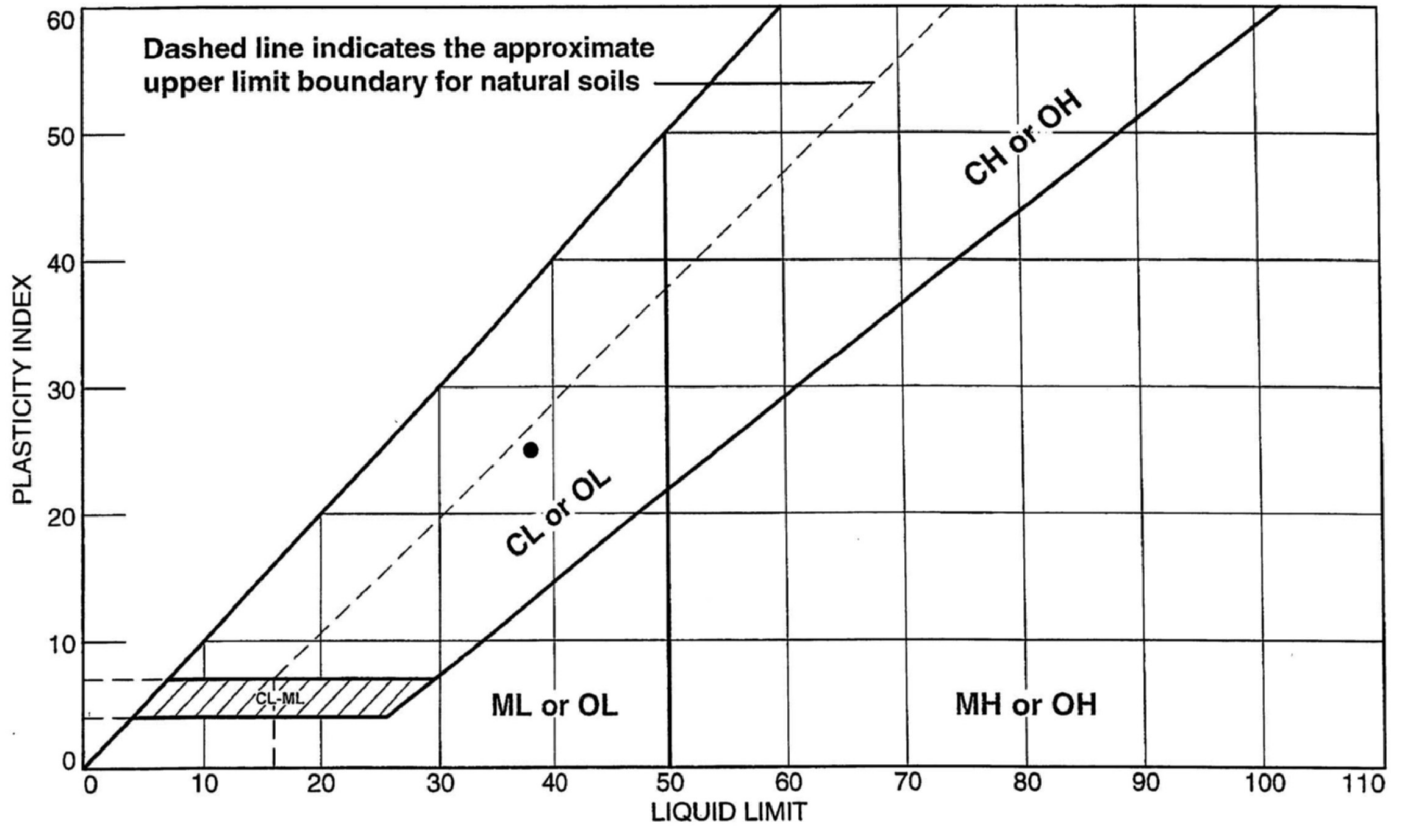
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	3.2	10.6	13.8	54.8	31.4	86.2

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
	0.0014	0.0024	0.0047	0.0124	0.0235	0.0569	0.0708	0.0910	0.1533

Fineness Modulus
0.12

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-2302A	SS-13	48.5-50.0	20.1	13	38	25	CL

MACTEC, Inc.

