FINAL DATA REPORT REVISION 0
GEOTECHNICAL EXPLORATION AND TESTING

EXELON TEXAS COL PROJECT
VICTORIA COUNTY, TEXAS
SUPPLEMENTAL INVESTIGATION INCLUDING UHS

August 11, 2009

VOLUME 3

Prepared By:

MACTEC Engineering and Consulting, Inc.
Raleigh, North Carolina

MACTEC Project No. 6468-07-1777

Prepared For:

Bechtel Power Corporation
Subcontract No. 25352-102-HC4-CY00-00001

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Appendix E – Laboratory Test Data

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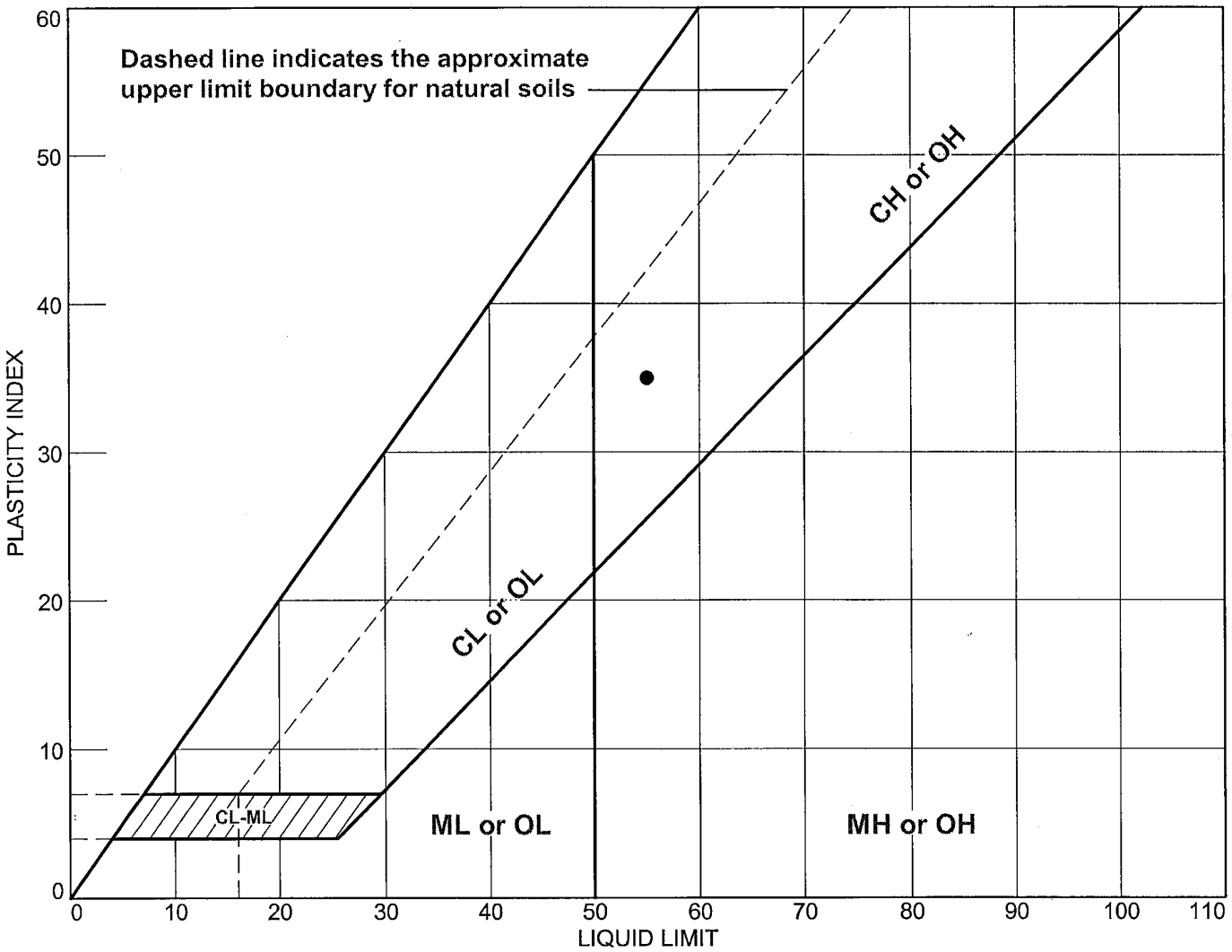
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LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-1	0-1.5'	9.0	20	55	35	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

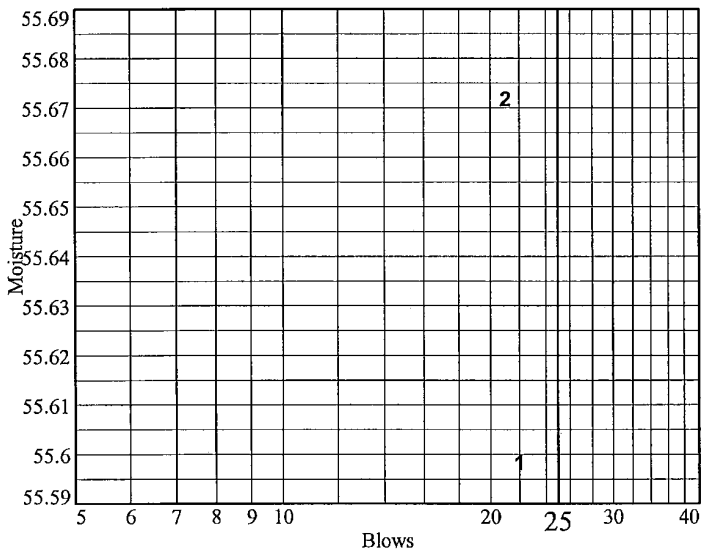
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 0-1.5' **Sample Number:** SS-1
Material Description: Dark Gray Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.55	24.39				
Dry+Tare	20.67	21.20				
Tare	15.49	15.47				
# Blows	22	21				
Moisture	55.6	55.7				



Liquid Limit= 55
Plastic Limit= 20
Plasticity Index= 35
Natural Moisture= 9.0
Liquidity Index= -0.3

Plastic Limit Data

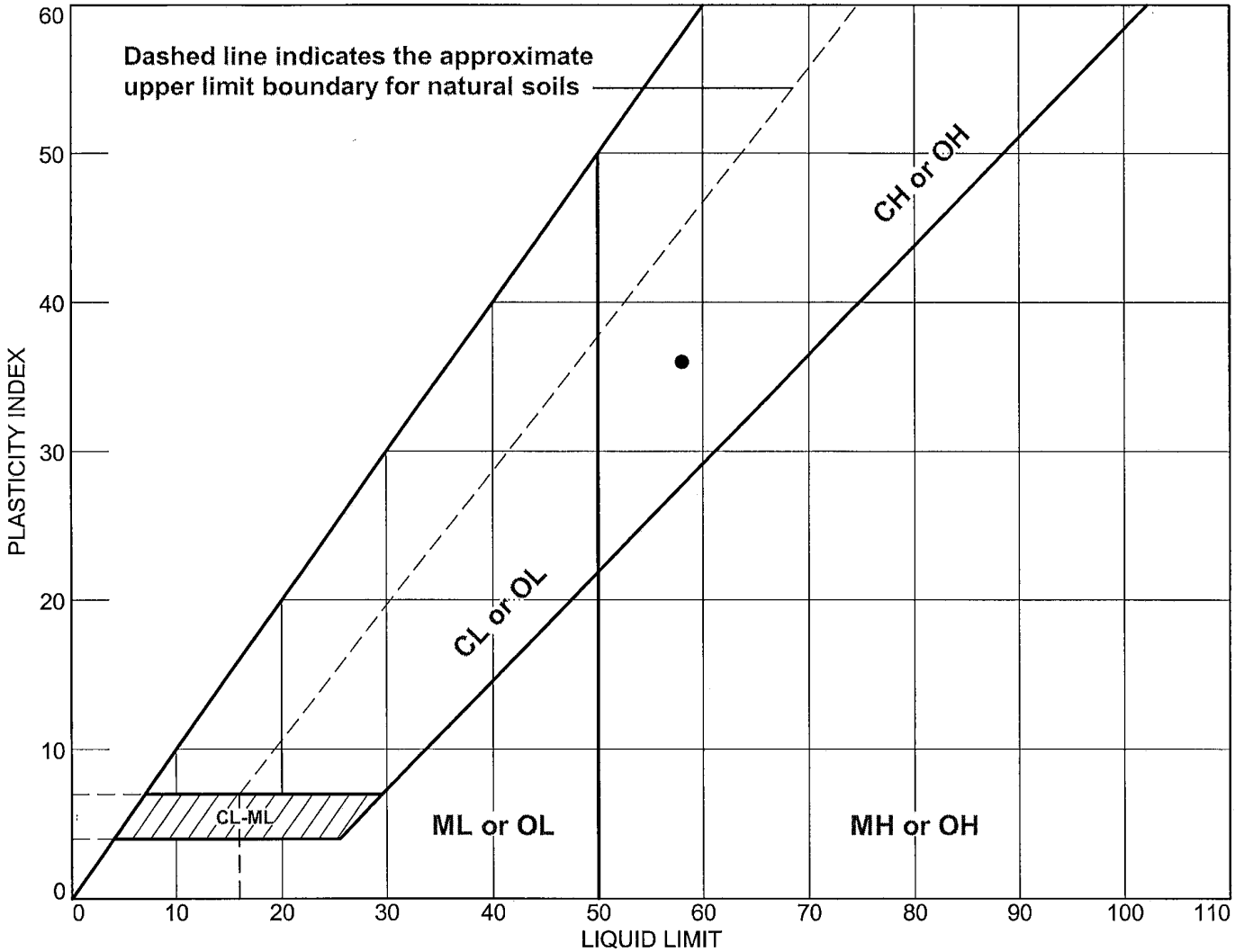
Run No.	1	2	3	4	
Wet+Tare	21.74	22.28			
Dry+Tare	20.69	21.18			
Tare	15.48	15.77			
Moisture	20.2	20.3			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
76.54	70.76	6.77	9.0

MACTEC Engineering and Consulting, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-3	6-7.5'	16.6	22	58	36	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

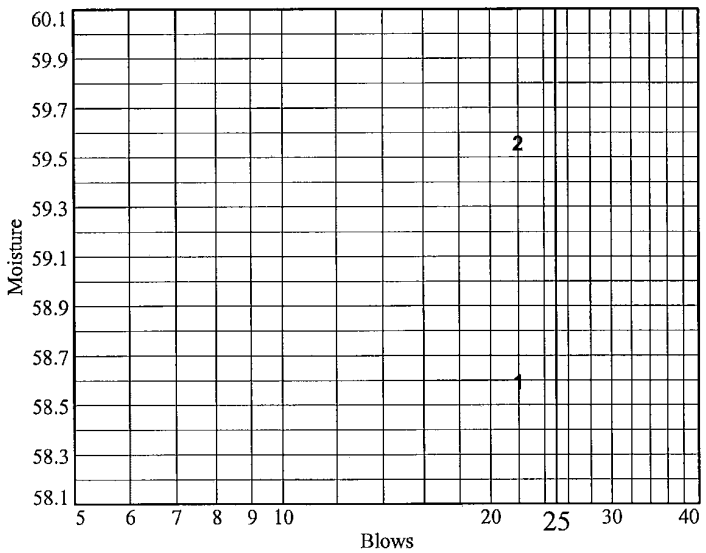
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 6-7.5' **Sample Number:** SS-3
Material Description: Pale Yellow Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.36	25.63				
Dry+Tare	23.69	21.86				
Tare	15.72	15.53				
# Blows	22	22				
Moisture	58.6	59.6				



Liquid Limit= 58
Plastic Limit= 22
Plasticity Index= 36
Natural Moisture= 16.6
Liquidity Index= -0.1

Plastic Limit Data

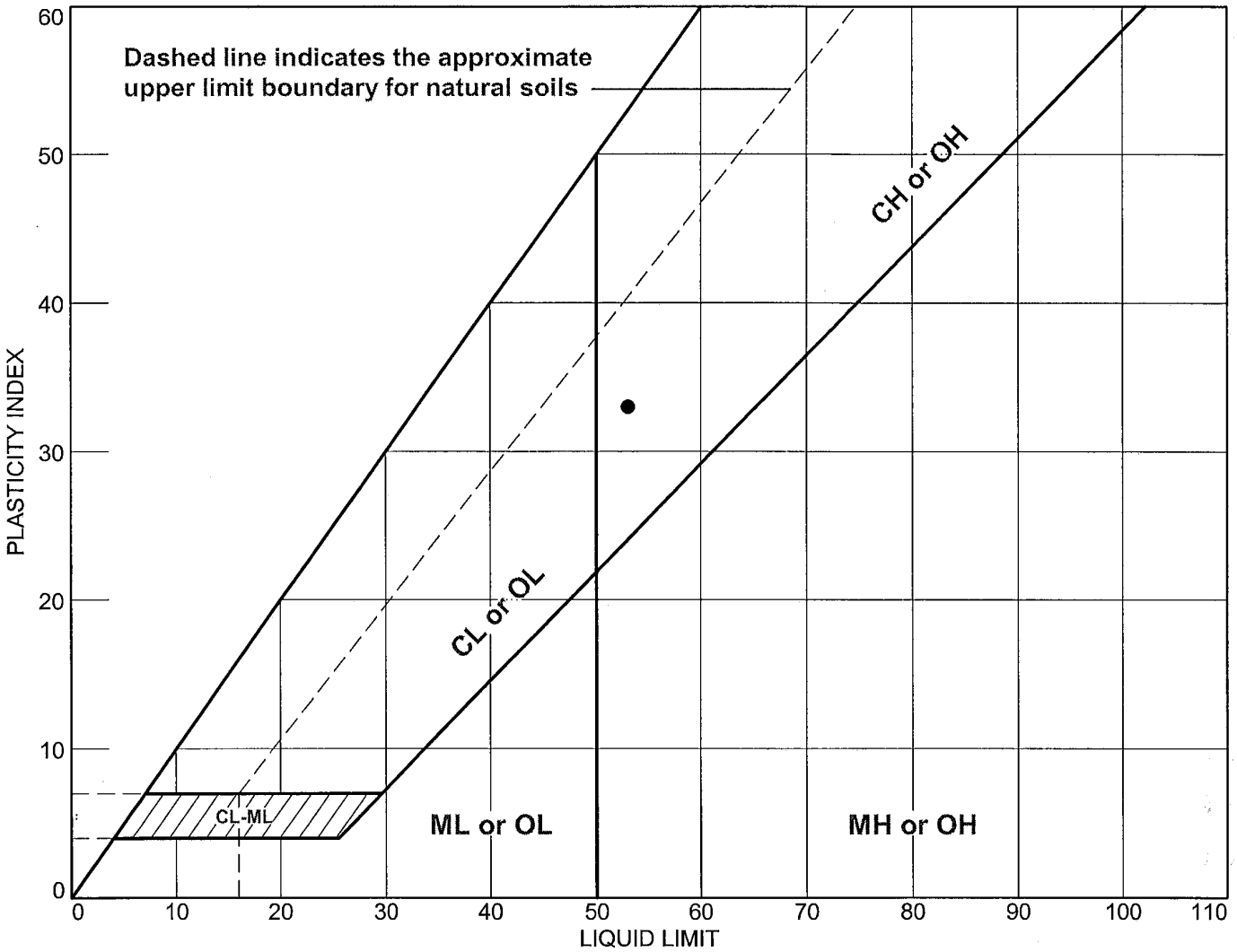
Run No.	1	2	3	4	
Wet+Tare	22.13	22.59			
Dry+Tare	20.96	21.30			
Tare	15.51	15.51			
Moisture	21.5	22.3			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
79.69	69.63	9.00	16.6

MACTEC Engineering and Consulting, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-5	11-12.5'	19.7	20	53	33	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

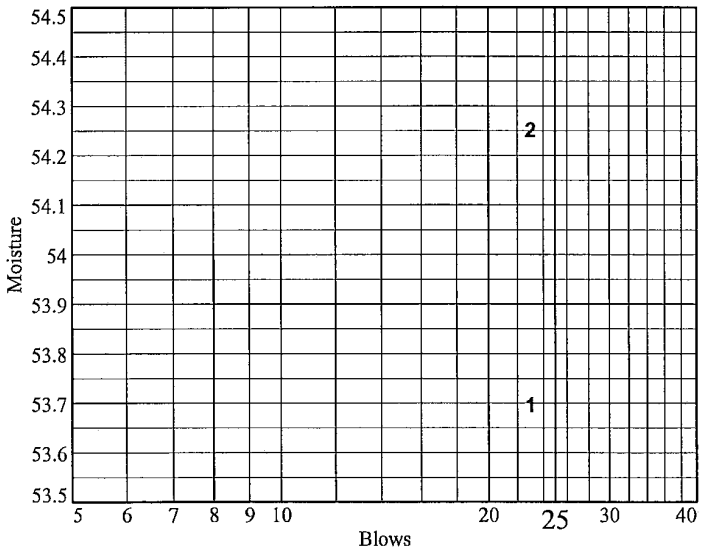
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 11-12.5' **Sample Number:** SS-5
Material Description: Very Pale Brown Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.29	30.36				
Dry+Tare	29.03	25.13				
Tare	15.51	15.49				
# Blows	23	23				
Moisture	53.7	54.3				



Liquid Limit= 53
Plastic Limit= 20
Plasticity Index= 33
Natural Moisture= 19.7
Liquidity Index= 0.0

Plastic Limit Data

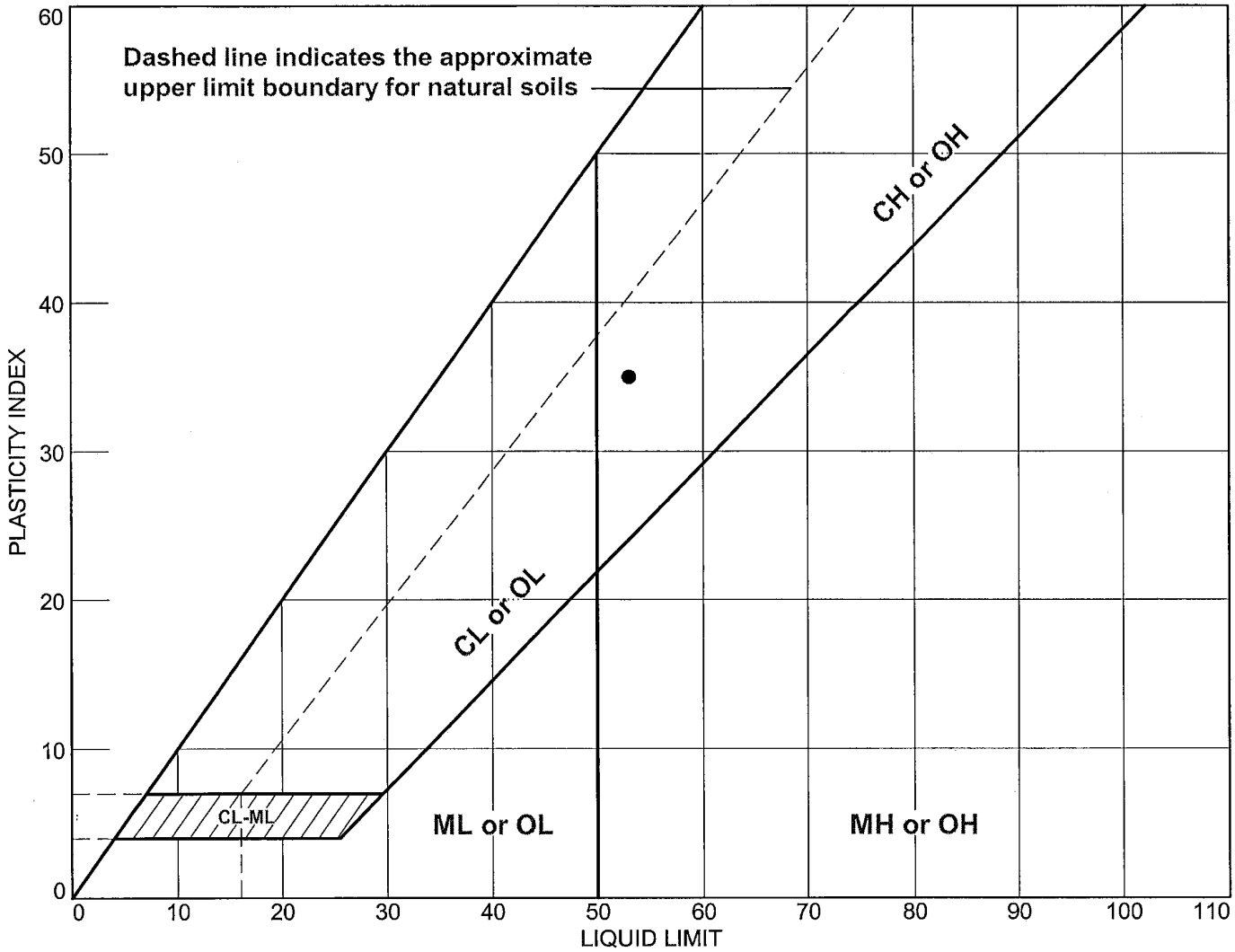
Run No.	1	2	3	4	
Wet+Tare	32.03	33.13			
Dry+Tare	28.63	29.41			
Tare	11.16	11.19			
Moisture	19.5	20.4			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
116.36	98.36	7.0	19.7

MACTEC Engineering and Consulting, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-7	17.5-19.0'	23.5	18	53	35	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

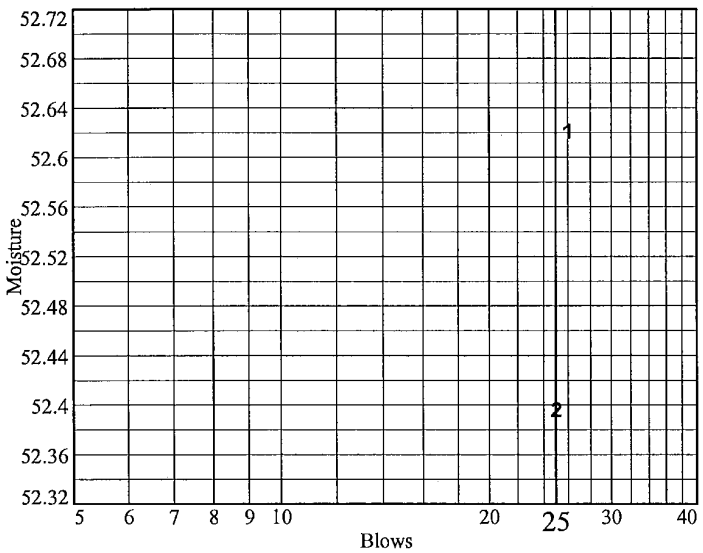
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 17.5-19.0' **Sample Number:** SS-7
Material Description: Light Gray Mottled Yellow Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	39.36	33.69				
Dry+Tare	31.13	27.46				
Tare	15.49	15.57				
# Blows	26	25				
Moisture	52.6	52.4				



Liquid Limit= 53
Plastic Limit= 18
Plasticity Index= 35
Natural Moisture= 23.5
Liquidity Index= 0.2

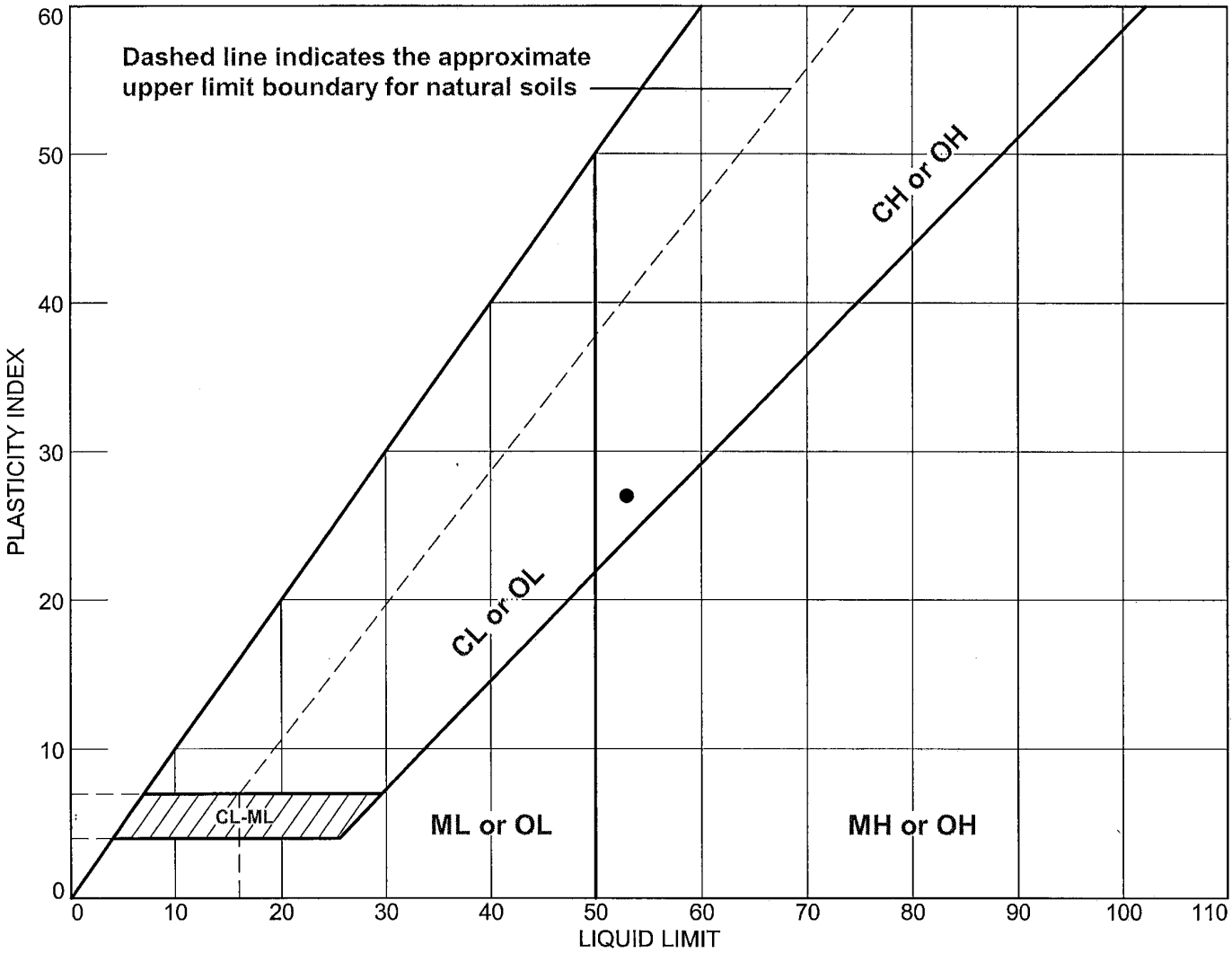
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	29.13	29.32			
Dry+Tare	27.00	27.28			
Tare	15.36	15.76			
Moisture	18.3	17.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
136.13	111.63	7.5	23.5

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-9	27.5-29.0'	25.9	26	53	27	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

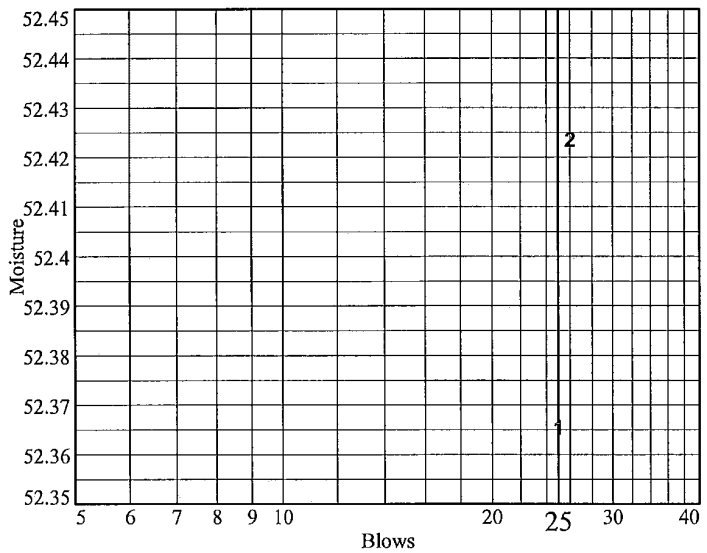
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 27.5-29.0' **Sample Number:** SS-9
Material Description: Brownish Yellow Mottled Very Pale Brown Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	29.63	36.56				
Dry+Tare	24.76	27.80				
Tare	15.46	11.09				
# Blows	25	26				
Moisture	52.4	52.4				



Liquid Limit= 53
Plastic Limit= 26
Plasticity Index= 27
Natural Moisture= 25.9
Liquidity Index= 0.0

Plastic Limit Data

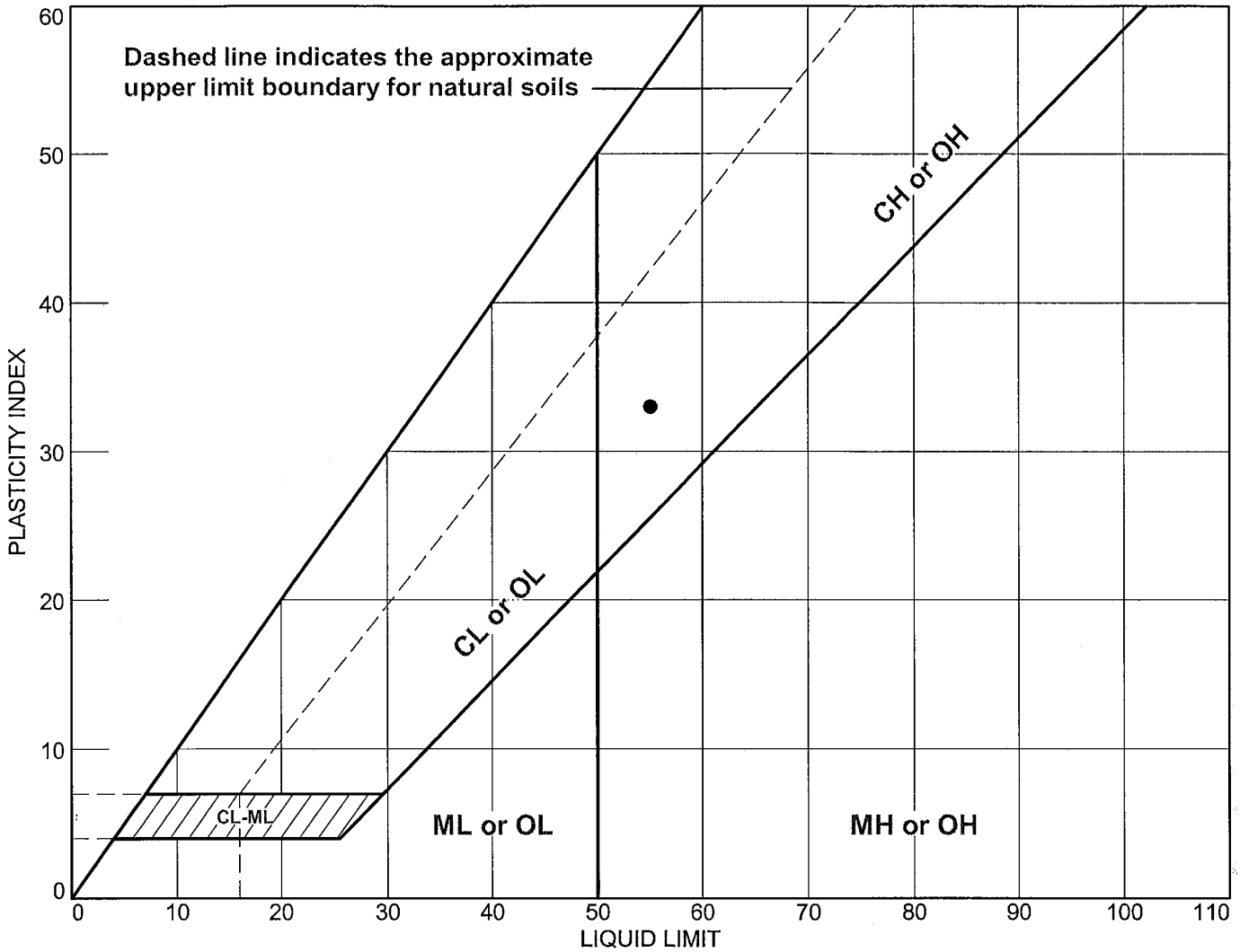
Run No.	1	2	3	4	
Wet+Tare	23.63	26.96			
Dry+Tare	22.00	24.56			
Tare	15.62	15.45			
Moisture	25.5	26.3			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
136.39	110.23	9.10	25.9

MACTEC Engineering and Consulting, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-11	37.5-39.0'	18.3	22	55	33	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** BS DSC 5-4-09

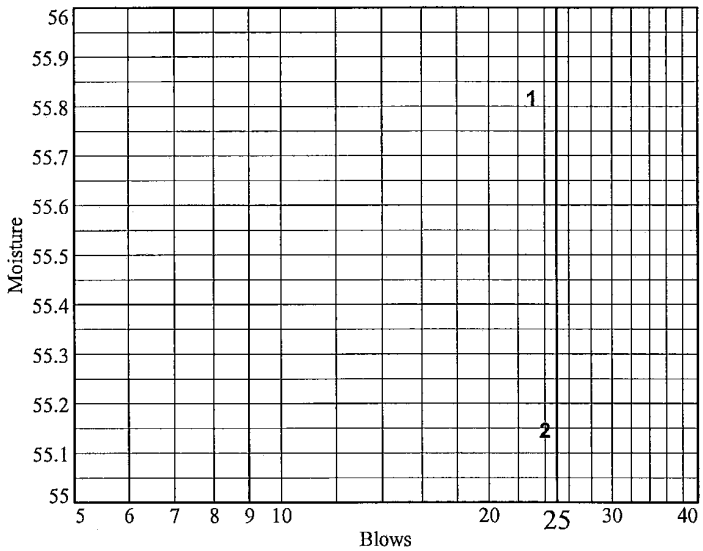
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 37.5-39.0' **Sample Number:** SS-11
Material Description: Very Pale Brown Mottled Brownish Yellow Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	29.63	36.69				
Dry+Tare	23.01	29.19				
Tare	11.15	15.59				
# Blows	23	24				
Moisture	55.8	55.1				



Liquid Limit= 55
Plastic Limit= 22
Plasticity Index= 33
Natural Moisture= 18.3
Liquidity Index= -0.1

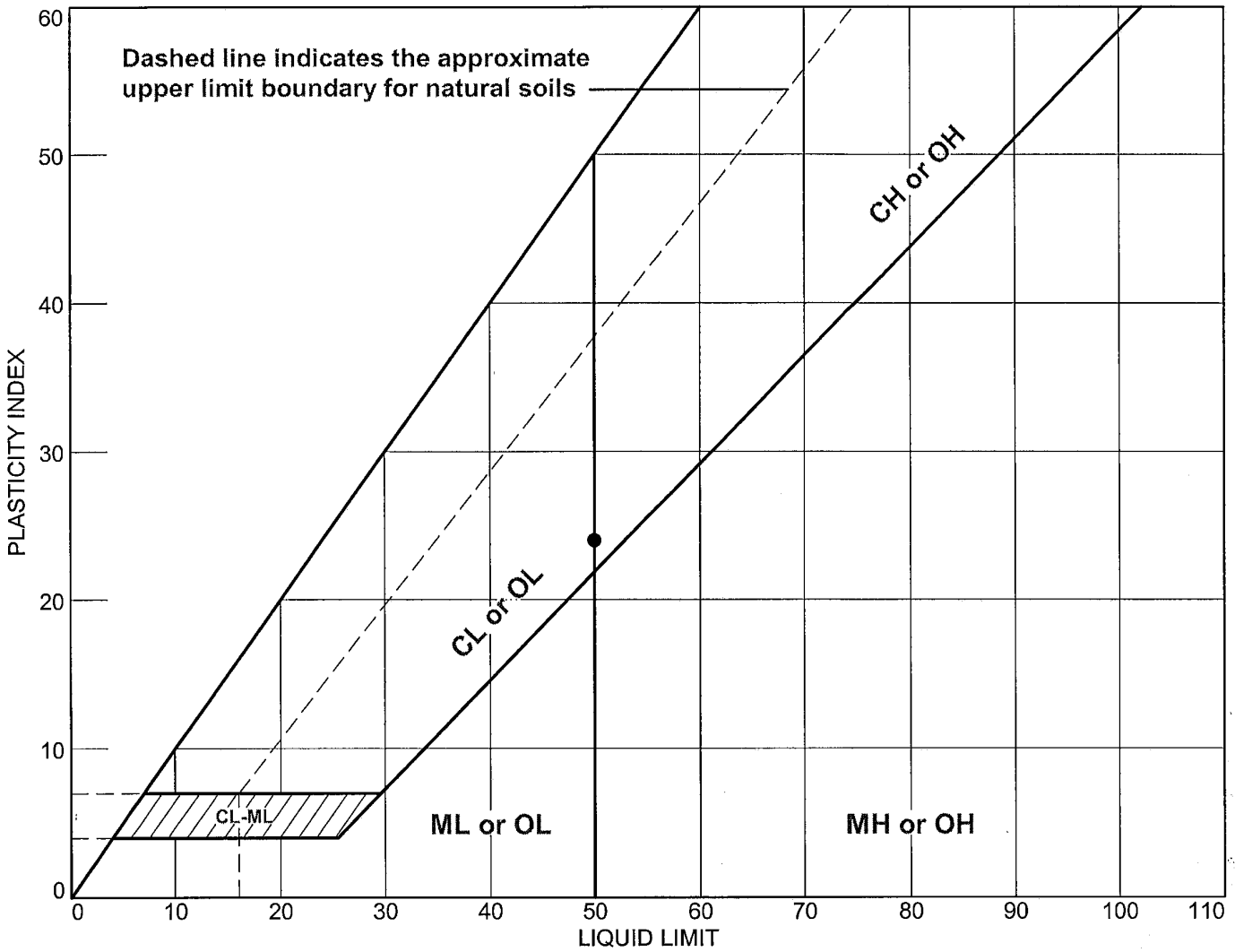
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	26.36	29.36			
Dry+Tare	24.38	26.12			
Tare	15.51	11.16			
Moisture	22.3	21.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
136.39	116.53	7.93	18.3

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-13	47.5-49	17.7	26	50	24	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

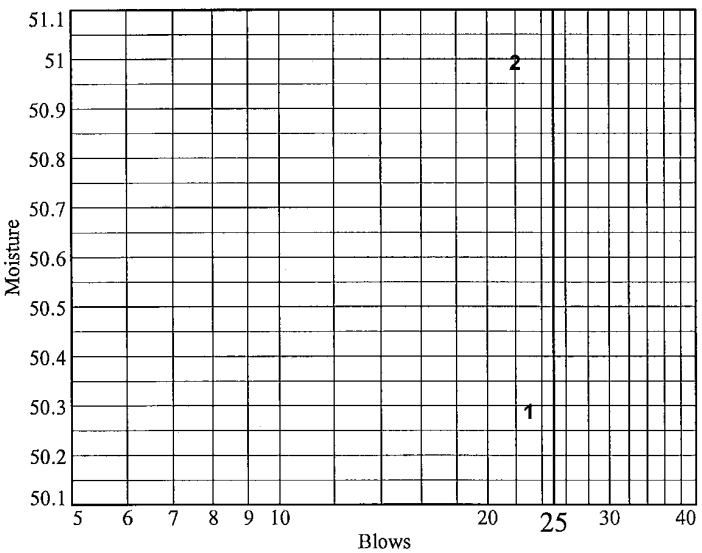
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 47.5-49 **Sample Number:** SS-13
Material Description: Brownish Yellow Mottled Pale Yellow Fat CLAY with sand (Visual)
USCS: CH (Visual)
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	29.63	28.96				
Dry+Tare	23.56	23.06				
Tare	11.49	11.49				
# Blows	23	22				
Moisture	50.3	51.0				



Liquid Limit= 50
Plastic Limit= 26
Plasticity Index= 24
Natural Moisture= 17.7
Liquidity Index= -0.3

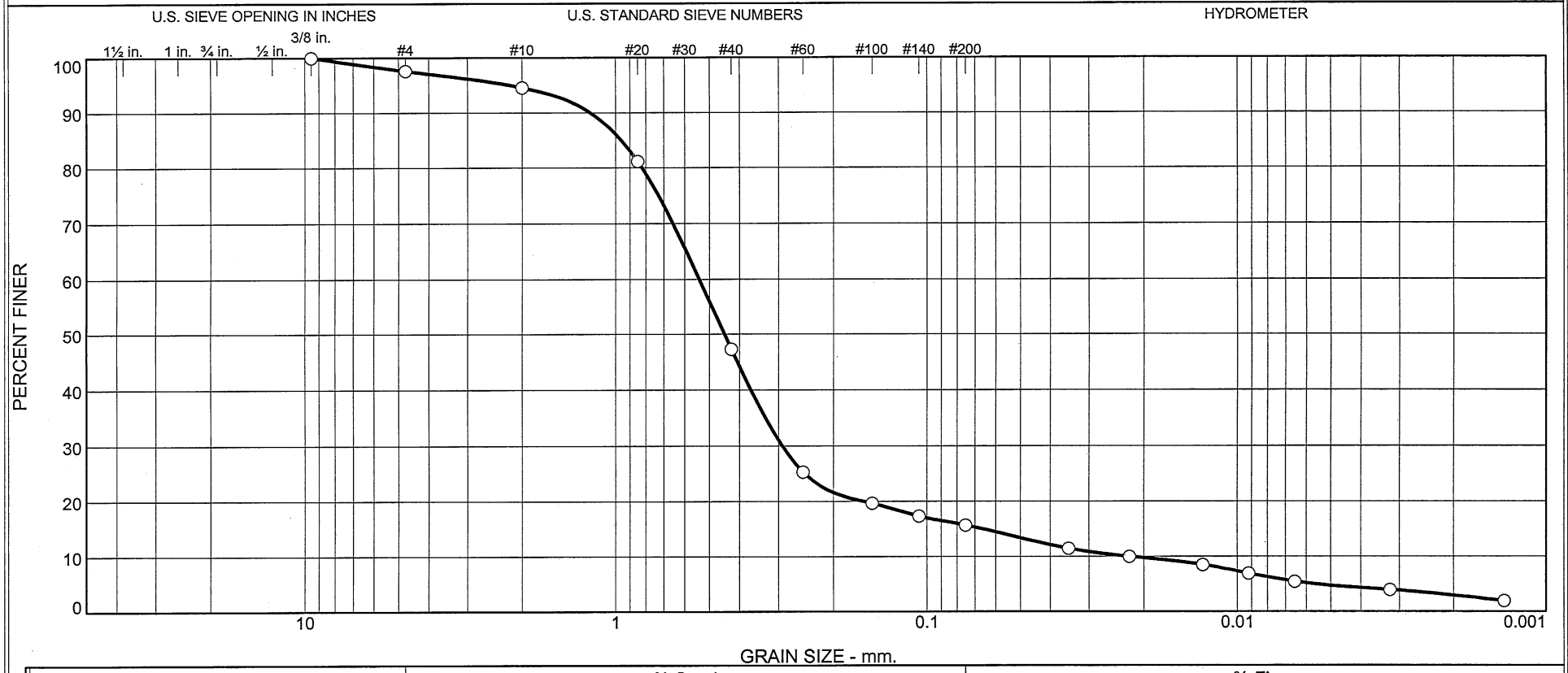
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	23.69	26.96			
Dry+Tare	22.03	24.56			
Tare	15.59	15.49			
Moisture	25.8	26.5			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
126.93	108.96	7.50	17.7

Particle Size Distribution Report ASTM D 422-63 (2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	2.4	3.0	47.4	31.5	11.0	4.7

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-15	57.5-59	1/9/09	SM (Visual)	Very Pale Brown Silty SAND (Visual)	26.5	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 57.5-59 **Sample Number:** SS-15
Material Description: Very Pale Brown Silty SAND (Visual)
Date: 1/9/09 **Natural Moisture:** 26.5
USCS Class.: SM (Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
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
174.50	0.00	0.00	3/8"	0.00	100.0
			#4	4.21	97.6
			#10	9.43	94.6
100.91	0.00	0.00	#20	14.39	81.1
			#40	50.51	47.2
			#60	73.93	25.3
			#100	79.94	19.7
			#140	82.42	17.3
			#200	84.17	15.7

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 94.6
Weight of hydrometer sample =100.91
Hygroscopic moisture correction:
Moist weight and tare = 29.79
Dry weight and tare = 29.75
Tare weight = 15.50
Hygroscopic moisture = 0.3%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-3.0

Meniscus correction only = 1.0
Specific gravity of solids = 2.700
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.164 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.5	1.0130	1.0077	0.0132	14.0	14.0	0.0349	11.5
5.00	21.5	1.0120	1.0067	0.0132	13.0	14.2	0.0222	10.0
15.00	21.5	1.0110	1.0057	0.0132	12.0	14.3	0.0129	8.5
30.00	21.4	1.0100	1.0046	0.0132	11.0	14.5	0.0092	6.9
60.00	21.4	1.0090	1.0036	0.0132	10.0	14.7	0.0065	5.4
250.00	21.4	1.0080	1.0026	0.0132	9.0	14.8	0.0032	3.9
1440.00	20.2	1.0070	1.0013	0.0134	8.0	15.0	0.0014	1.9

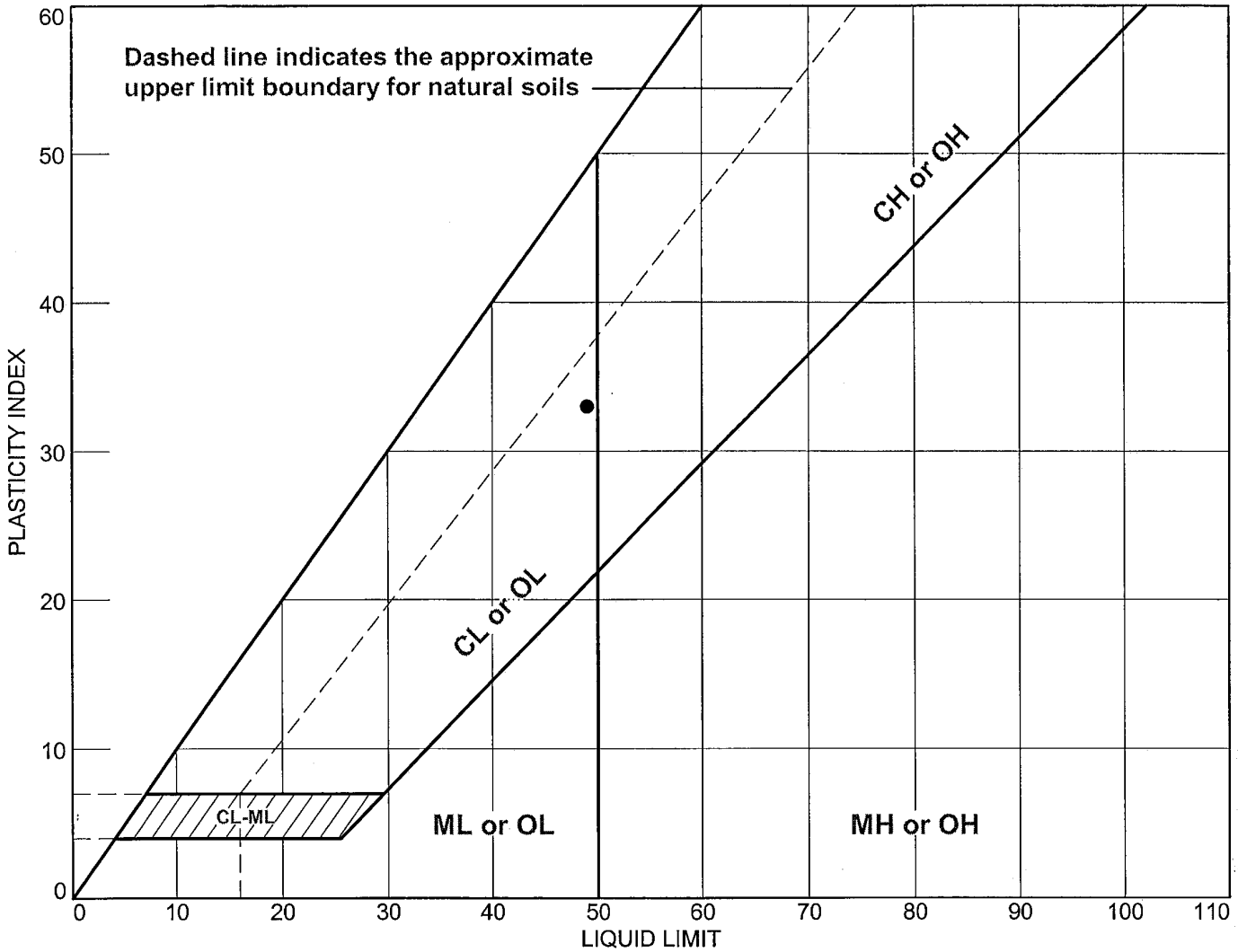
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	2.4	2.4	3.0	47.4	31.5	81.9	11.0	4.7	15.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0225	0.0656	0.1593	0.2915	0.4478	0.5399	0.8247	0.9613	1.2079	2.1867

Fineness Modulus	C_u	C_c
2.01	23.97	6.99

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-16	62.5-64.0'	25.5	16	49	33	CL (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

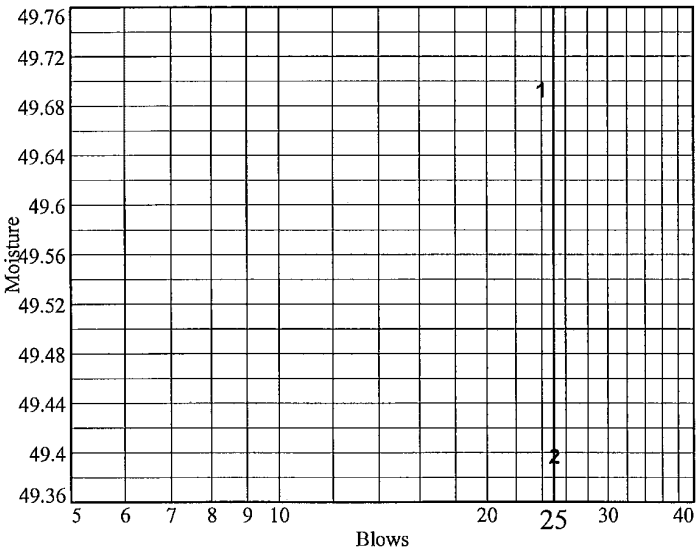
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 62.5-64.0' **Sample Number:** SS-16
Material Description: Very Pale Brown Mottled Brownish Yellow Lean CLAY with sand (Visual)
USCS: CL (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.77	21.86				
Dry+Tare	20.34	19.81				
Tare	15.45	15.66				
# Blows	24	25				
Moisture	49.7	49.4				



Liquid Limit= 49
Plastic Limit= 16
Plasticity Index= 33
Natural Moisture= 25.5
Liquidity Index= 0.3

