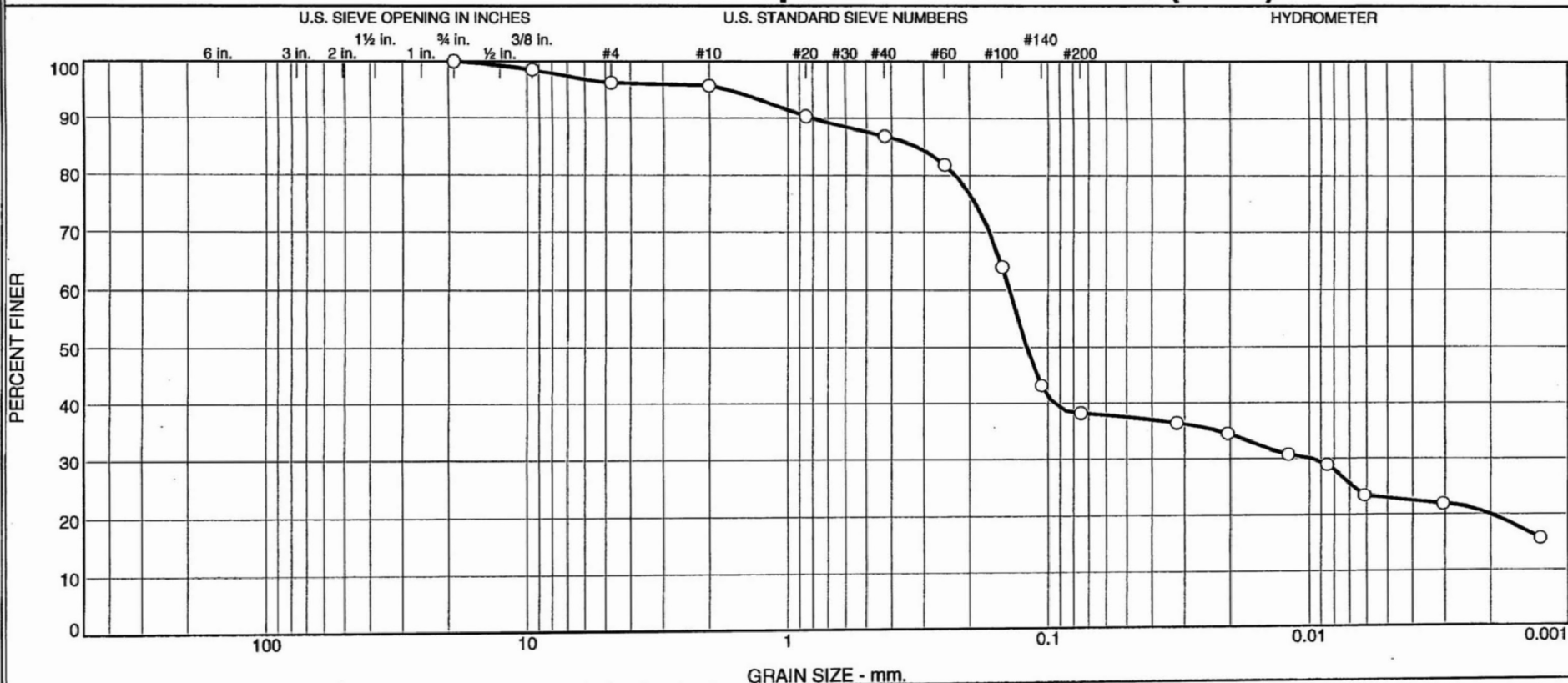


Particle Size Distribution Report / ASTM D 422-63 (2002)e1



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.8	0.5	8.8	48.7	15.2	23.0

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2319	SS-12	45.0-46.5	12-16-07	SC	Light Yellowish Brown Clayey SAND	19.5	21	12

Client Bechtel

Project Exelon Texas COL (Victoria Reservoir)

Project No. 6468071777

Figure *N/A***MACTEC, Inc.****Raleigh, North Carolina**

○ Specific Gravity is assumed

Tested By: CS

Checked By: LBJ

DSC 2-28-08

GRAIN SIZE DISTRIBUTION TEST DATA

2/27/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 45.0-46.5

Sample Number: SS-12

Material Description: Light Yellowish Brown Clayey SAND

Date: 12-16-07

Natural Moisture: 19.5

Liquid Limit: 21

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
264.81	0.00	0.00	3/4	0.00	100.0
			3/8"	3.80	98.6
			#4	9.98	96.2
			#10	11.29	95.7
51.31	0.00	0.00	#20	2.87	90.4
			#40	4.72	86.9
			#60	7.44	81.9
			#100	17.00	64.0
			#140	28.13	43.3
			#200	30.82	38.2

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 95.7

Weight of hydrometer sample = 51.31

Hygroscopic moisture correction:

Moist weight and tare = 29.55

Dry weight and tare = 29.34

Tare weight = 15.52

Hygroscopic moisture = 1.5%

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	22.7	24.0	19.5	0.0130	25.0	12.2	0.0321	36.5
5.00	22.6	23.0	18.4	0.0130	24.0	12.4	0.0205	34.5
15.00	22.6	21.0	16.4	0.0130	22.0	12.7	0.0120	30.8
30.00	22.6	20.0	15.4	0.0130	21.0	12.9	0.0085	28.9
60.00	22.8	17.0	12.5	0.0130	18.0	13.3	0.0061	23.4
240.00	23.4	16.0	11.7	0.0129	17.0	13.5	0.0031	21.9
1440.00	22.6	13.0	8.4	0.0130	14.0	14.0	0.0013	15.8

MACTEC, Inc.

Fractional Components

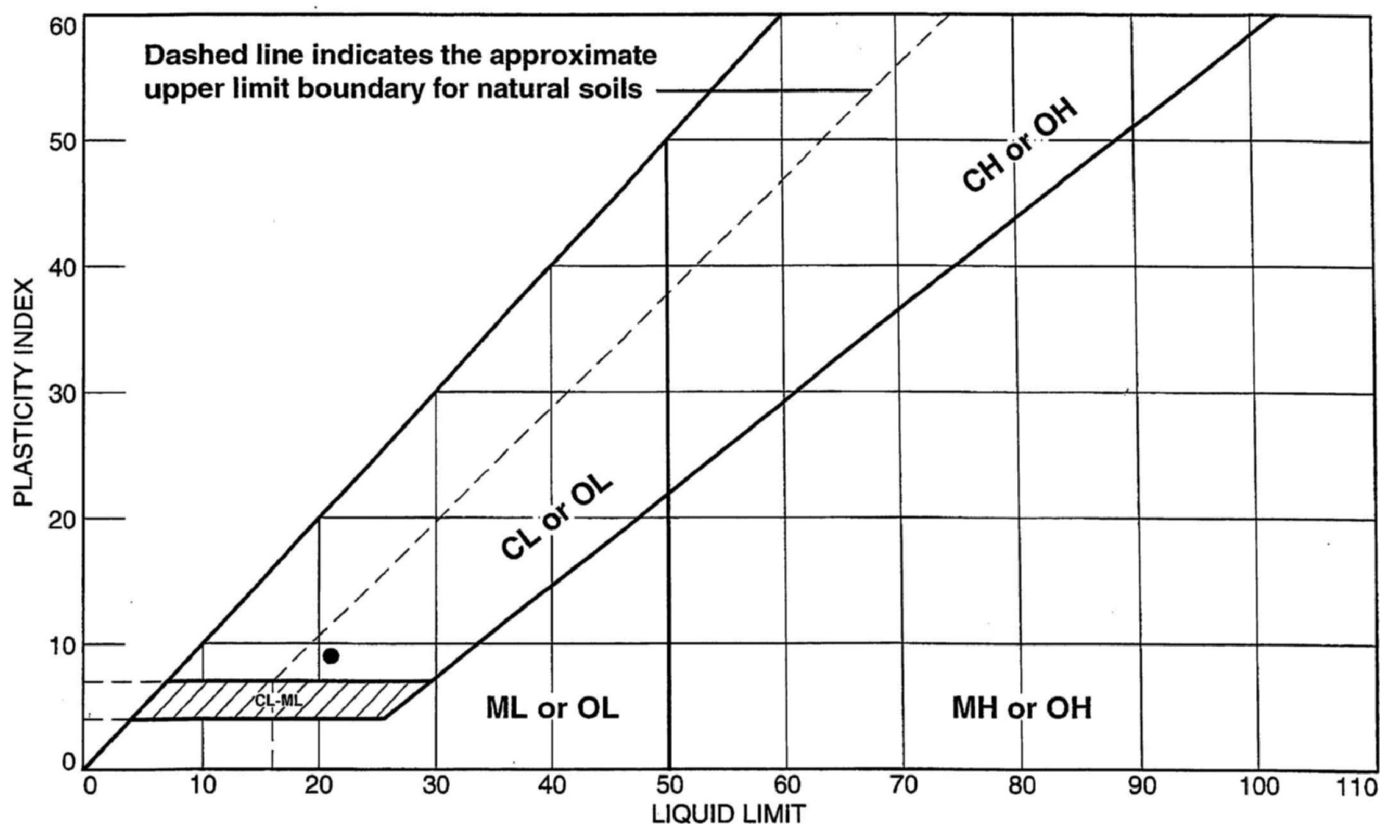
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	3.8	3.8	0.5	8.8	48.7	58.0	15.2	23.0	38.2