Raleigh, North Carolina

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project No.: 6468071777

Figure *NA*

Tested By: CS

Checked By: LBJ

DSC 4-2-08

LIQUID AND PLASTIC LIMIT TEST DATA

4/2/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2302A

Depth: 48.5-50.0

Sample Number: SS-13

Material Description: Light Gray and Yellow Lean CLAY

USCS: CL

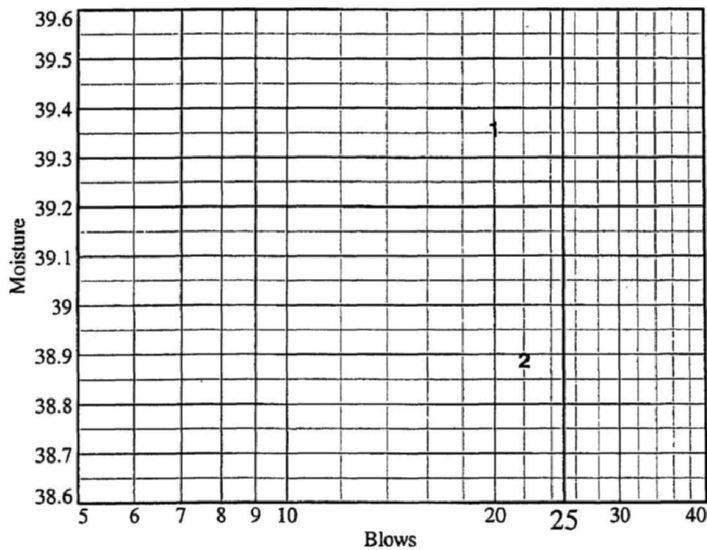
AASHTO: A-6(20)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.41	21.30				
Dry+Tare	20.45	19.69				
Tare	15.47	15.55				
# Blows	20	22				
Moisture	39.4	38.9				



Liquid Limit= 38
Plastic Limit= 13
Plasticity Index= 25
Natural Moisture= 20.1
Liquidity Index= 0.3

Plastic Limit Data

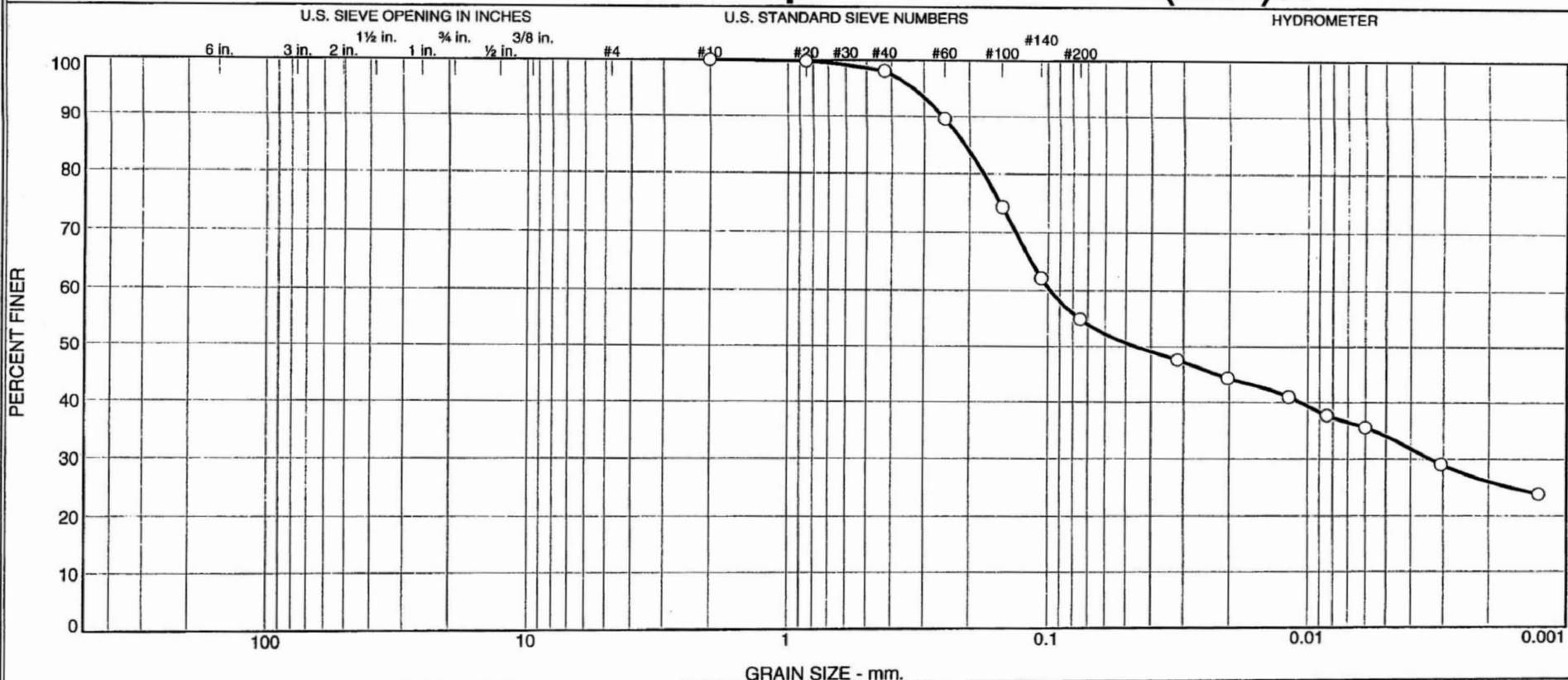
Run No.	1	2	3	4
Wet+Tare	25.17	24.22		
Dry+Tare	24.05	23.19		
Tare	15.61	15.45		
Moisture	13.3	13.3		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
135.54	113.98	6.68	20.1

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	1.9	43.1	21.0	34.0

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2302A	SS-14A	53.5-54.0	1-2-08	CL	Light Gray Sandy Lean CLAY	18.0	37	13

Client Bechtel	MACTEC, Inc.	○ Specific Gravity is assumed
Project Exelon Texas COL (Victoria Reservoir)		
Project No. 6468071777	Figure <i>NA</i>	Raleigh, North Carolina

Tested By: CS

Checked By: LBJ DSC 4-2-08

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