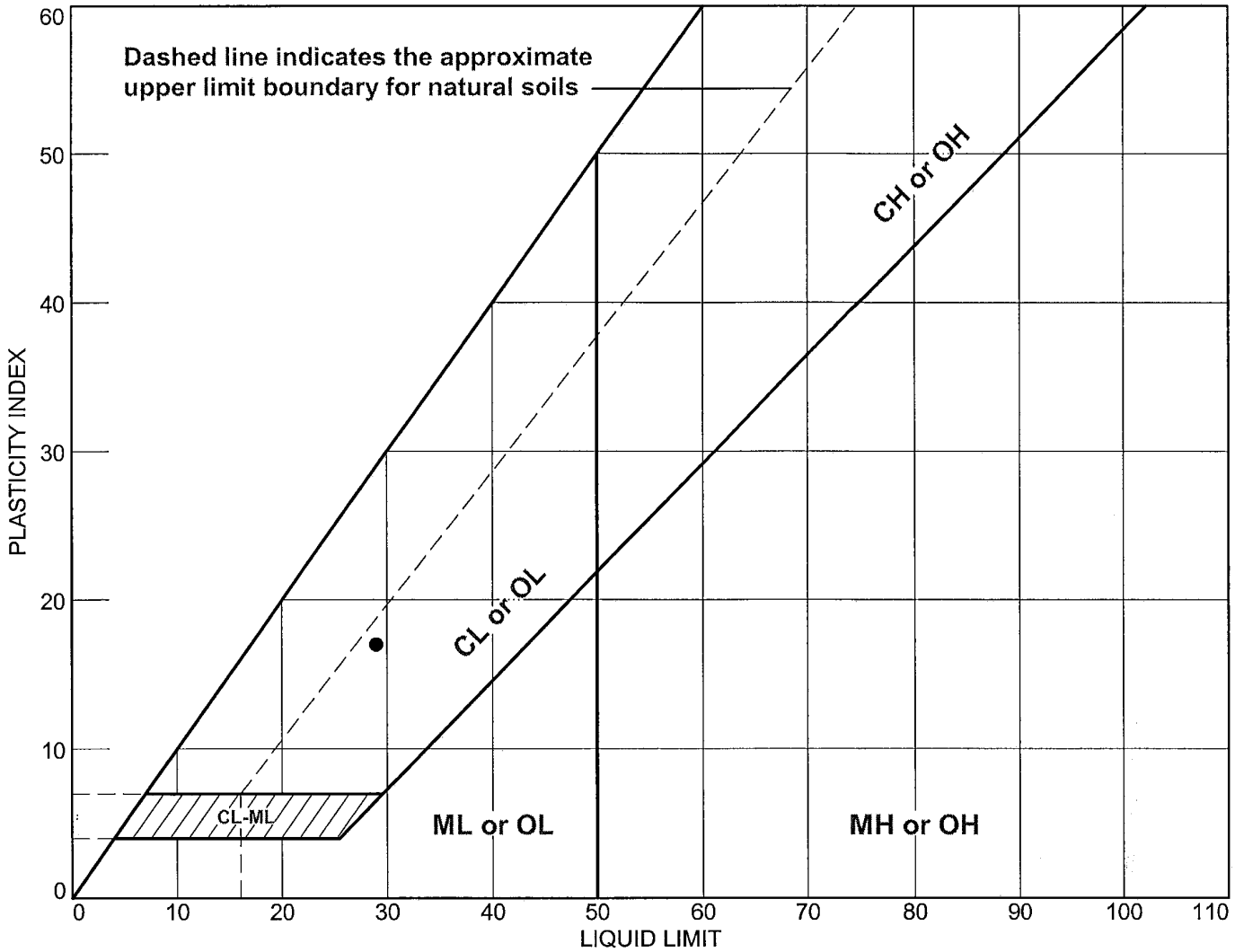
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	22.23	17.95			
Dry+Tare	21.31	17.07			
Tare	15.47	11.37			
Moisture	15.8	15.4			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
164.65	132.58	6.8	25.5

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-18	72.5-74.0'	19.0	12	29	17	CL (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

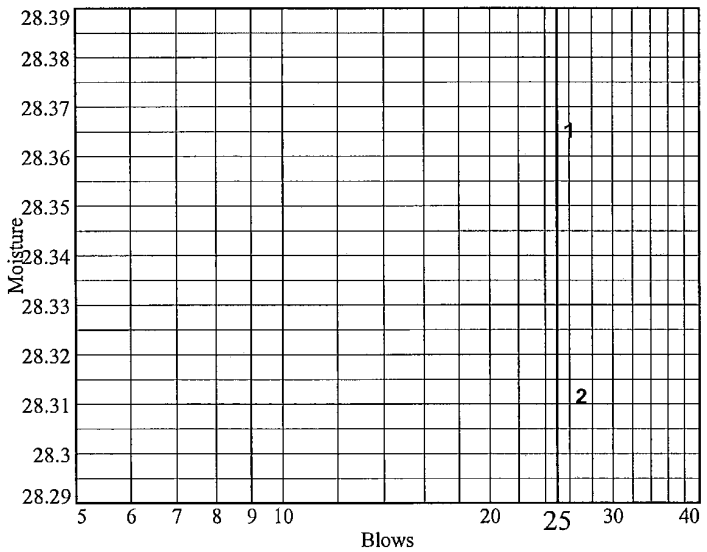
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 72.5-74.0' **Sample Number:** SS-18
Material Description: Pale Yellow Lean CLAY with sand (Visual)
USCS: CL (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.09	25.41				
Dry+Tare	19.73	23.23				
Tare	11.41	15.53				
# Blows	26	27				
Moisture	28.4	28.3				



Liquid Limit= 29
Plastic Limit= 12
Plasticity Index= 17
Natural Moisture= 19.0
Liquidity Index= 0.4

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.78	22.33			
Dry+Tare	21.11	21.57			
Tare	15.51	15.46			
Moisture	12.0	12.4			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
118.51	100.74	6.97	19.0

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	5.1	3.4	6.7	38.3	19.4	27.1

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-19	77.5-79.0'	1/10/09	SM (Visual)	Pale Yellow Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 77.5-79.0' **Sample Number:** SS-19
Material Description: Pale Yellow Silty SAND (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM (Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
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
242.44	0.00	0.00	3/4	0.00	100.0
			3/8"	6.44	97.3
			#4	12.38	94.9
			#10	20.56	91.5
49.96	0.00	0.00	#20	1.95	87.9
			#40	3.66	84.8
			#60	4.79	82.7
			#100	8.29	76.3
			#140	18.19	58.2
			#200	24.56	46.5

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 91.5
Weight of hydrometer sample =49.96
Hygroscopic moisture correction:
Moist weight and tare = 28.53
Dry weight and tare = 28.30
Tare weight = 15.52
Hygroscopic moisture = 1.8%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-3.0

Meniscus correction only = 1.0
Specific gravity of solids = 2.700
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.8	1.0190	1.0135	0.0133	20.0	13.0	0.0340	39.9
5.00	20.9	1.0180	1.0125	0.0133	19.0	13.2	0.0216	37.0
15.00	20.9	1.0170	1.0115	0.0133	18.0	13.3	0.0125	34.1
30.00	21.2	1.0160	1.0106	0.0132	17.0	13.5	0.0089	31.4
60.00	21.2	1.0150	1.0096	0.0132	16.0	13.7	0.0063	28.4
250.00	21.4	1.0140	1.0086	0.0132	15.0	13.8	0.0031	25.6
1440.00	20.2	1.0130	1.0073	0.0134	14.0	14.0	0.0013	21.6

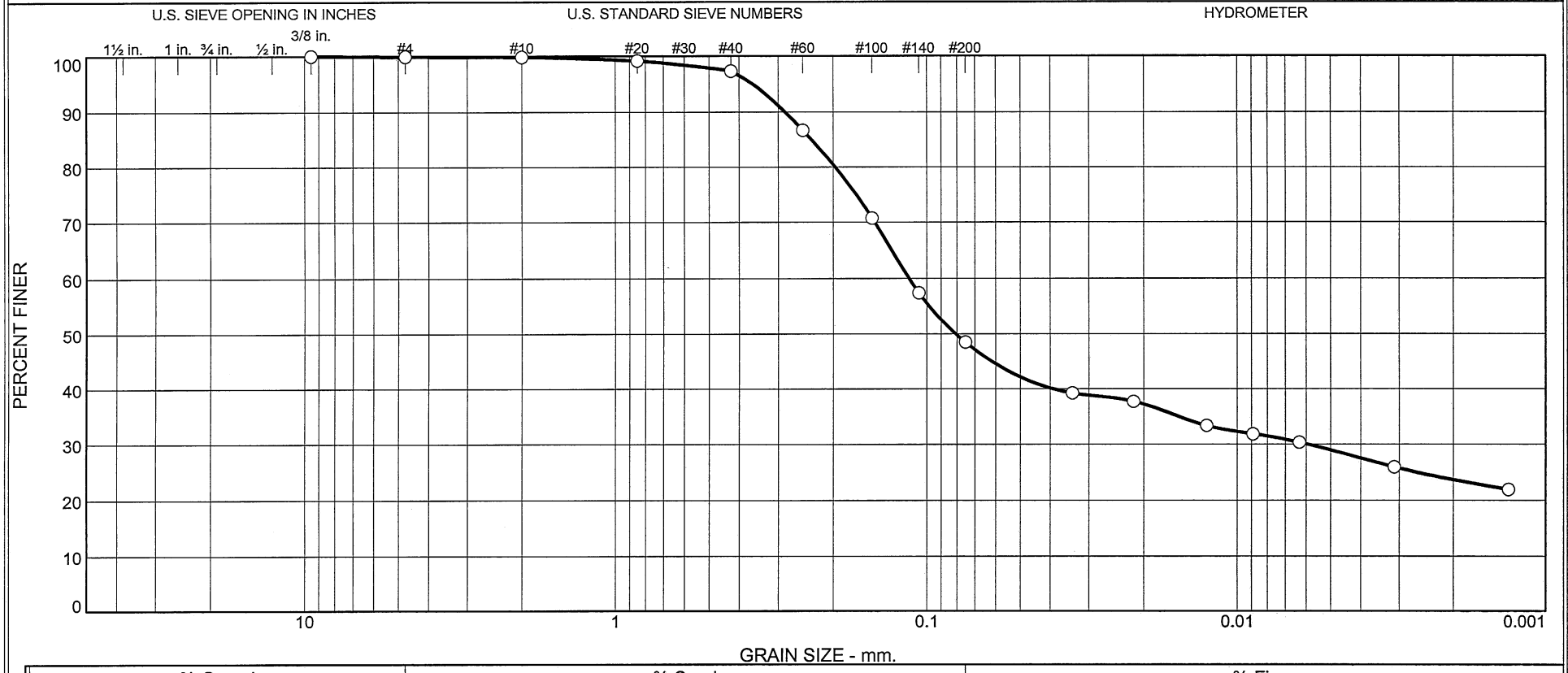
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	5.1	5.1	3.4	6.7	38.3	48.4	19.4	27.1	46.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0077	0.0860	0.1098	0.1694	0.4412	1.3839	4.8922

Fineness Modulus
0.80

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.1	0.1	2.5	48.8	19.5	29.0

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-21	87.5-88.75'	1/10/09	SC	Very Pale Brown Clayey SAND	12.3	25	14

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 87.5-88.75' **Sample Number:** SS-21
Material Description: Very Pale Brown Clayey SAND
Date: 1/10/09 **Natural Moisture:** 12.3
Liquid Limit: 25 **Plastic Limit:** 14 **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
342.49	0.00	0.00	3/8"	0.00	100.0
			#4	0.38	99.9
			#10	0.63	99.8
52.95	0.00	0.00	#20	0.36	99.1
			#40	1.32	97.3
			#60	6.97	86.7
			#100	15.45	70.7
			#140	22.53	57.3
			#200	27.23	48.5

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.8
Weight of hydrometer sample =52.95
Hygroscopic moisture correction:
Moist weight and tare = 29.76
Dry weight and tare = 29.70
Tare weight = 15.39
Hygroscopic moisture = 0.4%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-3.0

Meniscus correction only = 1.0
Specific gravity of solids = 2.700
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.164 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.1	1.0185	1.0131	0.0133	19.5	13.1	0.0339	39.3
5.00	21.1	1.0180	1.0126	0.0133	19.0	13.2	0.0215	37.8
15.00	21.2	1.0165	1.0111	0.0132	17.5	13.4	0.0125	33.3
30.00	21.2	1.0160	1.0106	0.0132	17.0	13.5	0.0089	31.8
60.00	21.2	1.0155	1.0101	0.0132	16.5	13.6	0.0063	30.3
250.00	21.3	1.0140	1.0086	0.0132	15.0	13.8	0.0031	25.9
1440.00	20.2	1.0130	1.0073	0.0134	14.0	14.0	0.0013	21.9

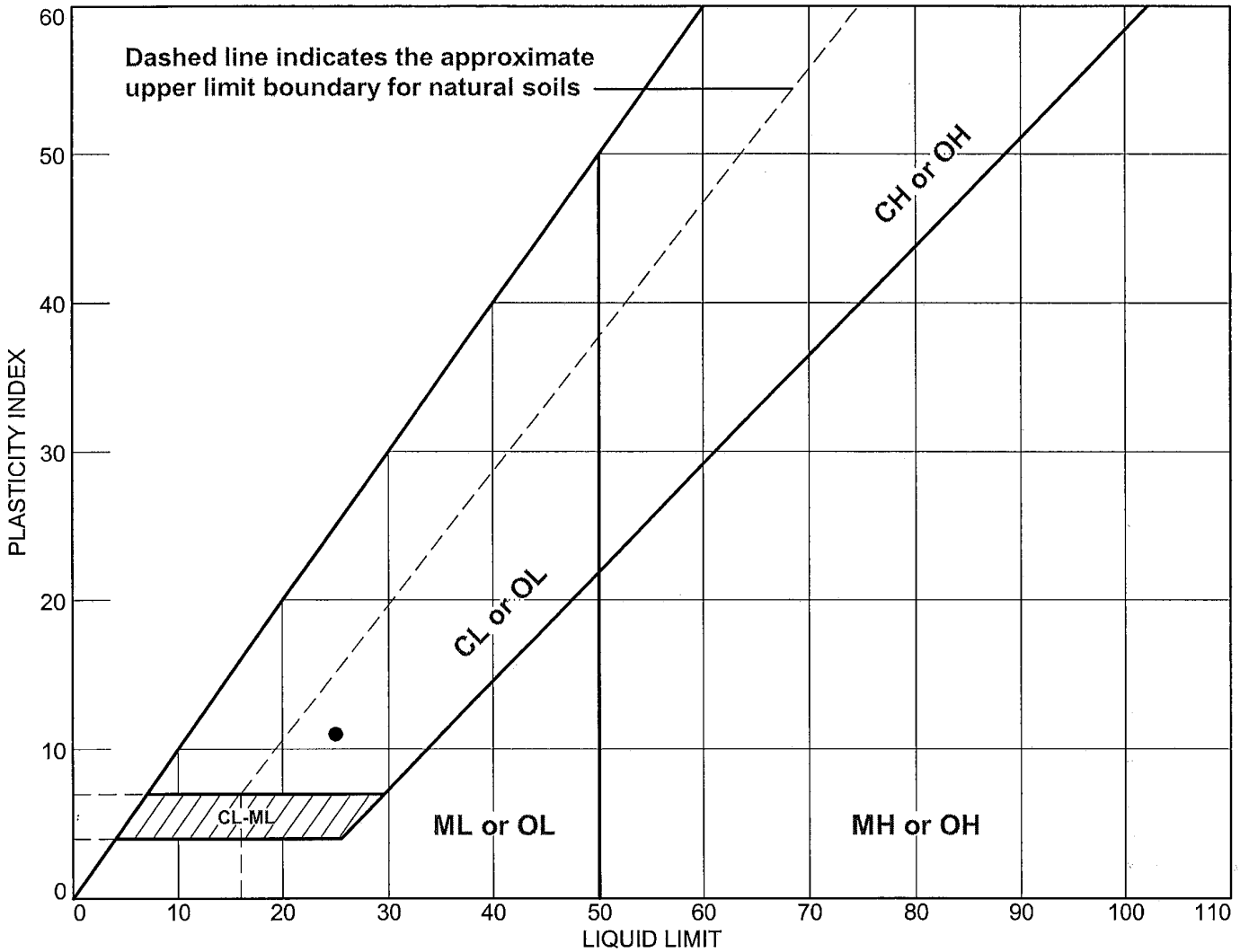
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.1	0.1	0.1	2.5	48.8	51.4	19.5	29.0	48.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0059	0.0807	0.1142	0.1972	0.2347	0.2854	0.3623

Fineness Modulus
0.41

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-21	87.5-88.75'	12.3	14	25	11	SC

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

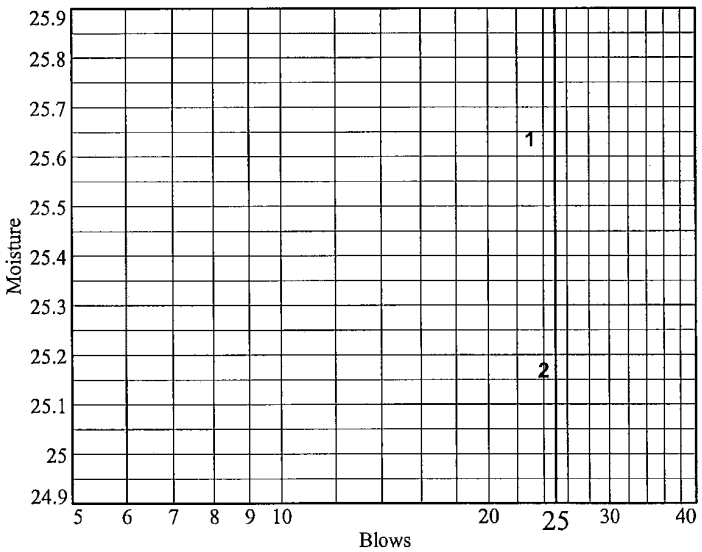
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 87.5-88.75'
Sample Number: SS-21
Material Description: Very Pale Brown Clayey SAND
USCS: SC
AASHTO: A-6(2)
Tested by: CS
Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.84	24.68				
Dry+Tare	26.12	22.83				
Tare	15.51	15.48				
# Blows	23	24				
Moisture	25.6	25.2				



Liquid Limit= 25
Plastic Limit= 14
Plasticity Index= 11
Natural Moisture= 12.3
Liquidity Index= -0.2

Plastic Limit Data

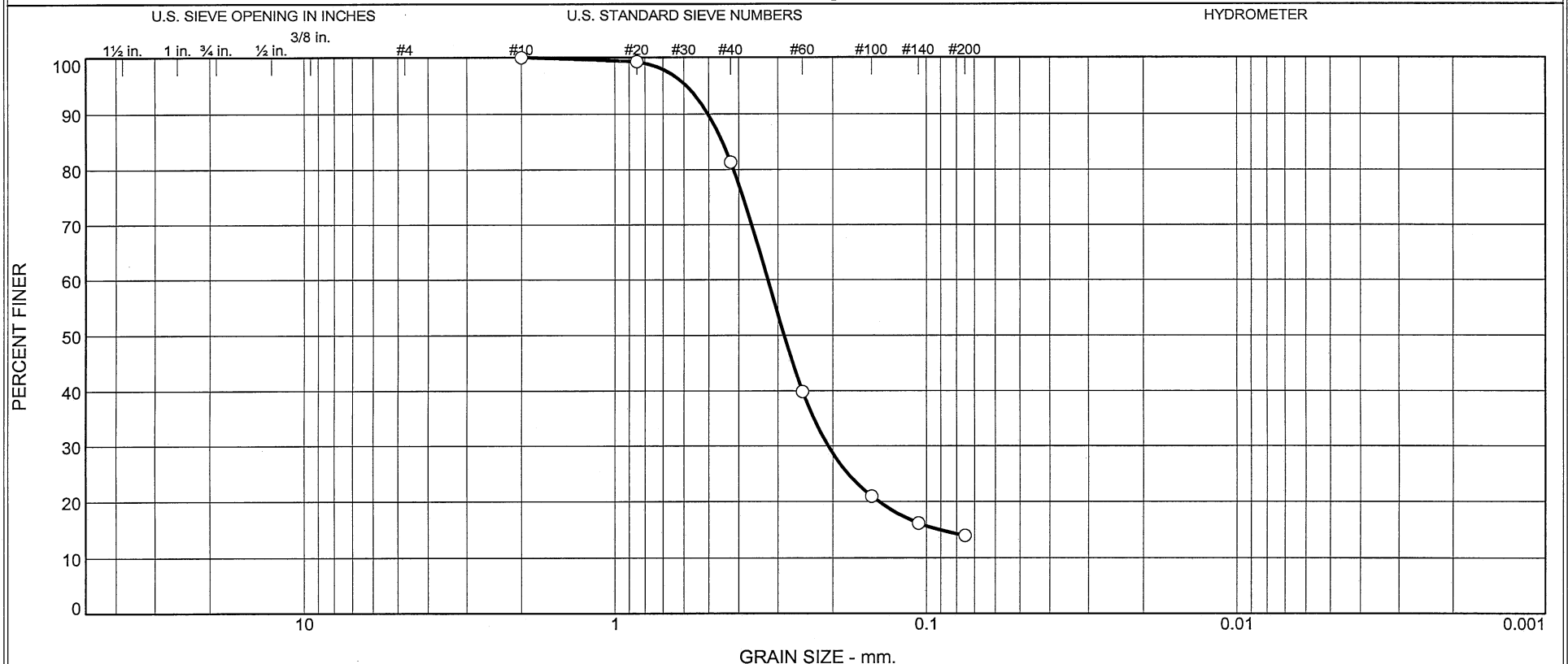
Run No.	1	2	3	4	
Wet+Tare	21.60	17.58			
Dry+Tare	20.86	16.81			
Tare	15.43	11.21			
Moisture	13.6	13.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
110.74	99.31	6.72	12.3

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 6913-04e2



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	19	67	14	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-22B	93.4-94.0'	1/10/09	SM (Visual)	Very Pale Brown Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ ND = Not Determined
Sieve Analysis Only

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/4/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 93.4-94.0' **Sample Number:** SS-22B
Material Description: Very Pale Brown Silty SAND (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM (Visual)
Testing Remarks: ND = Not Determined
Sieve Analysis Only
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
148.96	0.00	0.00	#10	0.00	100
104.08	0.00	0.00	#20	0.77	99
			#40	19.44	81
			#60	62.57	40
			#100	82.27	21
			#140	87.21	16
			#200	89.51	14

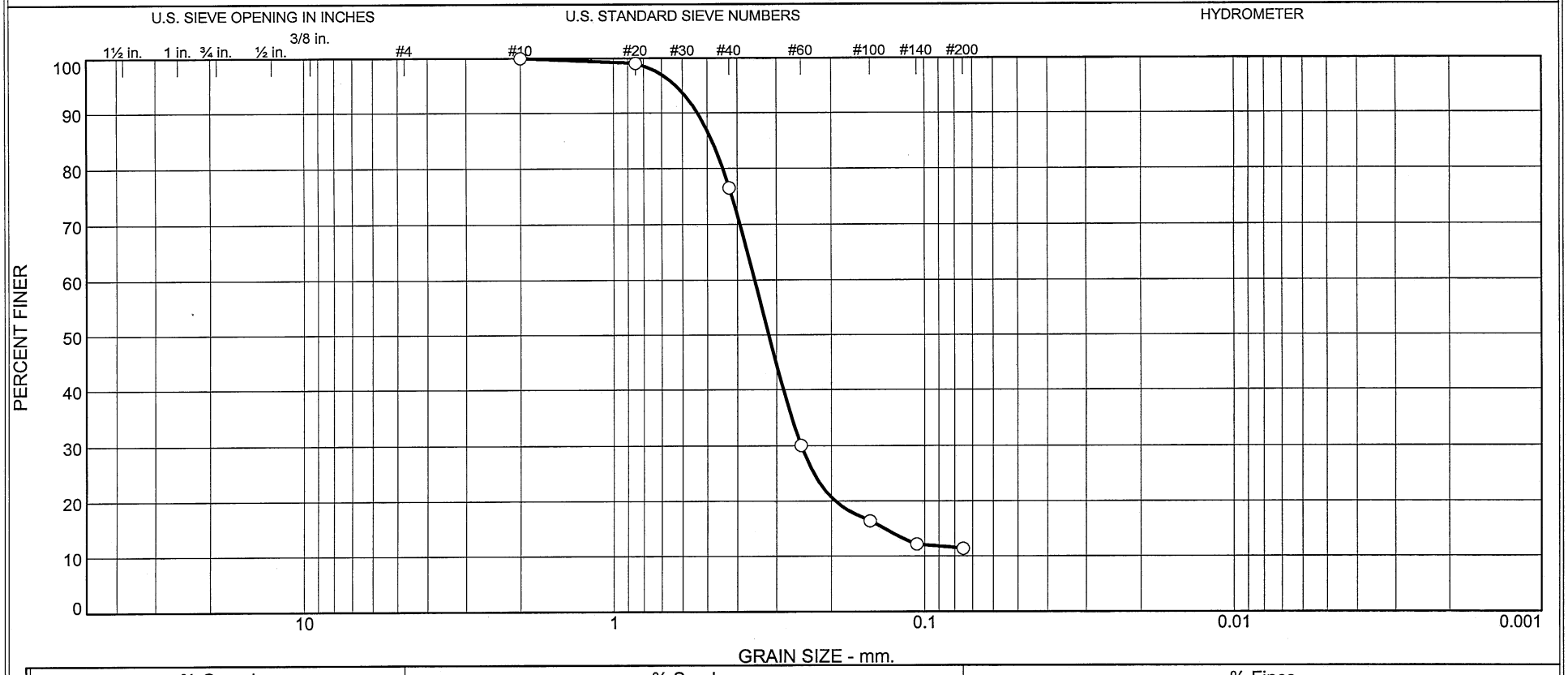
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	19	67	86			14

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0902	0.1422	0.2072	0.2867	0.3232	0.4165	0.4524	0.5032	0.5904

Fineness Modulus
1.30

Particle Size Distribution Report ASTM D 6913-04e2



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	23	66	11	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-23	97.5-98.0'	1/10/09	SP-SM (Visual)	Very Pale Brown Poorly Graded SAND with silt (Visual)	15.3	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ ND = Not Determined
Organic Content = 11.7% (ASTM D2974-07)
Sieve Analysis Only

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 97.5-98.0' **Sample Number:** SS-23
Material Description: Very Pale Brown Poorly Graded SAND with silt (Visual)
Date: 1/10/09 **Natural Moisture:** 15.3
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SP-SM (Visual)
Testing Remarks: ND = Not Determined
Organic Content = 11.7% (ASTM D2974-07)
Sieve Analysis Only
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
256.71	0.00	0.00	#10	0.00	100
99.42	0.00	0.00	#20	0.93	99
			#40	23.36	77
			#60	69.57	30
			#100	83.12	16
			#140	87.36	12
			#200	88.12	11

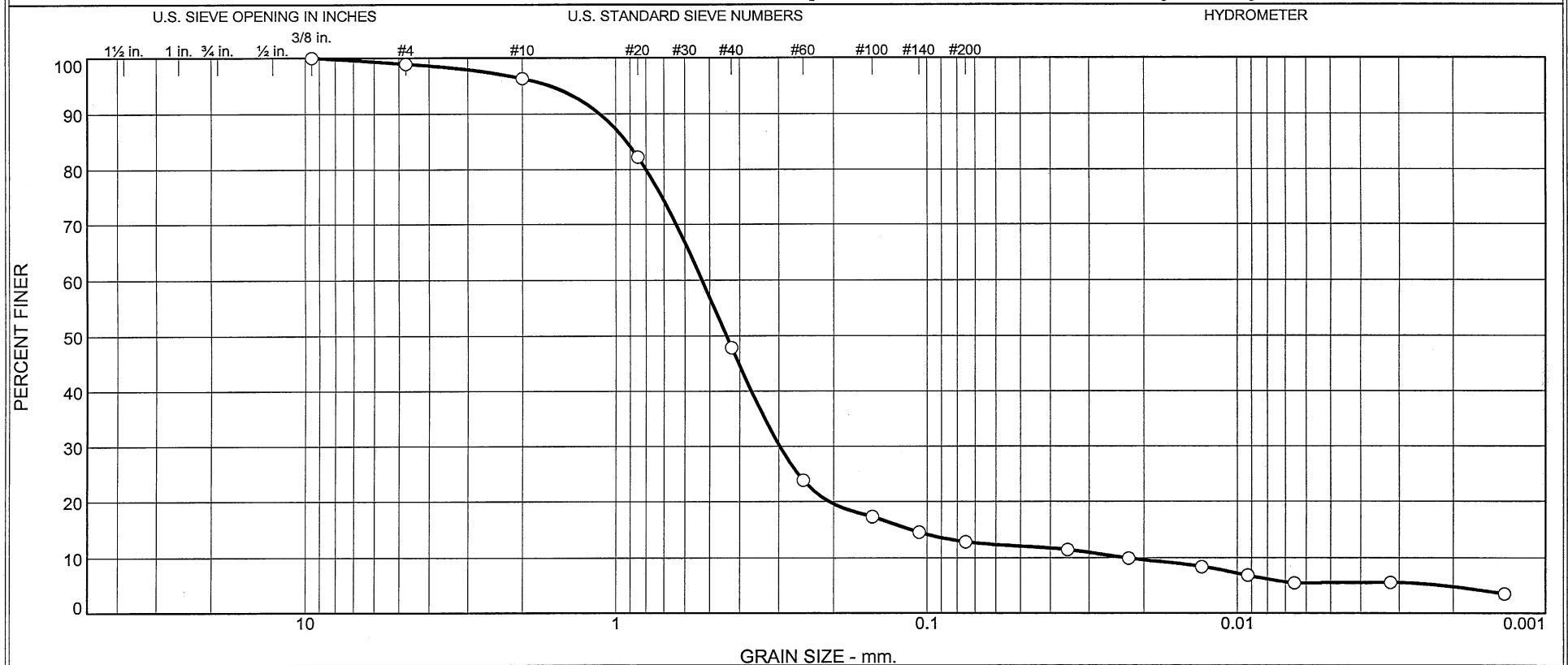
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	23	66	89			11

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.1348	0.1941	0.2499	0.3179	0.3526	0.4462	0.4841	0.5379	0.6305

Fineness Modulus
1.46

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	1.1	2.6	48.4	35.1	7.3	5.5

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-24	102.5-104.0'	1/10/09	SM (Visual)	Very Pale Brown Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Spcific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 102.5-104.0' **Sample Number:** SS-24
Material Description: Very Pale Brown Silty SAND (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM (Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
Spcific 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
315.37	0.00	0.00	3/8"	0.00	100.0
			#4	3.56	98.9
			#10	11.82	96.3
100.49	0.00	0.00	#20	14.65	82.2
			#40	50.53	47.9
			#60	75.62	23.8
			#100	82.43	17.3
			#140	85.28	14.6
			#200	87.08	12.8

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 96.3
Weight of hydrometer sample =100.91
Hygroscopic moisture correction:
Moist weight and tare = 28.74
Dry weight and tare = 28.66
Tare weight = 15.58
Hygroscopic moisture = 0.6%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-3.0

Meniscus correction only = 1.0
Specific gravity of solids = 2.700
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.164 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.9	1.0130	1.0075	0.0133	14.0	14.0	0.0352	11.4
5.00	20.9	1.0120	1.0065	0.0133	13.0	14.2	0.0224	9.9
15.00	20.9	1.0110	1.0055	0.0133	12.0	14.3	0.0130	8.4
30.00	20.9	1.0100	1.0045	0.0133	11.0	14.5	0.0092	6.9
60.00	21.2	1.0090	1.0036	0.0132	10.0	14.7	0.0065	5.5
250.00	21.4	1.0090	1.0036	0.0132	10.0	14.7	0.0032	5.6
1440.00	20.2	1.0080	1.0023	0.0134	9.0	14.8	0.0014	3.5

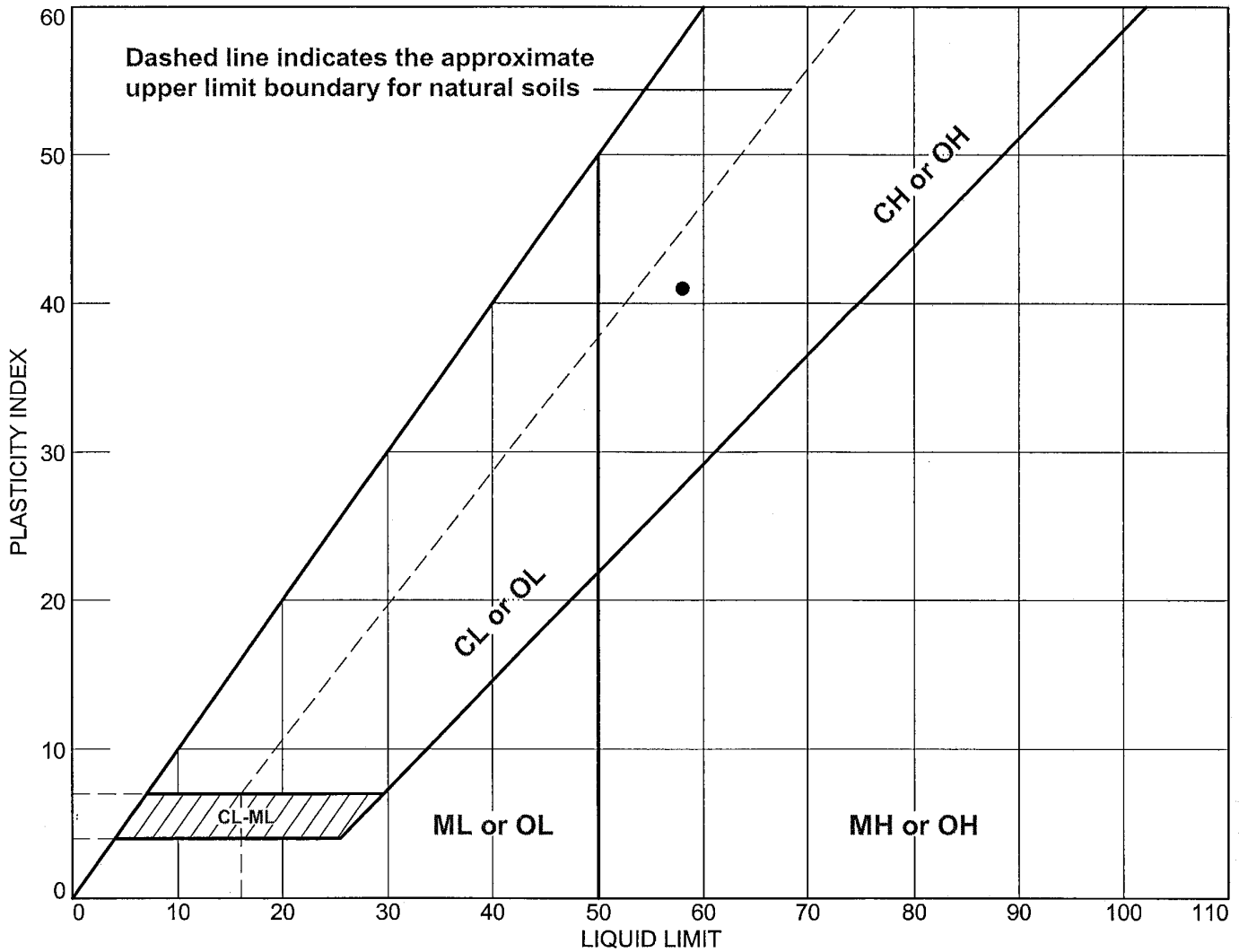
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.1	1.1	2.6	48.4	35.1	86.1	7.3	5.5	12.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0230	0.1123	0.2065	0.2979	0.4418	0.5297	0.8012	0.9245	1.1275	1.6420

Fineness Modulus	C_u	C_c
1.99	23.00	7.27

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-25	112.5-114.0'	26.5	17	58	41	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

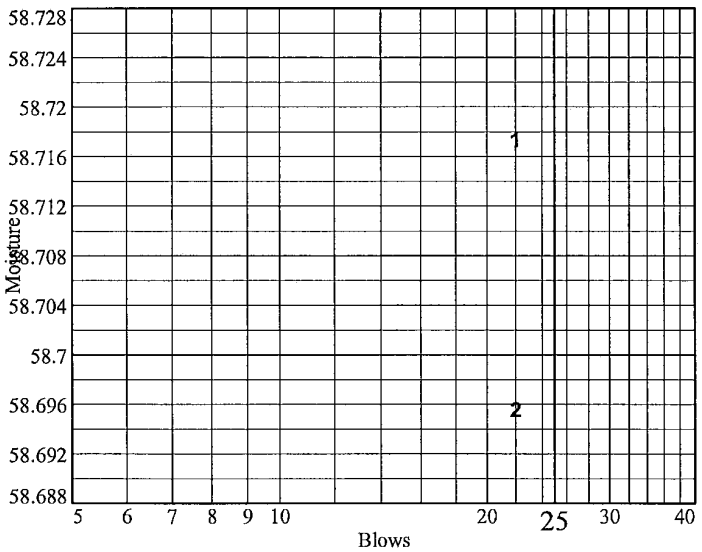
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 112.5-114.0' **Sample Number:** SS-25
Material Description: Pale Yellow Mottled Brownish Yellow Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.62	23.62				
Dry+Tare	20.69	20.65				
Tare	15.70	15.59				
# Blows	22	22				
Moisture	58.7	58.7				



Liquid Limit= 58
Plastic Limit= 17
Plasticity Index= 41
Natural Moisture= 26.5
Liquidity Index= 0.2

Plastic Limit Data

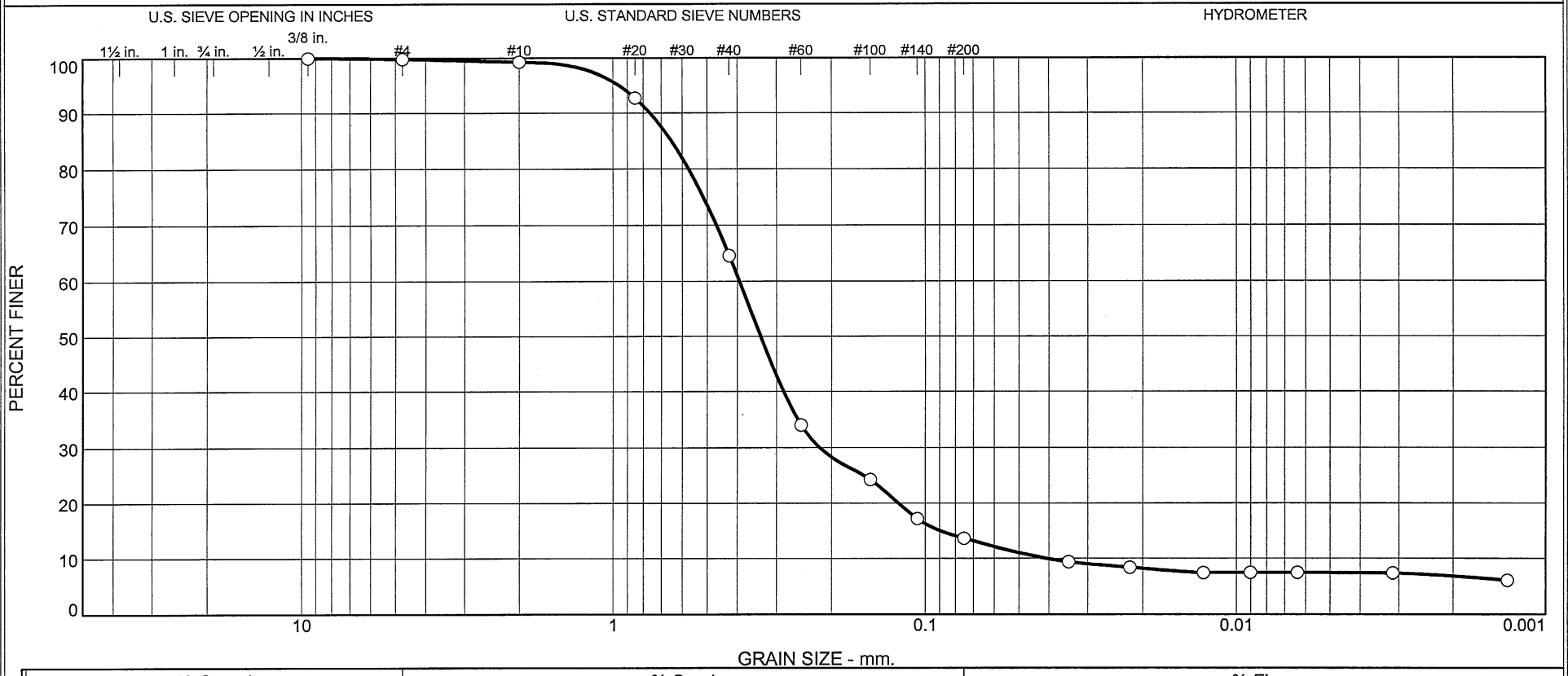
Run No.	1	2	3	4	
Wet+Tare	22.62	22.08			
Dry+Tare	21.59	21.12			
Tare	15.63	15.52			
Moisture	17.3	17.1			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
82.76	66.86	6.83	26.5

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.2	0.5	34.7	51.0	6.2	7.4

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-27	132.5-134.0'	1/10/09	SM (Visual)	Light Gray Silty SAND (Visual)	ND	ND	ND

Client Bechtel
Project Exelon Texas COL Project - Supplemental
Investigation, including UHS
Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.
Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 132.5-134.0' **Sample Number:** SS-27
Material Description: Light Gray Silty SAND (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM (Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
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
341.87	0.00	0.00	3/8"	0.00	100.0
			#4	0.63	99.8
			#10	2.50	99.3
101.58	0.00	0.00	#20	6.69	92.7
			#40	35.51	64.6
			#60	66.76	34.0
			#100	76.77	24.2
			#140	84.00	17.2
			#200	87.66	13.6

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.3
Weight of hydrometer sample =101.57
Hygroscopic moisture correction:
Moist weight and tare = 23.37
Dry weight and tare = 23.35
Tare weight = 11.14
Hygroscopic moisture = 0.2%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.4	15.0	9.6	0.0132	16.0	13.7	0.0345	9.3
5.00	21.4	14.0	8.6	0.0132	15.0	13.8	0.0220	8.4
15.00	21.4	13.0	7.6	0.0132	14.0	14.0	0.0128	7.4
30.00	21.5	13.0	7.7	0.0132	14.0	14.0	0.0090	7.4
60.00	21.5	13.0	7.7	0.0132	14.0	14.0	0.0064	7.4
250.00	21.1	13.0	7.6	0.0133	14.0	14.0	0.0031	7.3
1440.00	20.0	12.0	6.2	0.0134	13.0	14.2	0.0013	6.0

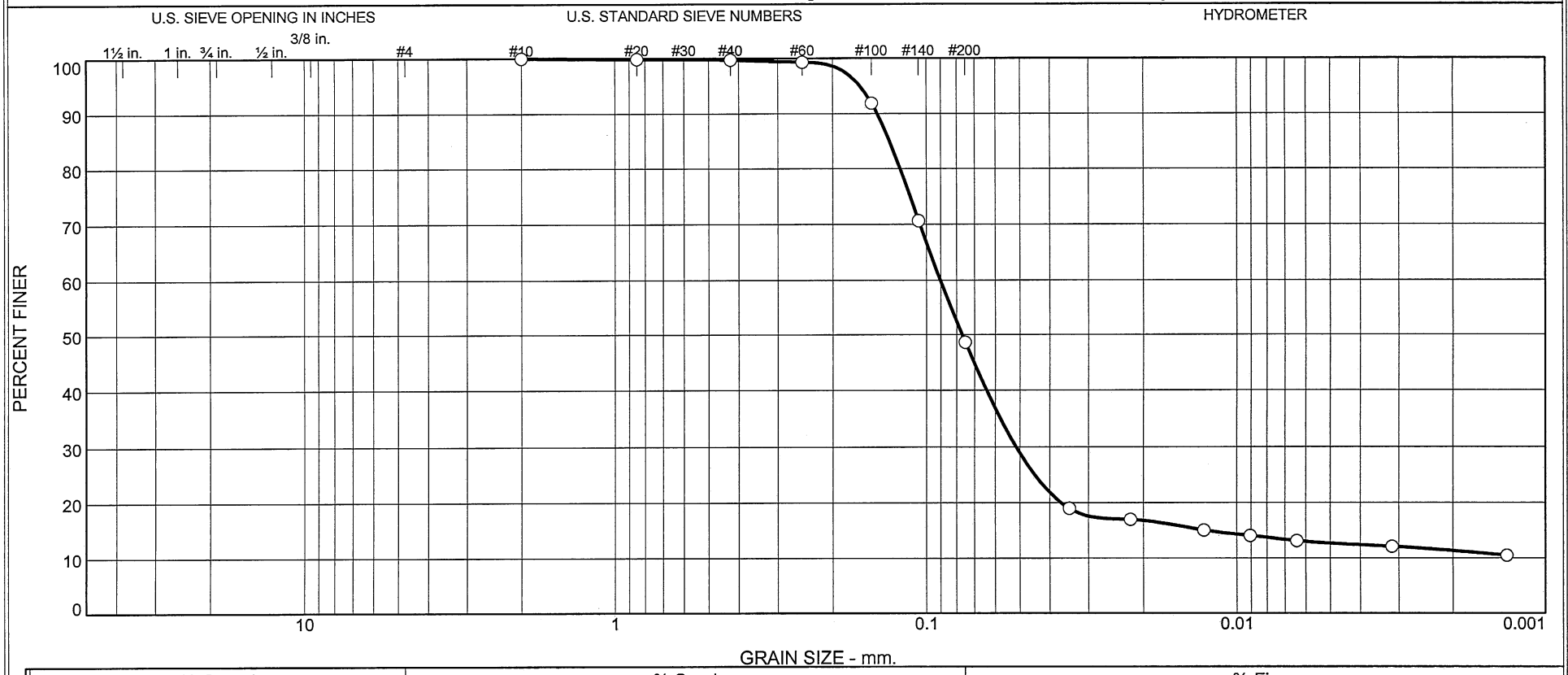
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.2	0.2	0.5	34.7	51.0	86.2	6.2	7.4	13.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0410	0.0896	0.1221	0.2183	0.3373	0.3946	0.5742	0.6516	0.7620	0.9561

Fineness Modulus	C_u	C_c
1.54	9.62	2.94

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.3	51.1	35.9	12.7

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-28	142.5-144.0'	1/11/09	SC	Light Gray Clayey SAND	21.0	32	16

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 142.5-144.0' **Sample Number:** SS-28
Material Description: Light Gray Clayey SAND
Date: 1/11/09 **Natural Moisture:** 21.0
Liquid Limit: 32 **Plastic Limit:** 16 **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
193.46	0.00	0.00	#10	0.00	100.0
50.84	0.00	0.00	#20	0.09	99.8
			#40	0.16	99.7
			#60	0.36	99.3
			#100	4.13	91.9
			#140	14.95	70.6
			#200	26.13	48.6

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.85
Hygroscopic moisture correction:
Moist weight and tare = 28.97
Dry weight and tare = 28.82
Tare weight = 15.53
Hygroscopic moisture = 1.1%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-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 **x** Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.4	15.0	9.6	0.0132	16.0	13.7	0.0345	19.0
5.00	21.4	14.0	8.6	0.0132	15.0	13.8	0.0220	17.0
15.00	21.4	13.0	7.6	0.0132	14.0	14.0	0.0128	15.0
30.00	21.4	12.5	7.1	0.0132	13.5	14.1	0.0091	14.1
60.00	21.5	12.0	6.7	0.0132	13.0	14.2	0.0064	13.1
250.00	21.4	11.5	6.1	0.0132	12.5	14.2	0.0032	12.1
1440.00	20.3	11.0	5.3	0.0134	12.0	14.3	0.0013	10.5

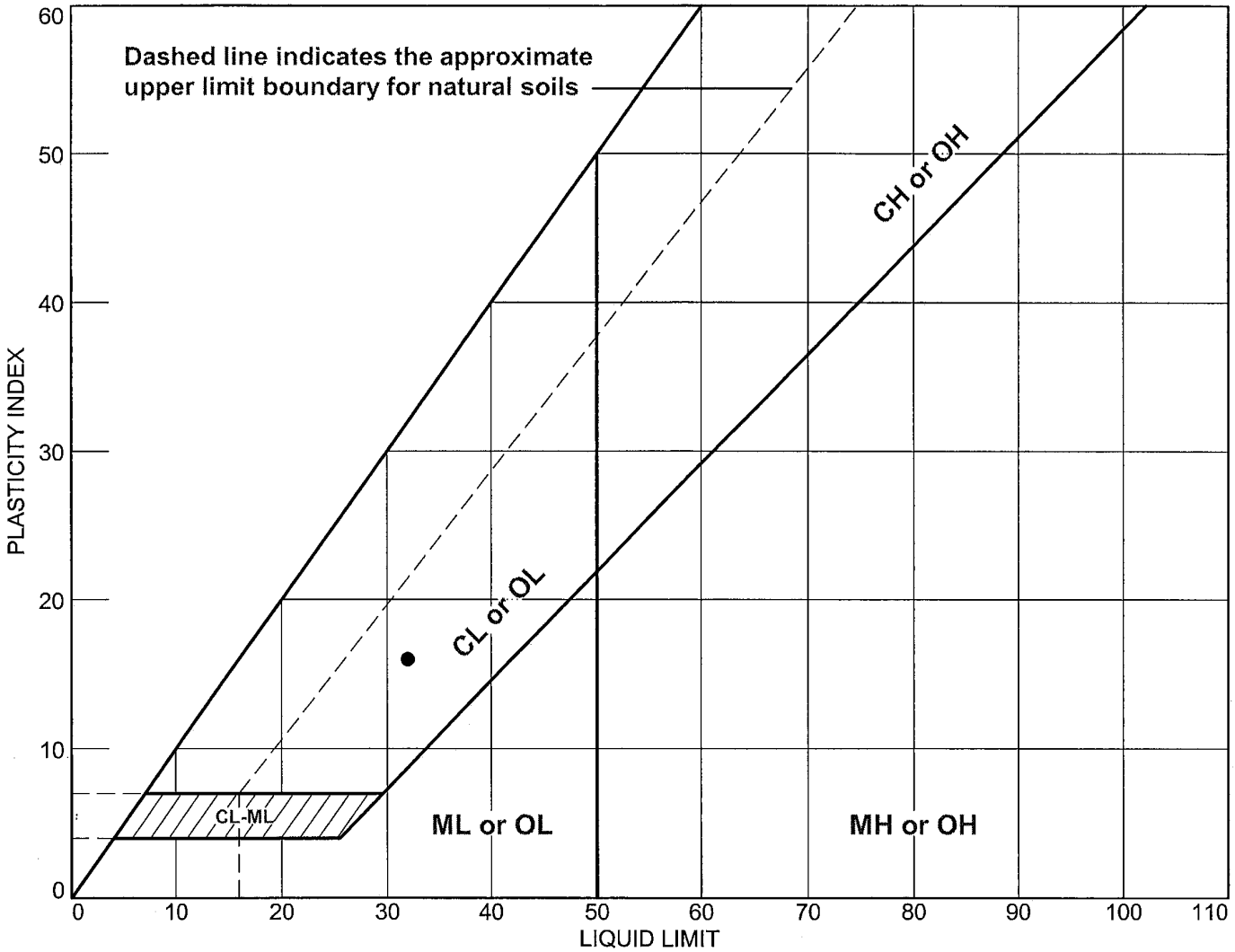
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.3	51.1	51.4	35.9	12.7	48.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0126	0.0368	0.0515	0.0768	0.0904	0.1217	0.1316	0.1440	0.1635

Fineness Modulus
0.09

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-28	142.5-144.0'	21.0	16	32	16	SC

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

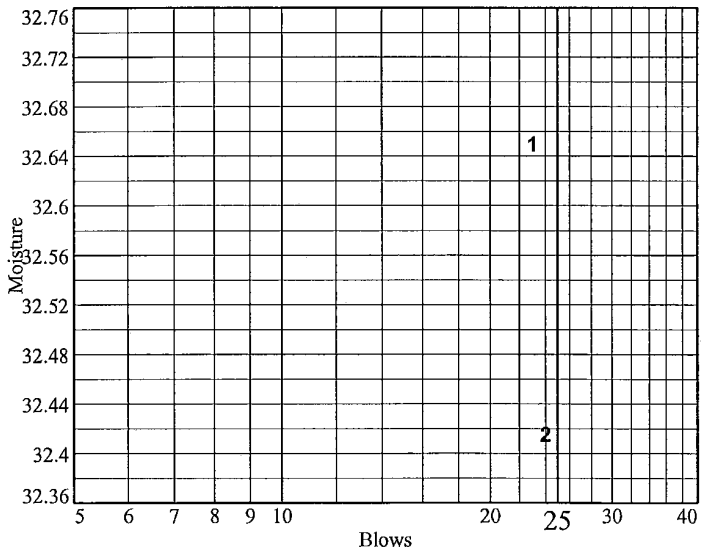
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 142.5-144.0' **Sample Number:** SS-28
Material Description: Light Gray Clayey SAND
USCS: SC **AASHTO:** A-6(4)
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.31	24.33				
Dry+Tare	22.92	22.21				
Tare	15.60	15.67				
# Blows	23	24				
Moisture	32.7	32.4				