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
		0.0020	0.0097	0.1206	0.1406	0.2275	0.3183	0.7975	1.6858

Fineness Modulus
0.80

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-2319	SS-12	45.0-46.5	19.5	12	21	9	SC

MACTEC, Inc.

Raleigh, North Carolina

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project No.: 6468071777

Figure N A

Tested By: CS

Checked By: LBJ

DSC 2-28-08

LIQUID AND PLASTIC LIMIT TEST DATA

2/27/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 45.0-46.5

Sample Number: SS-12

Material Description: Light Yellowish Brown Clayey SAND

USCS: SC

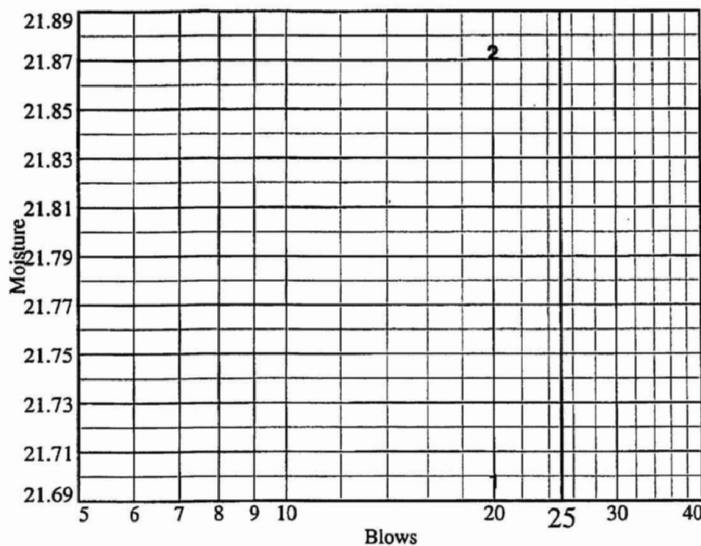
AASHTO: A-4(0)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	34.82	35.69				
Dry+Tare	31.37	32.07				
Tare	15.47	15.52				
# Blows	20	20				
Moisture	21.7	21.9				



Liquid Limit= 21
 Plastic Limit= 12
 Plasticity Index= 9
 Natural Moisture= 19.5
 Liquidity Index= 0.8

Plastic Limit Data

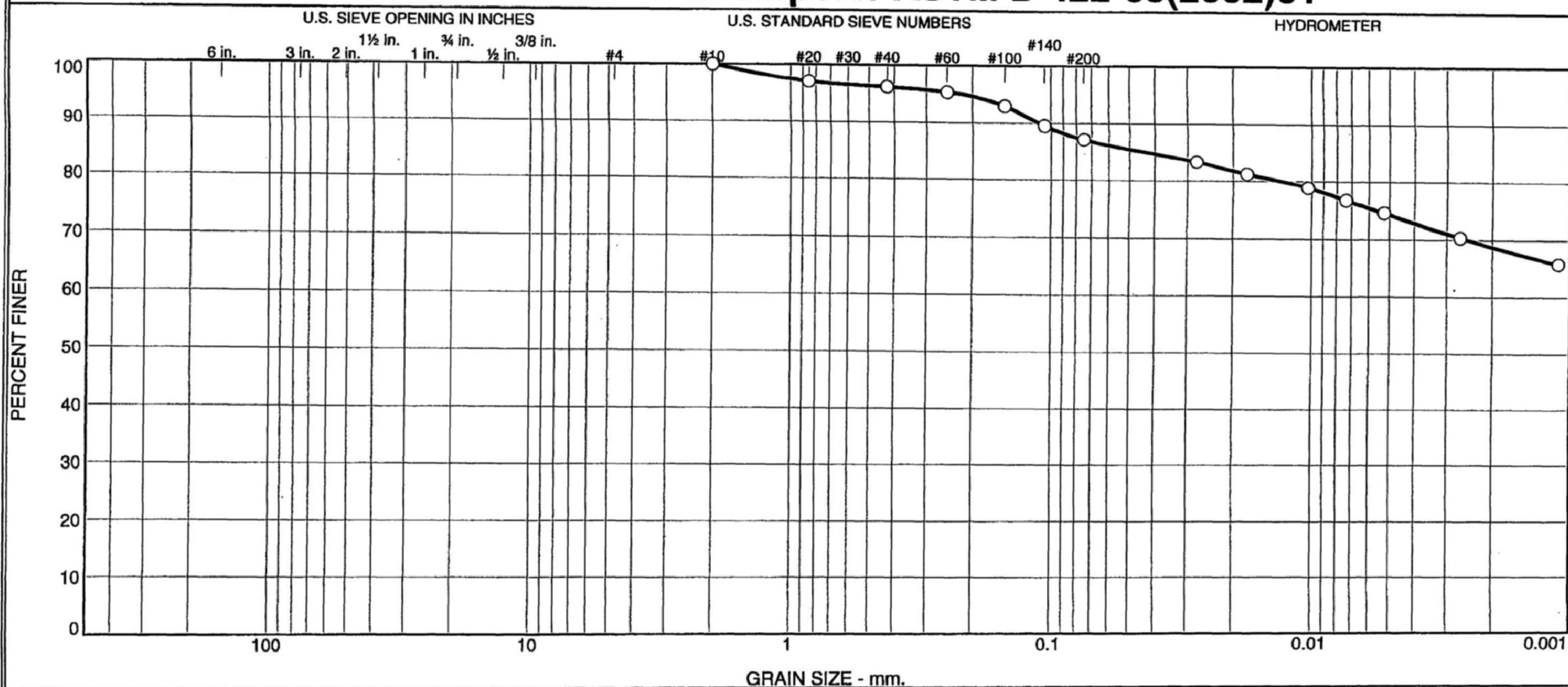
Run No.	1	2	3	4	
Wet+Tare	25.44	27.92			
Dry+Tare	24.35	26.57			
Tare	15.45	15.54			
Moisture	12.2	12.2			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
114.33	96.82	6.86	19.5

MACTEC, Inc.

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



GRAIN SIZE DISTRIBUTION TEST DATA

2/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 50.0-51.5

Sample Number: SS-13

Material Description: Light Brownish Gray Fat CLAY

Date: 12-16-07

Natural Moisture: 28.2

Liquid Limit: 68

Plastic Limit: 20

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
174.99	0.00	0.00	#10	0.00	100.0
47.79	0.00	0.00	#20	1.40	97.1
			#40	1.84	96.1
			#60	2.25	95.3
			#100	3.39	92.9
			#140	4.98	89.6
			#200	6.10	87.2

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 47.79

Hygroscopic moisture correction:

Moist weight and tare = 28.94

Dry weight and tare = 28.34

Tare weight = 15.45

Hygroscopic moisture = 4.7%

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	22.8	43.0	38.5	0.0130	44.0	9.1	0.0277	83.4
5.00	22.8	42.0	37.5	0.0130	43.0	9.2	0.0177	81.2
15.00	22.6	41.0	36.4	0.0130	42.0	9.4	0.0103	78.9
30.00	22.6	40.0	35.4	0.0130	41.0	9.6	0.0074	76.7
60.00	22.6	39.0	34.4	0.0130	40.0	9.7	0.0052	74.6
240.00	22.8	37.0	32.5	0.0130	38.0	10.1	0.0027	70.4
1440.00	22.6	35.0	30.4	0.0130	36.0	10.4	0.0011	65.9

MACTEC, Inc.

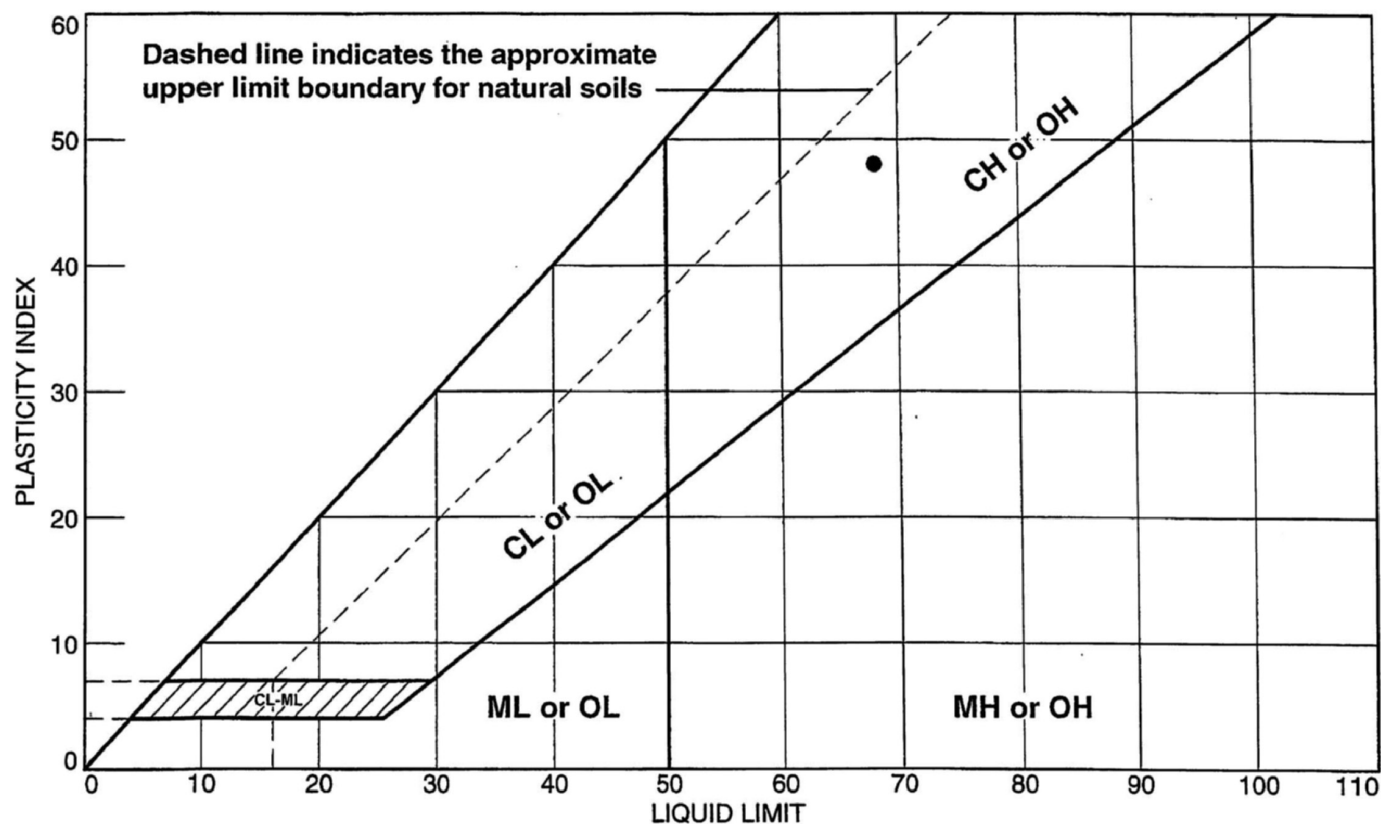
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	3.9	8.9	12.8	12.9	74.3	87.2

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
						0.0131	0.0427	0.1109	0.2240

Fineness Modulus
0.17

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-2319	SS-13	50.0-51.5	28.2	20	68	48	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 2-28-08

LIQUID AND PLASTIC LIMIT TEST DATA

2/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 50.0-51.5

Sample Number: SS-13

Material Description: Light Brownish Gray Fat CLAY

USCS: CH

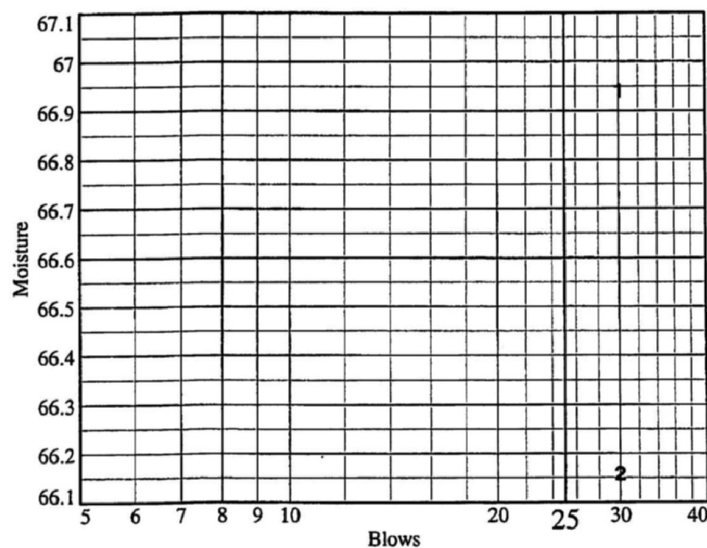
AASHTO: A-7-6(45)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	31.71	31.94				
Dry+Tare	25.21	25.41				
Tare	15.50	15.54				
# Blows	30	30				
Moisture	66.9	66.2				



Liquid Limit= 68
 Plastic Limit= 20
 Plasticity Index= 48
 Natural Moisture= 28.2
 Liquidity Index= 0.2