Liquid Limit= 32
Plastic Limit= 16
Plasticity Index= 16
Natural Moisture= 21.0
Liquidity Index= 0.3

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.86	21.76			
Dry+Tare	21.00	20.86			
Tare	15.53	15.48			
Moisture	15.7	16.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
50.89	43.22	6.77	21.0

Particle Size Distribution Report ASTM D 6913-04e2



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	15	73	12	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-29	152.5-154.0'	1/11/09	SP-SM (Visual)	Light Gray Poorly Graded SAND with silt (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ ND = Not Determined
Sieve Analysis Only

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 152.5-154.0' **Sample Number:** SS-29
Material Description: Light Gray Poorly Graded SAND with silt (Visual)
Date: 1/11/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SP-SM (Visual)
Testing Remarks: ND = Not Determined
Sieve Analysis Only
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
248.91	0.00	0.00	#10	0.00	100
100.51	0.00	0.00	#20	1.33	99
			#40	14.89	85
			#60	48.79	51
			#100	72.51	28
			#140	84.27	16
			#200	88.19	12

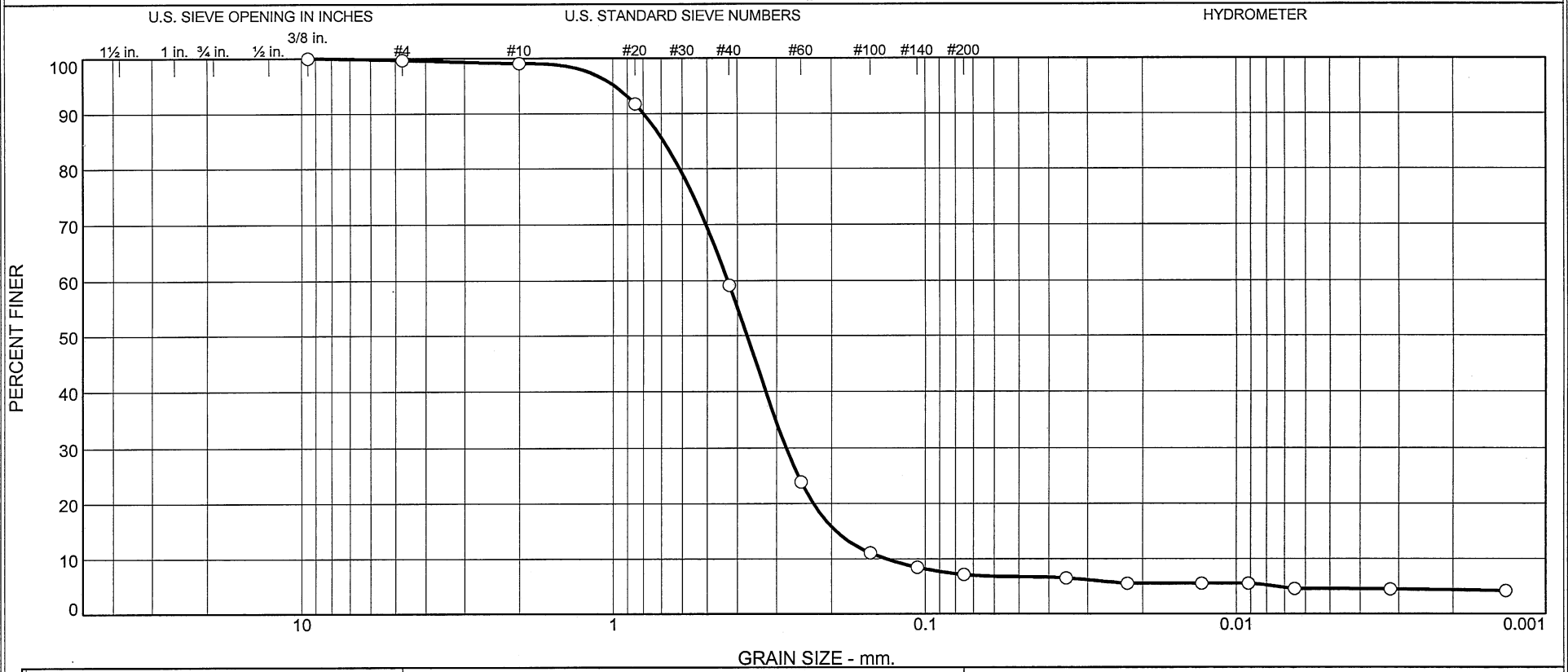
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	15	73	88			12

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.1000	0.1215	0.1584	0.2439	0.2855	0.3862	0.4234	0.4764	0.5726

Fineness Modulus
1.13

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.3	0.6	40.0	52.0	2.6	4.5

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-30	162.5-164.0'	1/11/09	SP-SM (Visual)	Very Pale Brown Poorly Graded SAND with silt (Visual)	ND	ND	ND

Client Bechtel
Project Exelon Texas COL Project - Supplemental Investigation, including UHS
Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.
Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 162.5-164.0' **Sample Number:** SS-30
Material Description: Very Pale Brown Poorly Graded SAND with silt (Visual)
Date: 1/11/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SP-SM (Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
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
322.54	0.00	0.00	3/8"	0.00	100.0
			#4	1.09	99.7
			#10	3.03	99.1
100.92	0.00	0.00	#20	7.45	91.7
			#40	40.66	59.1
			#60	76.60	23.9
			#100	89.63	11.1
			#140	92.32	8.4
			#200	93.66	7.1

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.1
Weight of hydrometer sample =100.92
Hygroscopic moisture correction:
Moist weight and tare = 29.63
Dry weight and tare = 29.52
Tare weight = 15.47
Hygroscopic moisture = 0.8%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.4	12.0	6.6	0.0132	13.0	14.2	0.0352	6.5
5.00	21.4	11.0	5.6	0.0132	12.0	14.3	0.0224	5.5
15.00	21.4	11.0	5.6	0.0132	12.0	14.3	0.0129	5.5
30.00	21.4	11.0	5.6	0.0132	12.0	14.3	0.0091	5.5
60.00	21.4	10.0	4.6	0.0132	11.0	14.5	0.0065	4.5
250.00	21.1	10.0	4.6	0.0133	11.0	14.5	0.0032	4.5
1440.00	20.0	10.0	4.2	0.0134	11.0	14.5	0.0013	4.1

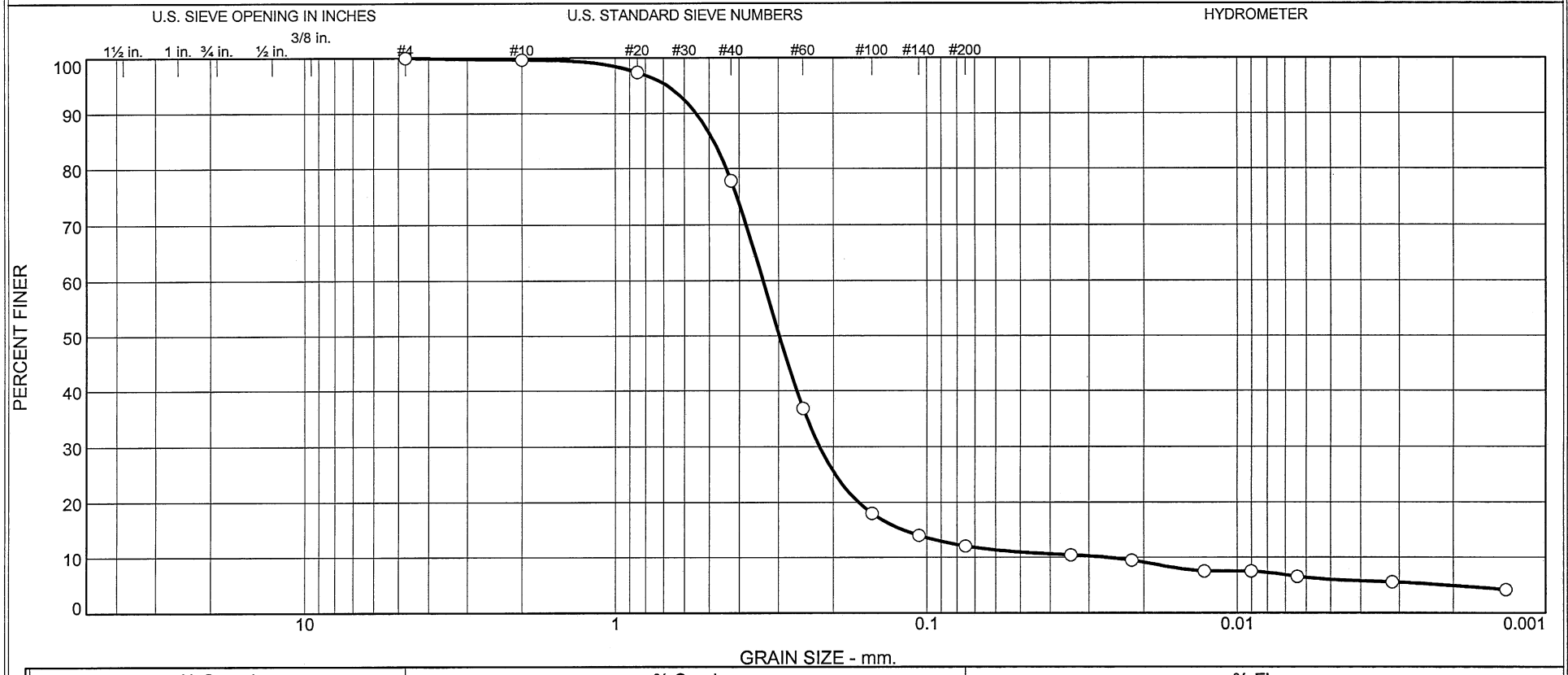
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.3	0.3	0.6	40.0	52.0	92.6	2.6	4.5	7.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1337	0.1934	0.2286	0.2793	0.3732	0.4304	0.6133	0.6902	0.7984	0.9883

Fineness Modulus	C_u	C_c
1.79	3.22	1.36

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.3	21.9	65.8	6.0	6.0

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-31	172.5-174.0'	1/11/09	SP-SM	Very Pale Brown Poorly Graded SAND with silt (Visual)	ND	ND	ND
					(Visual)				

Client Bechtel

Project Exelon Texas COL Project - Supplemental

Investigation, including UHS

Project No. 6468071777 Figure

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 172.5-174.0' **Sample Number:** SS-31
Material Description: Very Pale Brown Poorly Graded SAND with silt (Visual)
Date: 1/11/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SP-SM (Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
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
270.05	0.00	0.00	#4	0.00	100.0
			#10	0.93	99.7
101.55	0.00	0.00	#20	2.26	97.4
			#40	22.29	77.8
			#60	64.03	36.8
			#100	83.18	18.0
			#140	87.26	14.0
			#200	89.28	12.0

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.7
Weight of hydrometer sample =101.55
Hygroscopic moisture correction:
Moist weight and tare = 22.84
Dry weight and tare = 22.80
Tare weight = 11.07
Hygroscopic moisture = 0.3%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.5	16.0	10.7	0.0132	17.0	13.5	0.0343	10.4
5.00	21.5	15.0	9.7	0.0132	16.0	13.7	0.0218	9.4
15.00	21.5	13.0	7.7	0.0132	14.0	14.0	0.0127	7.5
30.00	21.5	13.0	7.7	0.0132	14.0	14.0	0.0090	7.5
60.00	21.5	12.0	6.7	0.0132	13.0	14.2	0.0064	6.5
250.00	21.4	11.0	5.6	0.0132	12.0	14.3	0.0032	5.5
1440.00	20.0	10.0	4.2	0.0134	11.0	14.5	0.0013	4.1

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	21.9	65.8	88.0	6.0	6.0	12.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0268	0.1189	0.1658	0.2217	0.2983	0.3365	0.4406	0.4846	0.5503	0.6805

Fineness Modulus	C_u	C_c
1.40	12.54	5.44

Particle Size Distribution Report ASTM D 6913-04e2



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	7	78	15	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-32B	182.75-183.5'	1/11/09	SM (Visual)	Very Pale Brown Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ ND = Not Determined
Sieve Analysis Only

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 182.75-183.5' **Sample Number:** SS-32B
Material Description: Very Pale Brown Silty SAND (Visual)
Date: 1/11/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM (Visual)
Testing Remarks: ND = Not Determined
Sieve Analysis Only
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
244.03	0.00	0.00	#10	0.00	100
100.36	0.00	0.00	#20	0.73	99
			#40	6.88	93
			#60	27.97	72
			#100	71.59	29
			#140	81.53	19
			#200	85.06	15

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	7	78	85			15

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.1159	0.1533	0.1950	0.2168	0.2824	0.3138	0.3659	0.4788

Fineness Modulus
0.91

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.1	0.3	7.7	79.2	6.4	6.3

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-33	192.5-194.0'	1/11/09	SM (Visual)	Light Gray Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental

Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 192.5-194.0' **Sample Number:** SS-33
Material Description: Light Gray Silty SAND (Visual)
Date: 1/11/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM (Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
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
312.79	0.00	0.00	3/8"	0.00	100.0
			#4	0.25	99.9
			#10	1.29	99.6
99.98	0.00	0.00	#20	0.62	99.0
			#40	7.75	91.9
			#60	46.31	53.5
			#100	77.77	22.1
			#140	84.85	15.1
			#200	87.28	12.7

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.6
Weight of hydrometer sample =99.98
Hygroscopic moisture correction:
Moist weight and tare = 28.98
Dry weight and tare = 28.85
Tare weight = 15.73
Hygroscopic moisture = 1.0%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.4	16.0	10.6	0.0132	17.0	13.5	0.0343	10.6
5.00	21.4	15.0	9.6	0.0132	16.0	13.7	0.0218	9.6
15.00	21.4	14.0	8.6	0.0132	15.0	13.8	0.0127	8.6
30.00	21.4	14.0	8.6	0.0132	15.0	13.8	0.0090	8.6
60.00	21.4	12.0	6.6	0.0132	13.0	14.2	0.0064	6.6
250.00	21.5	11.0	5.7	0.0132	12.0	14.3	0.0032	5.6
1440.00	20.1	10.0	4.3	0.0134	11.0	14.5	0.0013	4.2

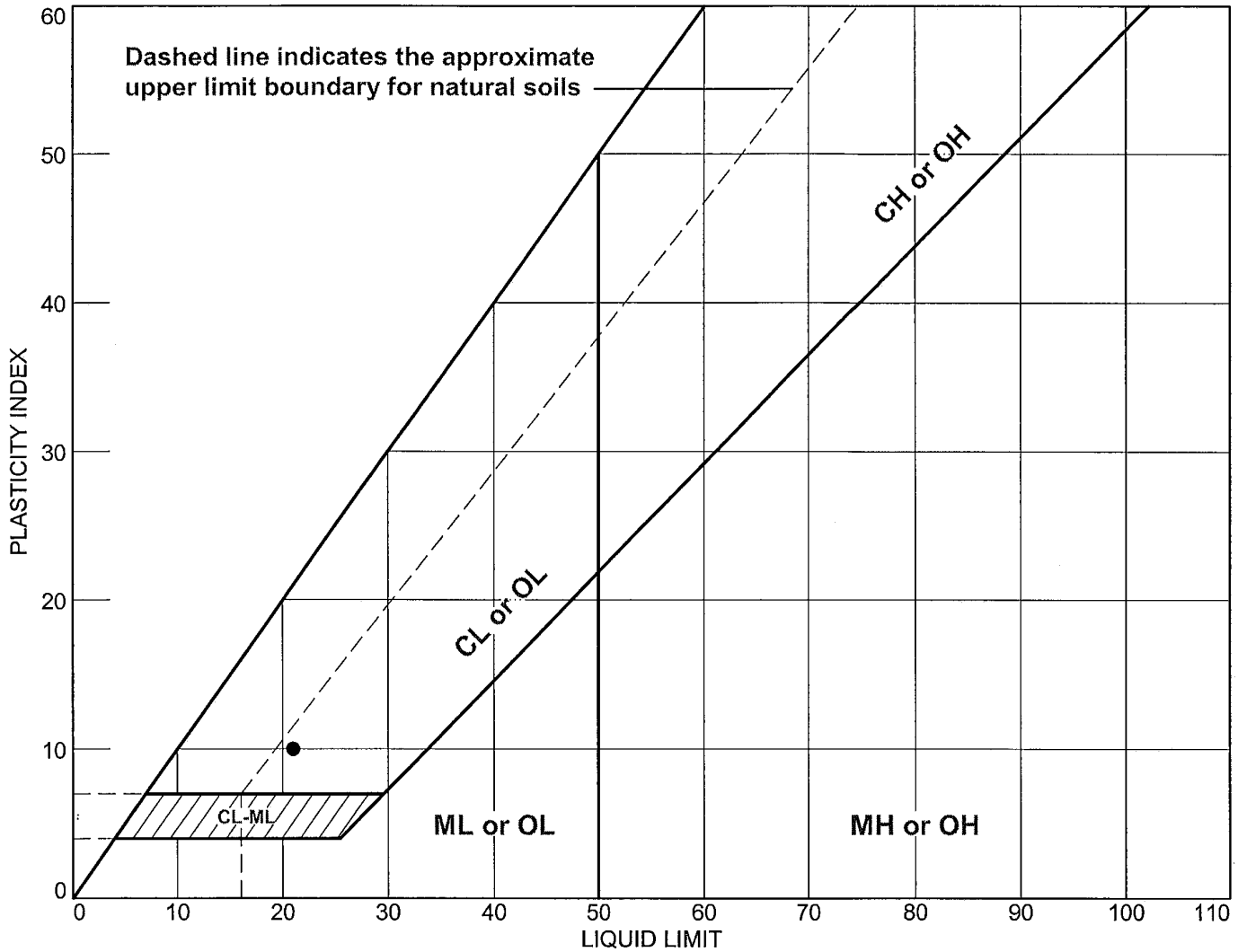
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.1	0.1	0.3	7.7	79.2	87.2	6.4	6.3	12.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0258	0.1053	0.1405	0.1779	0.2392	0.2711	0.3493	0.3759	0.4093	0.5405

Fineness Modulus	C_u	C_c
1.15	10.52	4.53

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-34	202.5-204.0'	21.6	11	21	10	SC (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

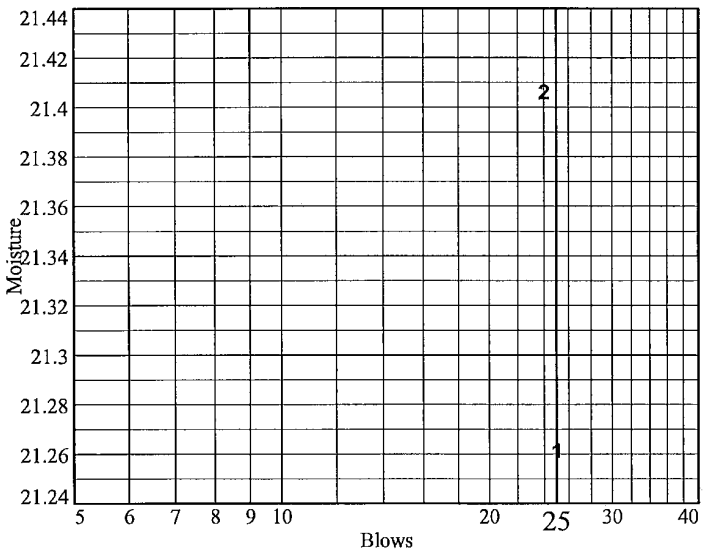
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 202.5-204.0' **Sample Number:** SS-34
Material Description: Light Gray Clayey SAND (Visual)
USCS: SC (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	21.56	27.27				
Dry+Tare	19.74	25.20				
Tare	11.18	15.53				
# Blows	25	24				
Moisture	21.3	21.4				



Liquid Limit= 21
Plastic Limit= 11
Plasticity Index= 10
Natural Moisture= 21.6
Liquidity Index= 1.1

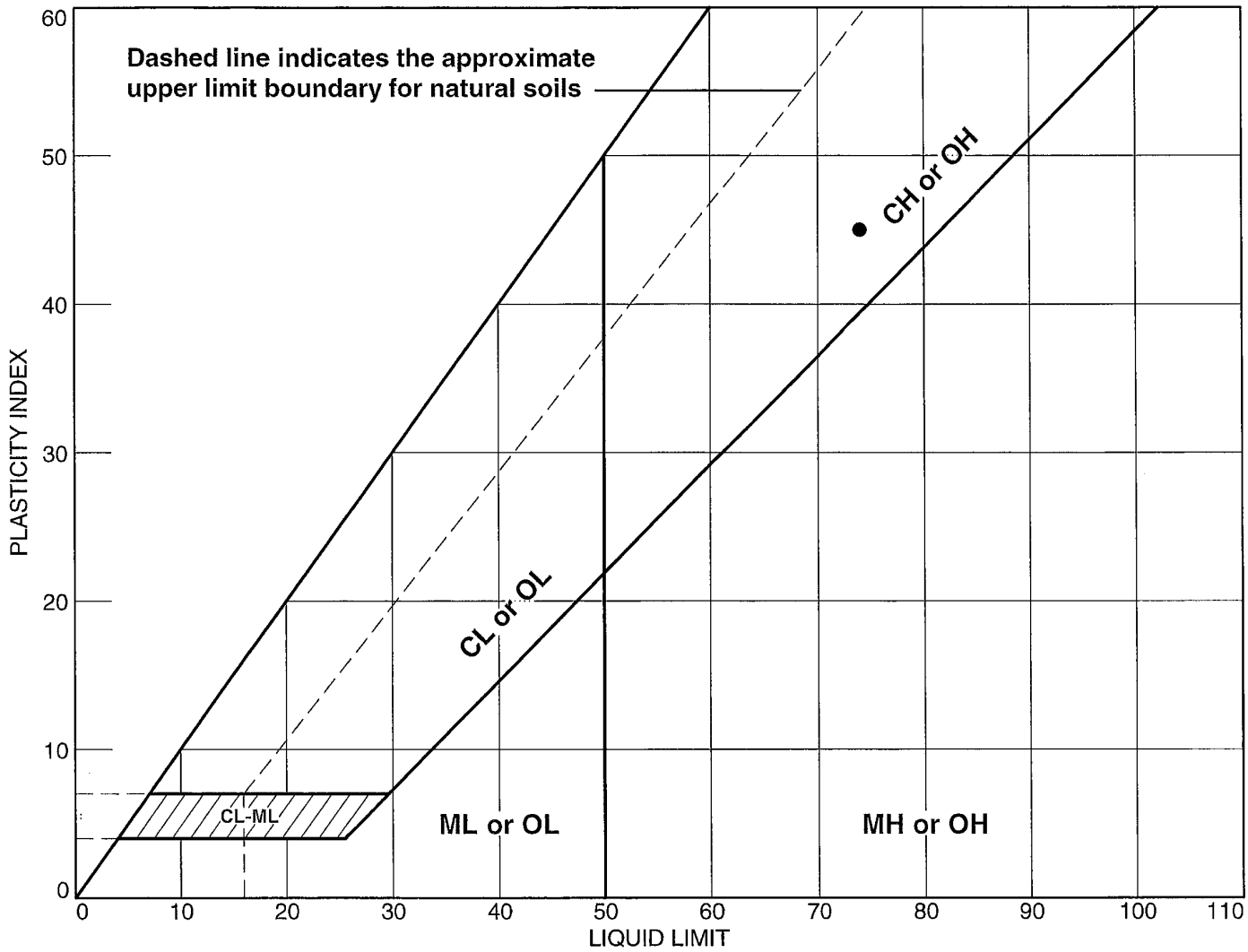
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	22.83	21.86			
Dry+Tare	22.12	21.22			
Tare	16.06	15.48			
Moisture	11.7	11.1			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
156.98	130.73	9.16	21.6

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-35	212.5-214.0'	28.1	29	74	45	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 8-10-09

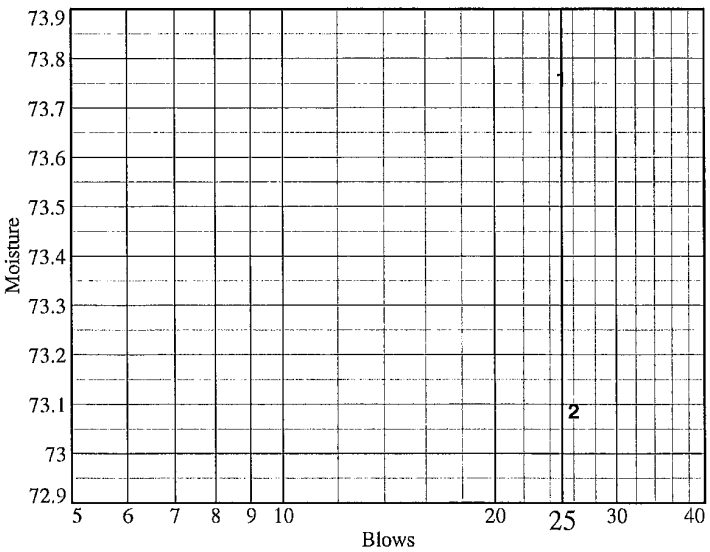
LIQUID AND PLASTIC LIMIT TEST DATA

8/10/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 212.5-214.0' **Sample Number:** SS-35
Material Description: Olive Brown Fat CLAY with Sand (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.86	22.06				
Dry+Tare	19.74	19.29				
Tare	15.51	15.50				
# Blows	25	26				
Moisture	73.8	73.1				



Liquid Limit= 74
Plastic Limit= 29
Plasticity Index= 45
Natural Moisture= 28.1
Liquidity Index= 0.0

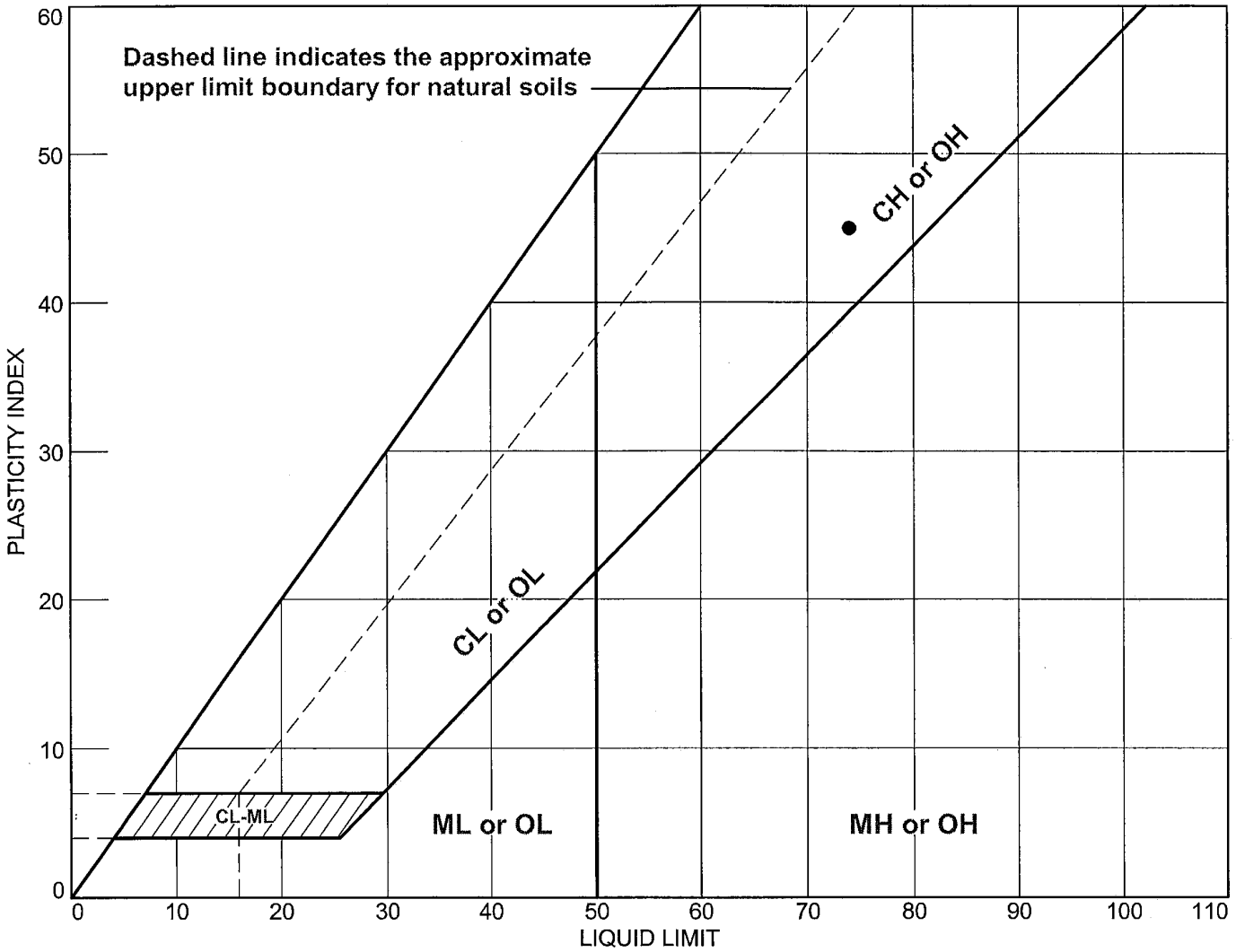
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.49	22.66			
Dry+Tare	16.09	21.06			
Tare	11.18	15.49			
Moisture	28.5	28.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
93.24	74.31	6.90	28.1

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-35	212.5-214.0'	28.1	29	74	45	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

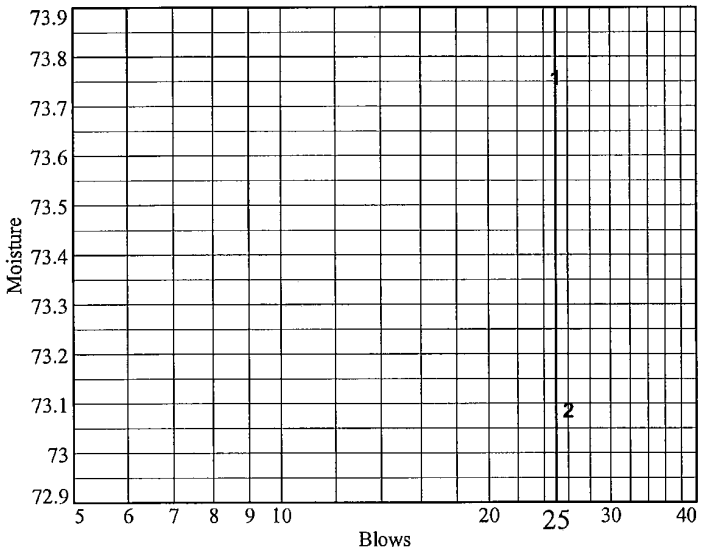
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 212.5-214.0' **Sample Number:** SS-35
Material Description: Olive Brown Fat CLAY with (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.86	22.06				
Dry+Tare	19.74	19.29				
Tare	15.51	15.50				
# Blows	25	26				
Moisture	73.8	73.1				



Liquid Limit= 74
Plastic Limit= 29
Plasticity Index= 45
Natural Moisture= 28.1
Liquidity Index= 0.0

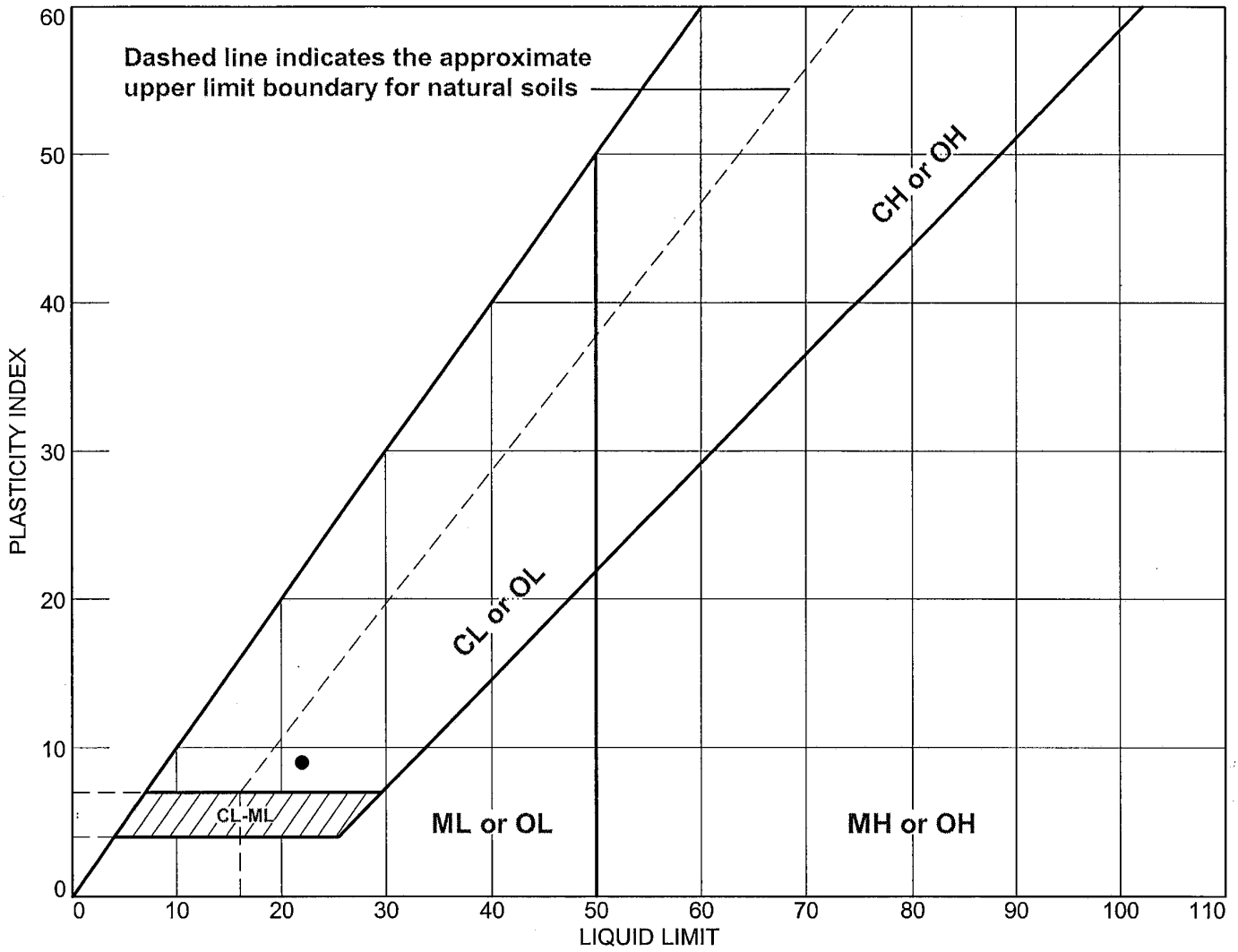
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.49	22.66			
Dry+Tare	16.09	21.06			
Tare	11.18	15.49			
Moisture	28.5	28.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
93.24	74.31	6.90	28.1

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-36	222.5-224.0'	18.1	13	22	9	SC (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

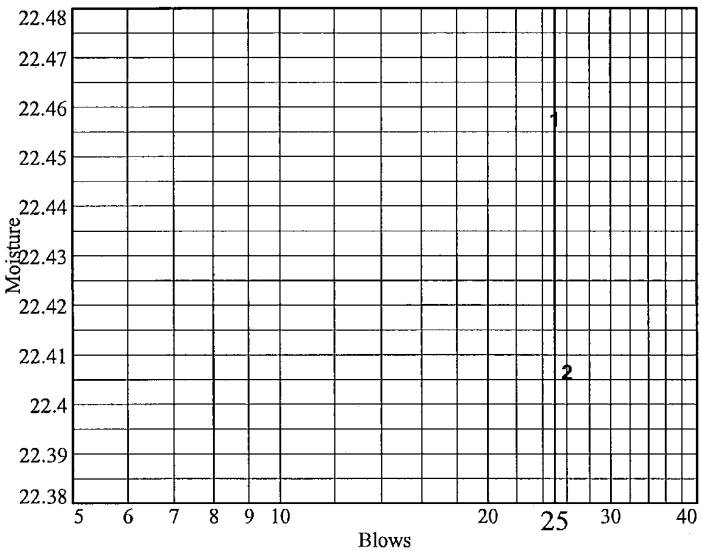
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 222.5-224.0' **Sample Number:** SS-36
Material Description: Light Gray Mottled Yellow Clayey SAND (Visual)
USCS: SC (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	19.86	27.30				
Dry+Tare	18.27	25.14				
Tare	11.19	15.50				
# Blows	25	26				
Moisture	22.5	22.4				



Liquid Limit= 22
Plastic Limit= 13
Plasticity Index= 9
Natural Moisture= 18.1
Liquidity Index= 0.6

Plastic Limit Data

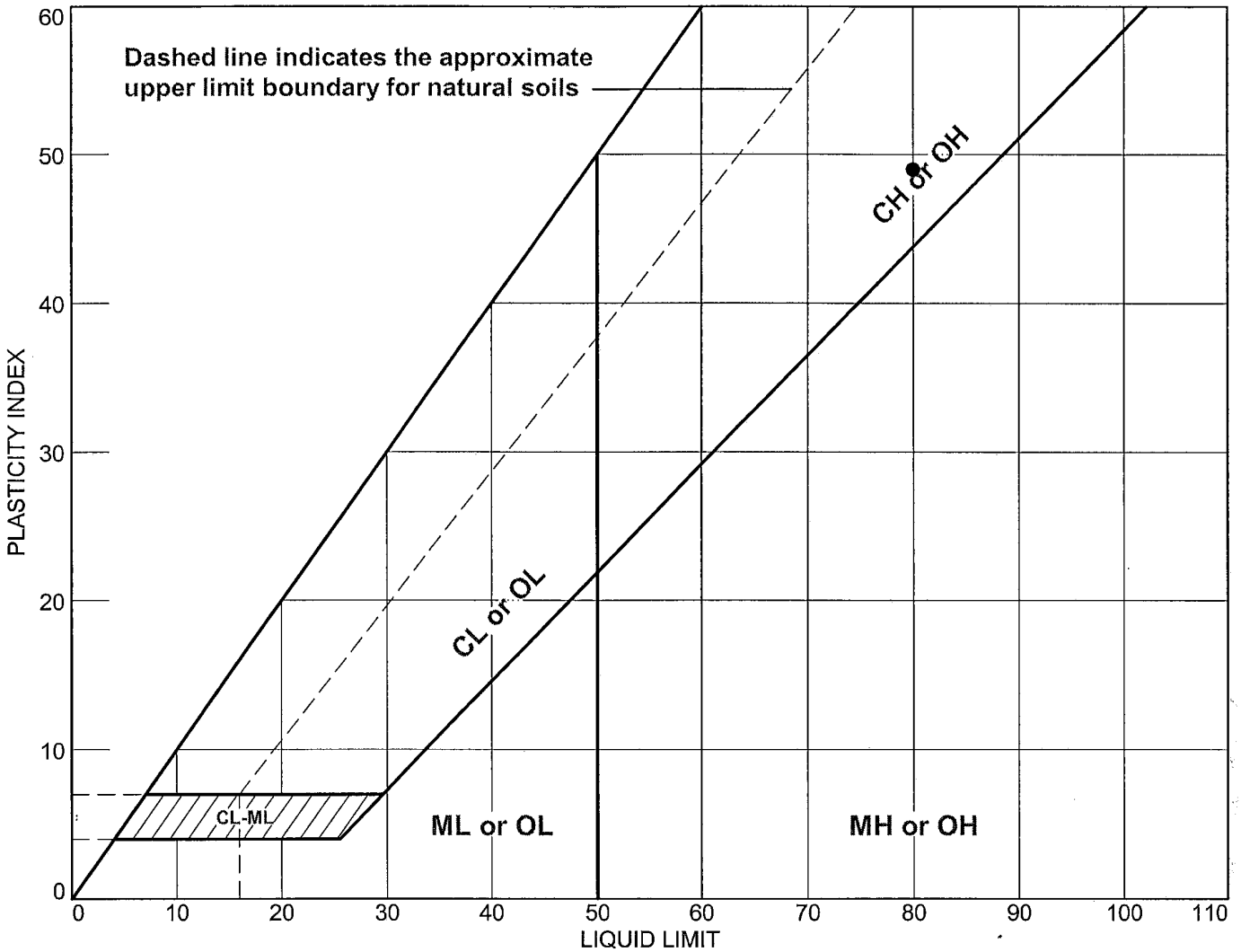
Run No.	1	2	3	4	
Wet+Tare	21.96	17.78			
Dry+Tare	21.22	16.99			
Tare	15.51	11.12			
Moisture	13.0	13.5			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
112.79	96.92	9.28	18.1

MACTEC Engineering and Consulting, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-38	242.5-244.0'	27.0	31	80	49	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** BS DSC 5-4-09

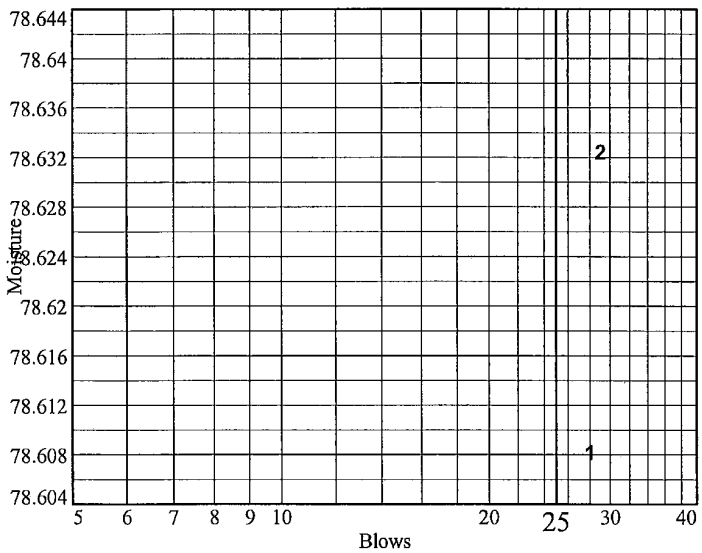
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 242.5-244.0' **Sample Number:** SS-38
Material Description: Light Gray Mottled Brownish Yellow Fat CLAY (Visual)
USCS: CH (Visual)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.21	22.01				
Dry+Tare	19.16	19.25				
Tare	15.28	15.74				
# Blows	28	29				
Moisture	78.6	78.6				



Liquid Limit= 80
Plastic Limit= 31
Plasticity Index= 49
Natural Moisture= 27.0
Liquidity Index= -0.1

Plastic Limit Data

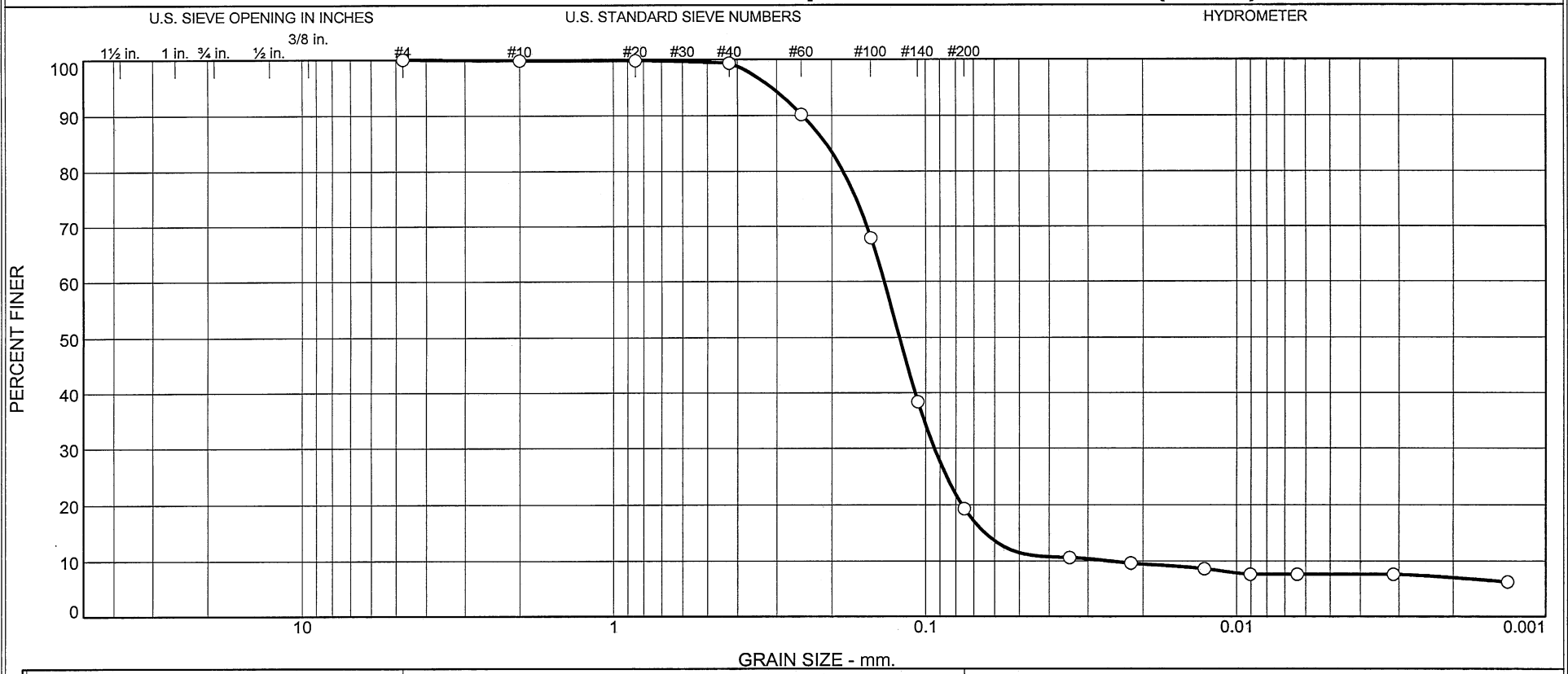
Run No.	1	2	3	4	
Wet+Tare	22.05	22.68			
Dry+Tare	20.49	20.96			
Tare	15.54	15.46			
Moisture	31.5	31.3			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
88.75	71.30	6.76	27.0

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.2	0.5	80.0	11.7	7.6

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-40	262.5-264.0'	1/12/09	SM (Visual)	Light Gray Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 262.5-264.0' **Sample Number:** SS-40
Material Description: Light Gray Silty SAND (Visual)
Date: 1/12/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM (Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
325.64	0.00	0.00	#4	0.00	100.0
			#10	0.58	99.8
99.92	0.00	0.00	#20	0.00	99.8
			#40	0.48	99.3
			#60	9.67	90.2
			#100	31.99	67.9
			#140	61.48	38.4
			#200	80.56	19.3

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.8
Weight of hydrometer sample =99.93
Hygroscopic moisture correction:
Moist weight and tare = 28.65
Dry weight and tare = 28.55
Tare weight = 15.48
Hygroscopic moisture = 0.8%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.4	16.0	10.6	0.0132	17.0	13.5	0.0343	10.6
5.00	21.4	15.0	9.6	0.0132	16.0	13.7	0.0218	9.6
15.00	21.4	14.0	8.6	0.0132	15.0	13.8	0.0127	8.6
30.00	21.4	13.0	7.6	0.0132	14.0	14.0	0.0090	7.6
60.00	21.4	13.0	7.6	0.0132	14.0	14.0	0.0064	7.6
250.00	21.4	13.0	7.6	0.0132	14.0	14.0	0.0031	7.6
1440.00	20.2	12.0	6.3	0.0134	13.0	14.2	0.0013	6.3

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.2	0.5	80.0	80.7	11.7	7.6	19.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0258	0.0644	0.0764	0.0939	0.1215	0.1361	0.1843	0.2091	0.2484	0.3110

Fineness Modulus	C_u	C_c
0.39	5.28	2.51

Particle Size Distribution Report ASTM D 6913-04e2



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	4	75	21	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-41A	272.5-273.2'	1/13/09	SM (Visual)	Very Pale Brown Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ ND = Not Determined
Sieve Analysis Only

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 272.5-273.2' **Sample Number:** SS-41A
Material Description: Very Pale Brown Silty SAND (Visual)
Date: 1/13/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM (Visual)
Testing Remarks: ND = Not Determined
Sieve Analysis Only
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
232.54	0.00	0.00	#10	0.00	100
105.78	0.00	0.00	#20	0.20	100
			#40	4.61	96
			#60	16.06	85
			#100	41.26	61
			#140	70.64	33
			#200	83.78	21

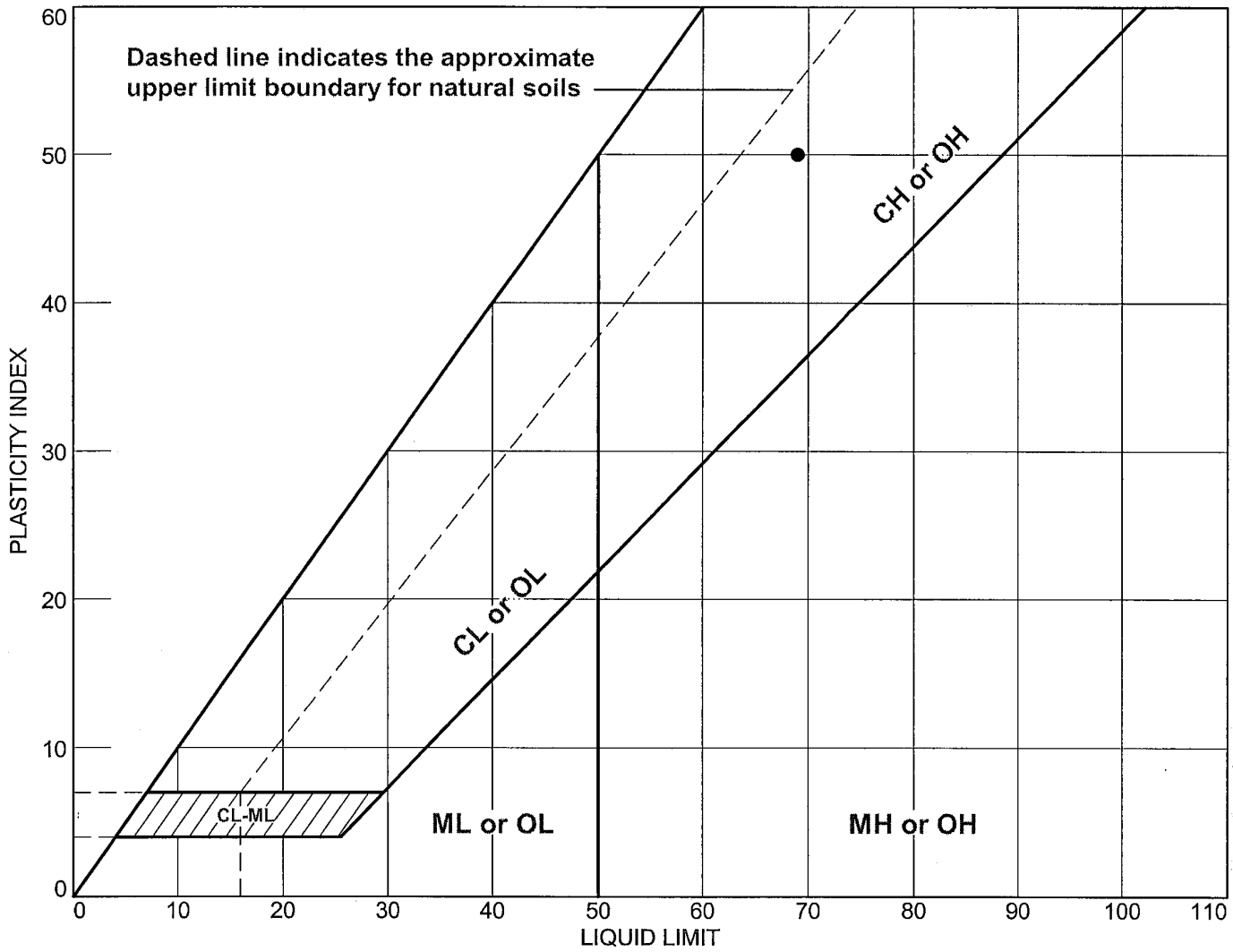
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	4	75	79			21