Plastic Limit Data

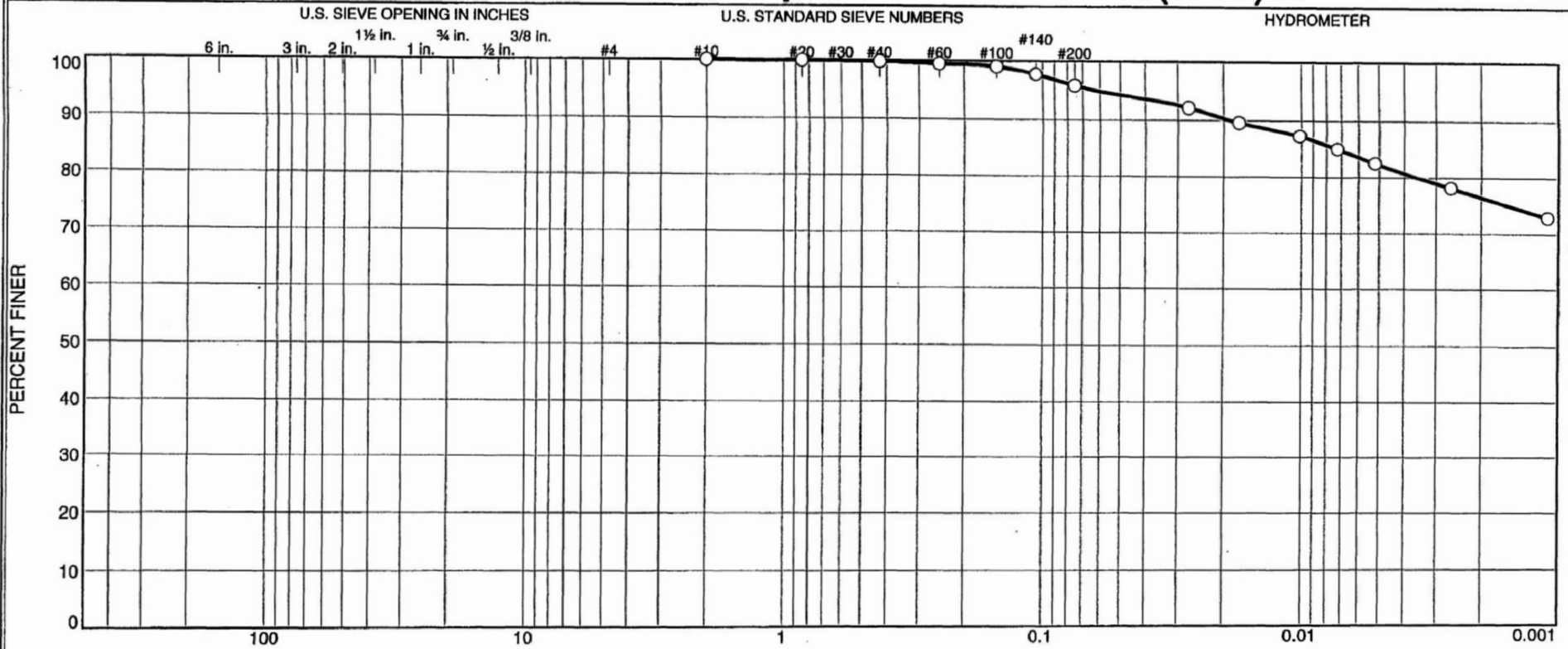
Run No.	1	2	3	4	
Wet+Tare	23.69	23.81			
Dry+Tare	22.28	22.43			
Tare	15.47	15.53			
Moisture	20.7	20.0			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
76.73	61.86	9.17	28.2

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	4.0	13.5	82.3

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2319	SS-14	55-56.5	12-16-07	CH	Brown Fat CLAY	28.9	81	24

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

Tested By: CS

Checked By: LBJ DSC 2-28-08

GRAIN SIZE DISTRIBUTION TEST DATA

2/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 55-56.5

Sample Number: SS-14

Material Description: Brown Fat CLAY

Date: 12-16-07

Natural Moisture: 28.9

Liquid Limit: 81

Plastic Limit: 24

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
167.72	0.00	0.00	#10	0.00	100.0
47.07	0.00	0.00	#20	0.03	99.9
			#40	0.08	99.8
			#60	0.24	99.5
			#100	0.46	99.0
			#140	1.06	97.7
			#200	1.98	95.8

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 47.07

Hygroscopic moisture correction:

Moist weight and tare = 21.42

Dry weight and tare = 20.67

Tare weight = 11.77

Hygroscopic moisture = 8.4%

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	22.6	45.0	40.4	0.0130	46.0	8.8	0.0272	92.1
5.00	22.4	44.0	39.4	0.0131	45.0	8.9	0.0174	89.7
15.00	22.4	43.0	38.4	0.0131	44.0	9.1	0.0102	87.4
30.00	22.4	42.0	37.4	0.0131	43.0	9.2	0.0072	85.1
60.00	22.1	41.0	36.3	0.0131	42.0	9.4	0.0052	82.6
240.00	22.3	39.0	34.3	0.0131	40.0	9.7	0.0026	78.2
1440.00	21.4	37.0	32.0	0.0132	38.0	10.1	0.0011	72.9

MACTEC, Inc.

Regional Composites

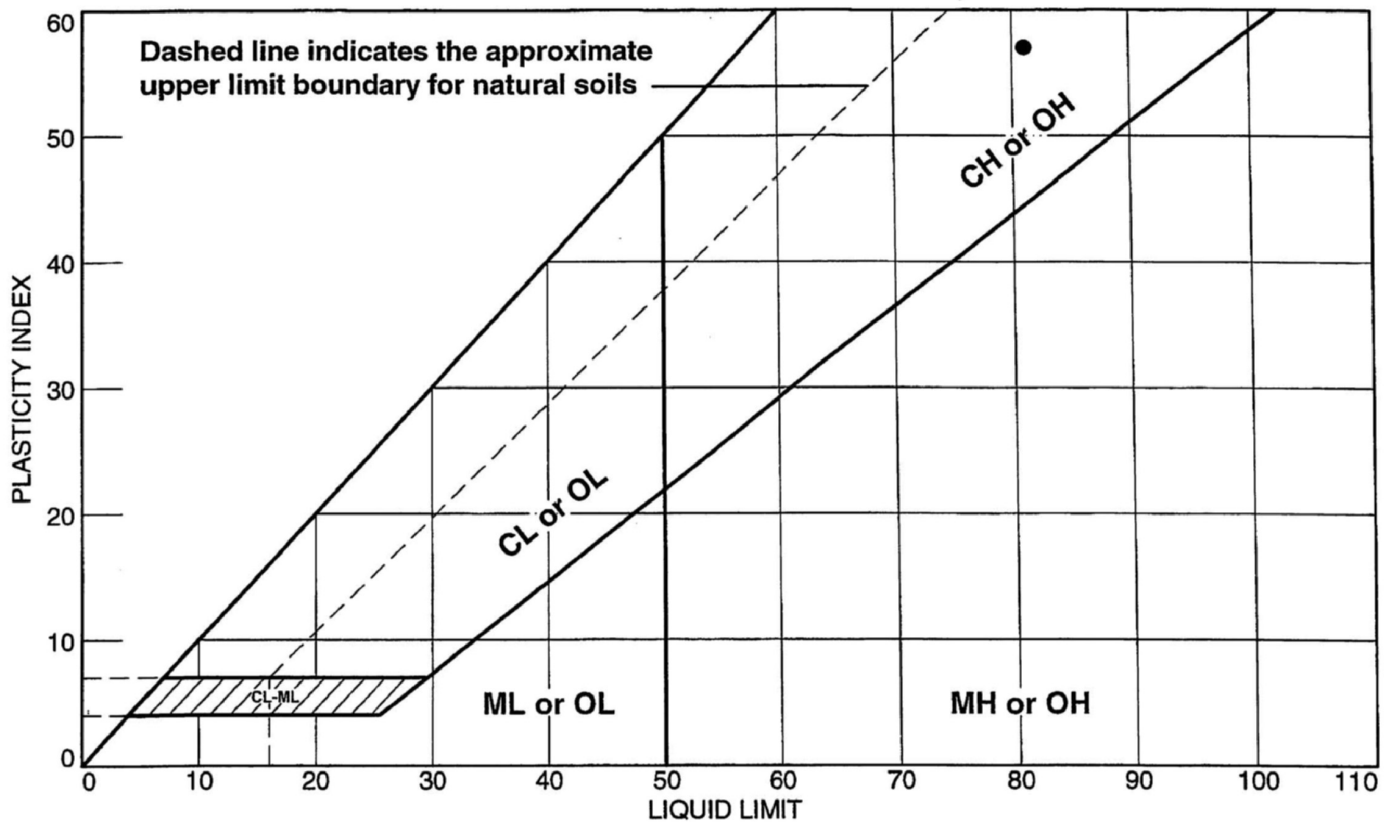
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.2	4.0	4.2	13.5	82.3	95.8

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
						0.0035	0.0072	0.0187	0.0629

Fineness Modulus
0.02

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-2319	SS-14	55-56.5	28.9	24	81	57	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 2-28-08

LIQUID AND PLASTIC LIMIT TEST DATA

2/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 55-56.5

Sample Number: SS-14

Material Description: Brown Fat CLAY

USCS: CH

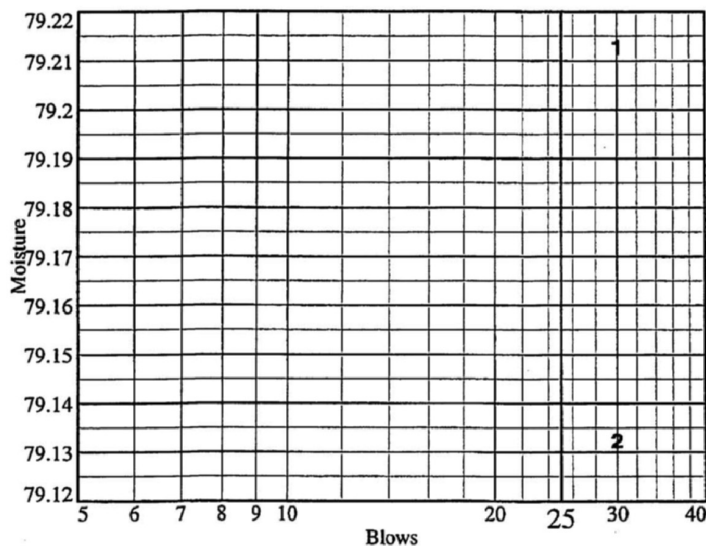
AASHTO: A-7-6(63)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	30.29	30.81				
Dry+Tare	23.85	24.06				
Tare	15.72	15.53				
# Blows	30	30				
Moisture	79.2	79.1				



Liquid Limit= 81
 Plastic Limit= 24
 Plasticity Index= 57
 Natural Moisture= 28.9
 Liquidity Index= 0.1

Plastic Limit Data

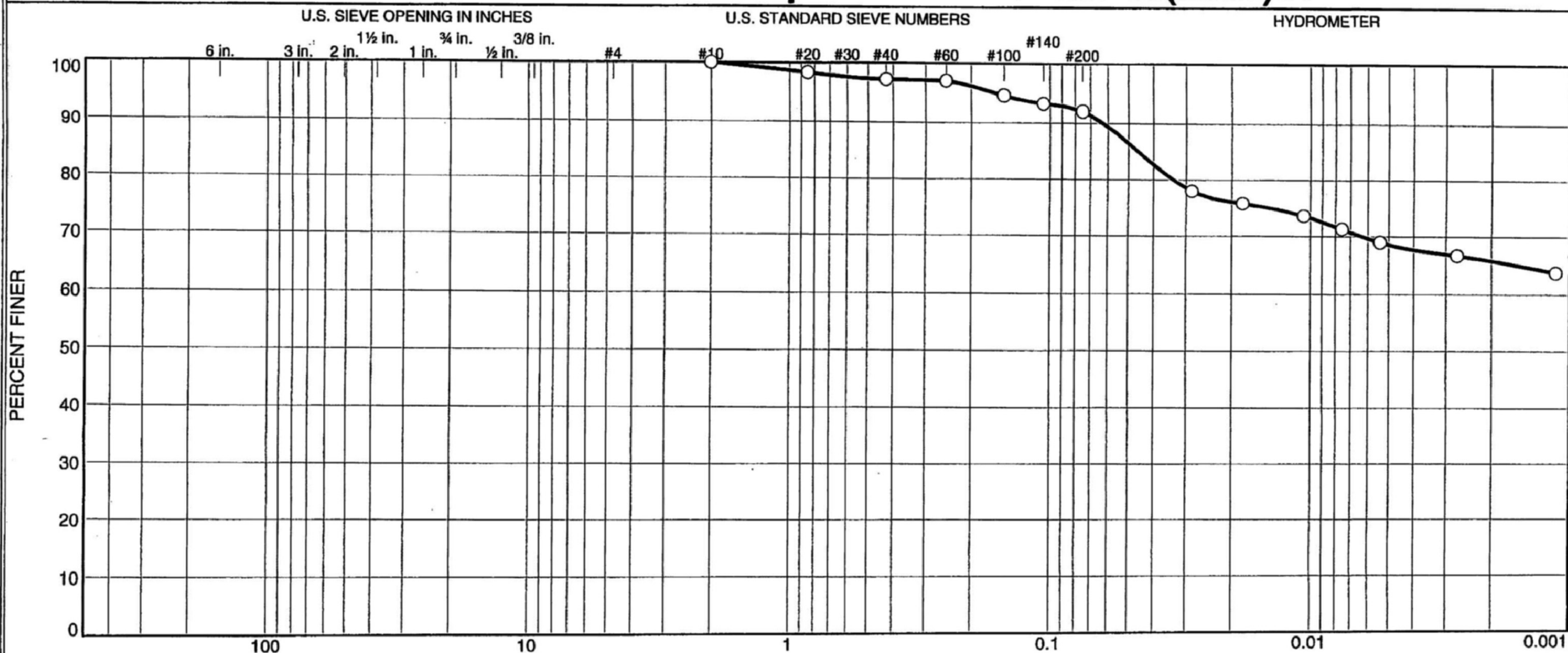
Run No.	1	2	3	4
Wet+Tare	22.99	23.15		
Dry+Tare	21.56	21.70		
Tare	15.48	15.59		
Moisture	23.5	23.7		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
105.79	83.59	6.89	28.9

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	2.8	5.2	23.4	68.6

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2319	SS-15	60-61.5	12-16-07	CH	Brown Fat CLAY	36.6	92	26

Client Bechtel		MACTEC, Inc.	○ Specific Gravity is assumed
Project Exelon Texas COL (Victoria Reservoir)			
Project No. 6468071777	Figure 14	Raleigh, North Carolina	

GRAIN SIZE DISTRIBUTION TEST DATA

2/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 60-61.5

Sample Number: SS-15

Material Description: Brown Fat CLAY

Date: 12-16-07

Natural Moisture: 36.6

Liquid Limit: 92

Plastic Limit: 26

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
153.29	0.00	0.00	#10	0.00	100.0
47.55	0.00	0.00	#20	0.80	98.3
			#40	1.32	97.2
			#60	1.41	97.0
			#100	2.58	94.6
			#140	3.21	93.2
			#200	3.82	92.0

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 47.55

Hygroscopic moisture correction:

Moist weight and tare = 18.17

Dry weight and tare = 17.51

Tare weight = 6.16

Hygroscopic moisture = 5.8%

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	22.6	40.0	35.4	0.0130	41.0	9.6	0.0285	78.0
5.00	22.6	39.0	34.4	0.0130	40.0	9.7	0.0182	75.8
15.00	22.6	38.0	33.4	0.0130	39.0	9.9	0.0106	73.6
30.00	22.5	37.0	32.4	0.0130	38.0	10.1	0.0076	71.3
60.00	22.4	36.0	31.4	0.0131	37.0	10.2	0.0054	69.0
240.00	22.4	35.0	30.4	0.0131	36.0	10.4	0.0027	66.8
1440.00	21.5	34.0	29.0	0.0132	35.0	10.6	0.0011	63.9

MACTEC, Inc.