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.1001	0.1313	0.1481	0.2146	0.2516	0.3073	0.4053

Fineness Modulus
0.51

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-42	282.5-284.0'	24.9	19	69	50	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** BS DSC 5-4-09

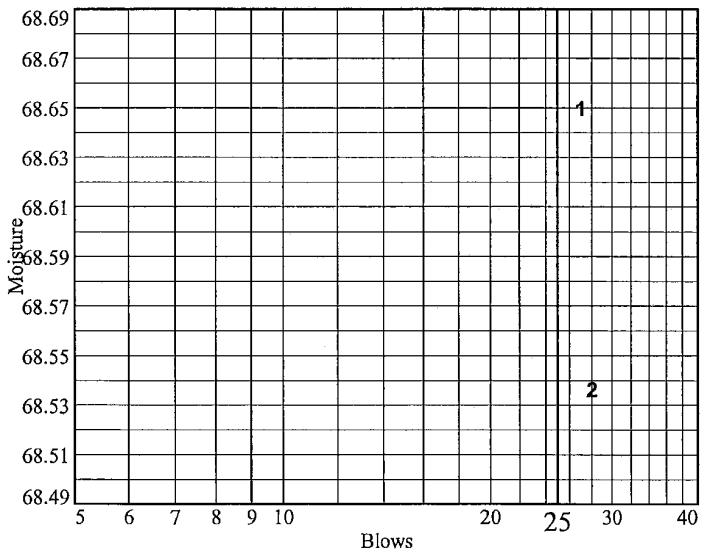
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 282.5-284.0' **Sample Number:** SS-42
Material Description: Light Gray Mottled Brownish Yellow Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	18.43	22.36				
Dry+Tare	15.43	19.55				
Tare	11.06	15.45				
# Blows	27	28				
Moisture	68.6	68.5				



Liquid Limit= 69
Plastic Limit= 19
Plasticity Index= 50
Natural Moisture= 24.9
Liquidity Index= 0.1

Plastic Limit Data

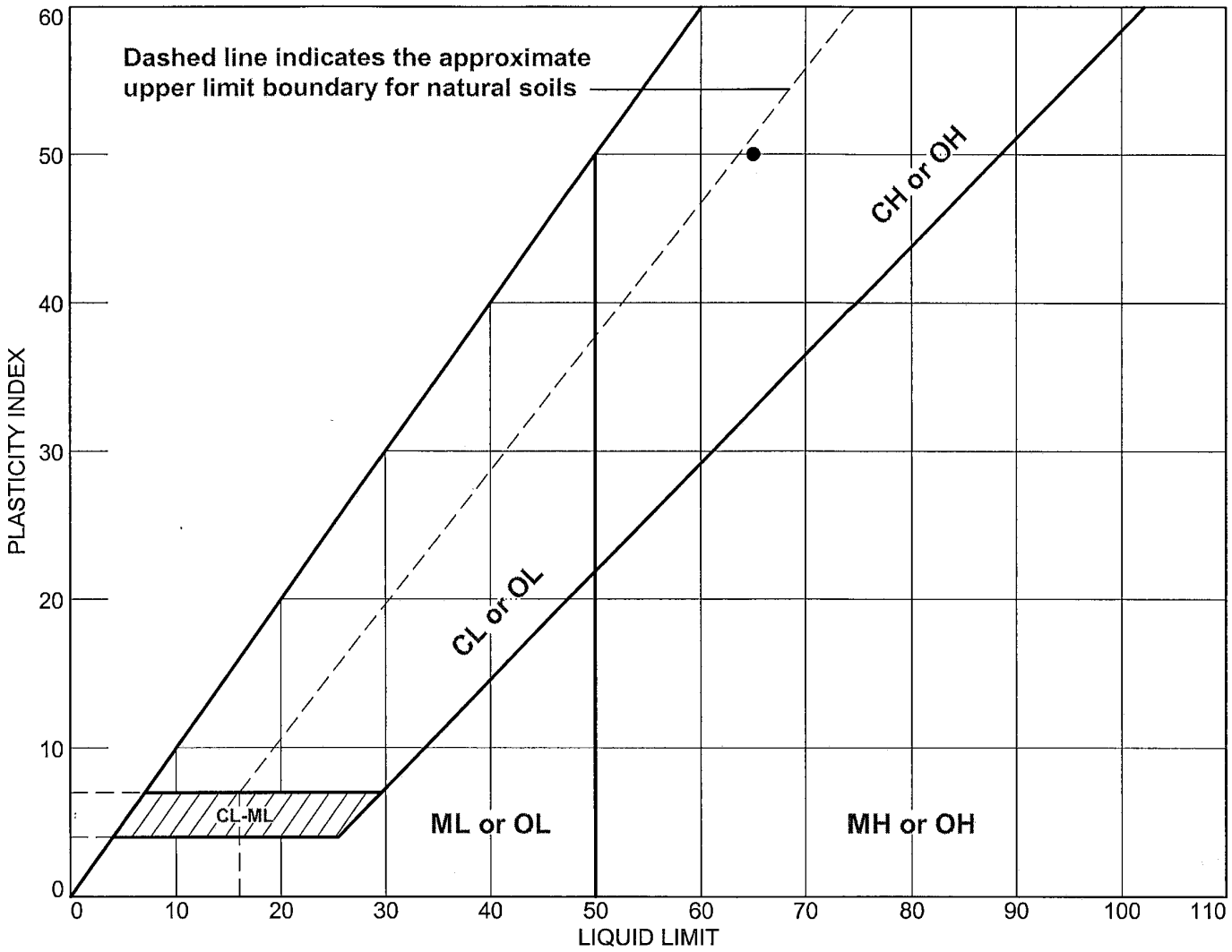
Run No.	1	2	3	4	
Wet+Tare	17.91	22.16			
Dry+Tare	16.83	21.13			
Tare	11.13	15.52			
Moisture	18.9	18.4			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
92.57	75.46	6.84	24.9

MACTEC Engineering and Consulting, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-44	302.5-304.0'	21.6	15	65	50	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** BS DSC 5-4-09

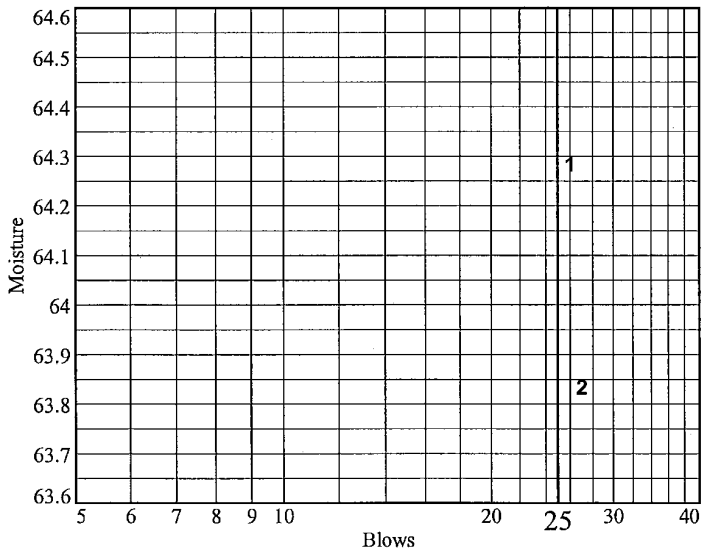
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 302.5-304.0' **Sample Number:** SS-44
Material Description: Light Gray Mottled Light Reddish Brown Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.85	21.51				
Dry+Tare	19.97	19.18				
Tare	15.49	15.53				
# Blows	26	27				
Moisture	64.3	63.8				



Liquid Limit= 65
Plastic Limit= 15
Plasticity Index= 50
Natural Moisture= 21.6
Liquidity Index= 0.1

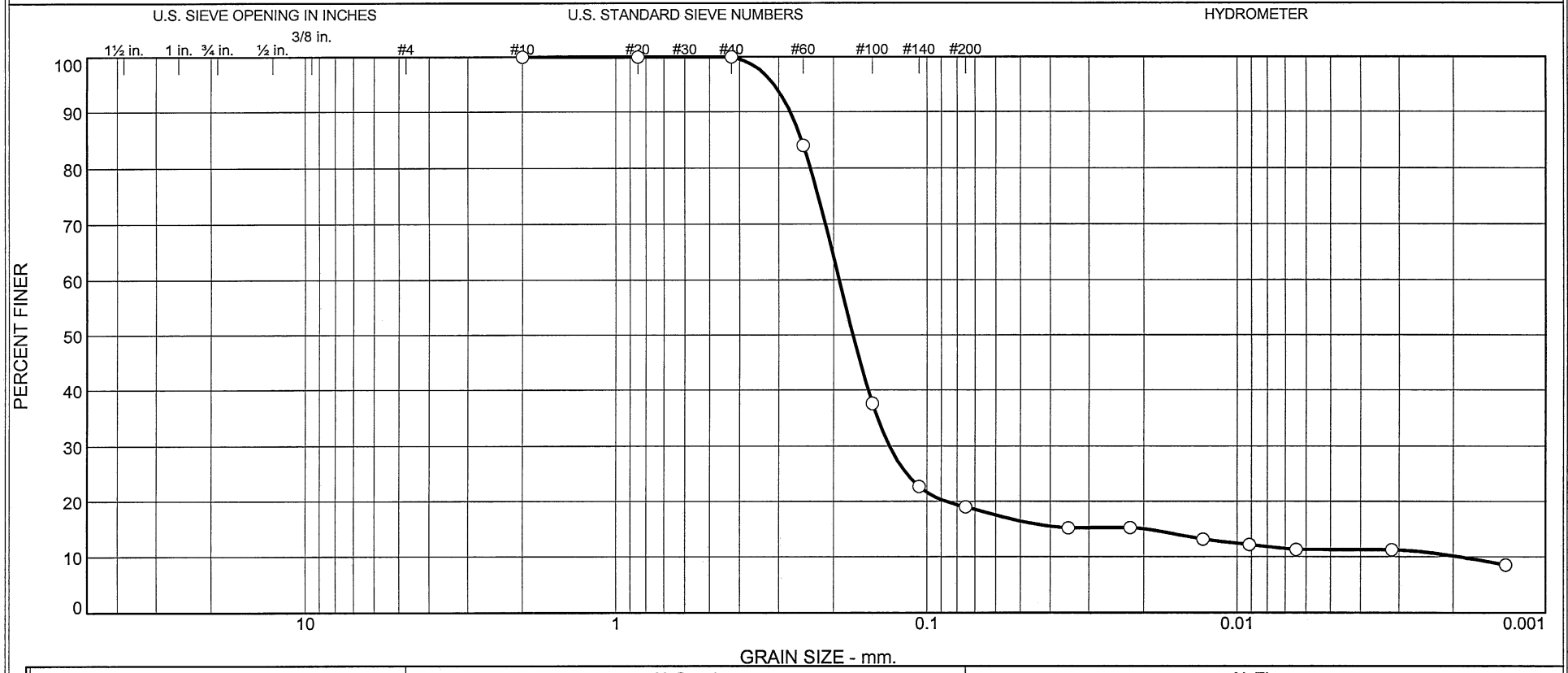
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.78	22.82			
Dry+Tare	20.97	21.88			
Tare	15.64	15.90			
Moisture	15.2	15.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
74.19	62.26	6.96	21.6

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	81.0	7.8	11.2

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-46	322.5-324.0'	1/13/09	SM (Visual)	Very Pale Brown Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 322.5-324.0' **Sample Number:** SS-46
Material Description: Very Pale Brown Silty SAND (Visual)
Date: 1/13/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM (Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
309.31	0.00	0.00	#10	0.00	100.0
49.96	0.00	0.00	#20	0.00	100.0
			#40	0.00	100.0
			#60	8.02	83.9
			#100	31.18	37.6
			#140	38.60	22.7
			#200	40.47	19.0

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =49.96
Hygroscopic moisture correction:
Moist weight and tare = 28.11
Dry weight and tare = 28.03
Tare weight = 15.45
Hygroscopic moisture = 0.6%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	13.0	7.6	0.0132	14.0	14.0	0.0350	15.2
5.00	21.4	13.0	7.6	0.0132	14.0	14.0	0.0221	15.2
15.00	21.2	12.0	6.6	0.0132	13.0	14.2	0.0129	13.1
30.00	21.2	11.5	6.1	0.0132	12.5	14.2	0.0091	12.1
60.00	21.4	11.0	5.6	0.0132	12.0	14.3	0.0065	11.2
250.00	21.3	11.0	5.6	0.0132	12.0	14.3	0.0032	11.2
1440.00	20.1	10.0	4.3	0.0134	11.0	14.5	0.0013	8.5

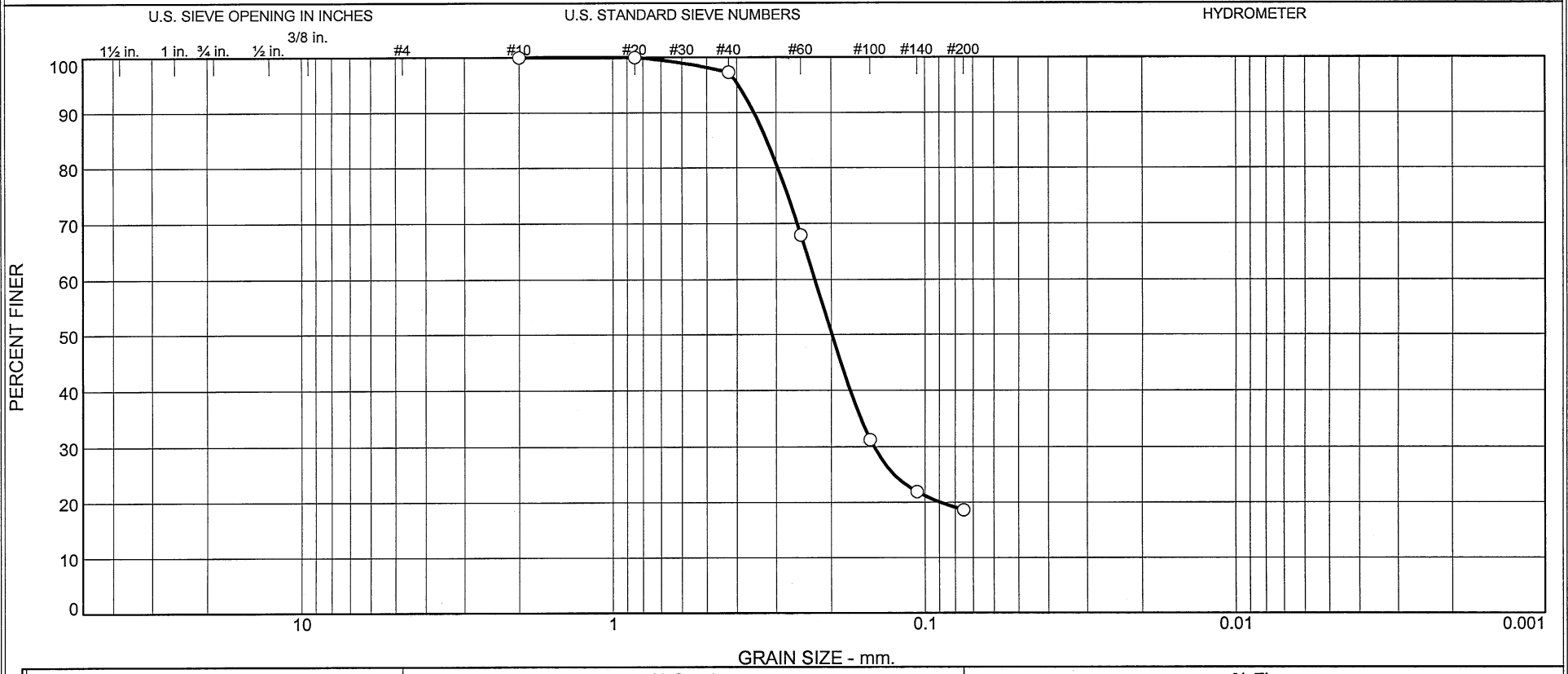
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.0	81.0	81.0	7.8	11.2	19.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0019	0.0200	0.0867	0.1322	0.1735	0.1920	0.2375	0.2538	0.2759	0.3112

Fineness Modulus	C_u	C_c
0.69	98.88	46.85

Particle Size Distribution Report ASTM D 6913-04e2



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	3	78	19	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-47	332.5-333.5'	1/14/09	SM (Visual)	Yellow Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ ND = Not Determined
Sieve Analysis Only

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 332.5-333.5' **Sample Number:** SS-47
Material Description: Yellow Silty SAND (Visual)
Date: 1/14/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM (Visual)
Testing Remarks: ND = Not Determined
Sieve Analysis Only
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
129.82	0.00	0.00	#10	0.00	100
101.11	0.00	0.00	#20	0.00	100
			#40	2.70	97
			#60	32.46	68
			#100	69.49	31
			#140	78.94	22
			#200	82.27	19

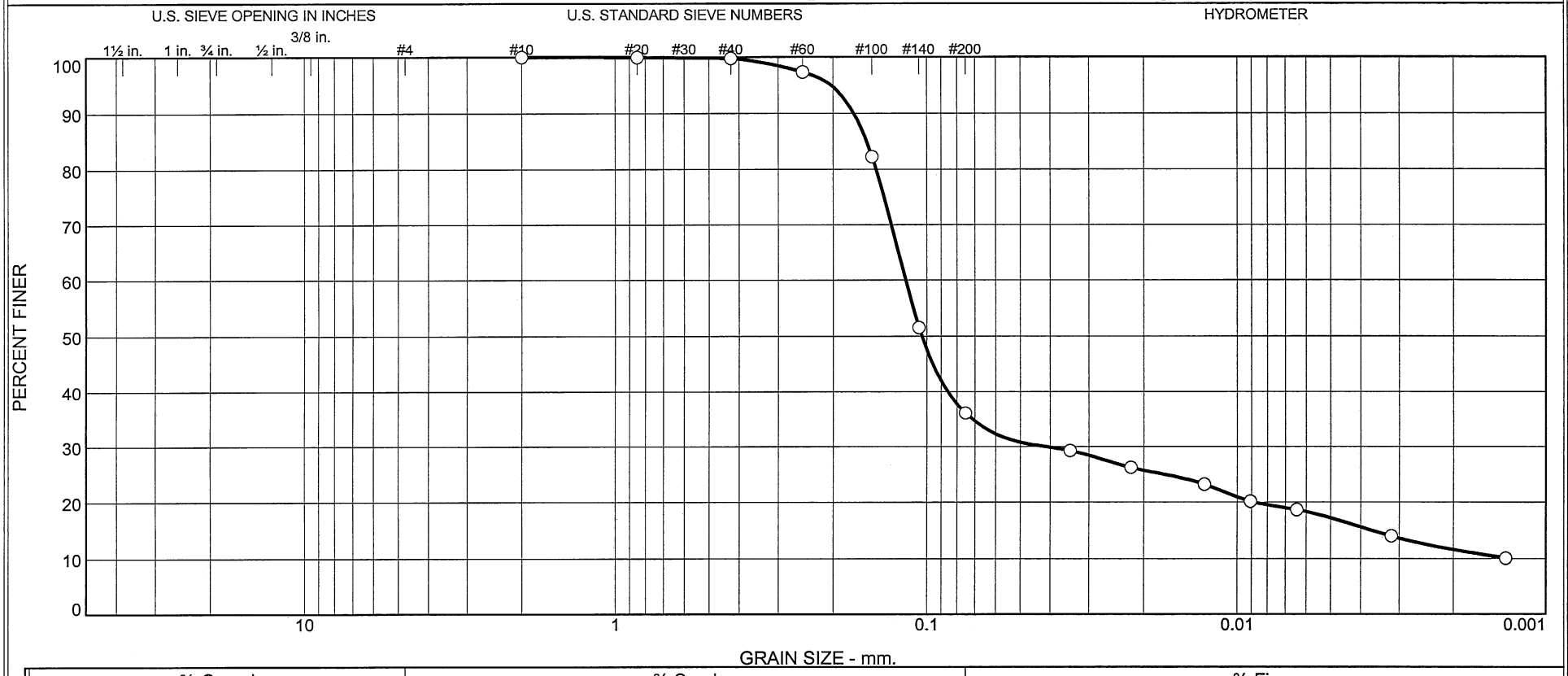
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	3	78	81			19

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0889	0.1459	0.1993	0.2260	0.2967	0.3219	0.3533	0.3963

Fineness Modulus
0.89

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.2	63.7	18.9	17.2

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3123	SS-49	352.5-354'	1/14/09	SC	Very Pale Brown Clayey SAND	20.6	22	14

Client Bechtel	**MACTEC Engineering and Consulting, Inc.**	○ Specific Gravity is assumed
Project Exelon Texas COL Project - Supplemental Investigation, including UHS		
Project No. 6468071777 Figure N/A	**Raleigh, North Carolina**	

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 352.5-354' **Sample Number:** SS-49
Material Description: Very Pale Brown Clayey SAND
Date: 1/14/09 **Natural Moisture:** 20.6
Liquid Limit: 22 **Plastic Limit:** 14 **USCS Class.:** SC
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
303.15	0.00	0.00	#10	0.00	100.0
53.49	0.00	0.00	#20	0.04	99.9
			#40	0.13	99.8
			#60	1.43	97.3
			#100	9.51	82.2
			#140	25.91	51.6
			#200	34.17	36.1

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =53.49
Hygroscopic moisture correction:
Moist weight and tare = 27.80
Dry weight and tare = 27.59
Tare weight = 15.61
Hygroscopic moisture = 1.8%
Table of composite correction values:

Temp., deg. C:	12.3	29.5
Comp. corr.:	-8.0	-3.0

Meniscus correction only = 1.0
Specific gravity of solids = 2.700
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.164 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.5	1.0150	1.0097	0.0132	16.0	13.7	0.0345	29.2
5.00	21.5	1.0140	1.0087	0.0132	15.0	13.8	0.0220	26.2
15.00	21.5	1.0130	1.0077	0.0132	14.0	14.0	0.0127	23.2
30.00	21.5	1.0120	1.0067	0.0132	13.0	14.2	0.0091	20.2
60.00	21.5	1.0115	1.0062	0.0132	12.5	14.2	0.0064	18.7
250.00	21.4	1.0100	1.0046	0.0132	11.0	14.5	0.0032	14.0
1440.00	20.3	1.0090	1.0033	0.0134	10.0	14.7	0.0014	10.0

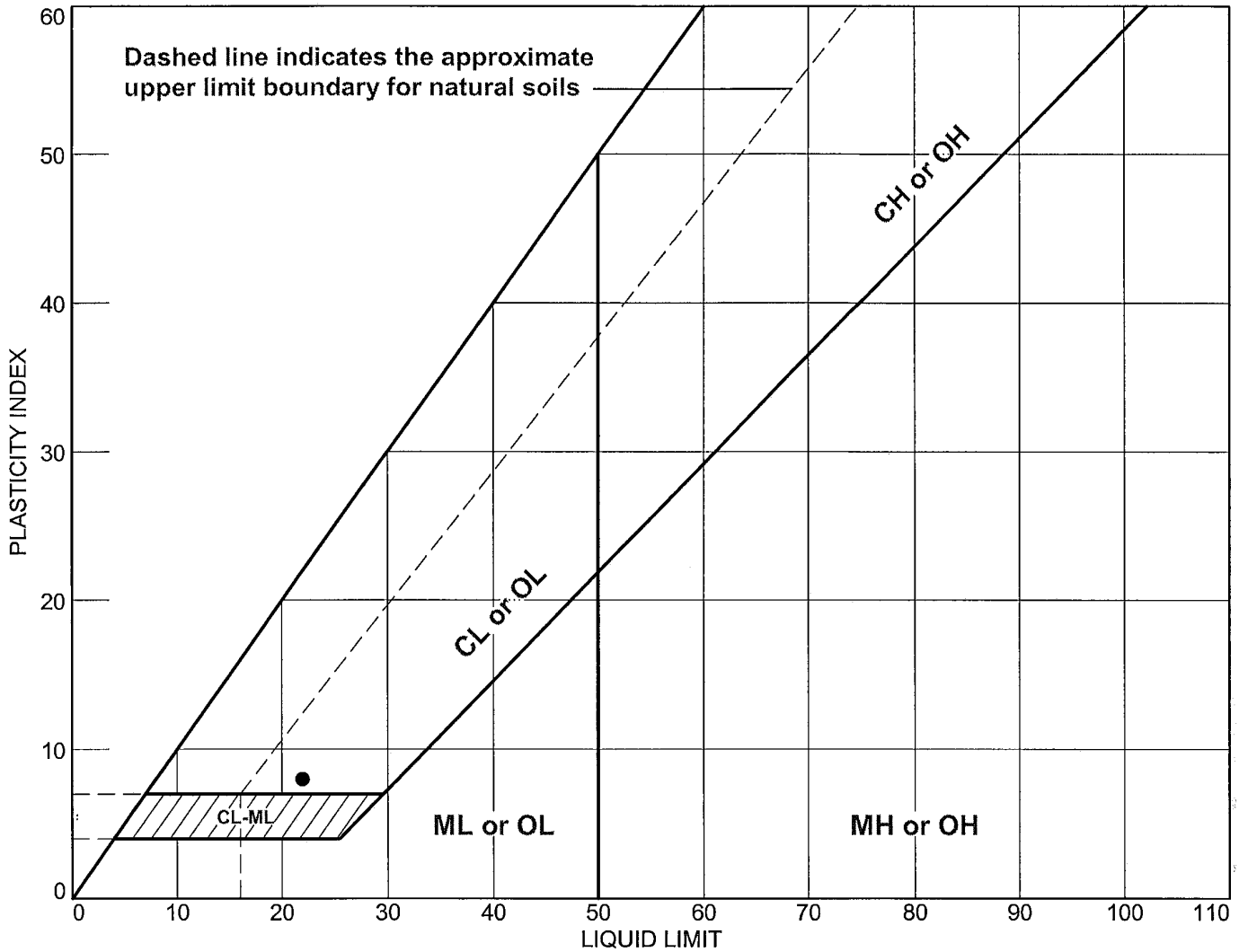
Fractional Components

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	63.7	63.9	18.9	17.2	36.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0037	0.0088	0.0420	0.1038	0.1171	0.1457	0.1563	0.1718	0.2029

Fineness Modulus
0.20

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-49	352.5-354'	20.6	14	22	8	SC

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** BS DSC 5-4-09

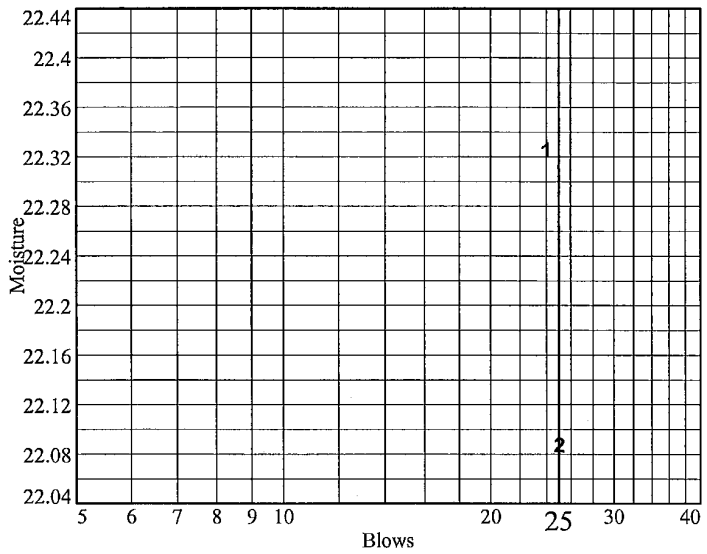
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 352.5-354' **Sample Number:** SS-49
Material Description: Very Pale Brown Clayey SAND
USCS: SC **AASHTO:** A-4(0)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.26	26.66				
Dry+Tare	25.11	24.65				
Tare	15.48	15.55				
# Blows	24	25				
Moisture	22.3	22.1				



Liquid Limit= 22
Plastic Limit= 14
Plasticity Index= 8
Natural Moisture= 20.6
Liquidity Index= 0.8

Plastic Limit Data

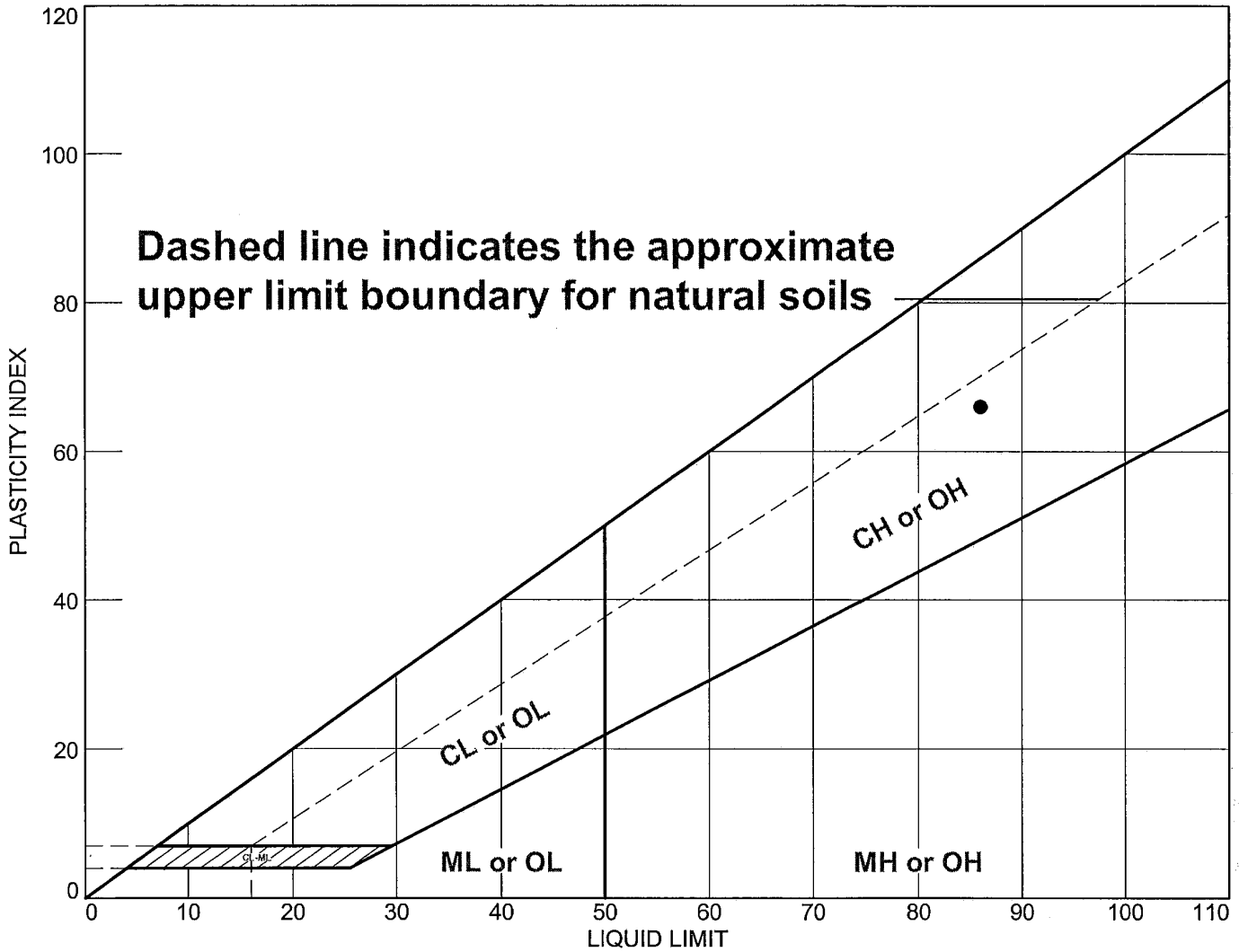
Run No.	1	2	3	4	
Wet+Tare	21.69	21.77			
Dry+Tare	20.96	21.00			
Tare	15.46	15.50			
Moisture	13.3	14.0			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
143.36	120.03	6.80	20.6

MACTEC Engineering and Consulting, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-51	372.5-374.0'	27.7	20	86	66	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** BS DSC 5-4-09

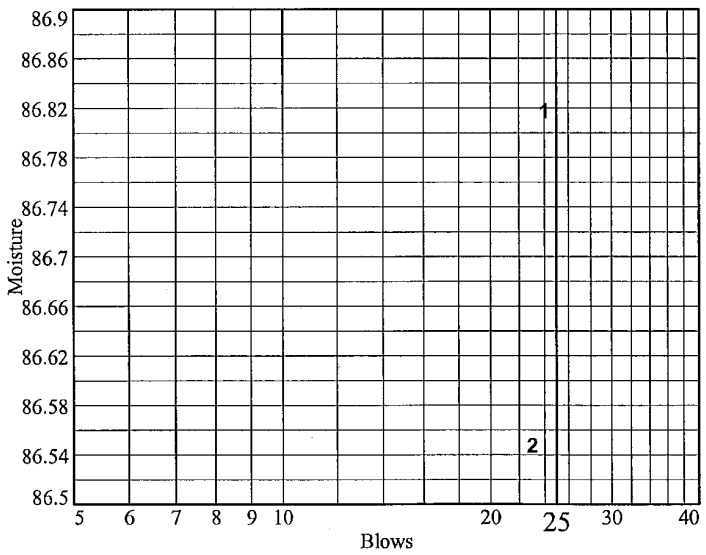
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 372.5-374.0' **Sample Number:** SS-51
Material Description: Light Gray Mottled Brownish Yellow Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.85	22.99				
Dry+Tare	20.03	19.58				
Tare	15.63	15.64				
# Blows	24	23				
Moisture	86.8	86.5				



Liquid Limit= 86
Plastic Limit= 20
Plasticity Index= 66
Natural Moisture= 27.7
Liquidity Index= 0.1

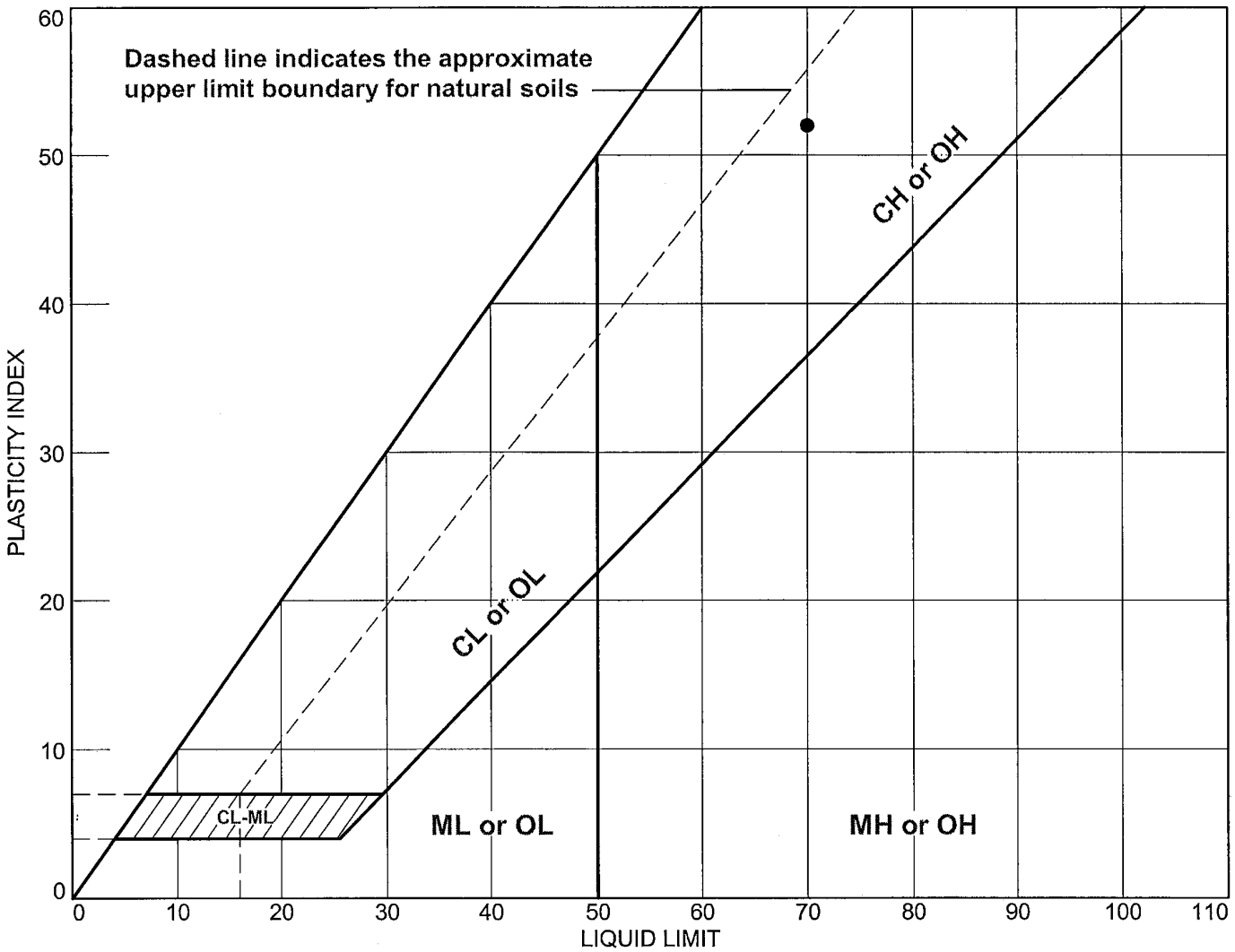
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.78	22.55			
Dry+Tare	20.73	21.38			
Tare	15.52	15.47			
Moisture	20.2	19.8			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
78.48	62.98	7.03	27.7

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3123	SS-53	392.5-394.0'	26.4	18	70	52	CH (Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** BS DSC 5-4-09

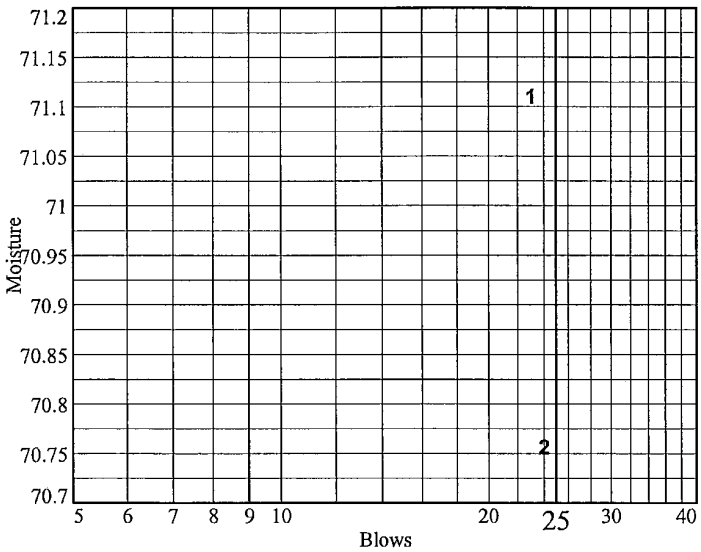
LIQUID AND PLASTIC LIMIT TEST DATA

4/30/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3123
Depth: 392.5-394.0' **Sample Number:** SS-53
Material Description: Light Gray Fat CLAY (Visual)
USCS: CH (Visual) **AASHTO:** ND
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.95	21.98				
Dry+Tare	20.43	19.27				
Tare	15.48	15.44				
# Blows	23	24				
Moisture	71.1	70.8				



Liquid Limit= 70
Plastic Limit= 18
Plasticity Index= 52
Natural Moisture= 26.4
Liquidity Index= 0.2

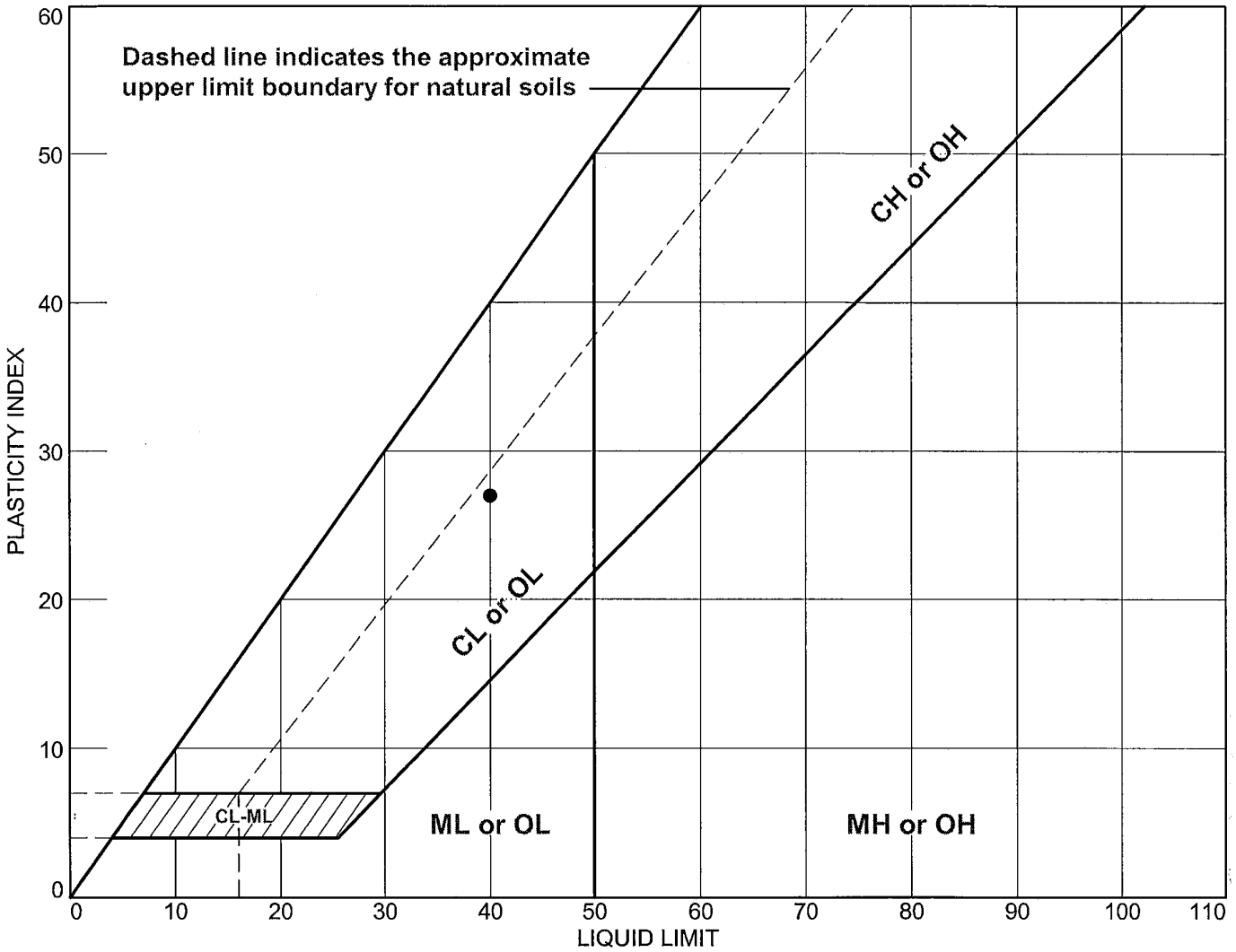
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.71	17.35			
Dry+Tare	20.81	16.37			
Tare	15.66	11.09			
Moisture	17.5	18.6			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
77.67	62.88	6.85	26.4

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-1	0-1.5	20.3	13	40	27	CL(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

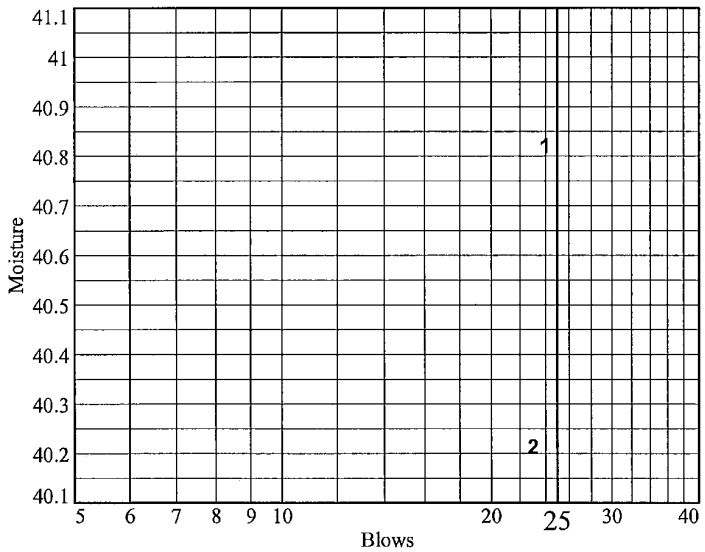
LIQUID AND PLASTIC LIMIT TEST DATA

5/4/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 0-1.5 **Sample Number:** SS-1
Material Description: Black Lean CLAY with sand (Visual)
USCS: CL(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.01	23.30				
Dry+Tare	22.23	21.06				
Tare	15.42	15.49				
# Blows	24	23				
Moisture	40.8	40.2				



Liquid Limit= 40
Plastic Limit= 13
Plasticity Index= 27
Natural Moisture= 20.3
Liquidity Index= 0.3

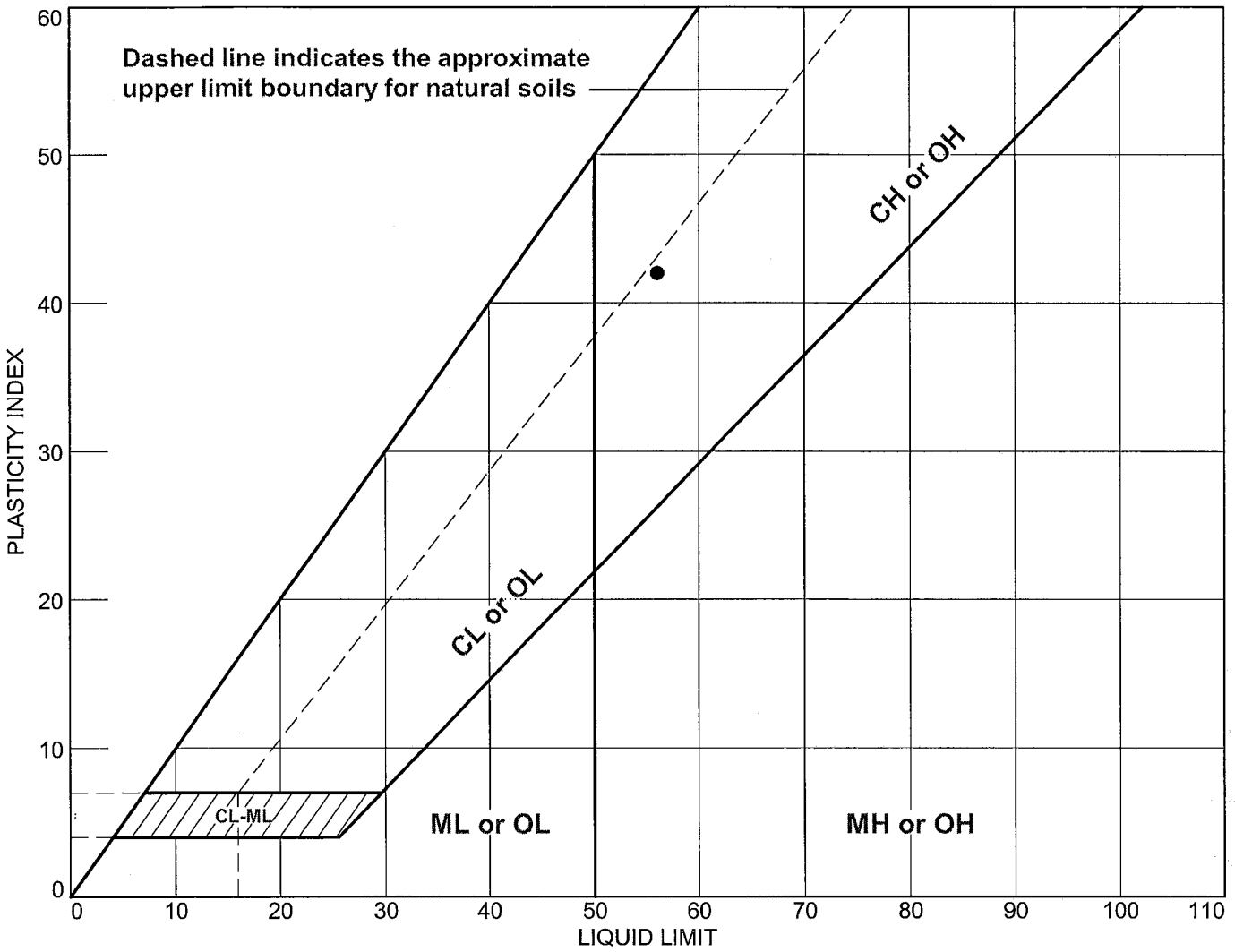
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	22.16	21.72			
Dry+Tare	21.39	21.00			
Tare	15.50	15.49			
Moisture	13.1	13.1			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
87.10	73.58	6.91	20.3

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-3	6.0-7.5'	20.2	14	56	42	CH(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

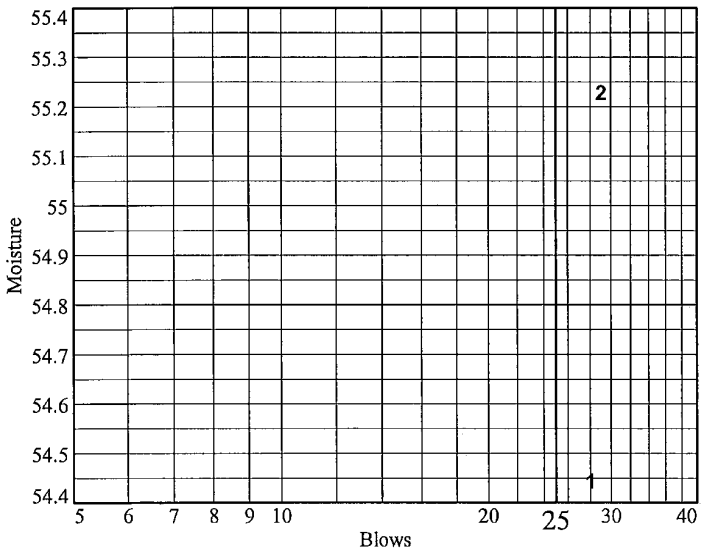
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 6.0-7.5' **Sample Number:** SS-3
Material Description: Light Brownish Gray Fat CLAY (Visual)
USCS: CH(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.14	23.96				
Dry+Tare	21.20	20.95				
Tare	15.80	15.50				
# Blows	28	29				
Moisture	54.4	55.2				



Liquid Limit= 56
Plastic Limit= 14
Plasticity Index= 42
Natural Moisture= 20.2
Liquidity Index= 0.1