Fractional Components

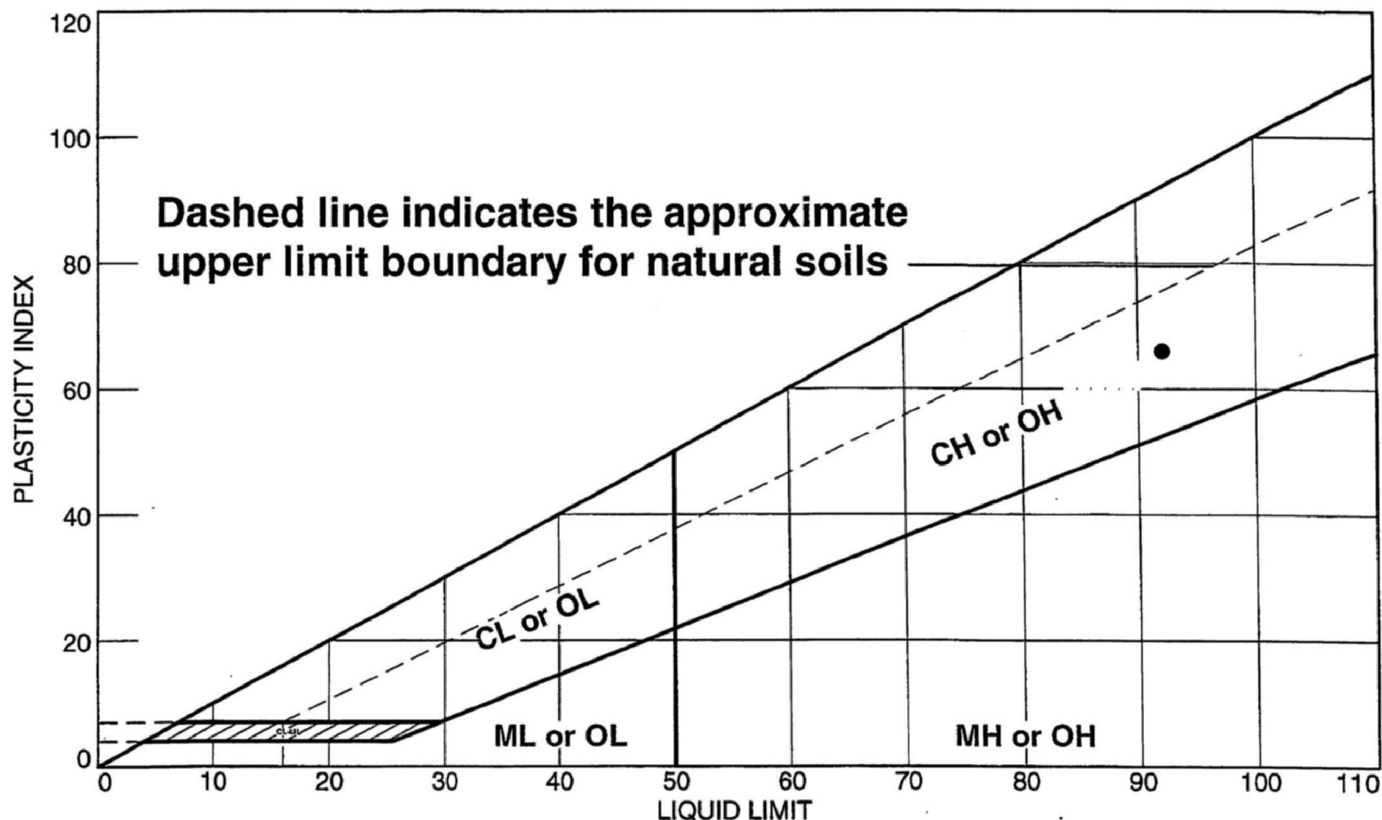
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	2.8	5.2	8.0	23.4	68.6	92.0

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
						0.0337	0.0456	0.0624	0.1626

Fineness Modulus
0.12

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-2319	SS-15	60-61.5	36.6	26	92	66	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 2-28-08*

LIQUID AND PLASTIC LIMIT TEST DATA

2/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 60-61.5

Sample Number: SS-15

Material Description: Brown Fat CLAY

USCS: CH

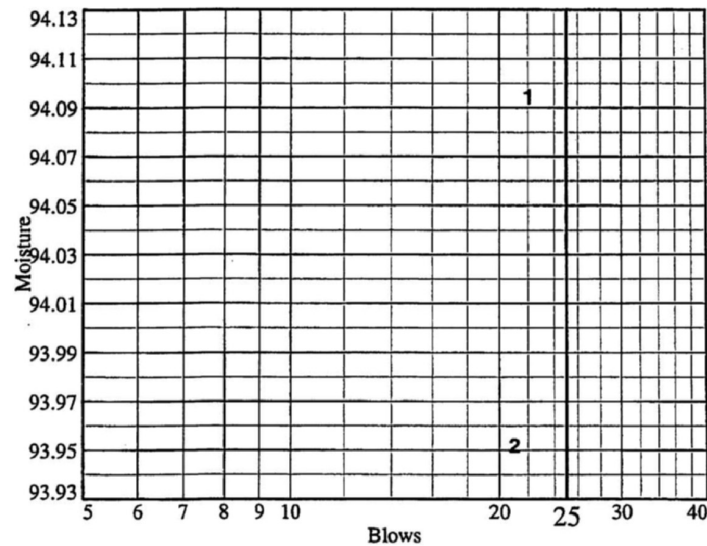
AASHTO: A-7-6(69)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	30.28	29.22				
Dry+Tare	23.11	22.54				
Tare	15.49	15.43				
# Blows	22	21				
Moisture	94.1	94.0				



Liquid Limit= 92
 Plastic Limit= 26
 Plasticity Index= 66
 Natural Moisture= 36.6
 Liquidity Index= 0.2

Plastic Limit Data

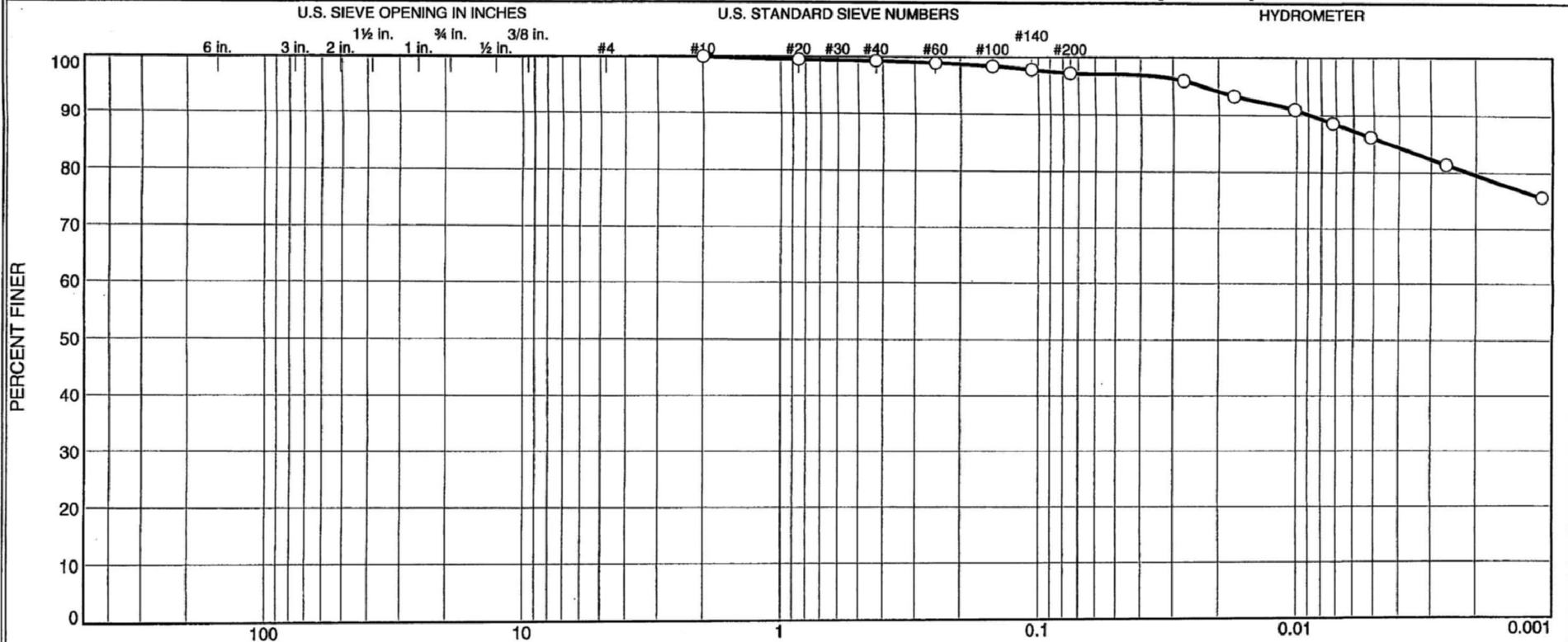
Run No.	1	2	3	4
Wet+Tare	22.11	22.67		
Dry+Tare	20.74	21.23		
Tare	15.47	15.56		
Moisture	26.0	25.4		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
119.75	89.47	6.76	36.6