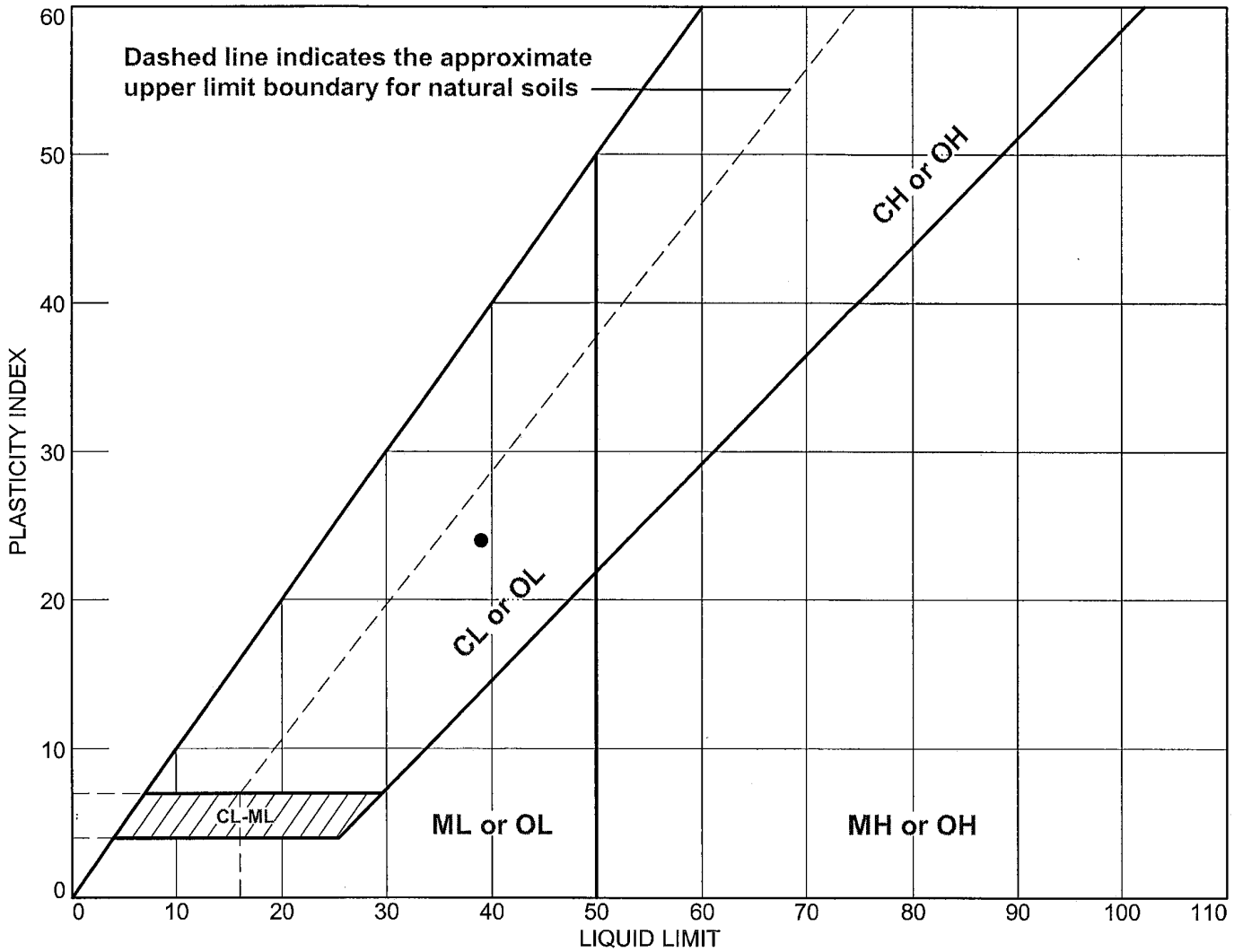
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.40	21.64			
Dry+Tare	16.64	20.90			
Tare	11.14	15.29			
Moisture	13.8	13.2			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
126.07	106.09	6.96	20.2

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-5	11.0-12.5'	14.0	15	39	24	CL(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

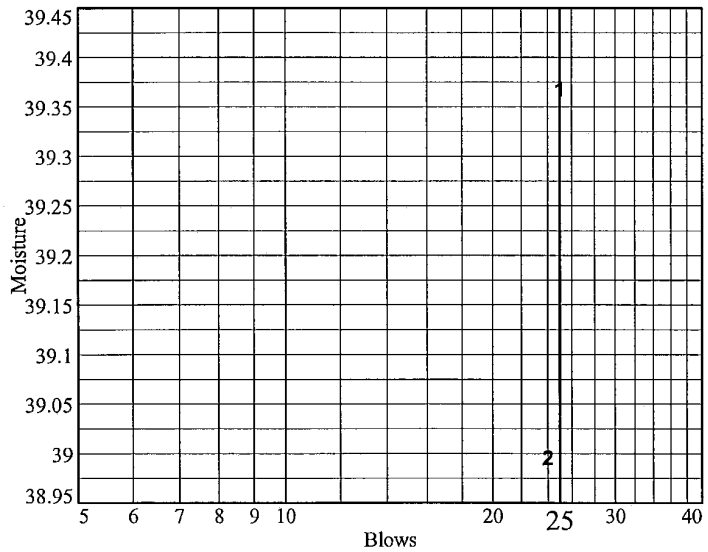
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 11.0-12.5' **Sample Number:** SS-5
Material Description: Light Brownish Gray Lean CLAY with sand (Visual)
USCS: CL(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.87	22.87				
Dry+Tare	21.50	20.85				
Tare	15.48	15.67				
# Blows	25	24				
Moisture	39.4	39.0				



Liquid Limit= 39
Plastic Limit= 15
Plasticity Index= 24
Natural Moisture= 14.0
Liquidity Index= 0.0

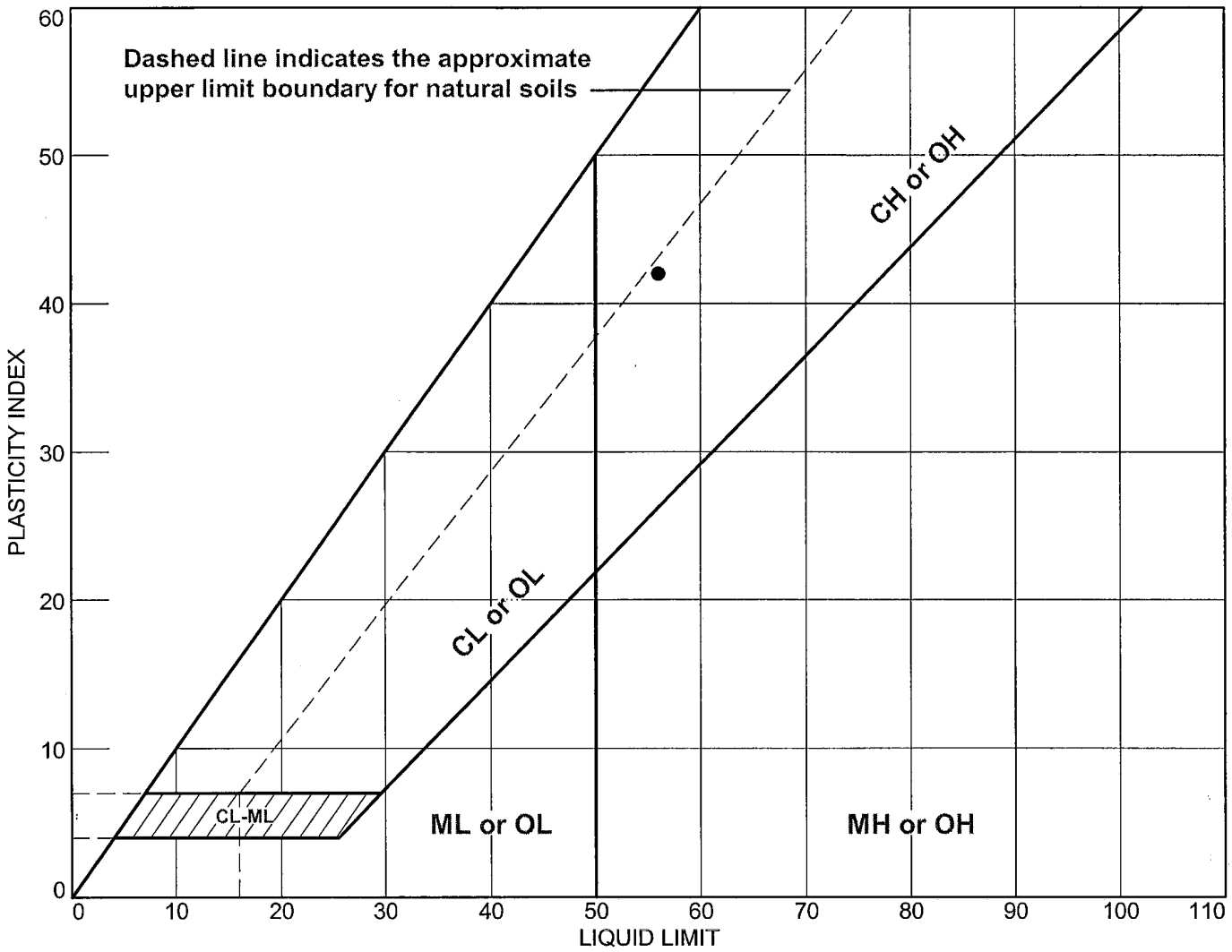
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	22.78	21.96			
Dry+Tare	21.86	21.13			
Tare	15.46	15.47			
Moisture	14.4	14.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
136.39	120.45	6.87	14.0

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-7	18.5-20.0'	21.5	14	56	42	CH(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

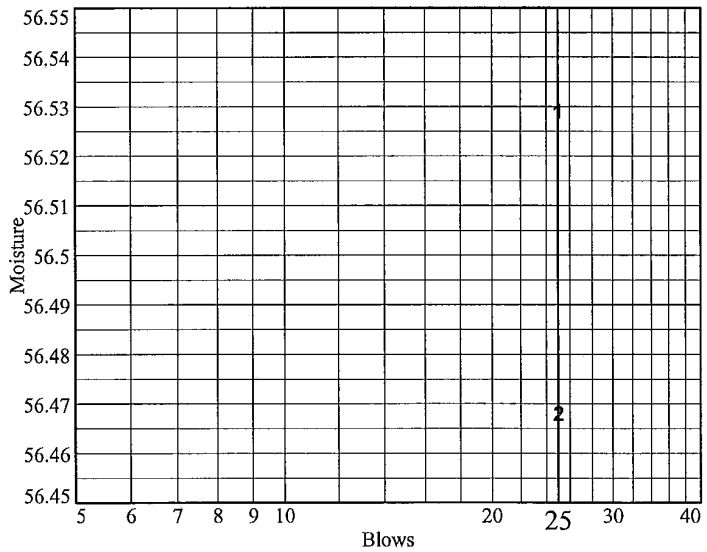
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 18.5-20.0' **Sample Number:** SS-7
Material Description: Light Brownish Gray Fat CLAY (Visual)
USCS: CH(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.78	22.91				
Dry+Tare	21.49	20.16				
Tare	15.67	15.29				
# Blows	25	25				
Moisture	56.5	56.5				



Liquid Limit= 56
Plastic Limit= 14
Plasticity Index= 42
Natural Moisture= 21.5
Liquidity Index= 0.2

Plastic Limit Data

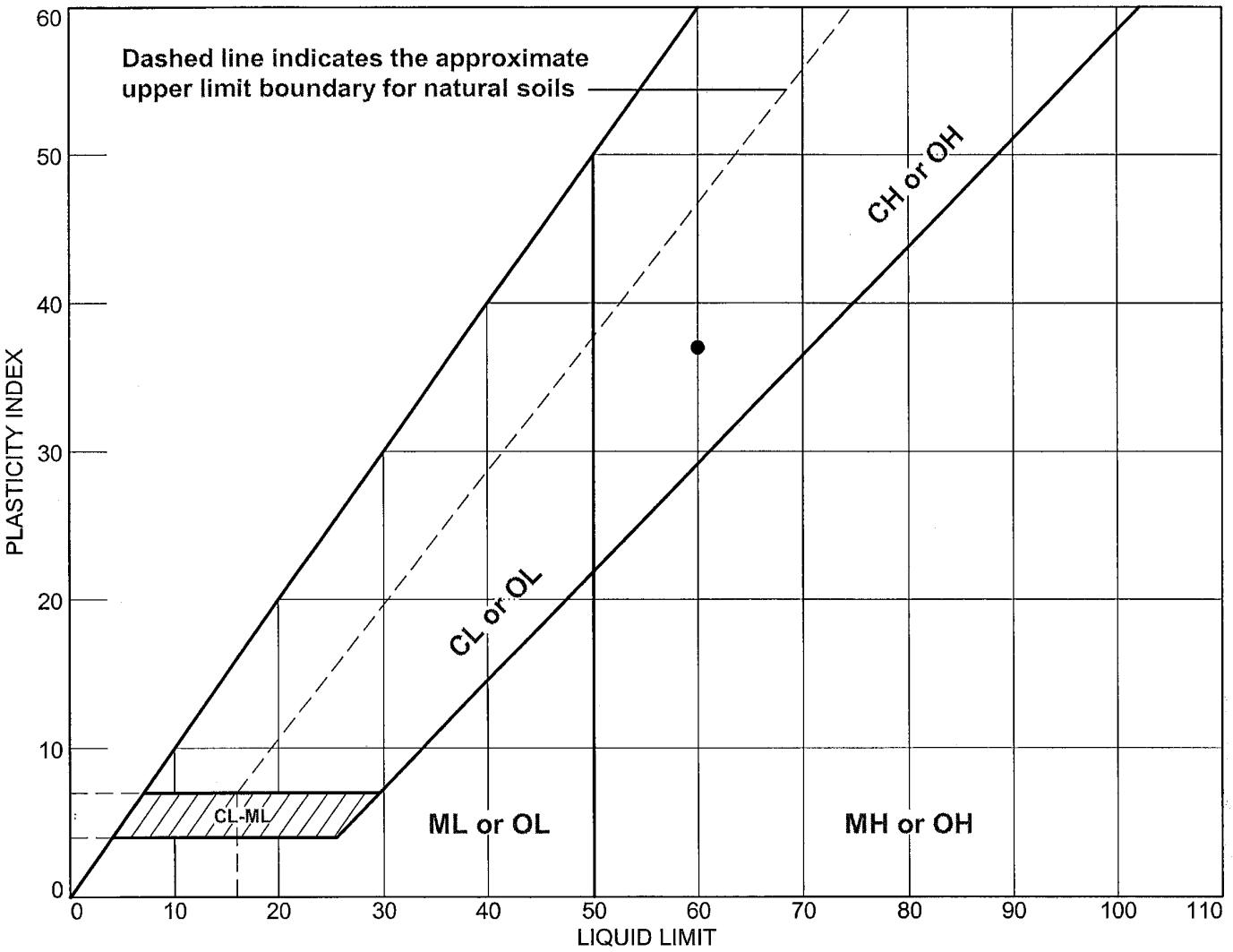
Run No.	1	2	3	4	
Wet+Tare	21.86	23.22			
Dry+Tare	21.08	22.22			
Tare	15.51	15.48			
Moisture	14.0	14.8			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
119.23	99.30	6.75	21.5

MACTEC Engineering and Consulting, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-9	28.5-30.0	26.8	23	60	37	CH(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

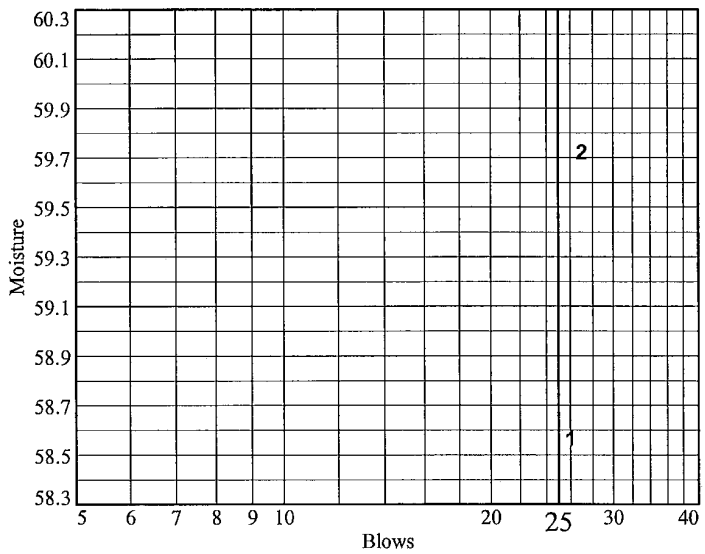
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 28.5-30.0 **Sample Number:** SS-9
Material Description: Mottled Light Brownish Gray and Reddish Yellow Fat CLAY (Visual)
USCS: CH(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.95	22.61				
Dry+Tare	20.84	20.00				
Tare	15.53	15.63				
# Blows	26	27				
Moisture	58.6	59.7				



Liquid Limit= 60
Plastic Limit= 23
Plasticity Index= 37
Natural Moisture= 26.8
Liquidity Index= 0.1

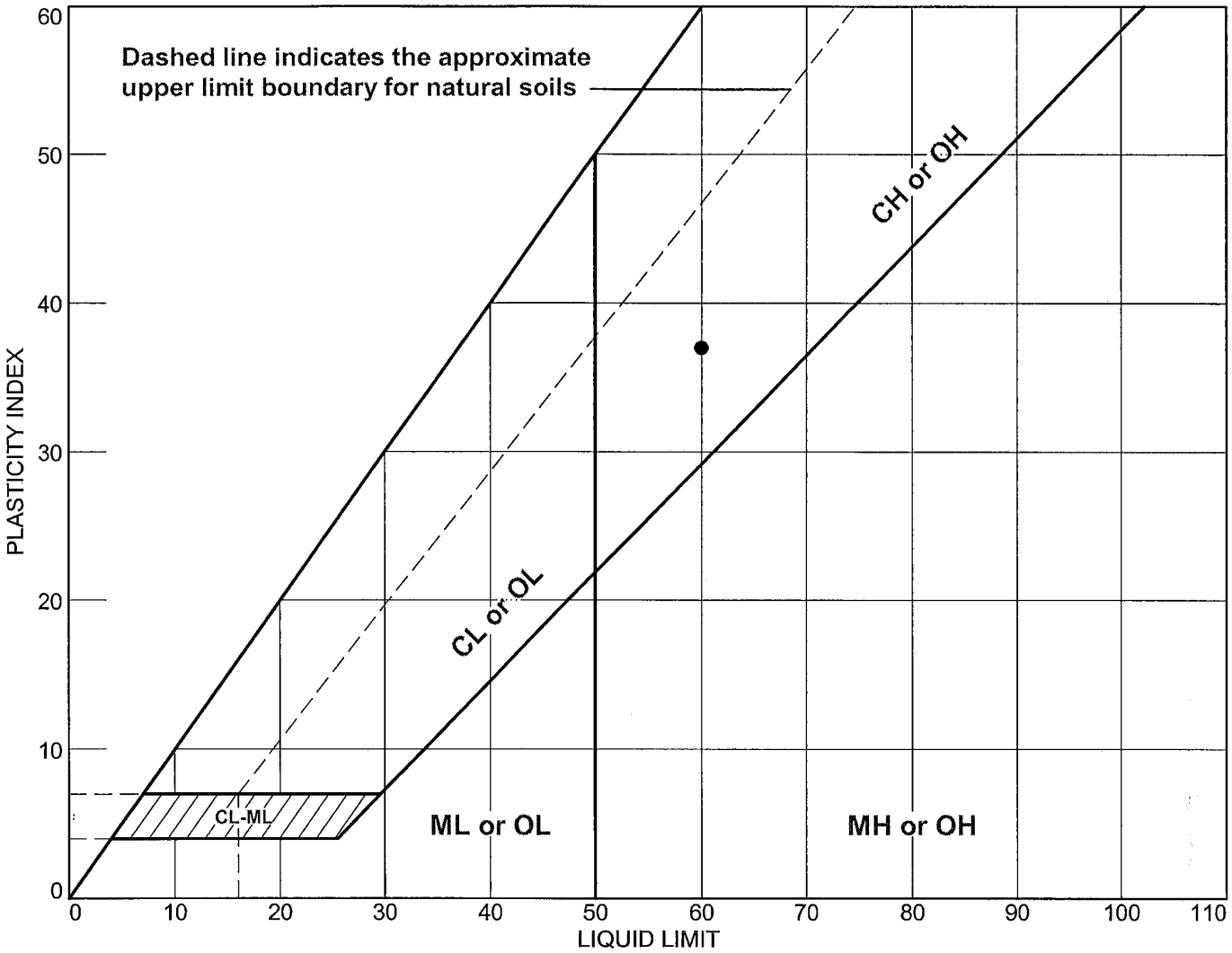
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	22.11	22.38			
Dry+Tare	20.86	21.12			
Tare	15.56	15.64			
Moisture	23.6	23.0			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
189.36	156.33	33.03	26.8

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-11	38.5-40.0'	30.9	23	60	37	CH(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

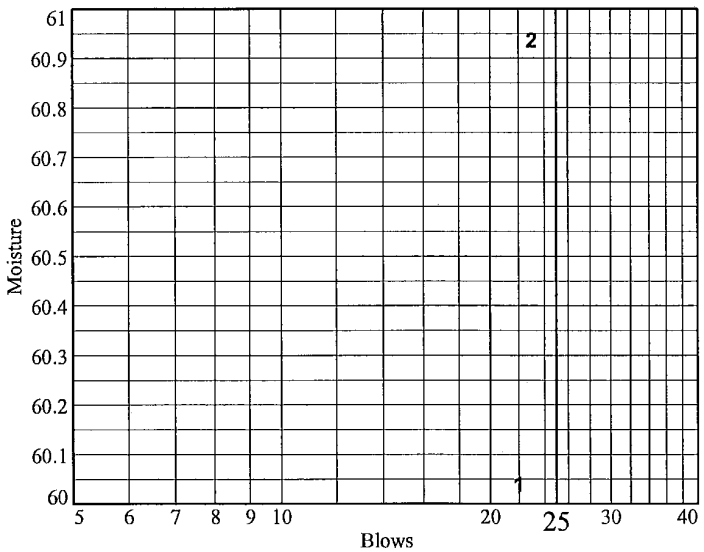
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 38.5-40.0' **Sample Number:** SS-11
Material Description: Slightly Mottled Light Brownish Gray and Reddish Yellow Fat CLAY (Visual)
USCS: CH(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.29	23.88				
Dry+Tare	20.36	20.76				
Tare	15.48	15.64				
# Blows	22	23				
Moisture	60.0	60.9				



Liquid Limit= 60
Plastic Limit= 23
Plasticity Index= 37
Natural Moisture= 30.9
Liquidity Index= 0.2

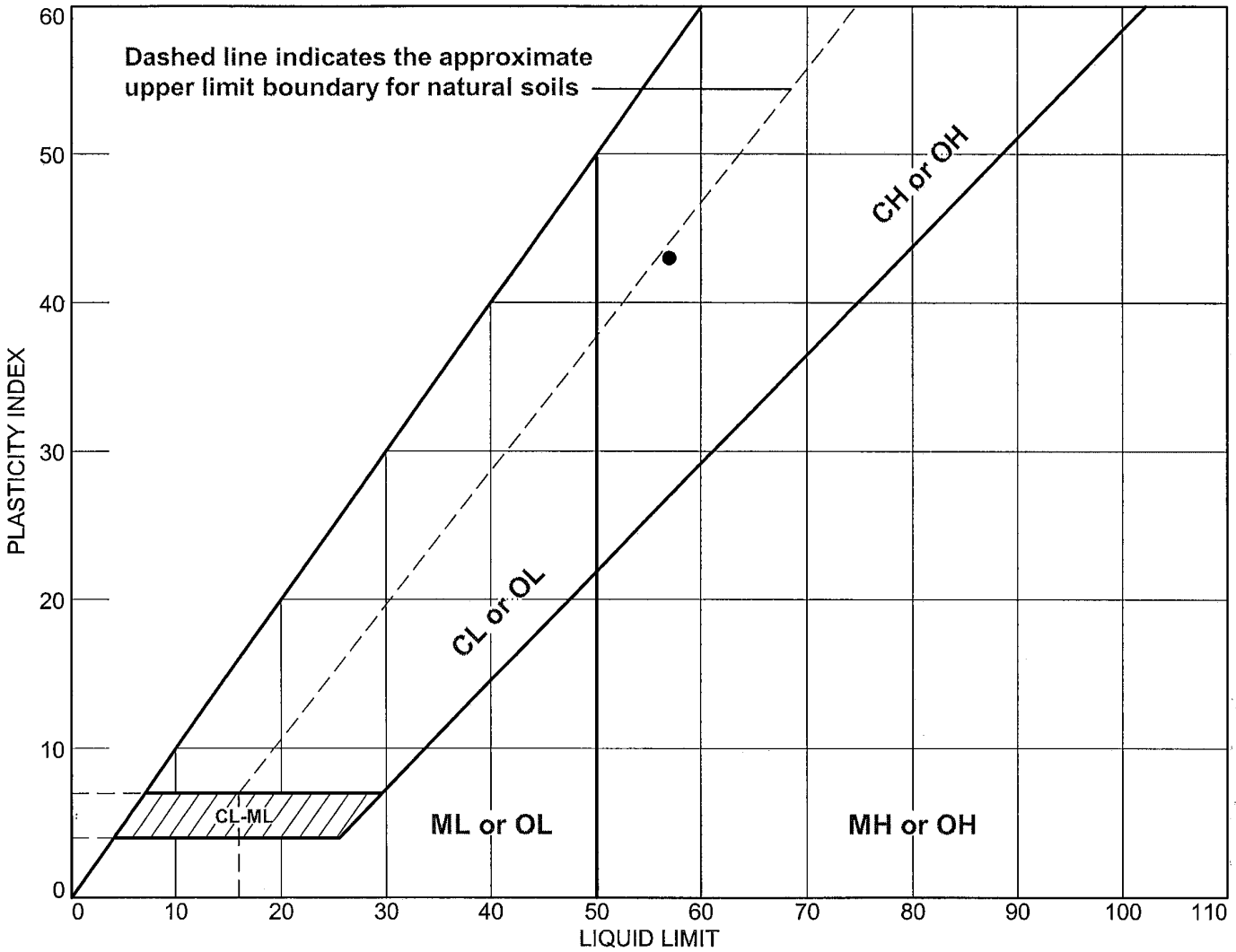
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	22.04	18.84			
Dry+Tare	20.80	17.48			
Tare	15.44	11.37			
Moisture	23.1	22.3			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
108.23	84.34	6.91	30.9

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-13	48.5-50.0'	19.1	14	57	43	CH(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

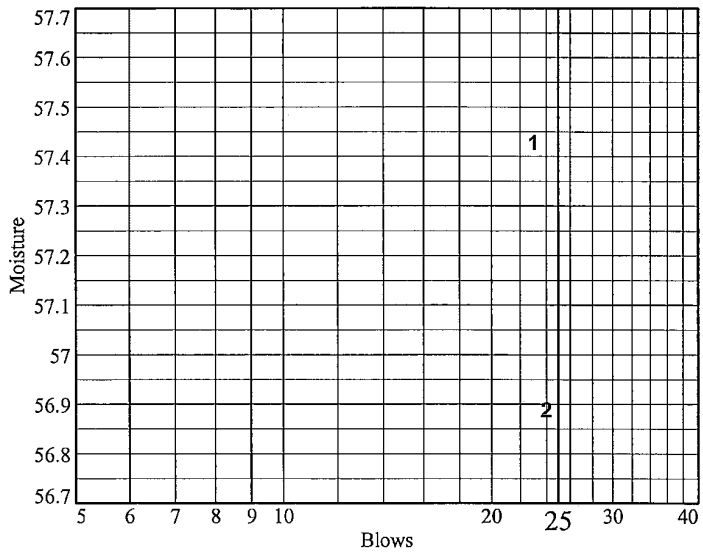
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 48.5-50.0' **Sample Number:** SS-13
Material Description: Light Yellowish Brown Fat CLAY (Visual)
USCS: CH(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.78	24.40				
Dry+Tare	20.92	21.18				
Tare	15.94	15.52				
# Blows	23	24				
Moisture	57.4	56.9				



Liquid Limit= 57
Plastic Limit= 14
Plasticity Index= 43
Natural Moisture= 19.1
Liquidity Index= 0.1

Plastic Limit Data

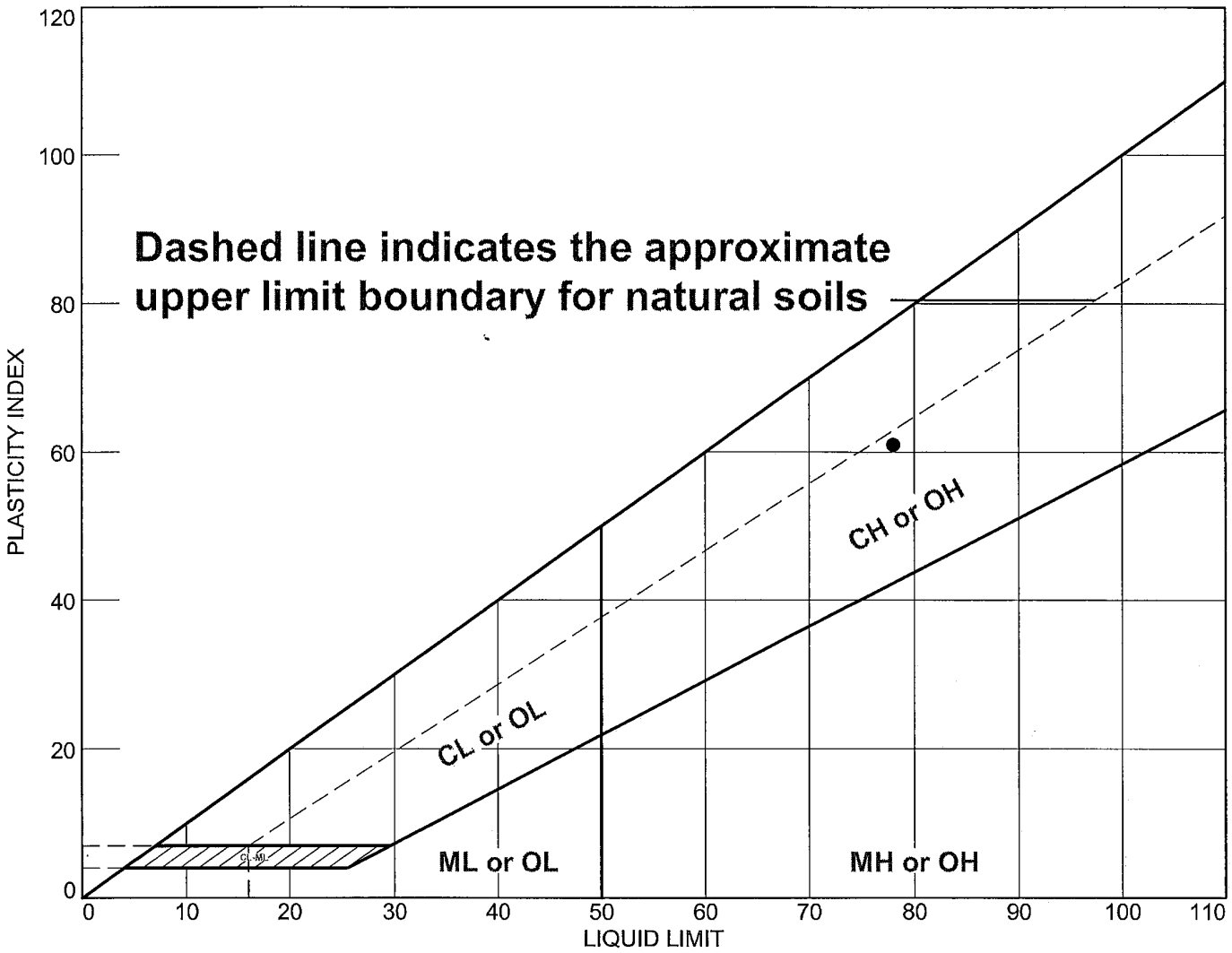
Run No.	1	2	3	4	
Wet+Tare	18.22	21.81			
Dry+Tare	17.35	21.04			
Tare	11.11	15.34			
Moisture	13.9	13.5			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
120.36	102.15	6.90	19.1

MACTEC Engineering and Consulting, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-15	58.5-60.0	20.9	17	78	61	CH(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

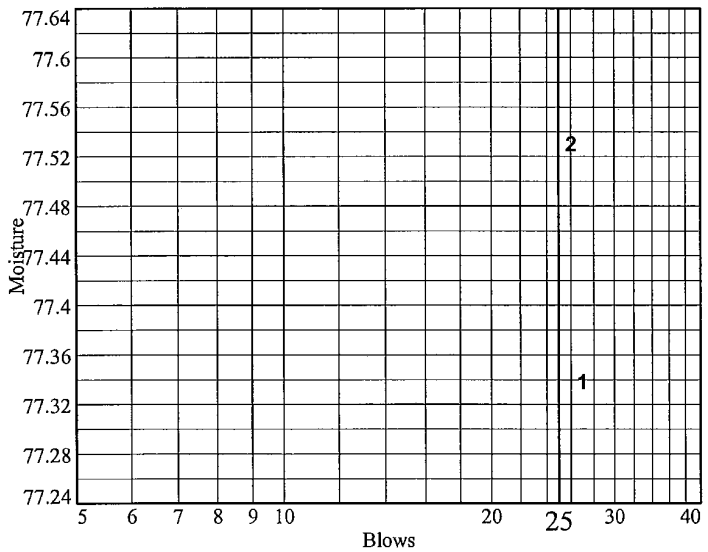
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 58.5-60.0 **Sample Number:** SS-15
Material Description: Light Gray Fat Clay (Visual)
USCS: CH(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.16	22.64				
Dry+Tare	20.44	19.50				
Tare	15.63	15.45				
# Blows	27	26				
Moisture	77.3	77.5				



Liquid Limit= 78
Plastic Limit= 17
Plasticity Index= 61
Natural Moisture= 20.9
Liquidity Index= 0.1

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	22.74	23.43			
Dry+Tare	21.67	22.25			
Tare	15.61	15.43			
Moisture	17.7	17.3			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
147.32	123.01	6.78	20.9

Particle Size Distribution Report ASTM D 6913-04e2



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	1	79	20	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3129	SS-17	68.5-70.0'	1/10/09	SM(Visual)	Very Pale Brown Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ ND = Not Determined
Sieve Analysis Only

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 68.5-70.0' **Sample Number:** SS-17
Material Description: Very Pale Brown Silty SAND (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM(Visual)
Testing Remarks: ND = Not Determined
Sieve Analysis Only
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
135.63	0.00	0.00	#4	0.00	100
			#10	0.35	100
99.19	0.00	0.00	#20	0.18	100
			#40	0.36	99
			#60	23.36	76
			#100	59.00	40
			#140	73.23	26
			#200	79.63	20

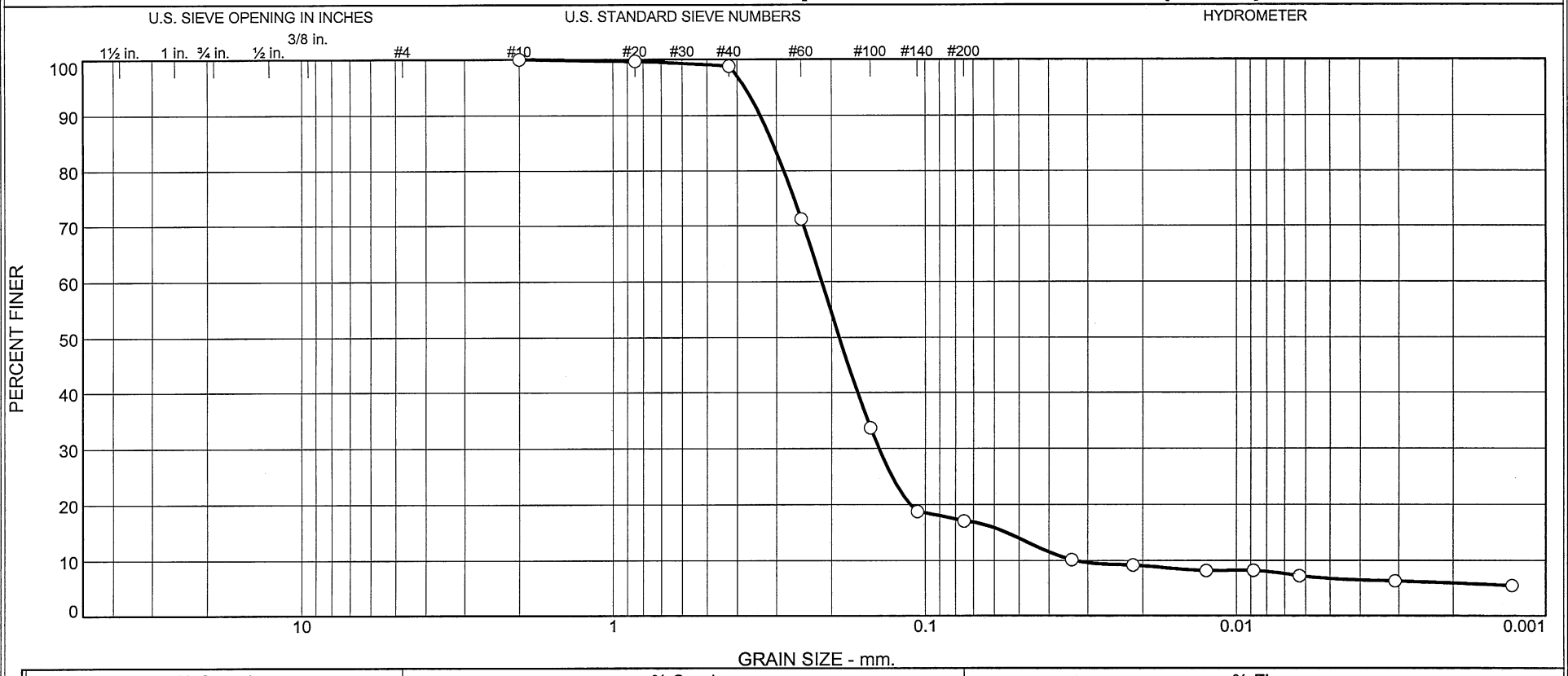
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	1	79	80			20

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0767	0.1200	0.1739	0.1994	0.2651	0.2891	0.3195	0.3619

Fineness Modulus
0.74

Particle Size Distribution Report ASTM D 422-63 (2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	1.2	81.7	10.4	6.7

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3129	SS-18	73.5-75.0'	1/10/09	SM(Visual)	Very Pale Brown Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 73.5-75.0' **Sample Number:** SS-18
Material Description: Very Pale Brown Silty SAND (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM(Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
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
295.07	0.00	0.00	#10	0.00	100.0
102.93	0.00	0.00	#20	0.36	99.7
			#40	1.26	98.8
			#60	29.63	71.2
			#100	68.32	33.6
			#140	83.63	18.8
			#200	85.36	17.1

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =102.93
Hygroscopic moisture correction:
Moist weight and tare = 25.67
Dry weight and tare = 25.59
Tare weight = 11.13
Hygroscopic moisture = 0.6%
Table of composite correction values:

Temp., deg. C:	11.0	28.7
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	23.3	15.0	10.5	0.0129	16.0	13.7	0.0338	10.1
5.00	23.3	14.0	9.5	0.0129	15.0	13.8	0.0215	9.2
15.00	23.3	13.0	8.5	0.0129	14.0	14.0	0.0125	8.2
30.00	23.4	13.0	8.5	0.0129	14.0	14.0	0.0088	8.2
60.00	23.4	12.0	7.5	0.0129	13.0	14.2	0.0063	7.2
250.00	23.5	11.0	6.5	0.0129	12.0	14.3	0.0031	6.3
1440.00	23.9	10.0	5.6	0.0128	11.0	14.5	0.0013	5.5

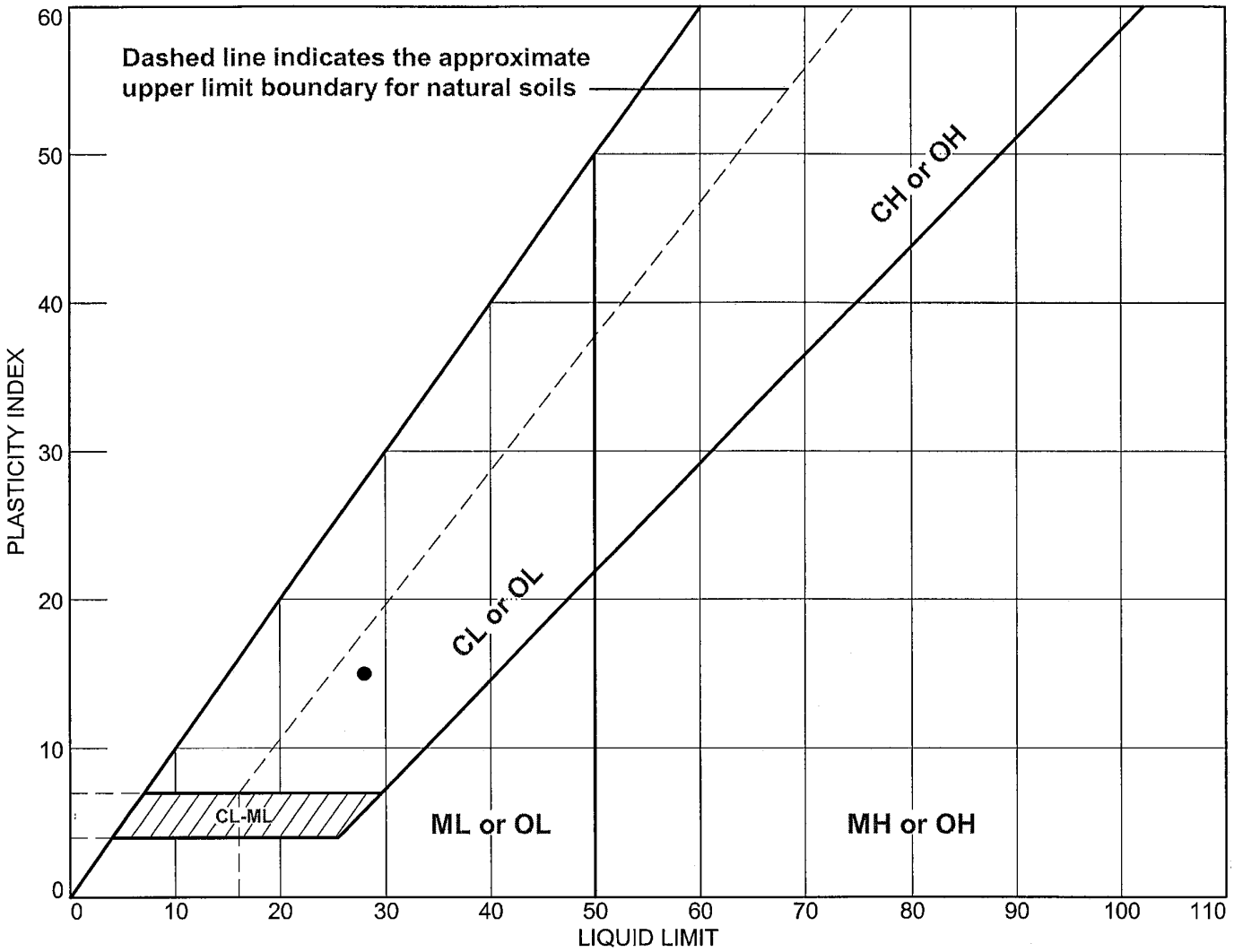
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	1.2	81.7	82.9	10.4	6.7	17.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0331	0.0547	0.1117	0.1411	0.1892	0.2154	0.2843	0.3085	0.3384	0.3785

Fineness Modulus	C_u	C_c
0.84	6.51	2.80

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-19	78.5-80.0'	13.7	13	28	15	CL(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

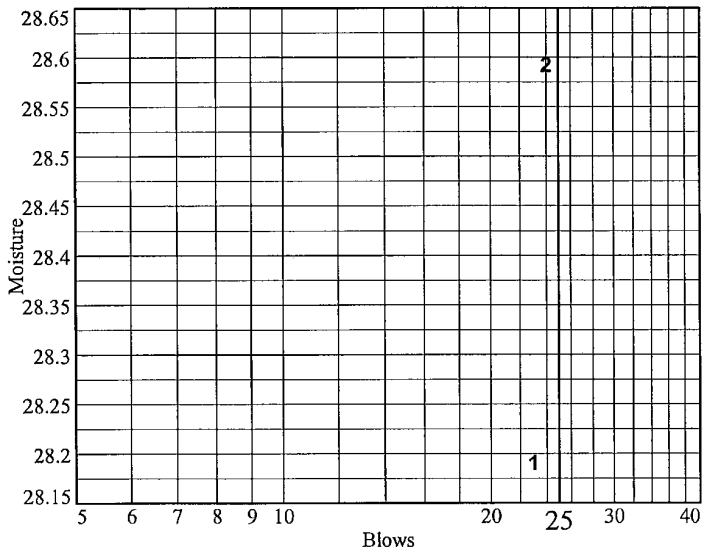
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 78.5-80.0' **Sample Number:** SS-19
Material Description: Light Gray Lean CLAY with sand (Visual)
USCS: CL(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.13	24.01				
Dry+Tare	23.01	22.14				
Tare	15.49	15.60				
# Blows	23	24				
Moisture	28.2	28.6				



Liquid Limit= 28
Plastic Limit= 13
Plasticity Index= 15
Natural Moisture= 13.7
Liquidity Index= 0.0

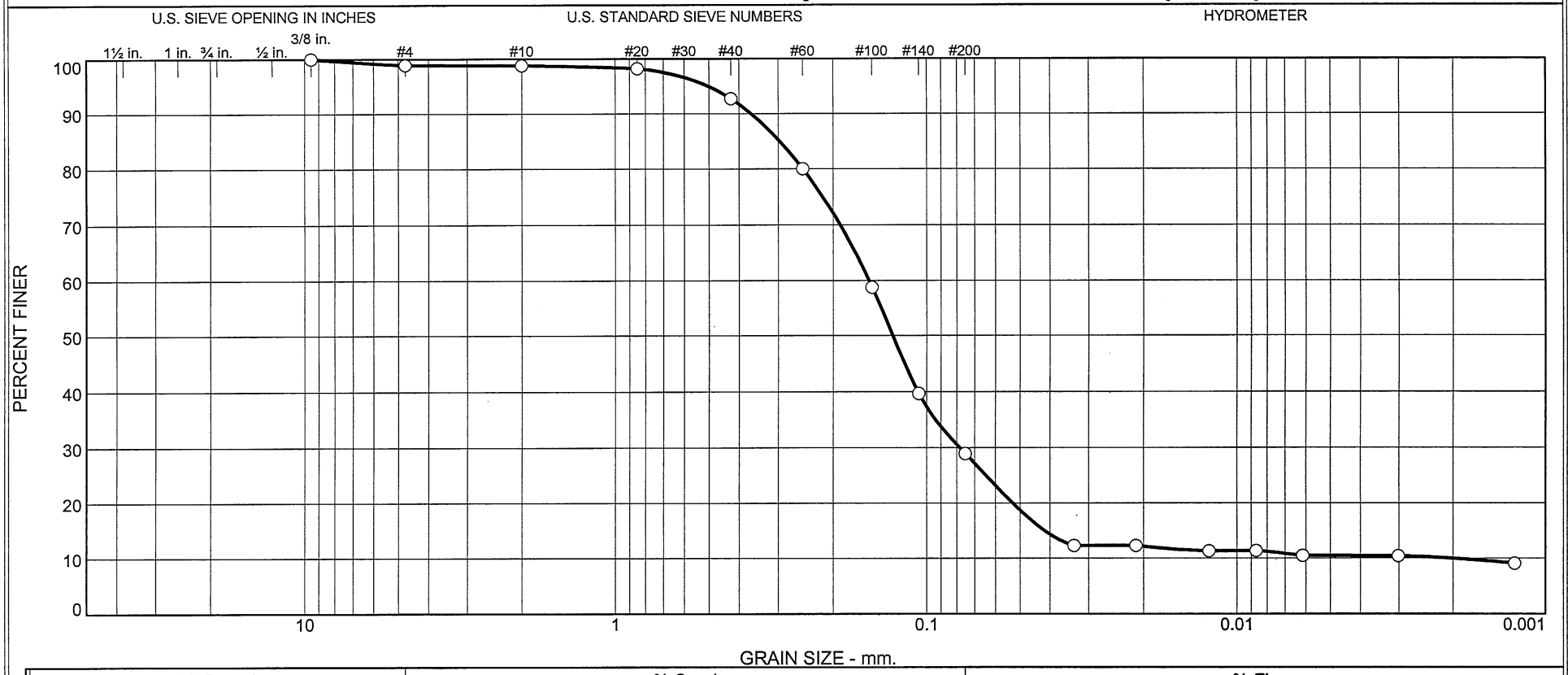
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.61	19.45			
Dry+Tare	20.86	18.53			
Tare	15.43	11.27			
Moisture	13.8	12.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
130.94	116.01	6.88	13.7

Particle Size Distribution Report ASTM D 422-63 (2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	1.1	0.1	6.1	63.8	18.5	10.4

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3129	SS-20B	83.9-85.0'	1/10/09	SM(Visual)	Very Pale Brown Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental

Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
Specific Gravity is assumed
ND = Not Determined

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 83.9-85.0' **Sample Number:** SS-20B
Material Description: Very Pale Brown Silty SAND (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM(Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
Specific Gravity is assumed
ND = Not Determined
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
221.25	0.00	0.00	3/8"	0.00	100.0
			#4	2.50	98.9
			#10	2.69	98.8
99.51	0.00	0.00	#20	0.59	98.2
			#40	6.12	92.7
			#60	18.96	80.0
			#100	40.36	58.7
			#140	59.53	39.7
			#200	70.36	28.9

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 98.8
Weight of hydrometer sample =99.51
Hygroscopic moisture correction:
Moist weight and tare = 25.24
Dry weight and tare = 25.13
Tare weight = 11.43
Hygroscopic moisture = 0.8%
Table of composite correction values:

Temp., deg. C:	11.0	28.7
Comp. corr.:	-8.0	-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 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	23.1	17.0	12.4	0.0129	18.0	13.3	0.0334	12.3
5.00	23.1	17.0	12.4	0.0129	18.0	13.3	0.0211	12.3
15.00	23.1	16.0	11.4	0.0129	17.0	13.5	0.0123	11.3
30.00	23.2	16.0	11.4	0.0129	17.0	13.5	0.0087	11.3
60.00	23.6	15.0	10.6	0.0129	16.0	13.7	0.0061	10.4
250.00	23.5	15.0	10.5	0.0129	16.0	13.7	0.0030	10.4
1440.00	23.9	13.5	9.1	0.0128	14.5	13.9	0.0013	9.0