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	0.8	2.1	11.2	85.9

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2319	SS-16	65.0-66.5	12-16-07	CH	Pale Brown mottled Brownish Yellow Fat CLAY	25.4	76	21

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

GRAIN SIZE DISTRIBUTION TEST DATA

2/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 65.0-66.5

Sample Number: SS-16

Material Description: Pale Brown mottled Brownish Yellow Fat CLAY

Date: 12-16-07

Natural Moisture: 25.4

Liquid Limit: 76

Plastic Limit: 21

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
188.28	0.00	0.00	#10	0.00	100.0
45.31	0.00	0.00	#20	0.24	99.5
			#40	0.34	99.2
			#60	0.51	98.9
			#100	0.75	98.3
			#140	1.03	97.7
			#200	1.31	97.1

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 45.31

Hygroscopic moisture correction:

Moist weight and tare = 22.45

Dry weight and tare = 21.49

Tare weight = 10.09

Hygroscopic moisture = 8.4%

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	22.8	45.0	40.5	0.0130	46.0	8.8	0.0272	95.8
5.00	22.5	44.0	39.4	0.0130	45.0	8.9	0.0174	93.2
15.00	22.6	43.0	38.4	0.0130	44.0	9.1	0.0101	90.9
30.00	22.6	42.0	37.4	0.0130	43.0	9.2	0.0072	88.6
60.00	22.5	41.0	36.4	0.0130	42.0	9.4	0.0052	86.1
240.00	22.5	39.0	34.4	0.0130	40.0	9.7	0.0026	81.4
1440.00	21.4	37.0	32.0	0.0132	38.0	10.1	0.0011	75.7

MACTEC, Inc.

Fractional Components

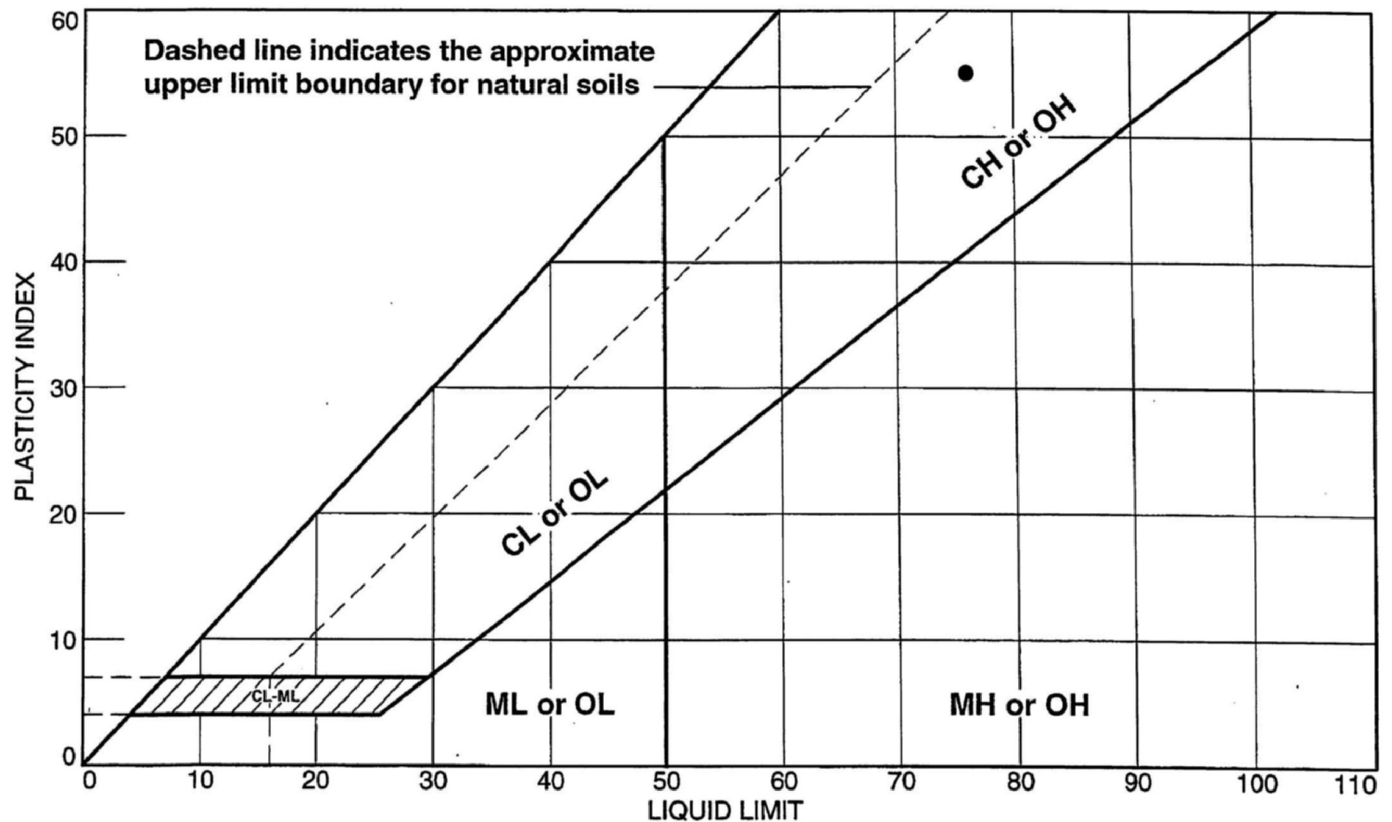
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.8	2.1	2.9	11.2	85.9	97.1

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
						0.0021	0.0044	0.0088	0.0234

Fineness Modulus
0.04

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-2319	SS-16	65.0-66.5	25.4	21	76	55	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 2-28-08

LIQUID AND PLASTIC LIMIT TEST DATA

2/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 65.0-66.5

Sample Number: SS-16

Material Description: Pale Brown mottled Brownish Yellow Fat CLAY

USCS: CH

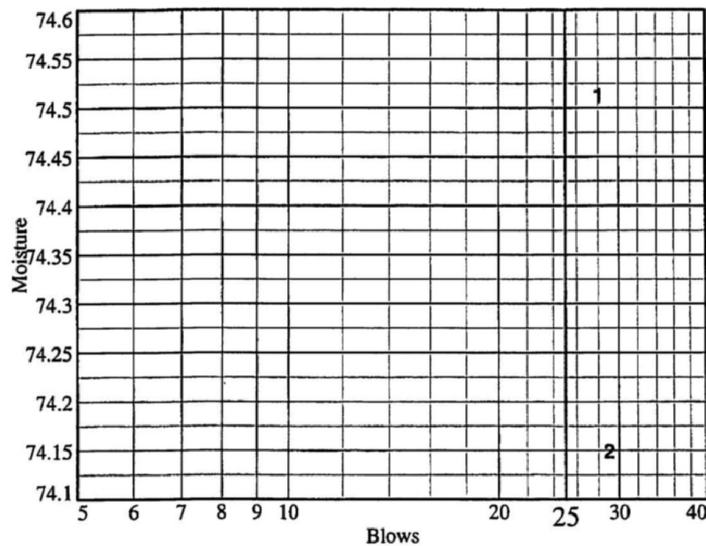
AASHTO: A-7-6(60)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.16	28.35				
Dry+Tare	22.81	22.90				
Tare	15.63	15.55				
# Blows	28	29				
Moisture	74.5	74.1				



Liquid Limit= 76
 Plastic Limit= 21
 Plasticity Index= 55
 Natural Moisture= 25.4
 Liquidity Index= 0.1

Plastic Limit Data

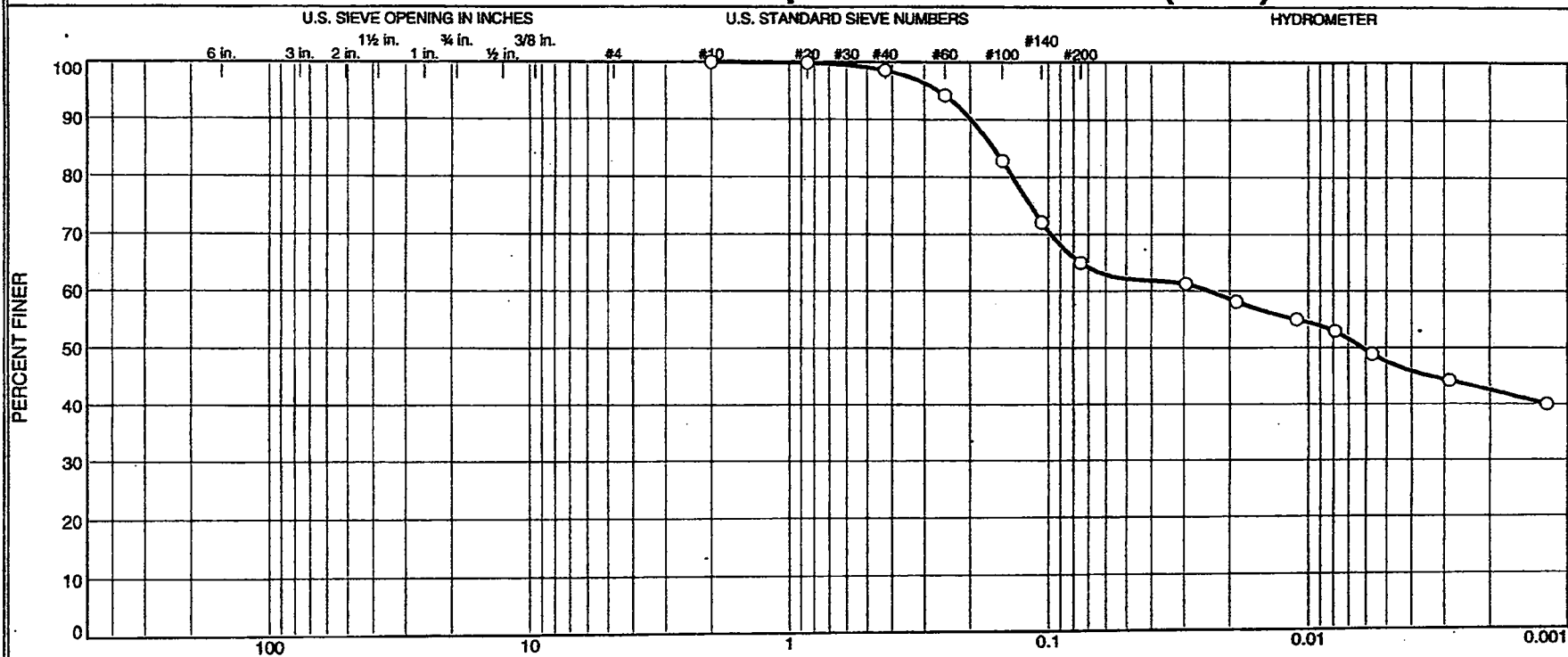
Run No.	1	2	3	4
Wet+Tare	23.52	24.36		
Dry+Tare	22.11	22.85		
Tare	15.46	15.78		
Moisture	21.2	21.4		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
156.33	126.57	9.39	25.4

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	1.5	33.5	17.4	47.6

Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
Boring B-2319	SS-17	70.0-71.5	12-16-07	CL	Light Brownish Gray Sandy Lean CLAY	16.1	41	12

Client Bechtel
 Project Exelon Texas COL (Victoria Reservoir)
 Project No. 6468071777

Figure NA

MACTEC, Inc.
Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS

Checked By: LBJ

DSC 2-28-08

GRAIN SIZE DISTRIBUTION TEST DATA

2/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 70.0-71.5

Sample Number: SS-17

Material Description: Light Brownish Gray Sandy Lean CLAY

Date: 12-16-07

Natural Moisture: 16.1

Liquid Limit: 41

Plastic Limit: 12

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
224.46	0.00	0.00	#10	0.00	100.0
50.88	0.00	0.00	#20	0.06	99.9
			#40	0.74	98.5
			#60	2.96	94.2
			#100	8.75	82.8
			#140	14.20	72.1
			#200	17.82	65.0

Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 50.88

Hygroscopic moisture correction:

Moist weight and tare = 22.24

Dry weight and tare = 21.90

Tare weight = 9.45

Hygroscopic moisture = 2.7%

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	23.3	35.0	30.7	0.0129	36.0	10.4	0.0294	61.3
5.00	23.2	33.5	29.1	0.0129	34.5	10.6	0.0189	58.2
15.00	23.0	32.0	27.6	0.0130	33.0	10.9	0.0110	55.1
30.00	22.9	31.0	26.5	0.0130	32.0	11.0	0.0079	53.0
60.00	22.8	29.0	24.5	0.0130	30.0	11.4	0.0057	48.9
240.00	23.3	26.5	22.2	0.0129	27.5	11.8	0.0029	44.3
1440.00	21.5	25.0	20.0	0.0132	26.0	12.0	0.0012	40.0

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	1.5	33.5	35.0	17.4	47.6	65.0

D ₁₀	D ₁₅	D ₂₀	D ₃₀	D ₅₀	D ₆₀	D ₈₀	D ₈₅	D ₉₀	D ₉₅
				0.0062	0.0239	0.1370	0.1619	0.1983	0.2655

Fineness Modulus
0.21

MACTEC, Inc.

The Plasticity Chart (Figure 2.1) is a graph with Plasticity Index (PI) on the vertical axis (0 to 60) and Liquid Limit (LL) on the horizontal axis (0 to 110). The chart is divided into several regions by solid lines:

- CL or OL**: Center region, bounded by a dashed line (approximate upper limit for natural soils) and a solid line (lower limit for natural soils).
- CH or OH**: High plasticity region, above the solid line.
- ML or OL**: Medium plasticity region, below the solid line.
- MH or OH**: High plasticity region, to the right of the dashed line.

A point is plotted at $LL = 40$ and $PI = 29$, which falls within the **CL or OL** region.

DCN# EXE808

LIQUID AND PLASTIC LIMIT TEST DATA

2/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria Reservoir)

Project Number: 6468071777

Location: Boring B-2319

Depth: 70.0-71.5

Sample Number: SS-17

Material Description: Light Brownish Gray Sandy Lean CLAY

USCS: CL

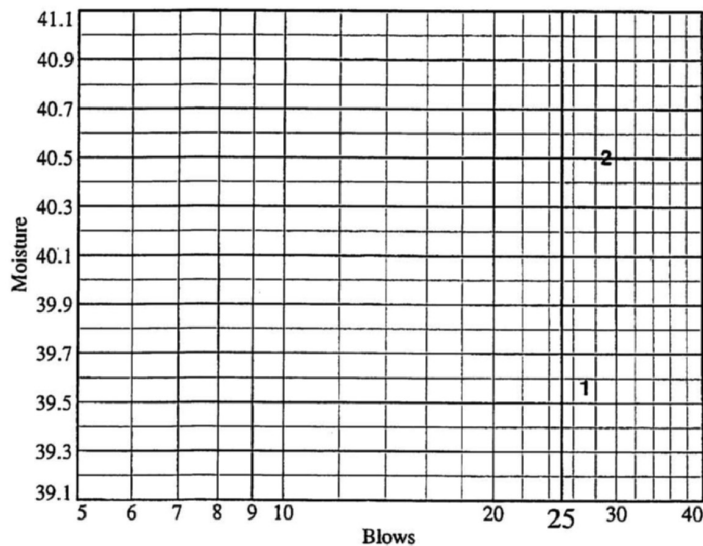
AASHTO: A-7-6(16)

Tested by: CS

Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	30.04	32.59				
Dry+Tare	25.85	27.64				
Tare	15.26	15.42				
# Blows	27	29				
Moisture	39.6	40.5				



Liquid Limit= 41
 Plastic Limit= 12
 Plasticity Index= 29
 Natural Moisture= 16.1
 Liquidity Index= 0.1

Plastic Limit Data

Run No.	1	2	3	4
Wet+Tare	25.18	25.98		
Dry+Tare	24.15	24.87		
Tare	15.44	15.63		
Moisture	11.8	12.0		

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
143.47	124.49	6.69	16.1

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