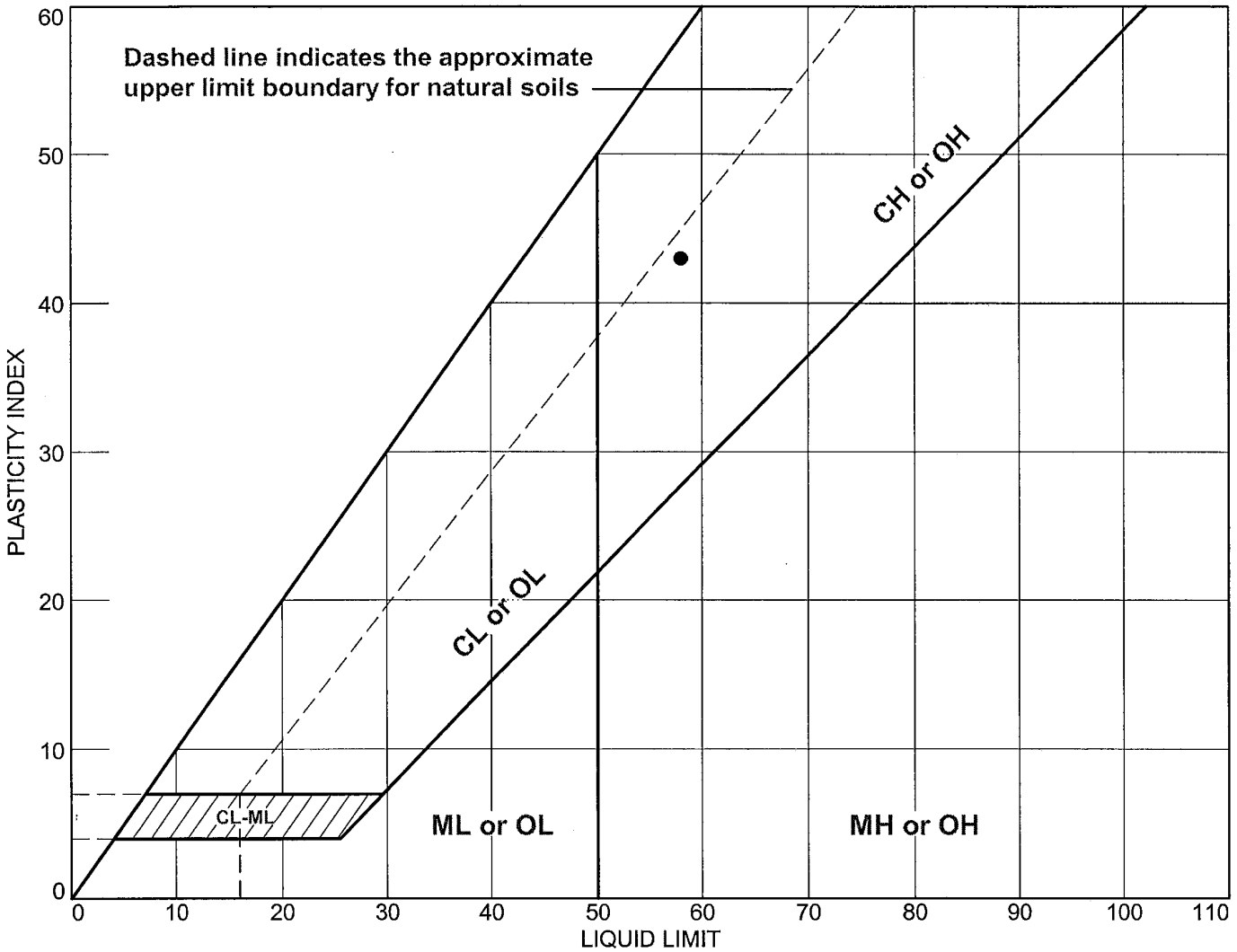
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.1	1.1	0.1	6.1	63.8	70.0	18.5	10.4	28.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0021	0.0416	0.0528	0.0782	0.1288	0.1536	0.2503	0.2970	0.3666	0.5035

Fineness Modulus	C_u	C_c
0.63	74.76	19.39

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-21	88.5-90.0	22.9	15	58	43	CH(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

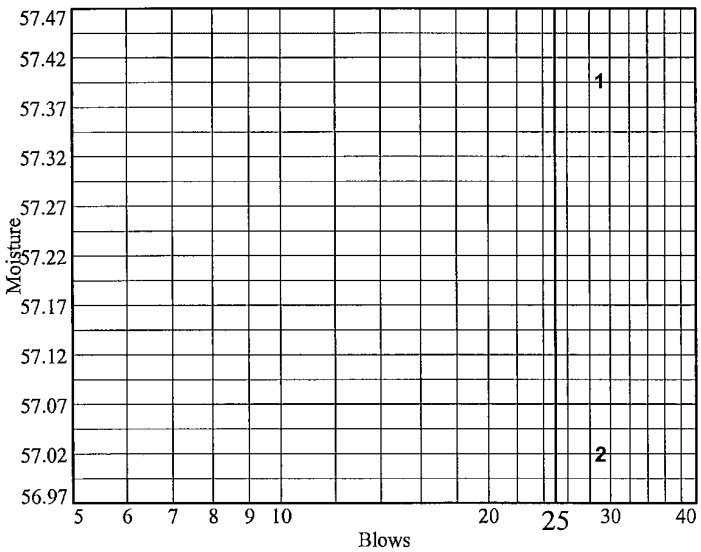
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 88.5-90.0 **Sample Number:** SS-21
Material Description: Light Gray Fat CLAY (Visual)
USCS: CH(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	29.78	26.38				
Dry+Tare	24.62	22.40				
Tare	15.63	15.42				
# Blows	29	29				
Moisture	57.4	57.0				



Liquid Limit= 58
Plastic Limit= 15
Plasticity Index= 43
Natural Moisture= 22.9
Liquidity Index= 0.2

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	23.71	23.77			
Dry+Tare	22.70	22.70			
Tare	15.72	15.46			
Moisture	14.5	14.8			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
41.35	34.91	6.84	22.9

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63 (2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	5.0	68.8	15.3	10.9

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3129	SS-22	93.5-95.0'	1/10/09	SM(Visual)	Pale Yellow Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrmeter Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 93.5-95.0' **Sample Number:** SS-22
Material Description: Pale Yellow Silty SAND (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM(Visual)
Testing Remarks: Sieve and Hydrmeter Analysis Only
ND = Not Determined
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
201.01	0.00	0.00	#10	0.00	100.0
100.63	0.00	0.00	#20	0.10	99.9
			#40	5.01	95.0
			#60	39.70	60.5
			#100	68.59	31.8
			#140	72.57	27.9
			#200	74.25	26.2

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =100.63
Hygroscopic moisture correction:
Moist weight and tare = 28.38
Dry weight and tare = 28.35
Tare weight = 15.52
Hygroscopic moisture = 0.2%
Table of composite correction values:

Temp., deg. C:	11.0	28.7
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.9	20.0	14.5	0.0135	21.0	12.9	0.0341	14.3
5.00	19.9	19.0	13.5	0.0135	20.0	13.0	0.0217	13.3
15.00	19.9	19.0	13.5	0.0135	20.0	13.0	0.0125	13.3
30.00	20.0	18.0	12.5	0.0134	19.0	13.2	0.0089	12.4
60.00	19.9	17.0	11.5	0.0135	18.0	13.3	0.0063	11.3
250.00	19.7	16.0	10.5	0.0135	17.0	13.5	0.0031	10.3
1440.00	20.7	15.0	9.7	0.0133	16.0	13.7	0.0013	9.6

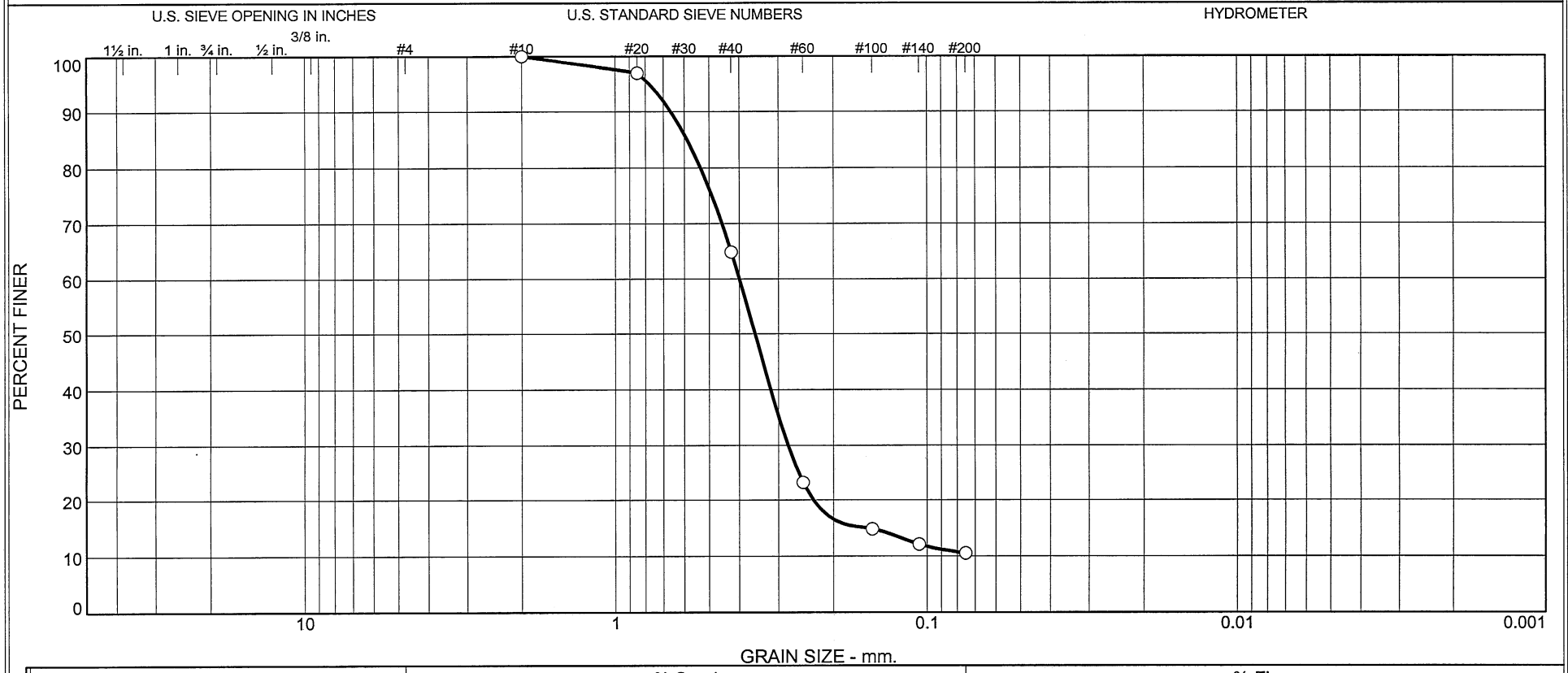
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	5.0	68.8	73.8	15.3	10.9	26.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0022	0.0365	0.0501	0.1386	0.2153	0.2481	0.3260	0.3515	0.3825	0.4248

Fineness Modulus	C_u	C_c
0.96	112.65	35.13

Particle Size Distribution Report ASTM D 6913-04e2



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	35	55	10	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3129	SS-23	98.5-99.4'	1/10/09	SP-SM(Visual)	Very Pale Brown Poorly Graded SAND with silt (Visual)	ND	ND	ND

Client Bechtel	**MACTEC Engineering and Consulting, Inc.**	○ Sieve Analysis Only ND = Not Determined Organic Content = 5.2% (ASTM D2974-07a)
Project Exelon Texas COL Project - Supplemental		
Investigation, including UHS		
Project No. 6468071777 Figure N/A	**Raleigh, North Carolina**	

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 98.5-99.4' **Sample Number:** SS-23
Material Description: Very Pale Brown Poorly Graded SAND with silt (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SP-SM(Visual)
Testing Remarks: Sieve Analysis Only
ND = Not Determined
Organic Content = 5.2% (ASTM D2974-07a)
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
129.21	0.00	0.00	#10	0.00	100
100.99	0.00	0.00	#20	3.10	97
			#40	35.49	65
			#60	77.56	23
			#100	86.04	15
			#140	88.78	12
			#200	90.40	10

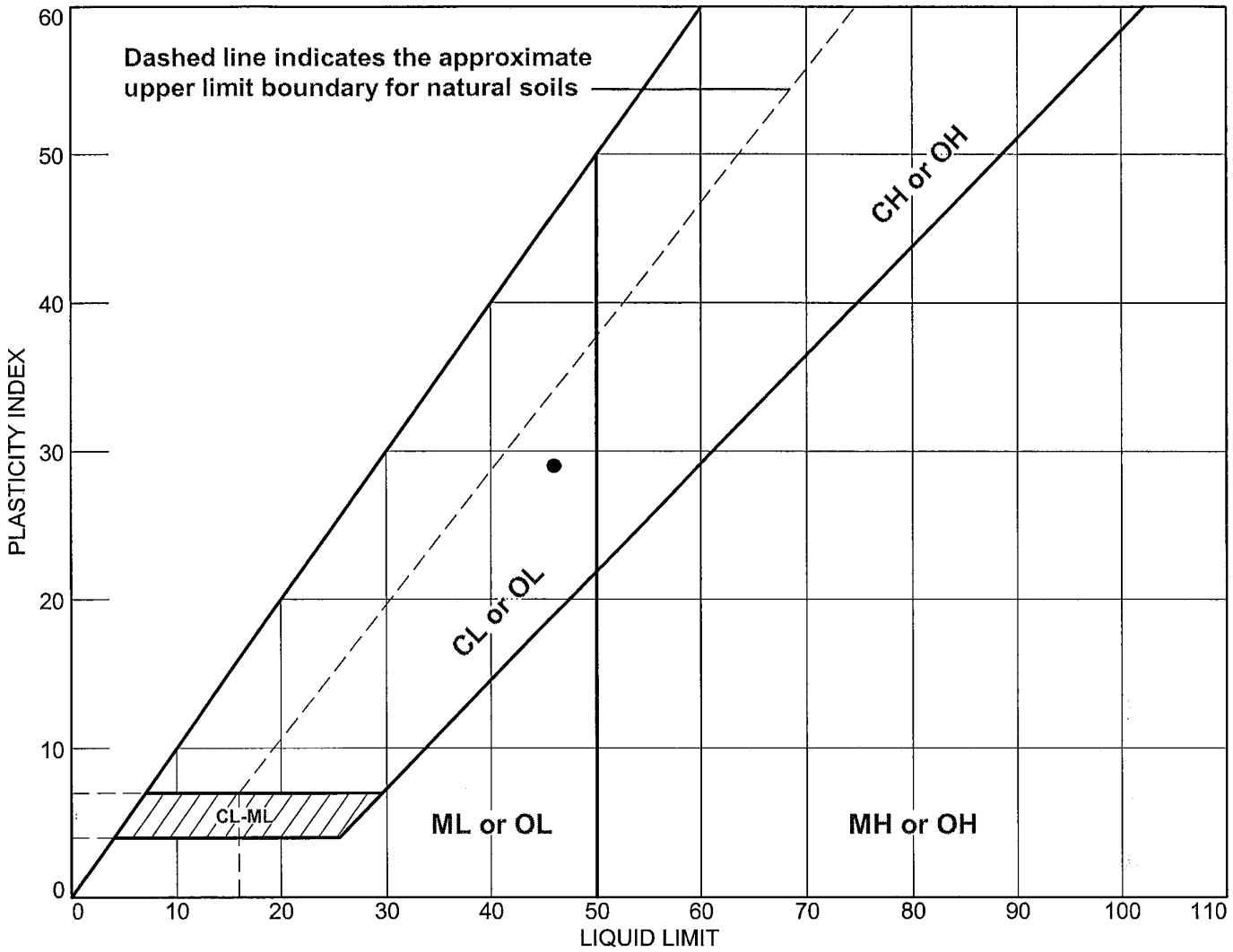
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	35	55	90			10

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.1578	0.2318	0.2796	0.3566	0.4003	0.5338	0.5890	0.6643	0.7808

Fineness Modulus
1.66

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3129	SS-25	118.5-120.0'	17.9	17	46	29	CL(Visual)

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** N/A

Tested By: CS **Checked By:** LBJ DSC 5-4-09

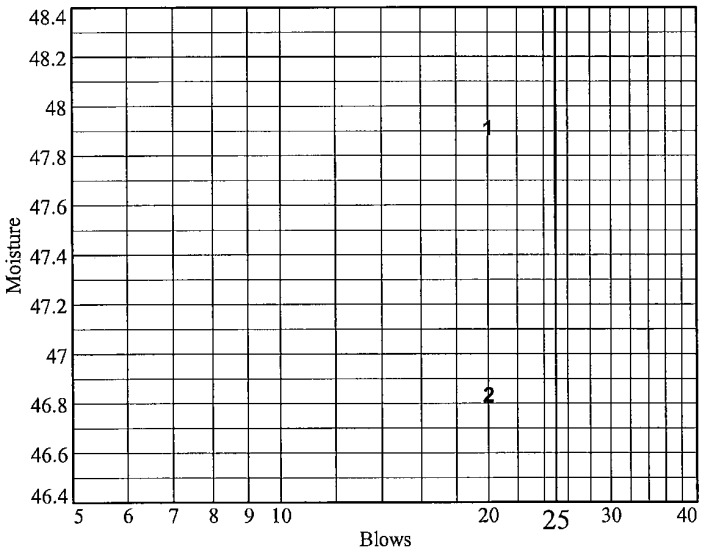
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 118.5-120.0' **Sample Number:** SS-25
Material Description: Light Gray Lean CLAY (Visual)
USCS: CL(Visual) **AASHTO:** ND
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.60	30.34				
Dry+Tare	23.04	25.60				
Tare	15.61	15.48				
# Blows	20	20				
Moisture	47.9	46.8				



Liquid Limit= 46
Plastic Limit= 17
Plasticity Index= 29
Natural Moisture= 17.9
Liquidity Index= 0.0

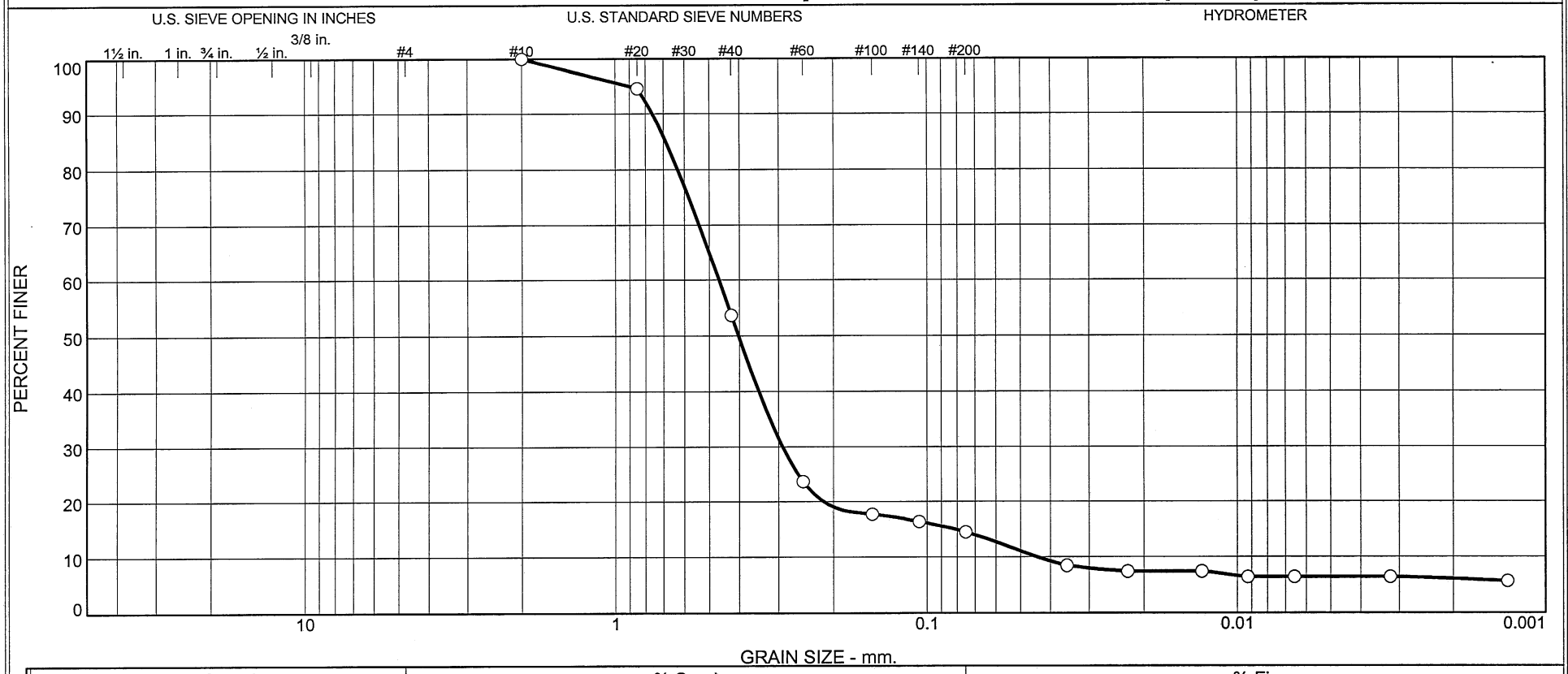
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	23.69	24.56			
Dry+Tare	22.53	23.23			
Tare	15.51	15.49			
Moisture	16.5	17.2			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
86.90	74.73	6.60	17.9

Particle Size Distribution Report ASTM D 422-63 (2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	46.4	39.1	8.0	6.5

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3129	SS-26	128.5-130.0'	1/10/09	SM(Visual)	Very Pale Brown Silty SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 128.5-130.0' **Sample Number:** SS-26
Material Description: Very Pale Brown Silty SAND (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SM(Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
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
261.36	0.00	0.00	#10	0.00	100.0
99.96	0.00	0.00	#20	5.45	94.5
			#40	46.35	53.6
			#60	76.33	23.6
			#100	82.27	17.7
			#140	83.63	16.3
			#200	85.49	14.5

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =99.96
Hygroscopic moisture correction:
Moist weight and tare = 28.84
Dry weight and tare = 28.82
Tare weight = 15.62
Hygroscopic moisture = 0.2%
Table of composite correction values:

Temp., deg. C:	11.0	28.7
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.0	14.0	8.5	0.0134	15.0	13.8	0.0354	8.5
5.00	19.9	13.0	7.5	0.0135	14.0	14.0	0.0225	7.4
15.00	19.9	13.0	7.5	0.0135	14.0	14.0	0.0130	7.4
30.00	19.9	12.0	6.5	0.0135	13.0	14.2	0.0092	6.5
60.00	19.9	12.0	6.5	0.0135	13.0	14.2	0.0065	6.5
250.00	19.9	12.0	6.5	0.0135	13.0	14.2	0.0032	6.5
1440.00	20.7	11.0	5.7	0.0133	12.0	14.3	0.0013	5.7

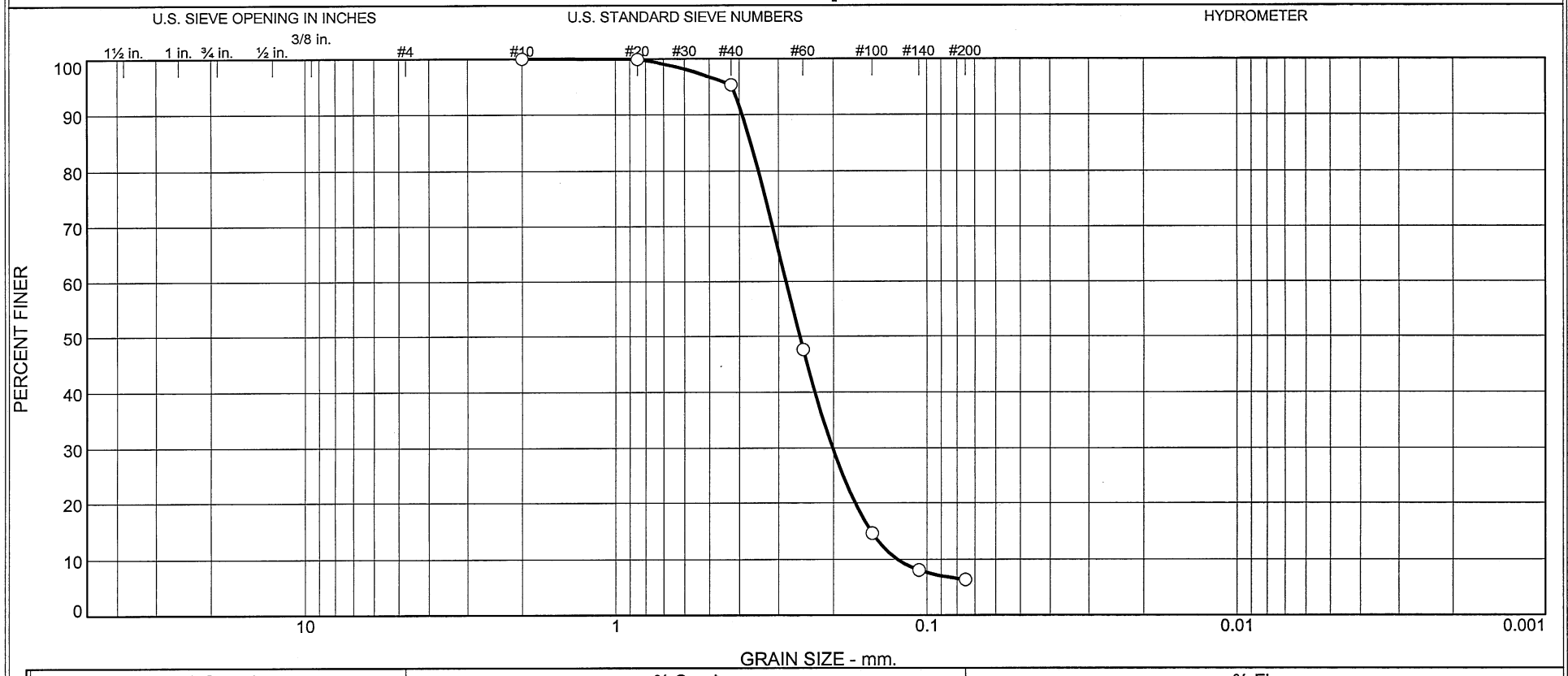
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	46.4	39.1	85.5	8.0	6.5	14.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0442	0.0814	0.2148	0.2910	0.4032	0.4658	0.6315	0.6894	0.7614	0.9125

Fineness Modulus	C_u	C_c
1.77	10.55	4.12

Particle Size Distribution Report ASTM D 6913-04e2



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0	0	0	5	89	6	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3129	SS-27	138.5-140.0'	1/10/09	SP-SM(Visual)	Very Pale Brown Poorly graded SAND with Silt (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental

Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve Analysis Only
ND = Not Determined

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 138.5-140.0' **Sample Number:** SS-27
Material Description: Very Pale Brown Poorly graded SAND with Silt (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SP-SM(Visual)
Testing Remarks: Sieve Analysis Only
ND = Not Determined
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
263.80	0.00	0.00	#10	0.00	100
102.61	0.00	0.00	#20	0.09	100
			#40	4.84	95
			#60	53.81	48
			#100	87.63	15
			#140	94.31	8
			#200	96.06	6

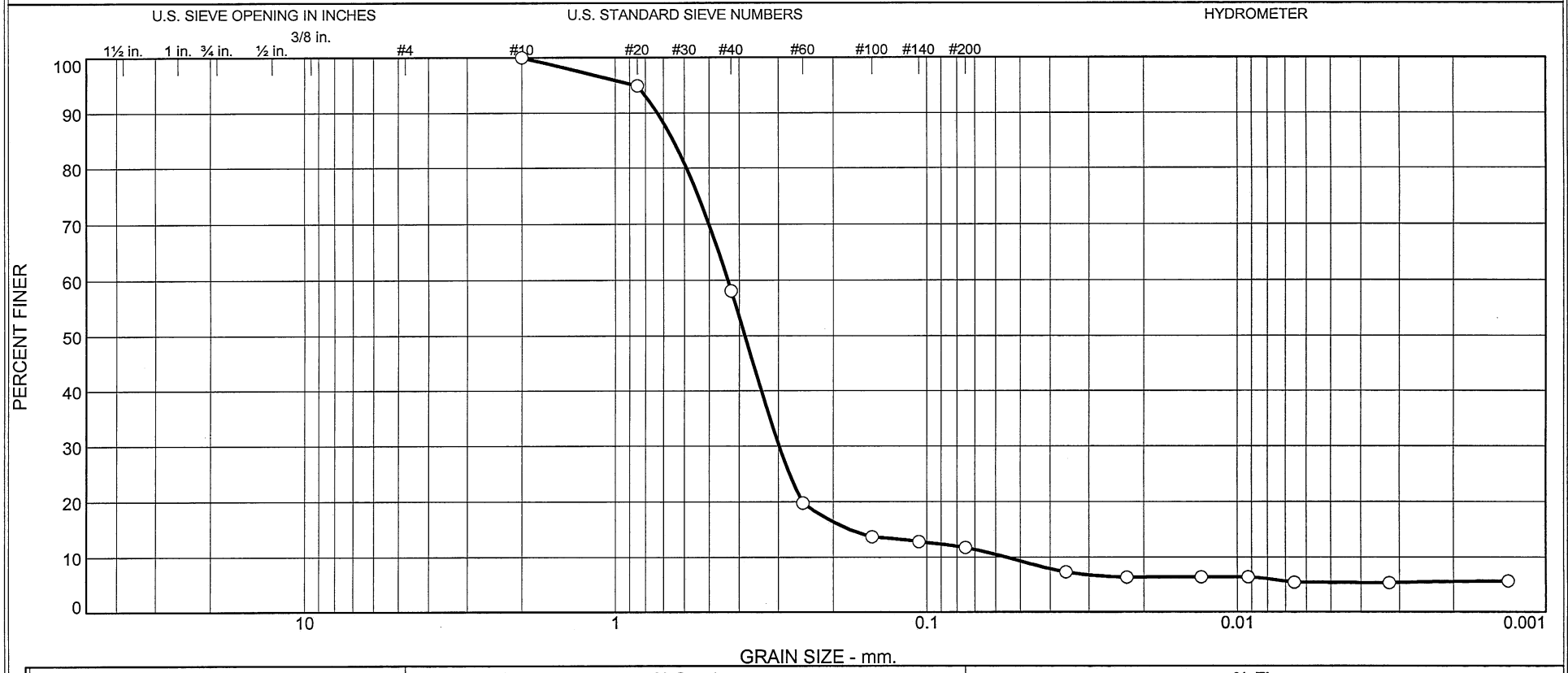
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	0	5	89	94			6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1246	0.1517	0.1704	0.2014	0.2566	0.2840	0.3480	0.3683	0.3922	0.4229

Fineness Modulus	C_u	C_c
1.22	2.28	1.15

Particle Size Distribution Report ASTM D 422-63 (2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	41.9	46.4	6.4	5.3

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3129	SS-28	148.5-150.0'	1/10/09	SP-SM(Visual)	Very Pale Brown Poorly Graded SAND with silt (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure N/A

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Sieve and Hydrometer Analysis Only
ND = Not Determined
Specific Gravity is assumed

Tested By: CS **Checked By:** LBJ DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3129
Depth: 148.5-150.0' **Sample Number:** SS-28
Material Description: Very Pale Brown Poorly Graded SAND with silt (Visual)
Date: 1/10/09 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SP-SM(Visual)
Testing Remarks: Sieve and Hydrometer Analysis Only
ND = Not Determined
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
302.76	0.00	0.00	#10	0.00	100.0
102.27	0.00	0.00	#20	5.21	94.9
			#40	42.87	58.1
			#60	82.03	19.8
			#100	88.23	13.7
			#140	89.13	12.8
			#200	90.26	11.7

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =102.27
Hygroscopic moisture correction:
Moist weight and tare = 29.93
Dry weight and tare = 29.90
Tare weight = 15.48
Hygroscopic moisture = 0.2%
Table of composite correction values:

Temp., deg. C:	11.0	28.7
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.9	13.0	7.5	0.0135	14.0	14.0	0.0356	7.3
5.00	19.9	12.0	6.5	0.0135	13.0	14.2	0.0227	6.3
15.00	20.1	12.0	6.6	0.0134	13.0	14.2	0.0130	6.4
30.00	20.1	12.0	6.6	0.0134	13.0	14.2	0.0092	6.4
60.00	20.1	11.0	5.6	0.0134	12.0	14.3	0.0066	5.4
250.00	19.6	11.0	5.4	0.0135	12.0	14.3	0.0032	5.3
1440.00	20.8	11.0	5.8	0.0133	12.0	14.3	0.0013	5.6

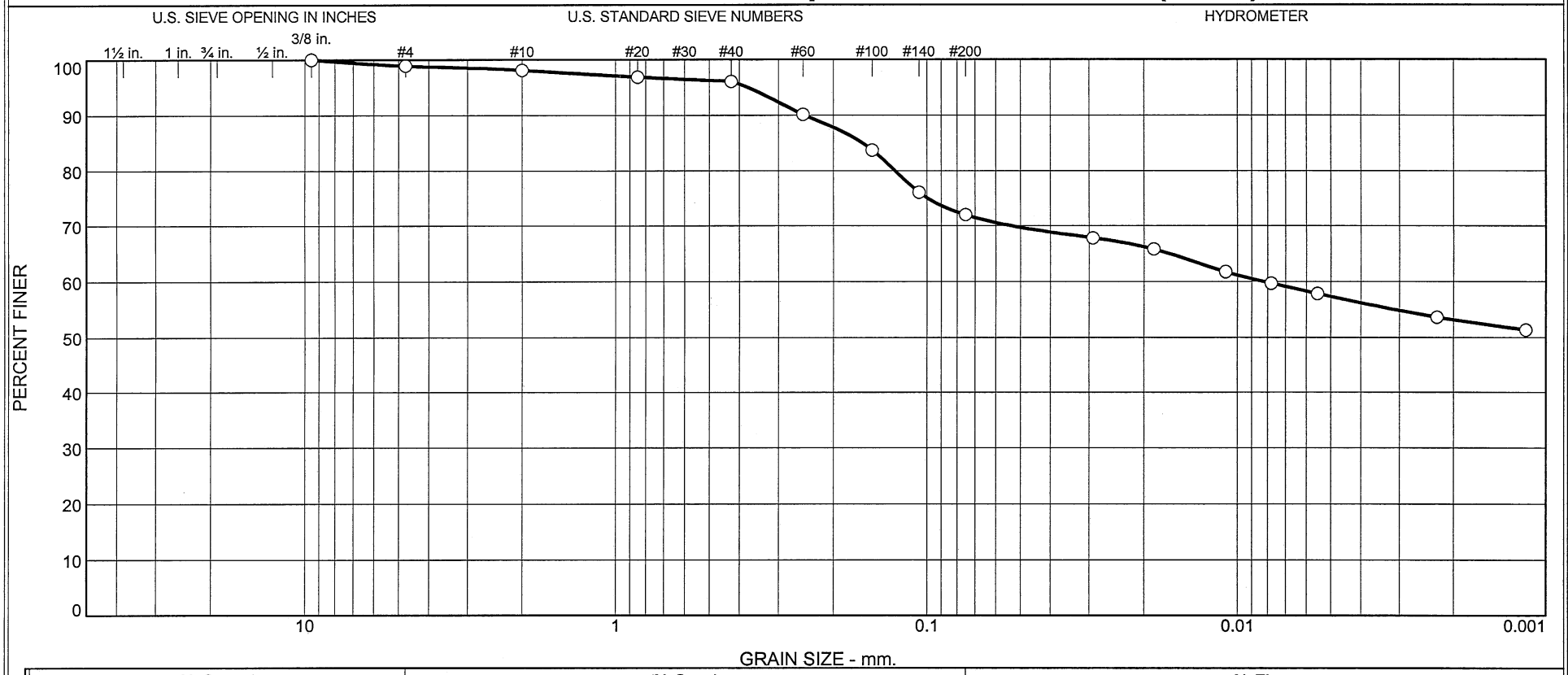
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	41.9	46.4	88.3	6.4	5.3	11.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0555	0.1757	0.2512	0.2981	0.3843	0.4358	0.5919	0.6530	0.7334	0.8636

Fineness Modulus	C_u	C_c
1.78	7.85	3.68

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	1.1	0.8	2.0	24.1	14.7	57.3

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-2	3.5-5.0'	2/24/09	CH	Gray Fat CLAY with sand	8.6	56	25

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed
Organic content = 1.9% as Per ASTM D2974-07a

Tested By: CS **Checked By:** BS DSC 5-9-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 3.5-5.0' **Sample Number:** SS-2
Material Description: Gray Fat CLAY with sand
Date: 2/24/09 **Natural Moisture:** 8.6
Liquid Limit: 56 **Plastic Limit:** 25 **USCS Class.:** CH
Testing Remarks: Specific Gravity is assumed
Organic content = 1.9% as Per ASTM D2974-07a
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
201.91	0.00	0.00	3/8"	0.00	100.0
			#4	2.24	98.9
			#10	3.84	98.1
49.71	0.00	0.00	#20	0.62	96.9
			#40	1.02	96.1
			#60	4.03	90.1
			#100	7.28	83.7
			#140	11.16	76.1
			#200	13.23	72.0

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 98.1
Weight of hydrometer sample =49.71
Hygroscopic moisture correction:
Moist weight and tare = 18.88
Dry weight and tare = 18.40
Tare weight = 5.68
Hygroscopic moisture = 3.8%
Table of composite correction values:

Temp., deg. C:	10.6	29.3
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.4	39.0	33.5	0.0132	40.0	9.7	0.0292	67.8
5.00	21.4	38.0	32.5	0.0132	39.0	9.9	0.0186	65.7
15.00	21.4	36.0	30.5	0.0132	37.0	10.2	0.0109	61.7
30.00	21.4	35.0	29.5	0.0132	36.0	10.4	0.0078	59.7
60.00	21.7	34.0	28.6	0.0132	35.0	10.6	0.0055	57.8
370.00	21.4	32.0	26.5	0.0132	33.0	10.9	0.0023	53.6
1440.00	21.0	31.0	25.3	0.0133	32.0	11.0	0.0012	51.3

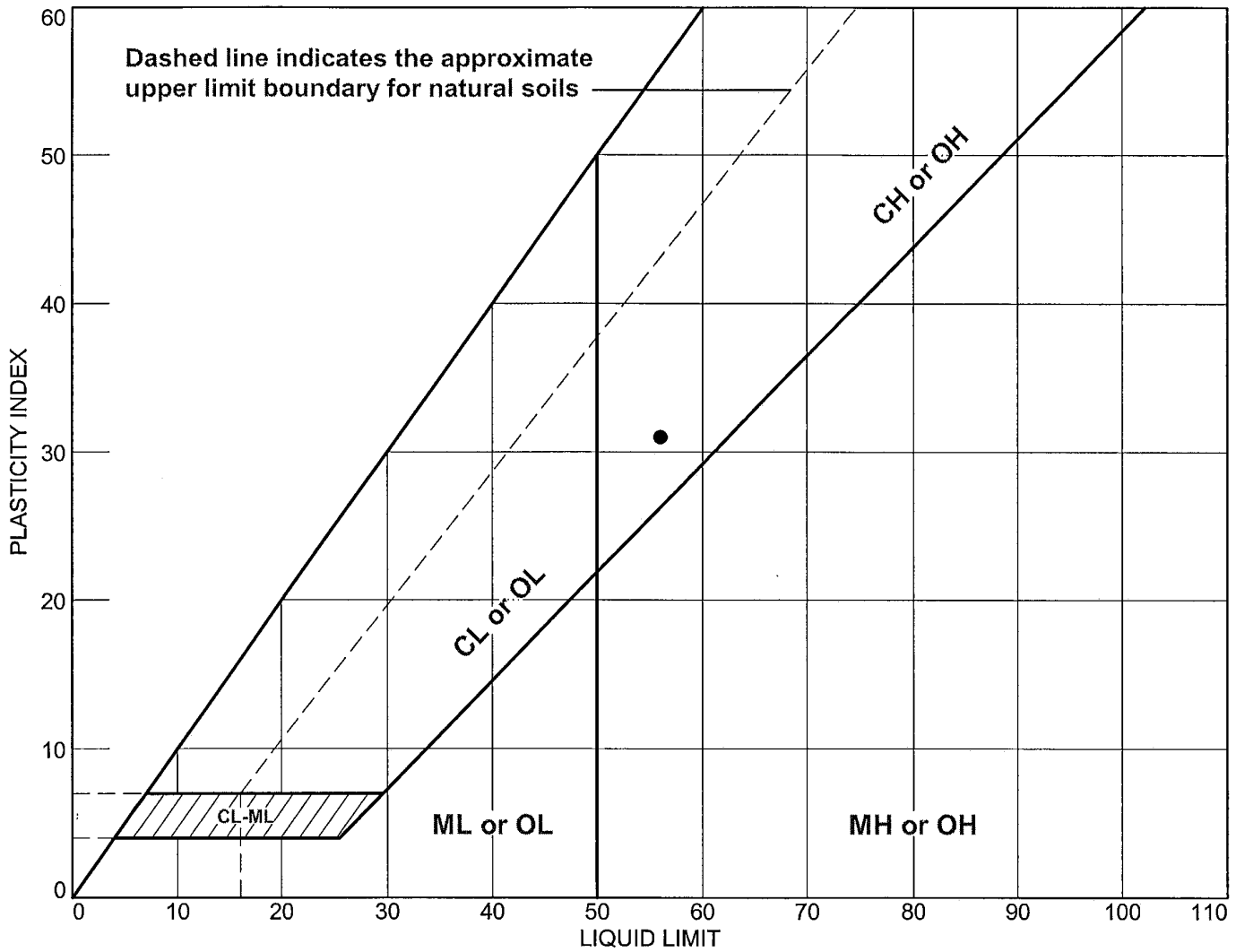
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.1	1.1	0.8	2.0	24.1	26.9	14.7	57.3	72.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
					0.0083	0.1268	0.1610	0.2467	0.3760

Fineness Modulus
0.33

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-2	3.5-5.0'	8.6	25	56	31	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

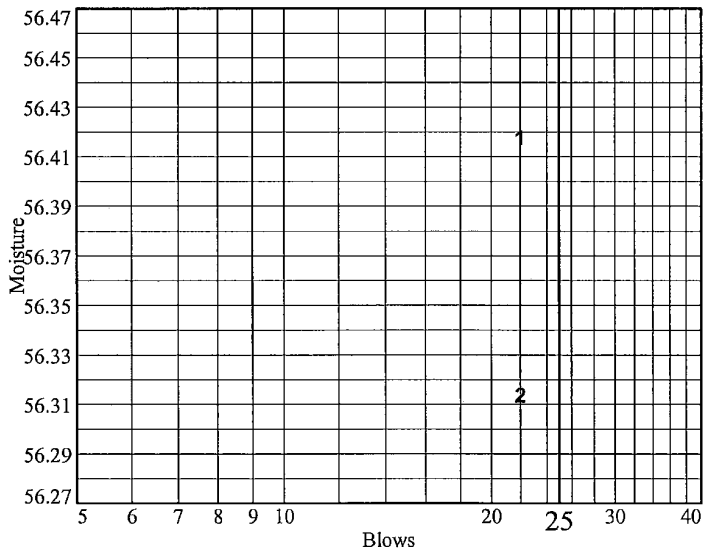
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 3.5-5.0' **Sample Number:** SS-2
Material Description: Gray Fat CLAY with sand
USCS: CH **AASHTO:** A-7-6(22)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.12	29.28				
Dry+Tare	22.34	24.33				
Tare	15.64	15.54				
# Blows	22	22				
Moisture	56.4	56.3				



Liquid Limit= 56
Plastic Limit= 25
Plasticity Index= 31
Natural Moisture= 8.6
Liquidity Index= -0.5

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.54	23.63			
Dry+Tare	20.30	21.99			
Tare	15.43	15.43			
Moisture	25.5	25.0			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
71.75	66.58	6.80	8.6

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.1	1.1	19.7	21.4	57.7

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-3	6.0-7.5'	2/24/09	CH	Light Gray Fat CLAY with sand	21.4	59	19

Client Bechtel	**MACTEC Engineering and Consulting, Inc.**	○ Specific Gravity is assumed Organic content = 1.7% ASTM D2974-07a
Project Exelon Texas COL Project - Supplemental Investigation, including UHS		
Project No. 6468071777 Figure NA	**Raleigh, North Carolina**	

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 6.0-7.5' **Sample Number:** SS-3
Material Description: Light Gray Fat CLAY with sand
Date: 2/24/09 **Natural Moisture:** 21.4
Liquid Limit: 59 **Plastic Limit:** 19 **USCS Class.:** CH
Testing Remarks: Specific Gravity is assumed
Organic content = 1.7% ASTM D2974-07a
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
202.24	0.00	0.00	#4	0.00	100.0
			#10	0.25	99.9
48.75	0.00	0.00	#20	0.26	99.3
			#40	0.51	98.8
			#60	1.42	97.0
			#100	4.55	90.6
			#140	7.45	84.6
			#200	10.16	79.1

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer sample =48.75
Hygroscopic moisture correction:
Moist weight and tare = 18.58
Dry weight and tare = 18.12
Tare weight = 5.66
Hygroscopic moisture = 3.7%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.8	40.0	34.4	0.0133	41.0	9.6	0.0291	72.3
5.00	20.8	38.0	32.4	0.0133	39.0	9.9	0.0187	68.1
15.00	20.8	36.0	30.4	0.0133	37.0	10.2	0.0110	63.9
30.00	20.8	35.0	29.4	0.0133	36.0	10.4	0.0078	61.8
59.00	20.9	33.5	28.0	0.0133	34.5	10.6	0.0056	58.8
250.00	21.3	31.0	25.6	0.0132	32.0	11.0	0.0028	53.8
1440.00	21.0	28.0	22.5	0.0133	29.0	11.5	0.0012	47.3

MACTEC Engineering and Consulting, Inc.

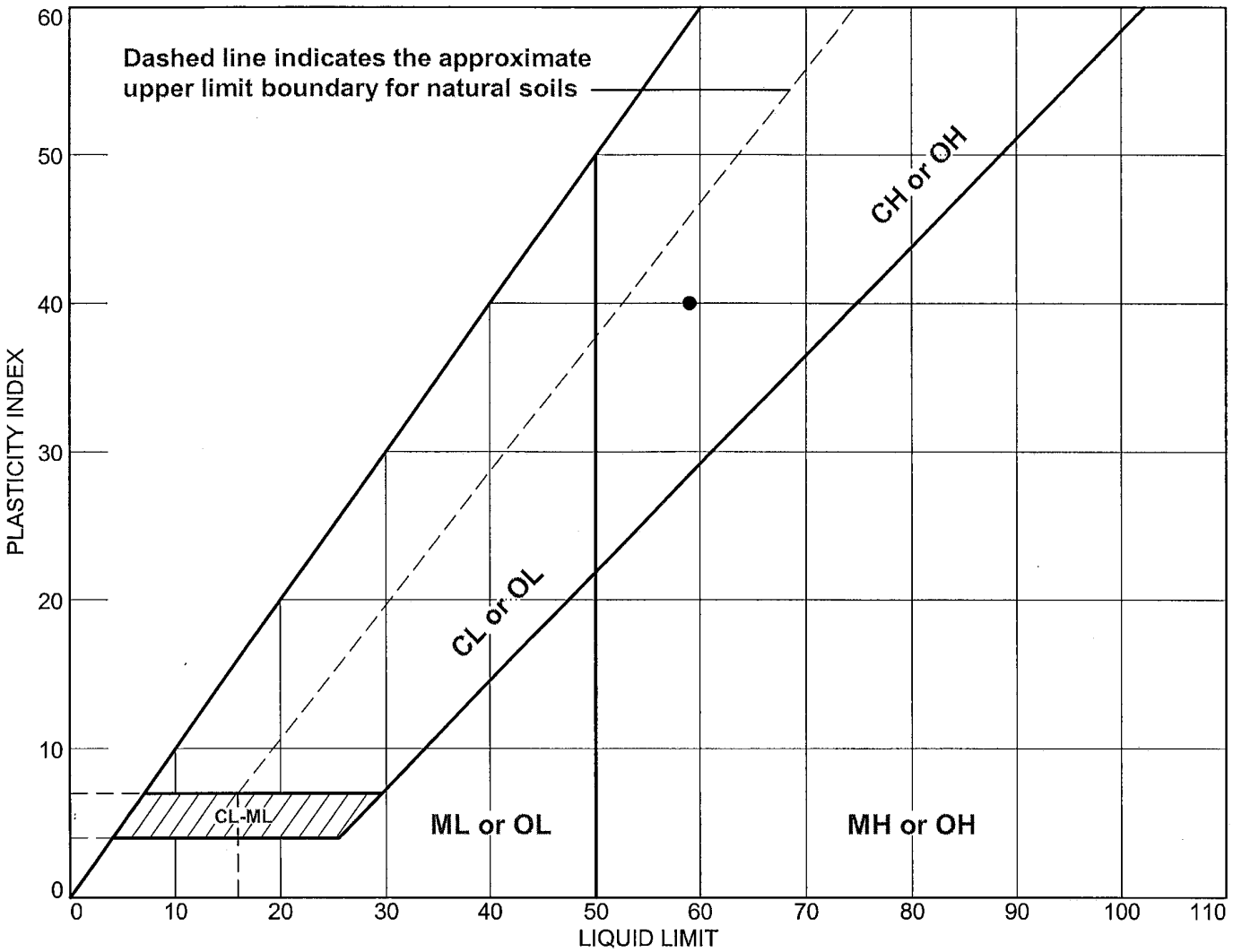
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.1	1.1	19.7	20.9	21.4	57.7	79.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0017	0.0064	0.0803	0.1084	0.1450	0.2051

Fineness Modulus
0.13

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-3	6.0-7.5'	21.4	19	59	40	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

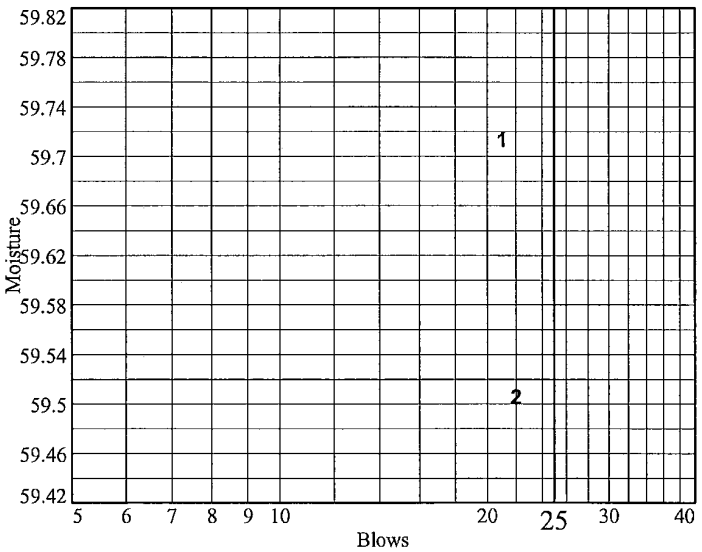
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 6.0-7.5' **Sample Number:** SS-3
Material Description: Light Gray Fat CLAY with sand
USCS: CH **AASHTO:** A-7-6(32)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.69	26.57				
Dry+Tare	22.51	22.47				
Tare	15.51	15.58				
# Blows	21	22				
Moisture	59.7	59.5				



Liquid Limit= 59
Plastic Limit= 19
Plasticity Index= 40
Natural Moisture= 21.4
Liquidity Index= 0.1

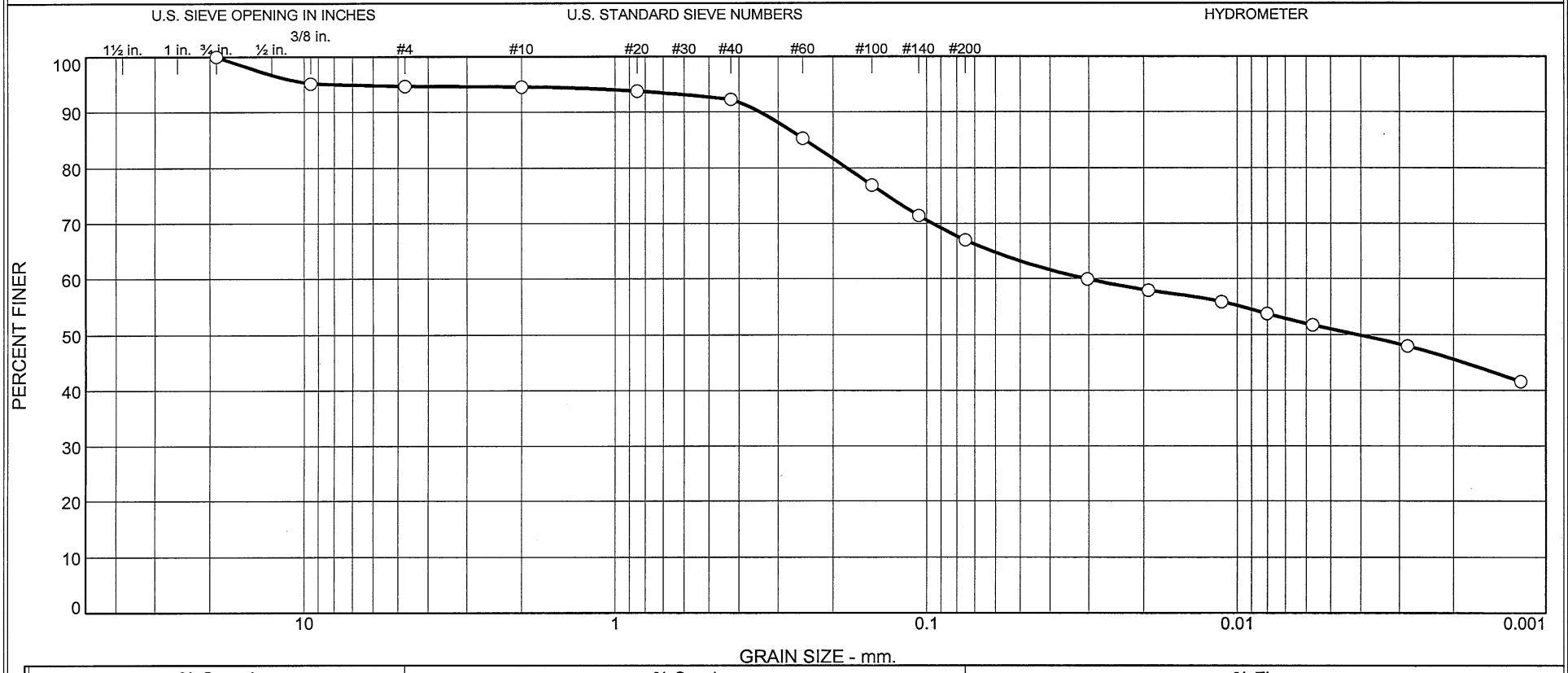
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.91	22.06			
Dry+Tare	20.88	21.00			
Tare	15.63	15.47			
Moisture	19.6	19.2			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
72.51	60.94	6.80	21.4

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	5.4	0.1	2.2	25.3	16.0	51.0

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-4	8.5-10.0'	2/24/09	CH	Light Gray Sandy Fat CLAY	19.0	59	22

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 8.5-10.0' **Sample Number:** SS-4
Material Description: Light Gray Sandy Fat CLAY
Date: 2/24/09 **Natural Moisture:** 19.0
Liquid Limit: 59 **Plastic Limit:** 22 **USCS Class.:** CH
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
209.72	0.00	0.00	3/4"	0.00	100.0
			3/8"	10.28	95.1
			#4	11.30	94.6
			#10	11.57	94.5
49.14	0.00	0.00	#20	0.39	93.7
			#40	1.16	92.3
			#60	4.78	85.3
			#100	9.14	76.9
			#140	12.00	71.4
			#200	14.31	67.0

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 94.5
Weight of hydrometer sample =49.14
Hygroscopic moisture correction:
Moist weight and tare = 16.49
Dry weight and tare = 15.80
Tare weight = 5.65
Hygroscopic moisture = 6.8%
Table of composite correction values:

Temp., deg. C:	12.5	29.3
Comp. corr.:	-8.0	-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 x **Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.9	35.0	29.5	0.0133	36.0	10.4	0.0303	59.9
5.00	20.9	34.0	28.5	0.0133	35.0	10.6	0.0193	57.9
15.00	20.9	33.0	27.5	0.0133	34.0	10.7	0.0112	55.8
30.00	20.8	32.0	26.5	0.0133	33.0	10.9	0.0080	53.8
60.00	20.8	31.0	25.5	0.0133	32.0	11.0	0.0057	51.7
250.00	21.3	29.0	23.6	0.0132	30.0	11.4	0.0028	48.0
1440.00	20.8	26.0	20.5	0.0133	27.0	11.9	0.0012	41.6

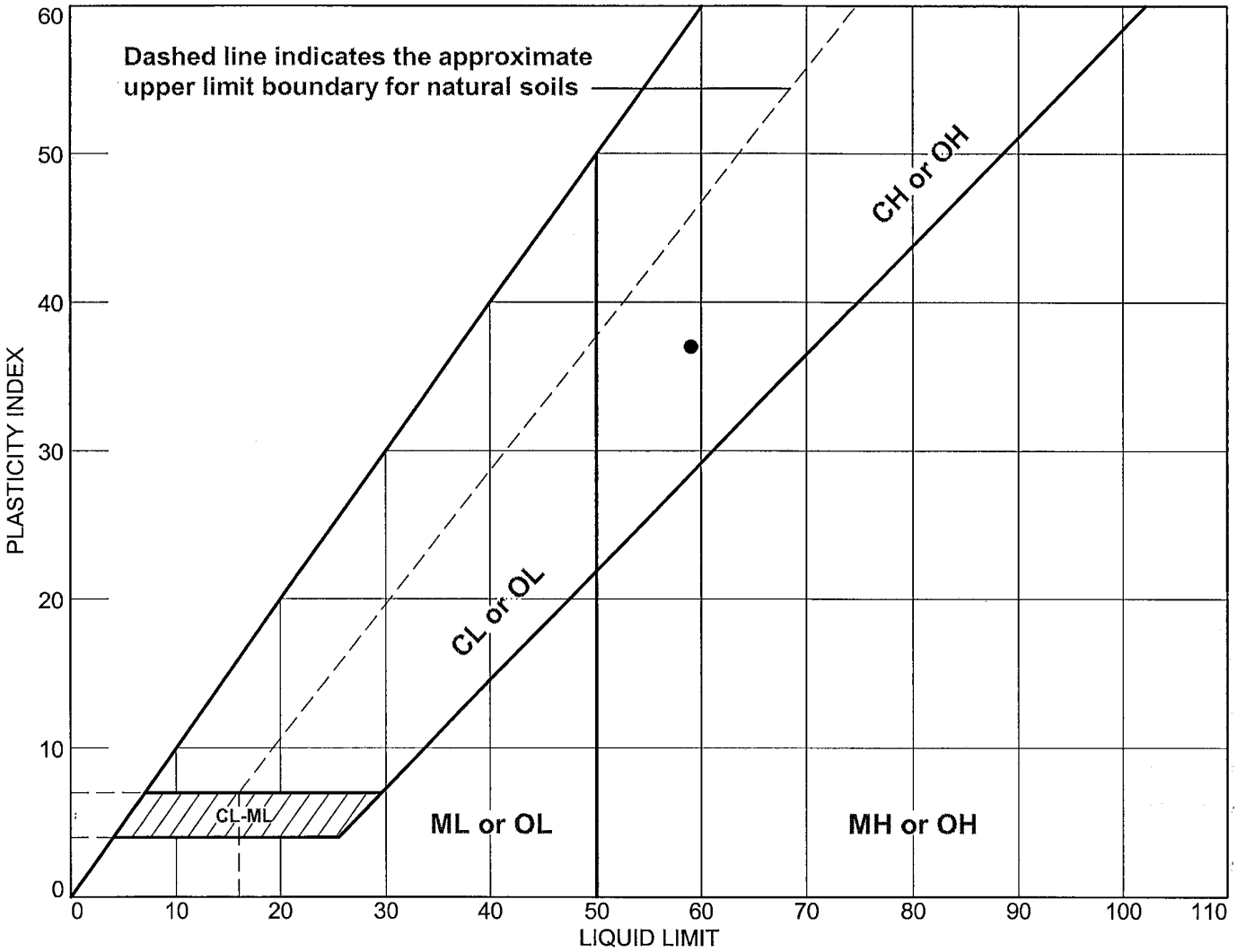
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	5.4	5.4	0.1	2.2	25.3	27.6	16.0	51.0	67.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0041	0.0308	0.1808	0.2455	0.3435	8.5464

Fineness Modulus
0.64

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-4	8.5-10.0'	19.0	22	59	37	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

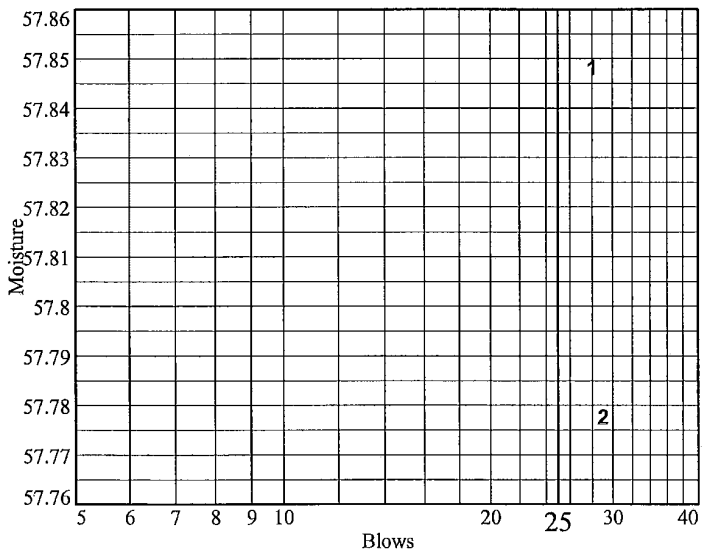
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 8.5-10.0' **Sample Number:** SS-4
Material Description: Light Gray Sandy Fat CLAY
USCS: CH **AASHTO:** A-7-6(23)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.38	25.22				
Dry+Tare	21.10	21.58				
Tare	15.43	15.28				
# Blows	28	29				
Moisture	57.8	57.8				



Liquid Limit= 59
Plastic Limit= 22
Plasticity Index= 37
Natural Moisture= 19.0
Liquidity Index= -0.1

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.71	21.50			
Dry+Tare	20.56	20.43			
Tare	15.34	15.41			
Moisture	22.0	21.3			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
114.06	96.90	6.79	19.0

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.7	0.1	1.7	32.2	22.8	42.5

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-5	11.0-12.5'	2/24/09	CL	Light Gray Sandy Lean CLAY	0.5	38	17

Client Bechtel
Project Exelon Texas COL Project - Supplemental Investigation, including UHS
Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.
Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 11.0-12.5' **Sample Number:** SS-5
Material Description: Light Gray Sandy Lean CLAY
Date: 2/24/09 **Natural Moisture:** 0.5
Liquid Limit: 38 **Plastic Limit:** 17 **USCS Class.:** CL
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
213.93	0.00	0.00	3/8"	0.00	100.0
			#4	1.56	99.3
			#10	1.70	99.2
49.93	0.00	0.00	#20	0.43	98.4
			#40	0.88	97.5
			#60	2.36	94.5
			#100	7.66	84.0
			#140	12.69	74.0
			#200	17.04	65.3

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.2
Weight of hydrometer sample =49.93
Hygroscopic moisture correction:
Moist weight and tare = 18.50
Dry weight and tare = 18.15
Tare weight = 5.64
Hygroscopic moisture = 2.8%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.9	33.0	27.5	0.0133	34.0	10.7	0.0308	55.5
5.00	20.9	31.0	25.5	0.0133	32.0	11.0	0.0198	51.4
15.00	20.9	29.0	23.5	0.0133	30.0	11.4	0.0116	47.4
30.00	20.9	28.0	22.5	0.0133	29.0	11.5	0.0082	45.4
60.00	21.0	27.0	21.5	0.0133	28.0	11.7	0.0059	43.4
250.00	21.4	25.0	19.6	0.0132	26.0	12.0	0.0029	39.7
1440.00	20.9	24.0	18.5	0.0133	25.0	12.2	0.0012	37.3

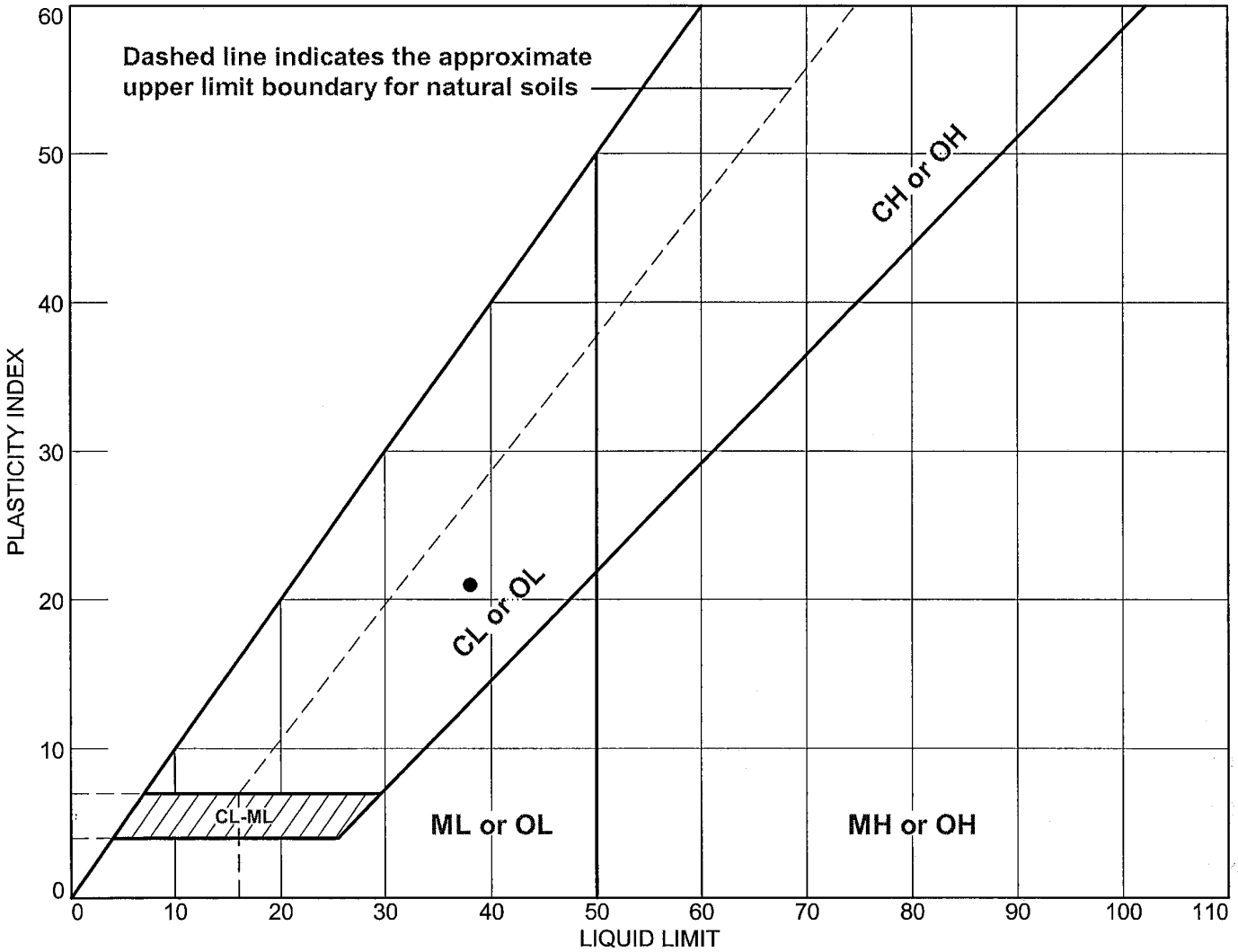
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.7	0.7	0.1	1.7	32.2	34.0	22.8	42.5	65.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0166	0.0525	0.1303	0.1558	0.1919	0.2606

Fineness Modulus
0.25

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-5	11.0-12.5'	0.5	17	38	21	CL

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

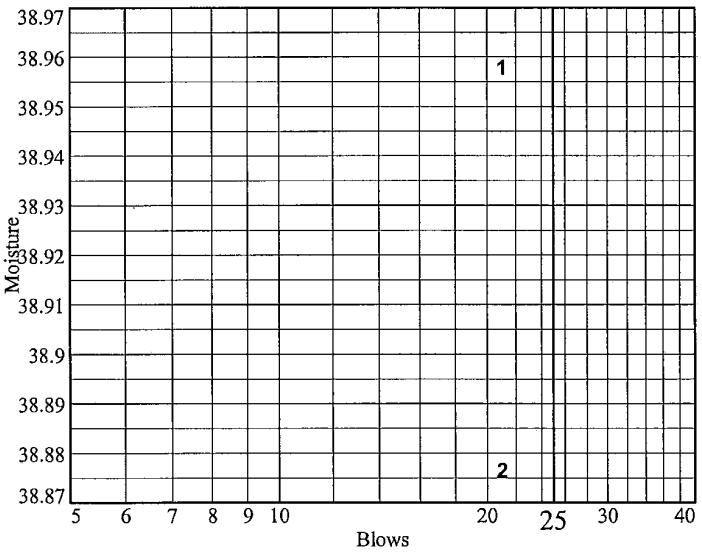
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 11.0-12.5' **Sample Number:** SS-5
Material Description: Light Gray Sandy Lean CLAY
USCS: CL **AASHTO:** A-6(11)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.76	23.85				
Dry+Tare	24.32	20.32				
Tare	15.49	11.24				
# Blows	21	21				
Moisture	39.0	38.9				



Liquid Limit= 38
Plastic Limit= 17
Plasticity Index= 21
Natural Moisture= 0.5
Liquidity Index= -0.8

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.94	21.99			
Dry+Tare	21.03	21.00			
Tare	15.76	15.40			
Moisture	17.3	17.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
72.09	71.80	9.36	0.5

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	1.3	31.4	14.4	52.9

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-6	13.5-15.0'	2/24/09	CH	Light Gray mottled Brownish Yellow Sandy Fat CLAY	8.6	56	25

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 13.5-15.0' **Sample Number:** SS-6
Material Description: Light Gray mottled Brownish Yellow Sandy Fat CLAY
Date: 2/24/09 **Natural Moisture:** 8.6
Liquid Limit: 56 **Plastic Limit:** 25 **USCS Class.:** CH
Testing Remarks: Specific gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
199.57	0.00	0.00	#10	0.00	100.0
47.64	0.00	0.00	#20	0.37	99.2
			#40	0.62	98.7
			#60	1.42	97.0
			#100	4.75	90.0
			#140	9.31	80.5
			#200	15.58	67.3

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =47.64
Hygroscopic moisture correction:
Moist weight and tare = 18.99
Dry weight and tare = 18.25
Tare weight = 5.66
Hygroscopic moisture = 5.9%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.0	37.5	32.0	0.0133	38.5	10.0	0.0297	70.3
5.00	21.1	35.0	29.5	0.0133	36.0	10.4	0.0191	64.9
14.00	21.2	33.0	27.6	0.0132	34.0	10.7	0.0116	60.6
30.00	21.0	32.0	26.5	0.0133	33.0	10.9	0.0080	58.3
60.00	21.4	30.0	24.6	0.0132	31.0	11.2	0.0057	54.2
250.00	21.7	28.0	22.7	0.0132	29.0	11.5	0.0028	50.0
1440.00	21.2	26.0	20.6	0.0132	27.0	11.9	0.0012	45.2

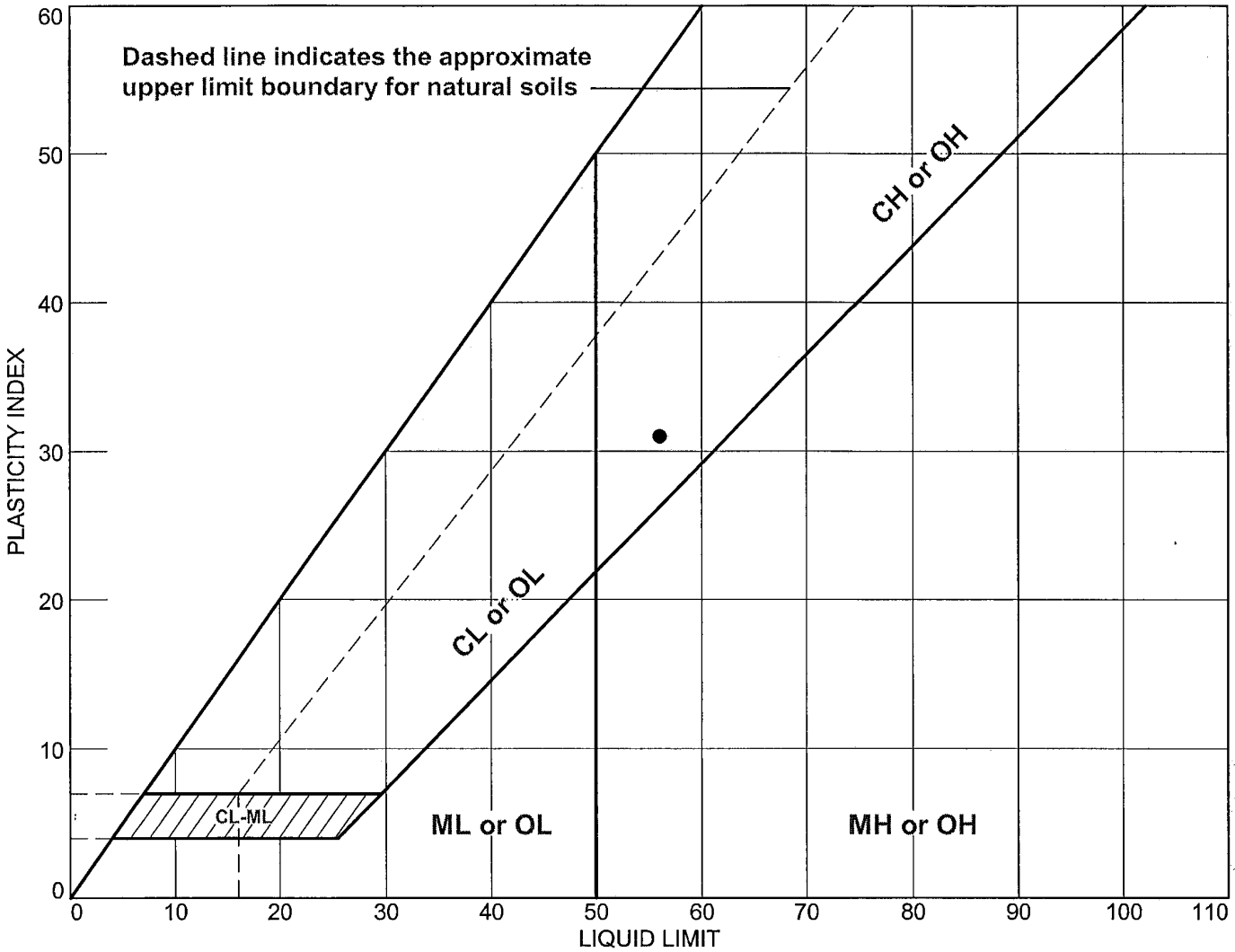
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	1.3	31.4	32.7	14.4	52.9	67.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0028	0.0103	0.1047	0.1217	0.1498	0.2037

Fineness Modulus
0.13

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-6	13.5-15.0'	8.6	25	56	31	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-9-09

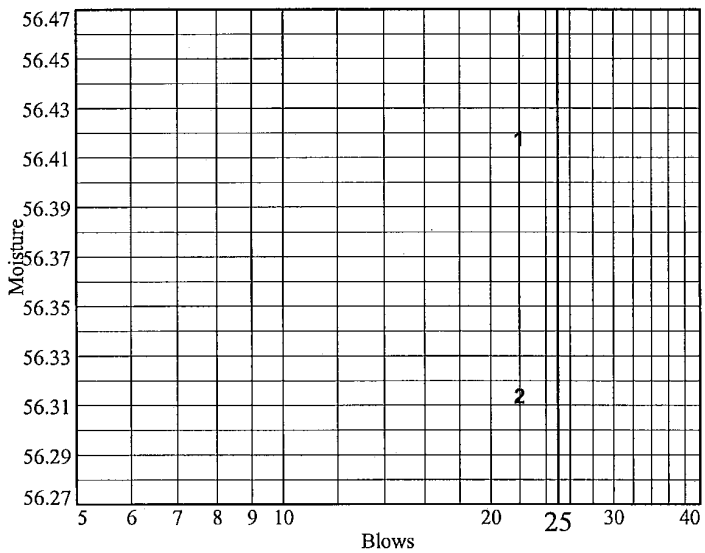
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 13.5-15.0' **Sample Number:** SS-6
Material Description: Light Gray mottled Brownish Yellow Sandy Fat CLAY
USCS: CH **AASHTO:** A-7-6(20)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.12	29.28				
Dry+Tare	22.34	24.33				
Tare	15.64	15.54				
# Blows	22	22				
Moisture	56.4	56.3				



Liquid Limit= 56
Plastic Limit= 25
Plasticity Index= 31
Natural Moisture= 8.6
Liquidity Index= -0.5

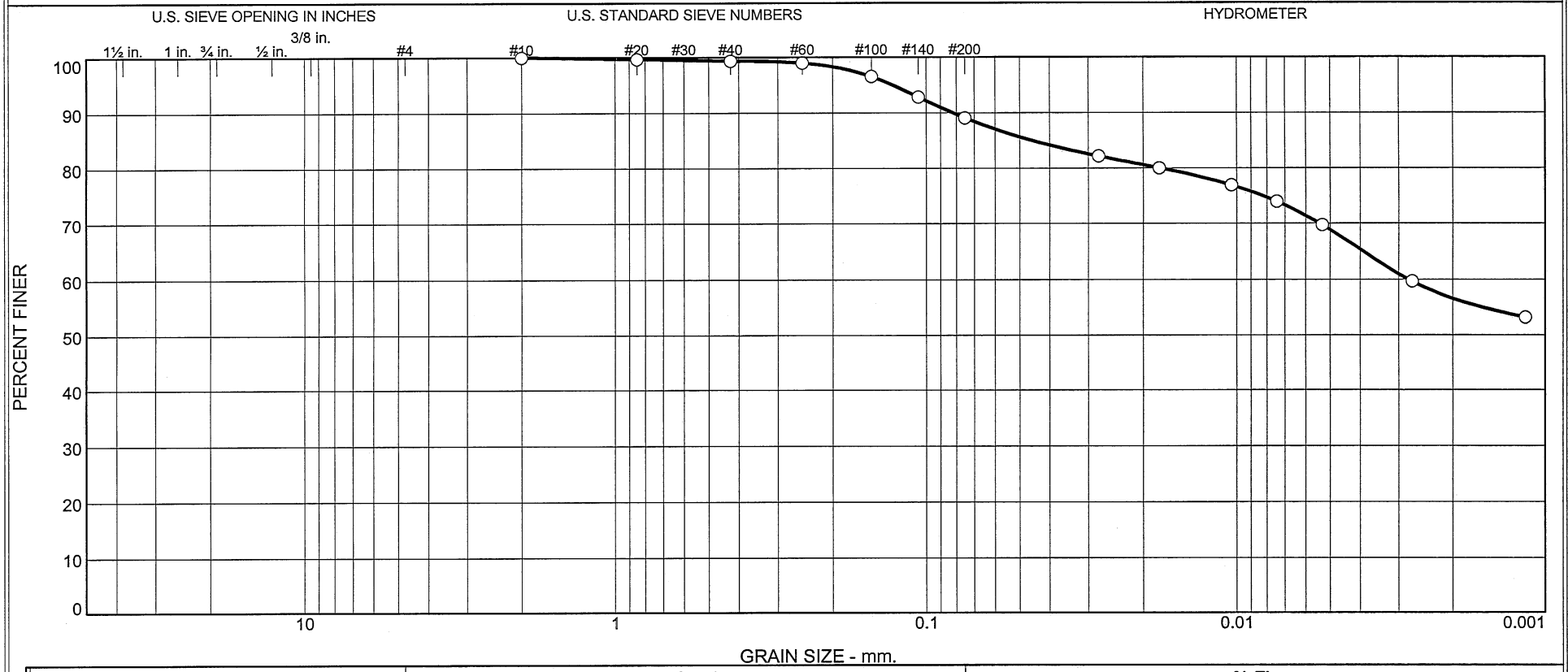
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.54	23.63			
Dry+Tare	20.30	21.99			
Tare	15.43	15.43			
Moisture	25.5	25.0			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
71.75	66.58	6.80	8.6

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.6	10.3	20.3	68.8

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-7	19.0-20.5'	2/24/09	CH	Light Gray mottled Brownish Yellow Fat CLAY	13.5	67	27

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 19.0-20.5' **Sample Number:** SS-7
Material Description: Light Gray mottled Brownish Yellow Fat CLAY
Date: 2/24/09 **Natural Moisture:** 13.5
Liquid Limit: 67 **Plastic Limit:** 27 **USCS Class.:** CH
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
197.79	0.00	0.00	#10	0.00	100.0
49.43	0.00	0.00	#20	0.16	99.7
			#40	0.32	99.4
			#60	0.52	98.9
			#100	1.72	96.5
			#140	3.53	92.9
			#200	5.39	89.1

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =49.43
Hygroscopic moisture correction:
Moist weight and tare = 18.60
Dry weight and tare = 18.11
Tare weight = 5.69
Hygroscopic moisture = 3.9%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.0	45.0	39.5	0.0133	46.0	8.8	0.0278	82.2
5.00	20.9	44.0	38.5	0.0133	45.0	8.9	0.0178	80.0
15.00	20.9	42.5	37.0	0.0133	43.5	9.2	0.0104	76.9
30.00	21.1	41.0	35.5	0.0133	42.0	9.4	0.0074	73.9
61.00	21.0	39.0	33.5	0.0133	40.0	9.7	0.0053	69.7
250.00	21.5	34.0	28.7	0.0132	35.0	10.6	0.0027	59.6
1440.00	21.2	31.0	25.6	0.0132	32.0	11.0	0.0012	53.2

MACTEC Engineering and Consulting, Inc.

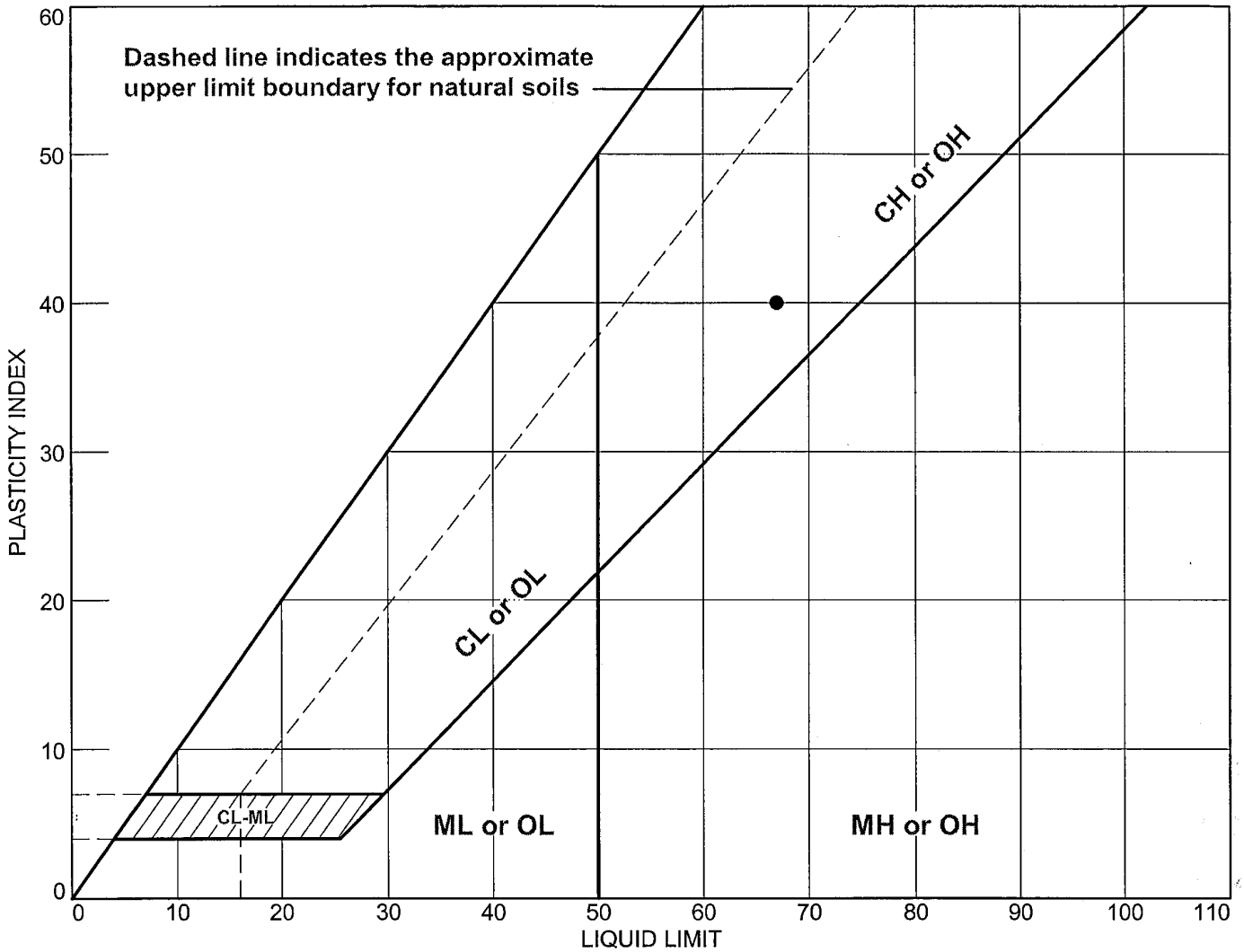
Fractional Components

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	10.3	10.9	20.3	68.8	89.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
					0.0028	0.0177	0.0455	0.0819	0.1282

Fineness Modulus
0.05

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-7	19.0-20.5'	13.5	27	67	40	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

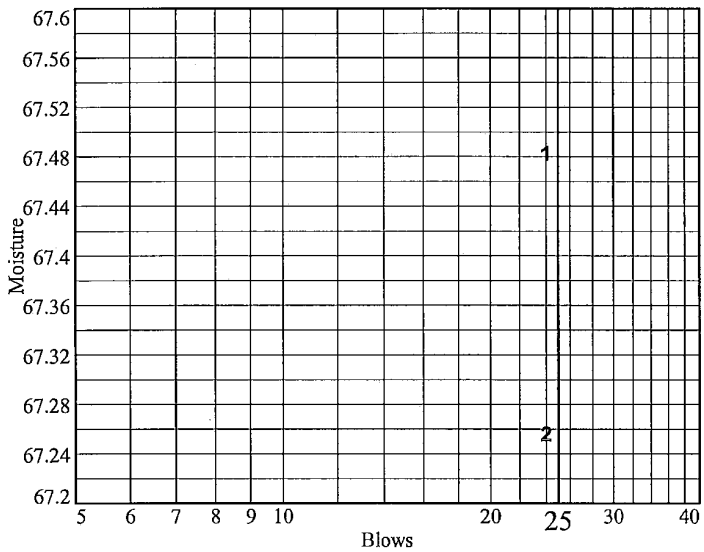
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 19.0-20.5' **Sample Number:** SS-7
Material Description: Light Gray mottled Brownish Yellow Fat CLAY
USCS: CH **AASHTO:** A-7-6(40)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.79	25.09				
Dry+Tare	22.83	21.29				
Tare	15.48	15.64				
# Blows	24	24				
Moisture	67.5	67.3				



Liquid Limit= 67
Plastic Limit= 27
Plasticity Index= 40
Natural Moisture= 13.5
Liquidity Index= -0.3

Plastic Limit Data

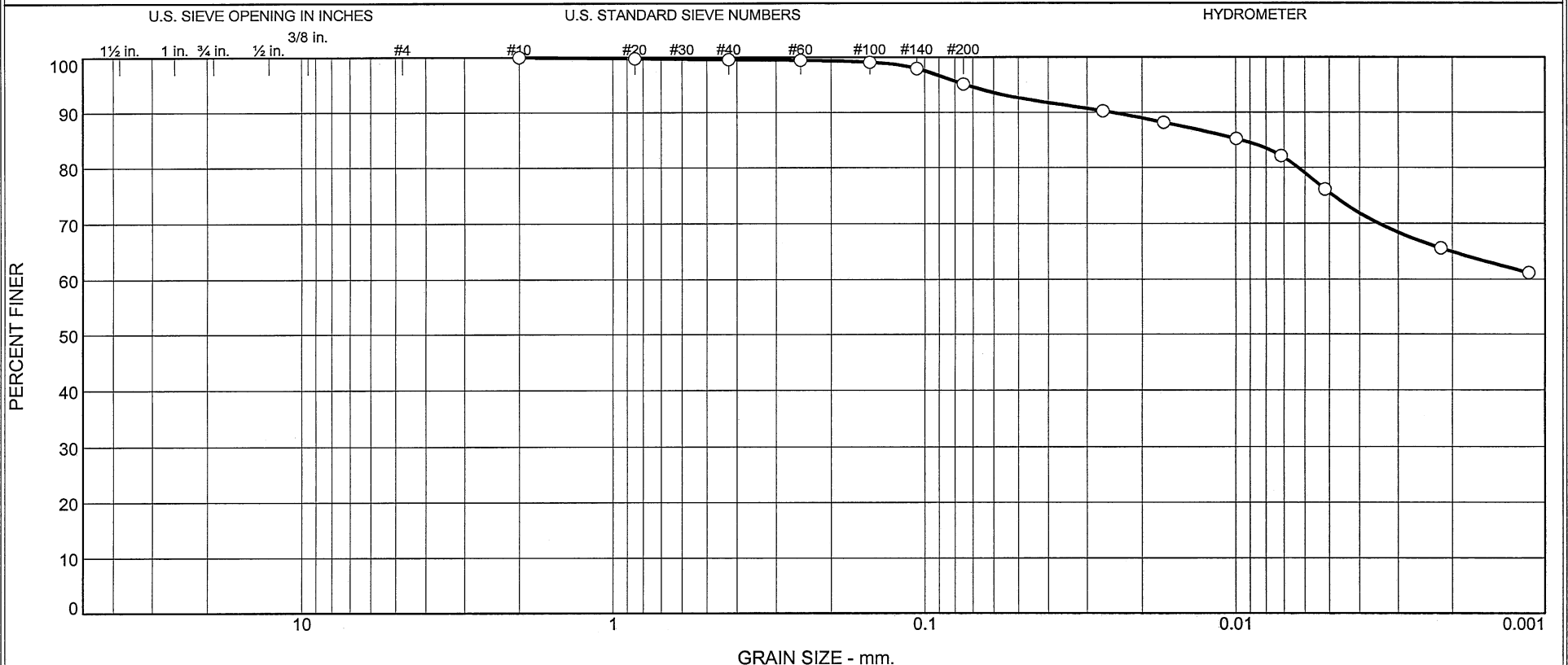
Run No.	1	2	3	4	
Wet+Tare	21.52	21.85			
Dry+Tare	20.20	20.51			
Tare	15.44	15.51			
Moisture	27.7	26.8			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
72.71	64.85	6.84	13.5

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.4	4.5	19.7	75.4

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-8	24.0-25.5'	2/24/09	CH	Light Gray mottled Yellow Fat CLAY	7.5	73	17

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 24.0-25.5' **Sample Number:** SS-8
Material Description: Light Gray mottled Yellow Fat CLAY
Date: 2/24/09 **Natural Moisture:** 7.5
Liquid Limit: 73 **Plastic Limit:** 17 **USCS Class.:** CH
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
196.66	0.00	0.00	#10	0.00	100.0
49.89	0.00	0.00	#20	0.12	99.8
			#40	0.22	99.6
			#60	0.29	99.4
			#100	0.47	99.1
			#140	1.04	97.9
			#200	2.43	95.1

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =49.89
Hygroscopic moisture correction:
Moist weight and tare = 18.85
Dry weight and tare = 18.28
Tare weight = 5.76
Hygroscopic moisture = 4.6%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.1	49.0	43.5	0.0133	50.0	8.1	0.0267	90.2
5.00	21.1	48.0	42.5	0.0133	49.0	8.3	0.0170	88.2
15.00	21.3	46.5	41.1	0.0132	47.5	8.5	0.0100	85.2
30.00	21.3	45.0	39.6	0.0132	46.0	8.8	0.0071	82.1
60.00	21.6	42.0	36.7	0.0132	43.0	9.2	0.0052	76.1
370.00	21.4	37.0	31.6	0.0132	38.0	10.1	0.0022	65.6
1440.00	21.0	35.0	29.5	0.0133	36.0	10.4	0.0011	61.1

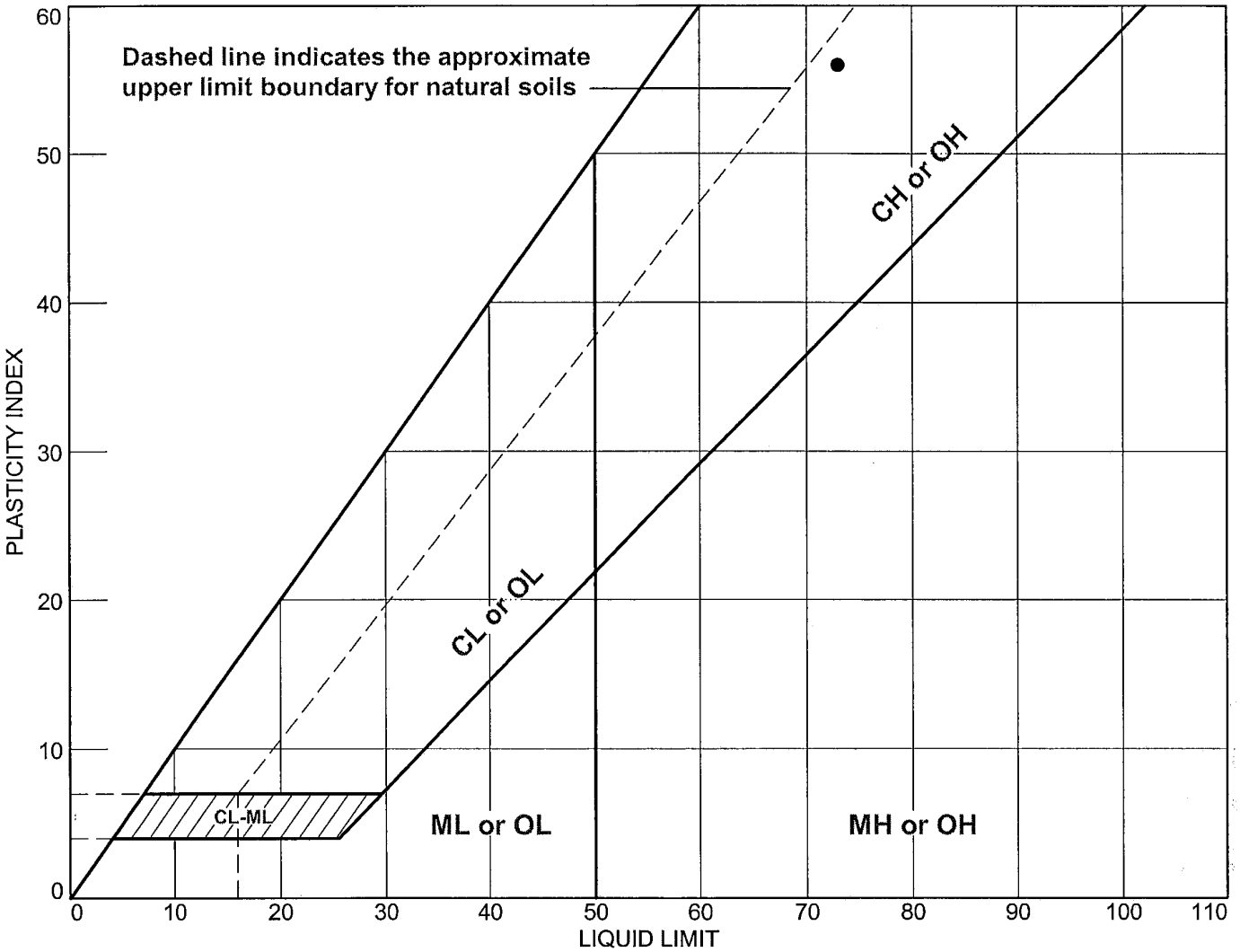
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.4	4.5	4.9	19.7	75.4	95.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
						0.0063	0.0097	0.0252	0.0738

Fineness Modulus
0.02

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-8	24.0-25.5'	7.5	17	73	56	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

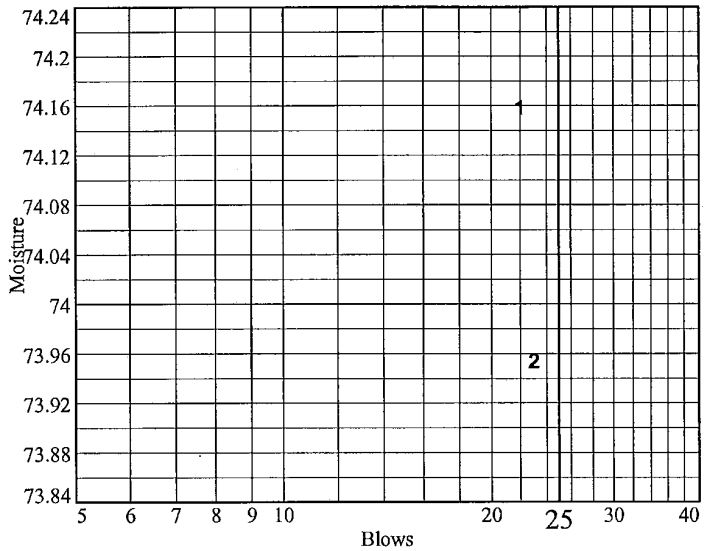
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 24.0-25.5' **Sample Number:** SS-8
Material Description: Light Gray mottled Yellow Fat CLAY
USCS: CH **AASHTO:** A-7-6(59)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.90	20.32				
Dry+Tare	22.05	16.43				
Tare	15.51	11.17				
# Blows	22	23				
Moisture	74.2	74.0				



Liquid Limit= 73
Plastic Limit= 17
Plasticity Index= 56
Natural Moisture= 7.5
Liquidity Index= -0.2

Plastic Limit Data

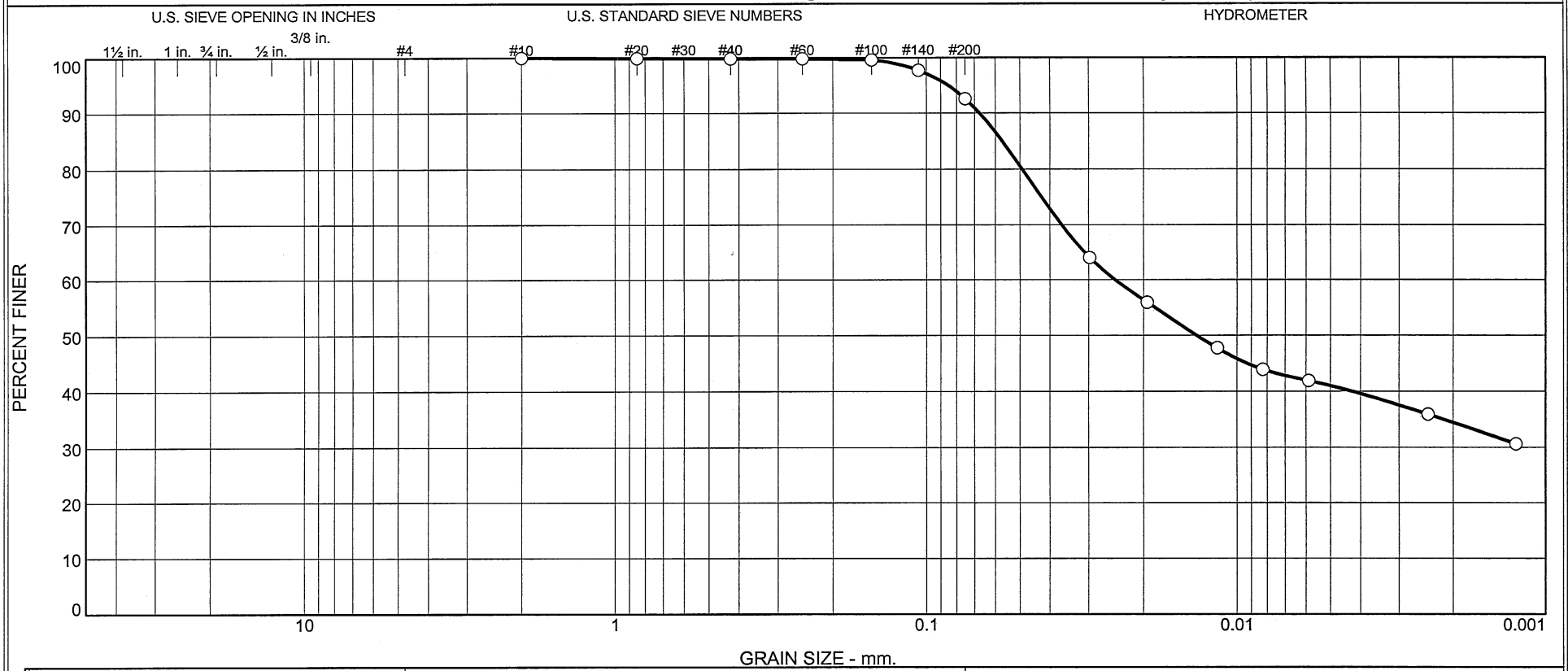
Run No.	1	2	3	4	
Wet+Tare	21.48	22.82			
Dry+Tare	20.62	21.73			
Tare	15.46	15.27			
Moisture	16.7	16.9			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
71.18	66.89	9.48	7.5

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.2	7.2	51.6	41.0

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-9	29.0-30.5'	2/25/09	CH	Very Pale Brown mottled Yellow Fat CLAY	3.1	53	18

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 29.0-30.5' **Sample Number:** SS-9
Material Description: Very Pale Brown mottled Yellow Fat CLAY
Date: 2/25/09 **Natural Moisture:** 3.1
Liquid Limit: 53 **Plastic Limit:** 18 **USCS Class.:** CH
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
208.72	0.00	0.00	#10	0.00	100.0
50.12	0.00	0.00	#20	0.06	99.9
			#40	0.09	99.8
			#60	0.11	99.8
			#100	0.22	99.6
			#140	1.15	97.7
			#200	3.72	92.6

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.12
Hygroscopic moisture correction:
Moist weight and tare = 18.58
Dry weight and tare = 18.21
Tare weight = 5.68
Hygroscopic moisture = 3.0%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.0	37.0	31.5	0.0133	38.0	10.1	0.0298	64.0
5.00	21.0	33.0	27.5	0.0133	34.0	10.7	0.0194	55.9
15.00	21.0	29.0	23.5	0.0133	30.0	11.4	0.0116	47.7
30.00	21.4	27.0	21.6	0.0132	28.0	11.7	0.0083	44.0
60.00	21.4	26.0	20.6	0.0132	27.0	11.9	0.0059	41.9
370.00	21.5	23.0	17.7	0.0132	24.0	12.4	0.0024	35.9
1440.00	21.2	20.5	15.1	0.0132	21.5	12.8	0.0012	30.6

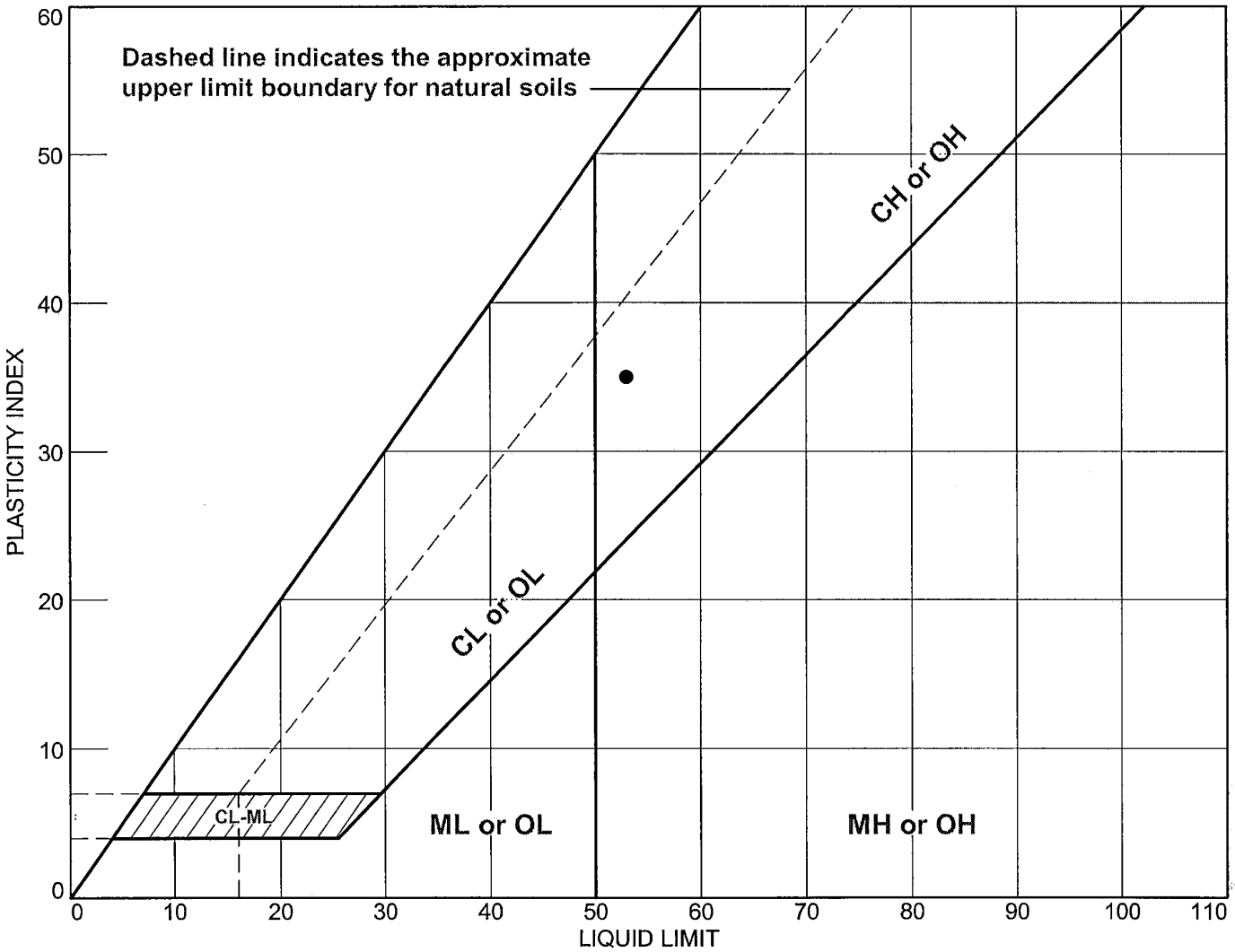
Fractional Components

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	7.2	7.4	51.6	41.0	92.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0135	0.0248	0.0492	0.0571	0.0675	0.0851

Fineness Modulus
0.01

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-9	29.0-30.5'	3.1	18	53	35	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

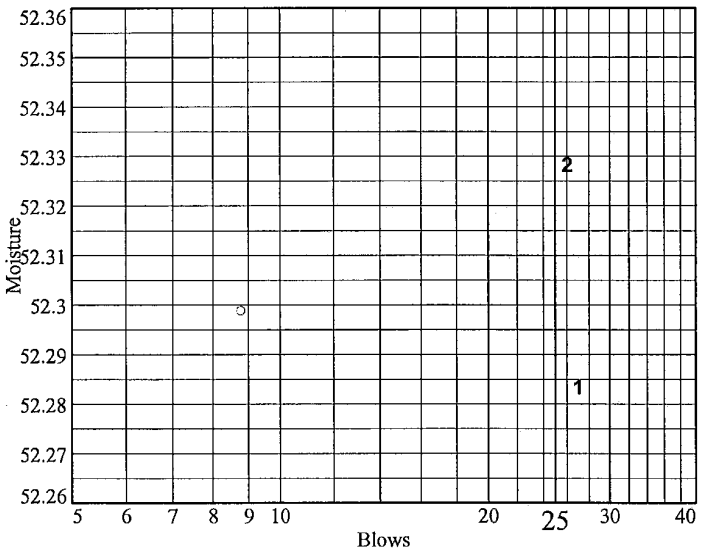
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 29.0-30.5' **Sample Number:** SS-9
Material Description: Very Pale Brown mottled Yellow Fat CLAY
USCS: CH **AASHTO:** A-7-6(35)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.41	27.92				
Dry+Tare	24.06	23.65				
Tare	15.74	15.49				
# Blows	27	26				
Moisture	52.3	52.3				



Liquid Limit= 53
Plastic Limit= 18
Plasticity Index= 35
Natural Moisture= 3.1
Liquidity Index= -0.4

Plastic Limit Data

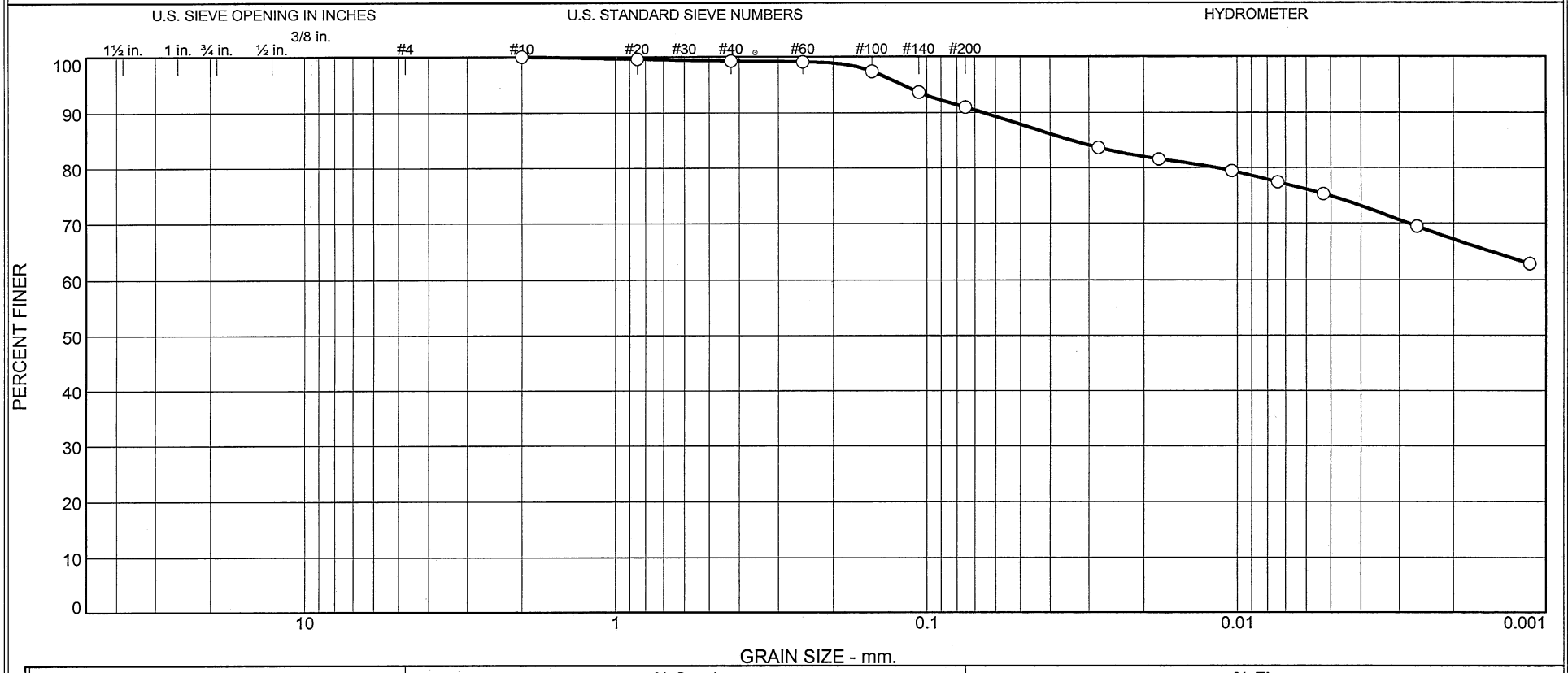
Run No.	1	2	3	4	
Wet+Tare	22.03	22.86			
Dry+Tare	21.03	21.71			
Tare	15.43	15.54			
Moisture	17.9	18.6			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
97.62	94.90	6.78	3.1

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.8	8.2	16.2	74.8

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-10	34.0-35.5'	2/25/09	CH	Yellow mottled Very Pale Brown Fat CLAY	24.1	69	26

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is Assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 34.0-35.5' **Sample Number:** SS-10
Material Description: Yellow mottled Very Pale Brown Fat CLAY
Date: 2/25/09 **Natural Moisture:** 24.1
Liquid Limit: 69 **Plastic Limit:** 26 **USCS Class.:** CH
Testing Remarks: Specific Gravity is Assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
196.67	0.00	0.00	#10	0.00	100.0
48.52	0.00	0.00	#20	0.21	99.6
			#40	0.37	99.2
			#60	0.45	99.1
			#100	1.27	97.4
			#140	3.09	93.6
			#200	4.38	91.0

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =48.52
Hygroscopic moisture correction:
Moist weight and tare = 29.46
Dry weight and tare = 28.93
Tare weight = 17.08
Hygroscopic moisture = 4.5%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	45.0	39.3	0.0134	46.0	8.8	0.0280	83.7
5.00	20.4	44.0	38.3	0.0134	45.0	8.9	0.0179	81.6
15.00	20.4	43.0	37.3	0.0134	44.0	9.1	0.0104	79.4
30.00	20.5	42.0	36.3	0.0134	43.0	9.2	0.0074	77.4
60.00	20.5	41.0	35.3	0.0134	42.0	9.4	0.0053	75.2
250.00	21.3	38.0	32.6	0.0132	39.0	9.9	0.0026	69.4
1440.00	21.0	35.0	29.5	0.0133	36.0	10.4	0.0011	62.8

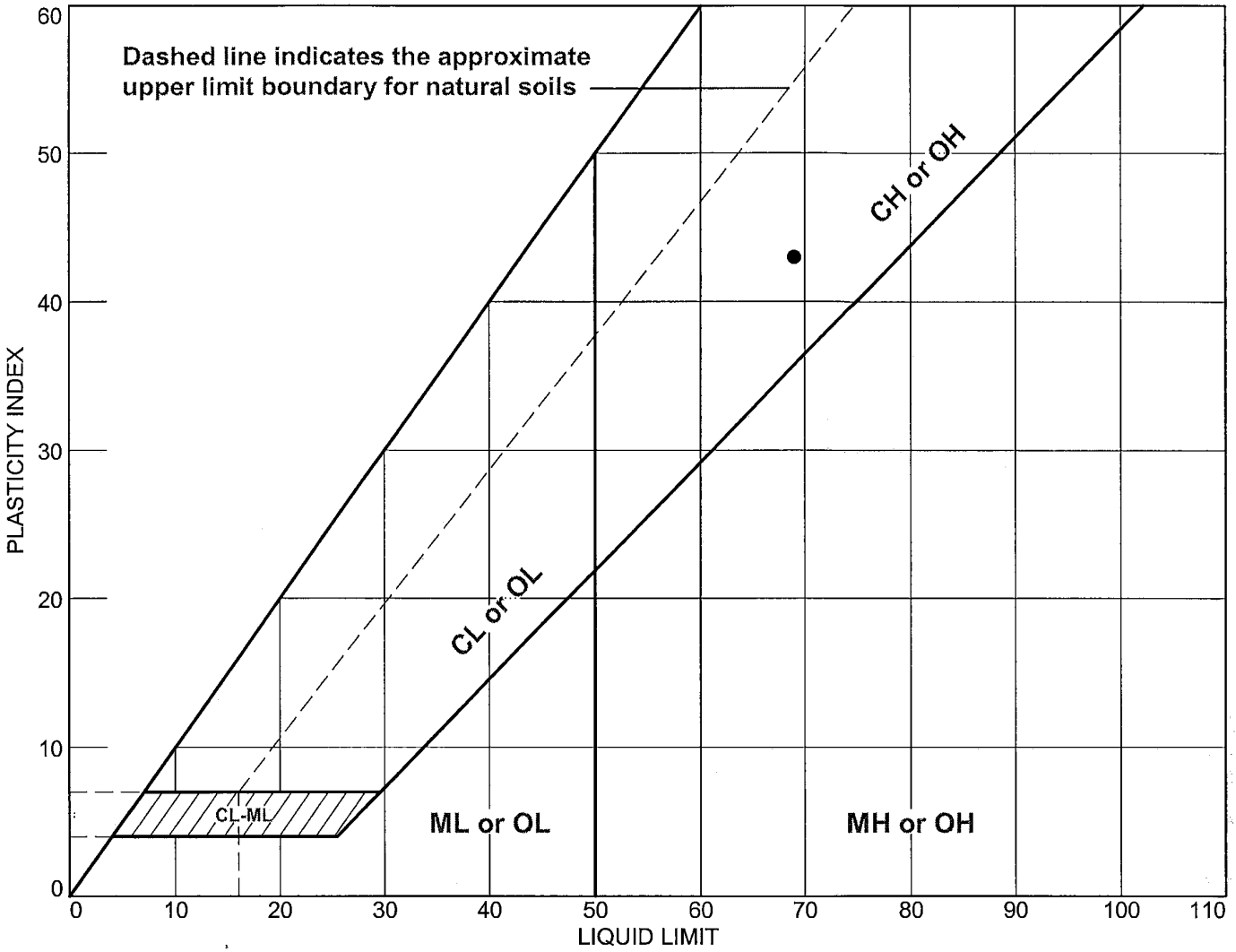
Fractional Components

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	8.2	9.0	16.2	74.8	91.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
						0.0117	0.0342	0.0655	0.1201

Fineness Modulus
0.04

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-10	34.0-35.5'	24.1	26	69	43	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

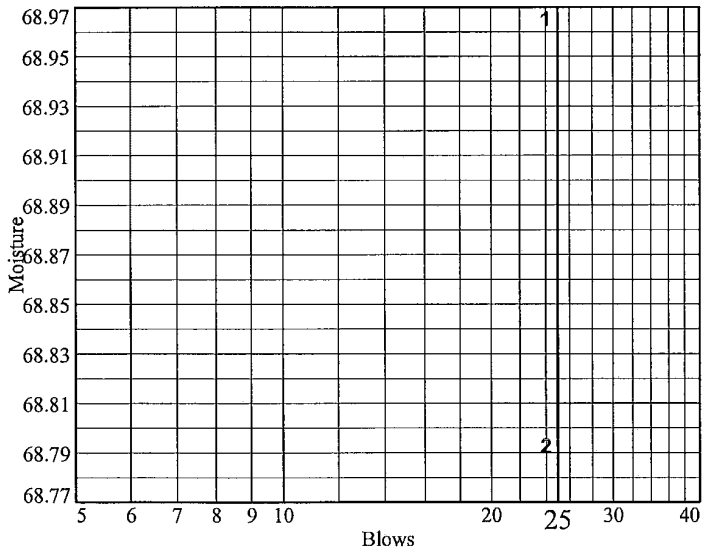
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 34.0-35.5' **Sample Number:** SS-10
Material Description: Yellow mottled Very Pale Brown Fat CLAY
USCS: CH **AASHTO:** A-7-6(44)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.07	25.09				
Dry+Tare	22.47	21.10				
Tare	15.80	15.30				
# Blows	24	24				
Moisture	69.0	68.8				



Liquid Limit= 69
Plastic Limit= 26
Plasticity Index= 43
Natural Moisture= 24.1
Liquidity Index= 0.0

Plastic Limit Data

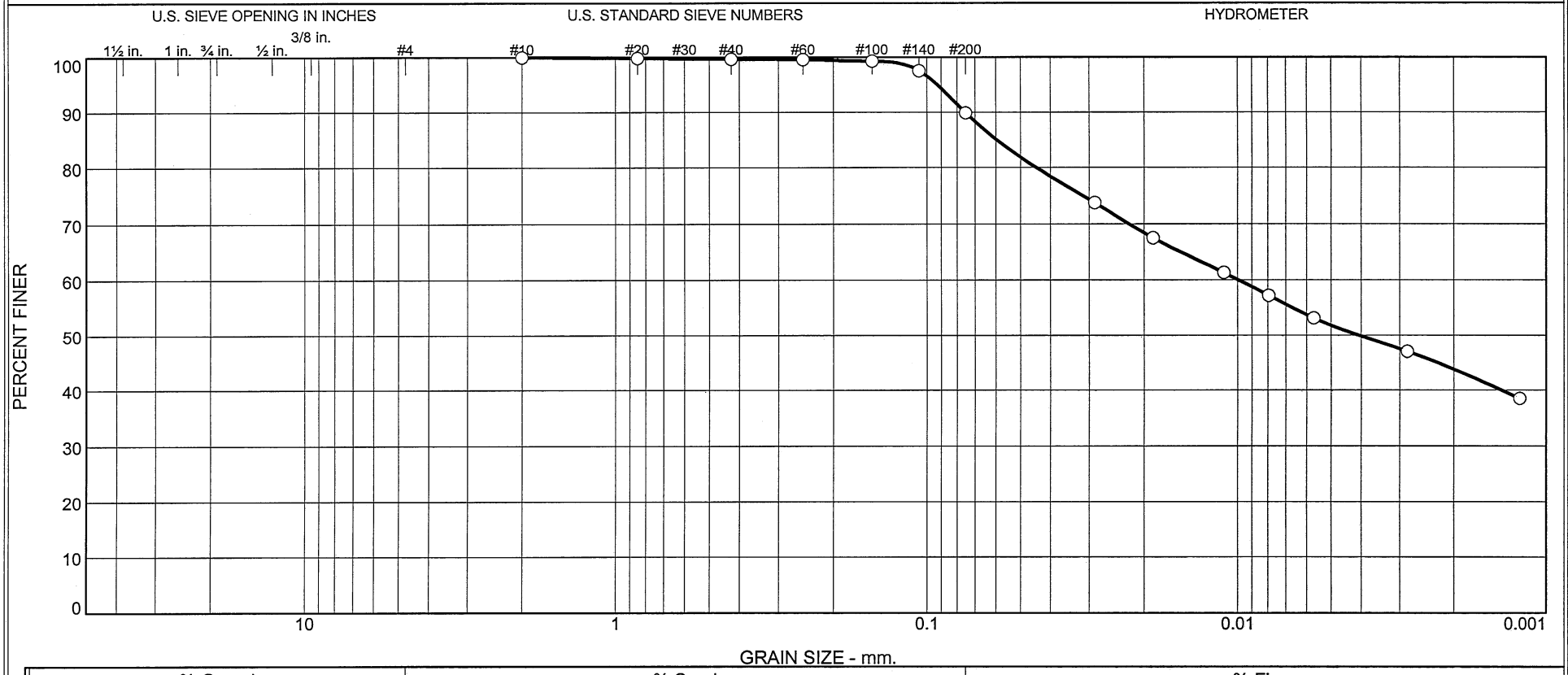
Run No.	1	2	3	4	
Wet+Tare	21.75	22.54			
Dry+Tare	20.44	21.04			
Tare	15.42	15.30			
Moisture	26.1	26.1			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
71.25	58.75	6.91	24.1

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.3	9.8	38.1	51.8

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-11	39.0-40.5'	2/25/09	CH	Yellow Fat CLAY	6.1	51	18

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 39.0-40.5' **Sample Number:** SS-11
Material Description: Yellow Fat CLAY
Date: 2/25/09 **Natural Moisture:** 6.1
Liquid Limit: 51 **Plastic Limit:** 18 **USCS Class.:** CH
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
209.94	0.00	0.00	#10	0.00	100.0
49.12	0.00	0.00	#20	0.08	99.8
			#40	0.16	99.7
			#60	0.21	99.6
			#100	0.36	99.3
			#140	1.19	97.6
			#200	4.97	89.9

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =49.12
Hygroscopic moisture correction:
Moist weight and tare = 18.47
Dry weight and tare = 18.08
Tare weight = 5.67
Hygroscopic moisture = 3.1%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.0	41.0	35.5	0.0133	42.0	9.4	0.0288	73.7
5.00	21.0	38.0	32.5	0.0133	39.0	9.9	0.0187	67.5
15.00	21.0	35.0	29.5	0.0133	36.0	10.4	0.0111	61.3
30.00	21.1	33.0	27.5	0.0133	34.0	10.7	0.0079	57.2
60.00	21.2	31.0	25.6	0.0132	32.0	11.0	0.0057	53.1
250.00	21.5	28.0	22.7	0.0132	29.0	11.5	0.0028	47.1
1440.00	21.1	24.0	18.5	0.0133	25.0	12.2	0.0012	38.5

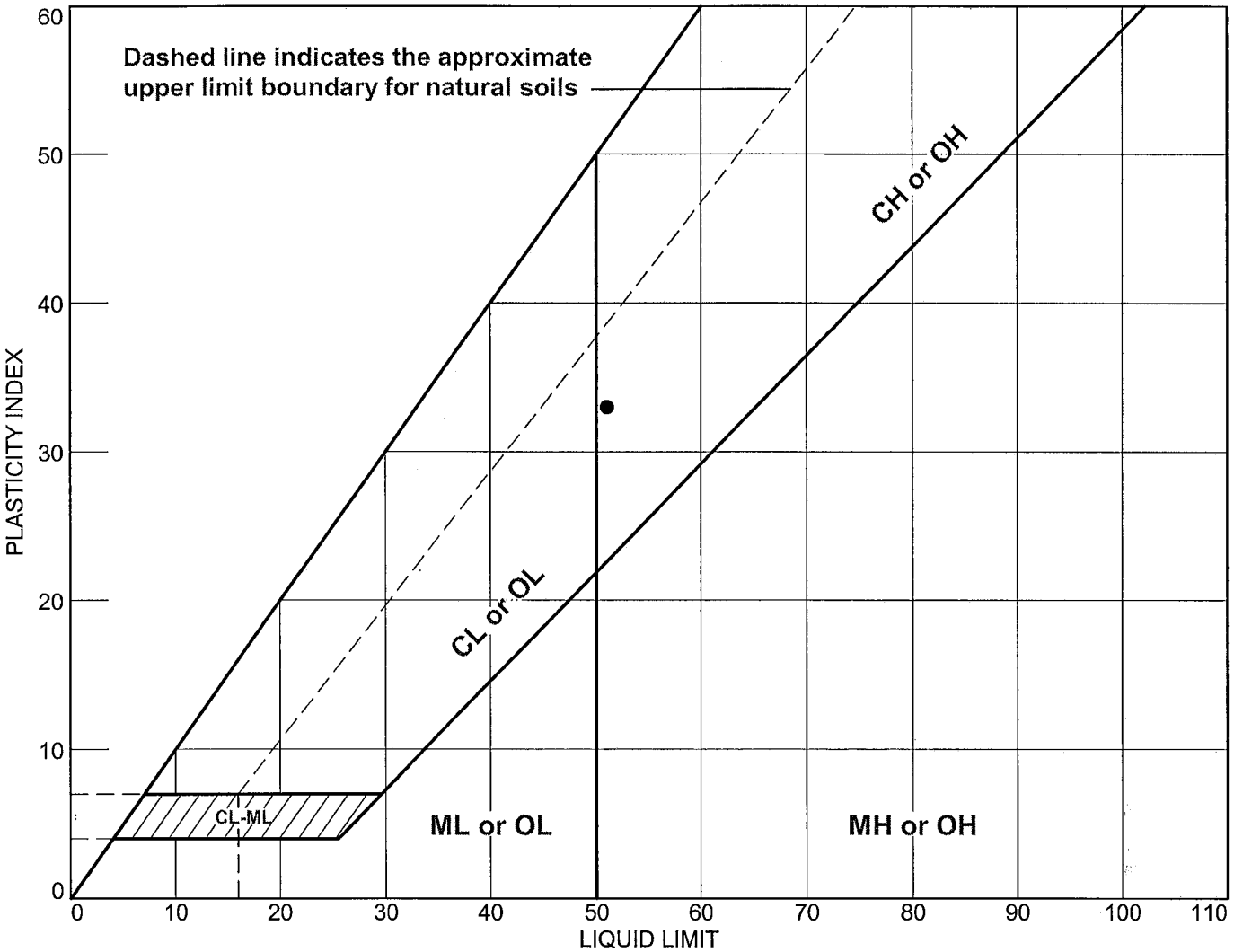
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.3	9.8	10.1	38.1	51.8	89.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0041	0.0099	0.0446	0.0598	0.0754	0.0925

Fineness Modulus
0.01

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-11	39.0-40.5'	6.1	18	51	33	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

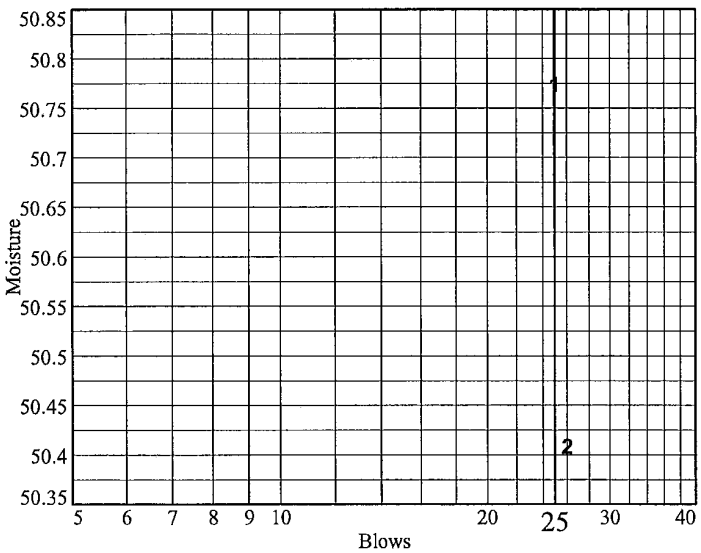
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 39.0-40.5' **Sample Number:** SS-11
Material Description: Yellow Fat CLAY
USCS: CH **AASHTO:** A-7-6(31)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.16	24.70				
Dry+Tare	23.90	21.62				
Tare	15.51	15.51				
# Blows	25	26				
Moisture	50.8	50.4				



Liquid Limit= 51
Plastic Limit= 18
Plasticity Index= 33
Natural Moisture= 6.1
Liquidity Index= -0.4

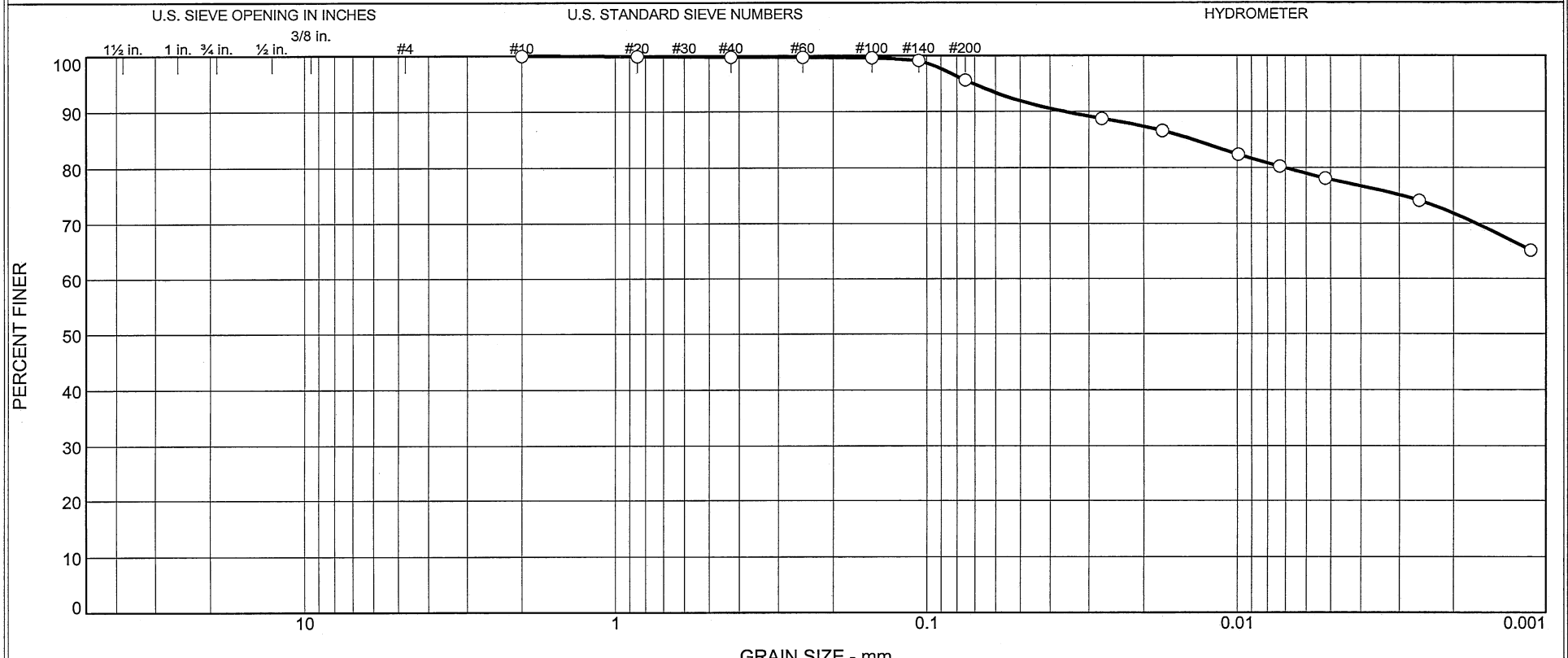
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.85	18.40			
Dry+Tare	20.89	17.31			
Tare	15.56	11.11			
Moisture	18.0	17.6			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
73.12	69.31	6.85	6.1

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.2	4.3	17.6	77.9

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-12	44.0-45.5'	2/25/09	CH	Yellow Fat CLAY	14.2	75	16

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/4/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 44.0-45.5' **Sample Number:** SS-12
Material Description: Yellow Fat CLAY
Date: 2/25/09 **Natural Moisture:** 14.2
Liquid Limit: 75 **Plastic Limit:** 16 **USCS Class.:** CH
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
196.79	0.00	0.00	#10	0.00	100.0
48.23	0.00	0.00	#20	0.06	99.9
			#40	0.12	99.8
			#60	0.15	99.7
			#100	0.19	99.6
			#140	0.44	99.1
			#200	2.15	95.5

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =48.23
Hygroscopic moisture correction:
Moist weight and tare = 18.49
Dry weight and tare = 17.97
Tare weight = 5.69
Hygroscopic moisture = 4.2%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.0	47.0	41.5	0.0133	48.0	8.4	0.0272	88.7
5.00	21.0	46.0	40.5	0.0133	47.0	8.6	0.0174	86.6
16.00	21.1	44.0	38.5	0.0133	45.0	8.9	0.0099	82.4
30.00	21.1	43.0	37.5	0.0133	44.0	9.1	0.0073	80.2
60.00	21.1	42.0	36.5	0.0133	43.0	9.2	0.0052	78.1
250.00	21.5	40.0	34.7	0.0132	41.0	9.6	0.0026	74.1
1440.00	20.9	36.0	30.5	0.0133	37.0	10.2	0.0011	65.1

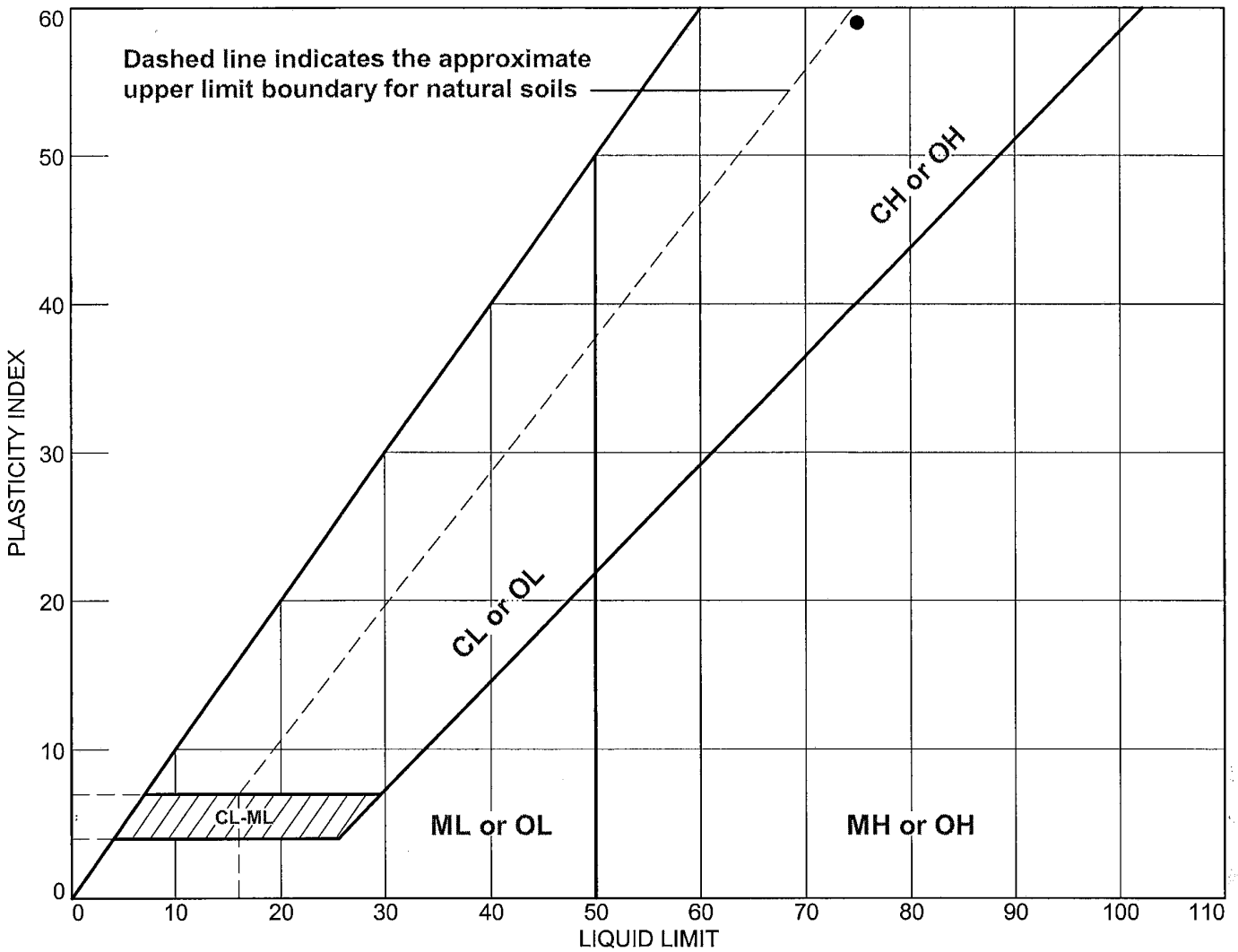
Fractional Components

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	4.3	4.5	17.6	77.9	95.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
						0.0070	0.0139	0.0362	0.0714

Fineness Modulus
0.01

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-12	44.0-45.5'	14.2	16	75	59	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

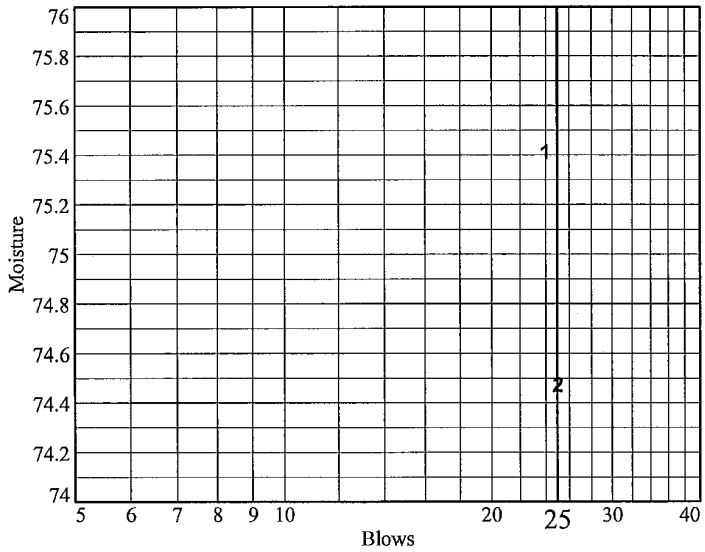
LIQUID AND PLASTIC LIMIT TEST DATA

5/4/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 44.0-45.5' **Sample Number:** SS-12
Material Description: Yellow Fat CLAY
USCS: CH **AASHTO:** A-7-6(63)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.91	24.71				
Dry+Tare	20.83	20.80				
Tare	15.42	15.55				
# Blows	24	25				
Moisture	75.4	74.5				



Liquid Limit= 75
Plastic Limit= 16
Plasticity Index= 59
Natural Moisture= 14.2
Liquidity Index= 0.0

Plastic Limit Data

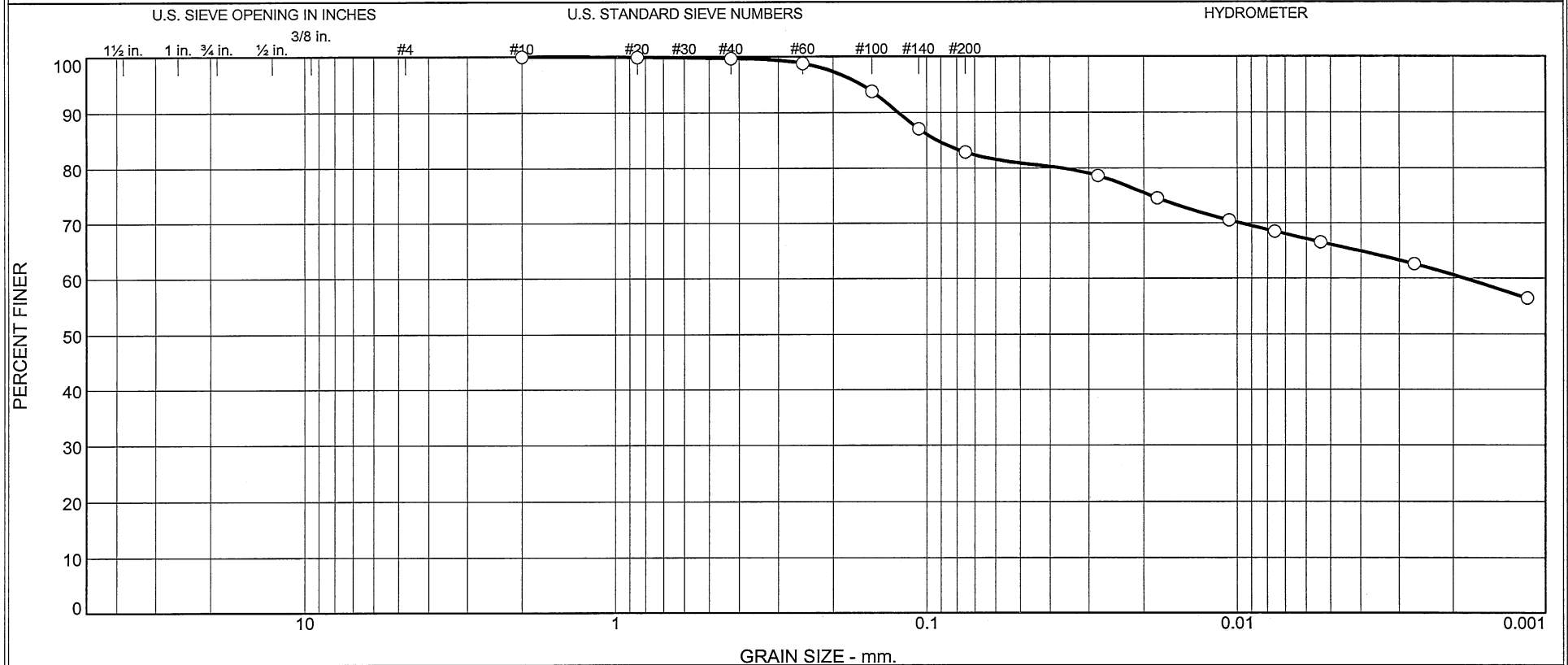
Run No.	1	2	3	4	
Wet+Tare	21.55	18.11			
Dry+Tare	20.71	17.13			
Tare	15.48	11.10			
Moisture	16.1	16.3			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
71.74	63.68	7.02	14.2

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.3	16.8	16.8	66.1

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-13	49.0-50.5'	2/25/09	CH	Very Pale Brown mottled Yellow Fat CLAY with sand	21.1	59	17

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 49.0-50.5' **Sample Number:** SS-13
Material Description: Very Pale Brown mottled Yellow Fat CLAY with sand
Date: 2/25/09 **Natural Moisture:** 21.1
Liquid Limit: 59 **Plastic Limit:** 17 **USCS Class.:** CH
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
295.05	0.00	0.00	#10	0.00	100.0
50.52	0.00	0.00	#20	0.05	99.9
			#40	0.17	99.7
			#60	0.62	98.8
			#100	3.15	93.8
			#140	6.54	87.1
			#200	8.66	82.9

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.52
Hygroscopic moisture correction:
Moist weight and tare = 17.98
Dry weight and tare = 17.60
Tare weight = 5.79
Hygroscopic moisture = 3.2%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.9	44.0	38.9	0.0133	45.0	8.9	0.0281	78.6
5.00	20.9	42.0	36.9	0.0133	43.0	9.2	0.0181	74.5
15.00	20.9	40.0	34.9	0.0133	41.0	9.6	0.0106	70.5
30.00	20.9	39.0	33.9	0.0133	40.0	9.7	0.0076	68.5
60.00	21.0	38.0	32.9	0.0133	39.0	9.9	0.0054	66.5
250.00	21.1	36.0	30.9	0.0133	37.0	10.2	0.0027	62.5
1440.00	21.0	33.0	27.9	0.0133	34.0	10.7	0.0011	56.4

MACTEC Engineering and Consulting, Inc.

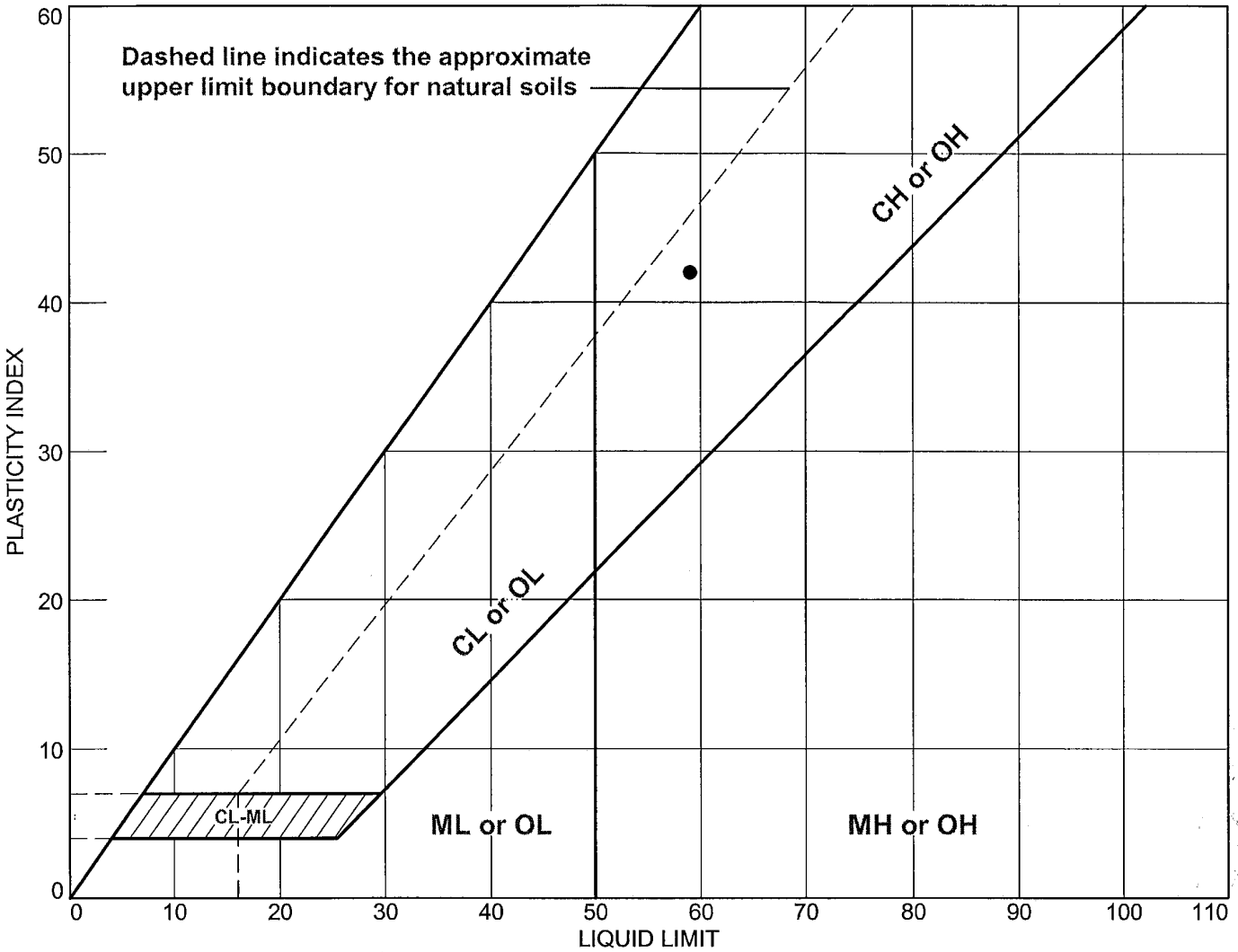
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.3	16.8	17.1	16.8	66.1	82.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
					0.0018	0.0372	0.0925	0.1235	0.1622

Fineness Modulus
0.07

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-13	49.0-50.5'	21.1	17	59	42	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

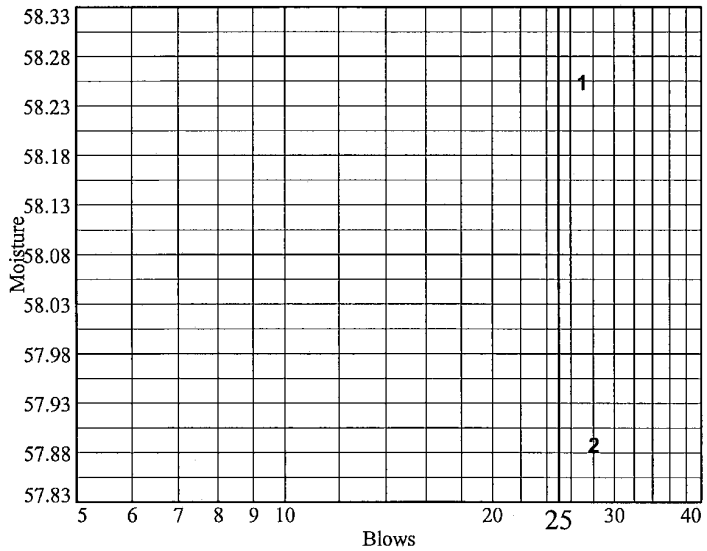
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 49.0-50.5' **Sample Number:** SS-13
Material Description: Very Pale Brown mottled Yellow Fat CLAY with sand
USCS: CH **AASHTO:** A-7-6(36)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.52	29.48				
Dry+Tare	21.85	24.38				
Tare	15.55	15.57				
# Blows	27	28				
Moisture	58.3	57.9				



Liquid Limit= 59
Plastic Limit= 17
Plasticity Index= 42
Natural Moisture= 21.1
Liquidity Index= 0.1

Plastic Limit Data

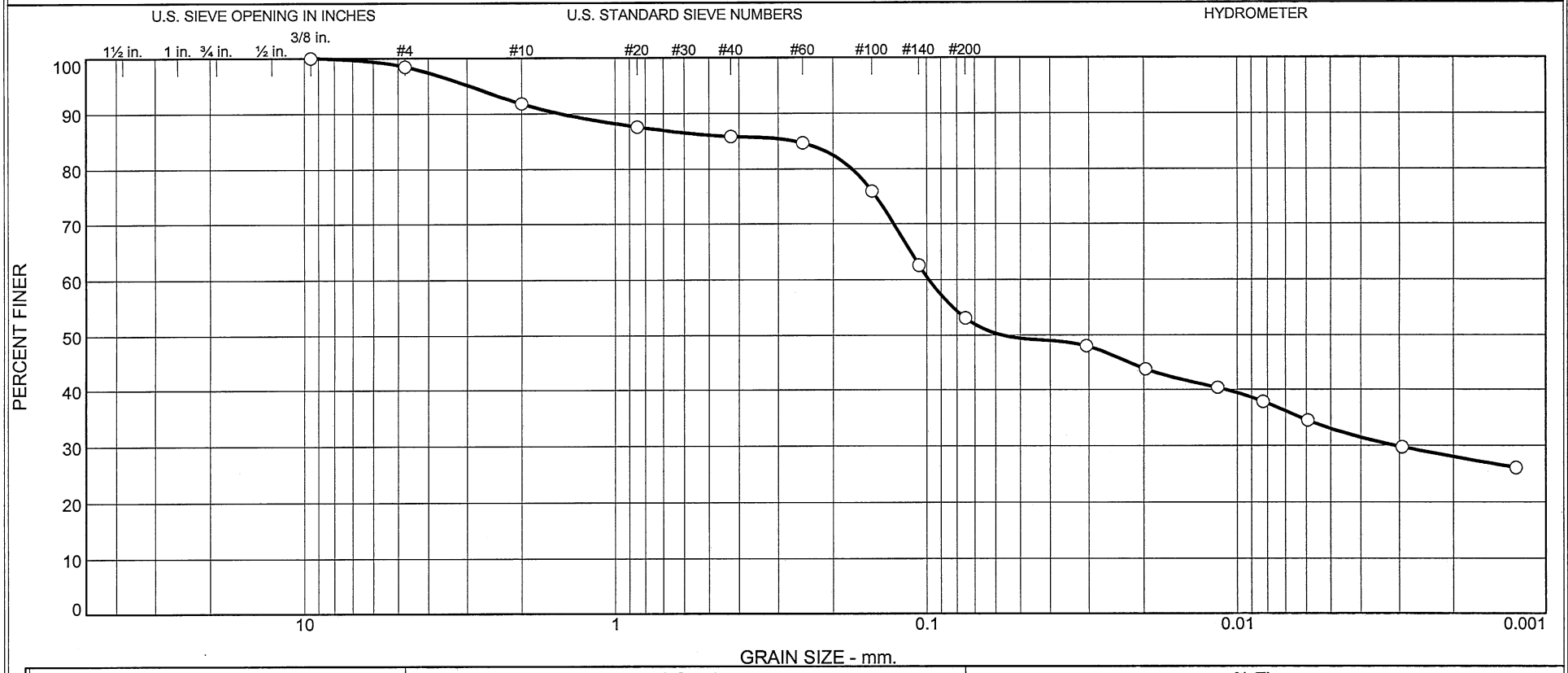
Run No.	1	2	3	4	
Wet+Tare	21.55	21.81			
Dry+Tare	20.66	20.96			
Tare	15.49	15.80			
Moisture	17.2	16.5			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
83.08	69.82	6.91	21.1

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	1.5	6.7	6.0	32.7	20.1	33.0

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-14	54.0-55.5'	2/25/09	CL	Very Pale Brown Sandy Lean CLAY	15.9	40	20

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 54.0-55.5' **Sample Number:** SS-14
Material Description: Very Pale Brown Sandy Lean CLAY
Date: 2/25/09 **Natural Moisture:** 15.9
Liquid Limit: 40 **Plastic Limit:** 20 **USCS Class.:** CL
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
248.54	0.00	0.00	3/8	0.00	100.0
			#4	3.85	98.5
			#10	20.36	91.8
54.66	0.00	0.00	#20	2.51	87.6
			#40	3.55	85.8
			#60	4.25	84.7
			#100	9.46	75.9
			#140	17.45	62.5
			#200	23.07	53.1

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 91.8
Weight of hydrometer sample =54.66
Hygroscopic moisture correction:
Moist weight and tare = 19.51
Dry weight and tare = 19.28
Tare weight = 5.67
Hygroscopic moisture = 1.7%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.8	34.0	28.4	0.0133	35.0	10.6	0.0306	48.0
5.00	20.8	31.5	25.9	0.0133	32.5	11.0	0.0197	43.8
15.00	20.7	29.5	23.9	0.0133	30.5	11.3	0.0116	40.4
30.00	20.7	28.0	22.4	0.0133	29.0	11.5	0.0083	37.8
60.00	20.7	26.0	20.4	0.0133	27.0	11.9	0.0059	34.5
250.00	21.3	23.0	17.6	0.0132	24.0	12.4	0.0029	29.7
1440.00	20.8	21.0	15.4	0.0133	22.0	12.7	0.0012	26.1

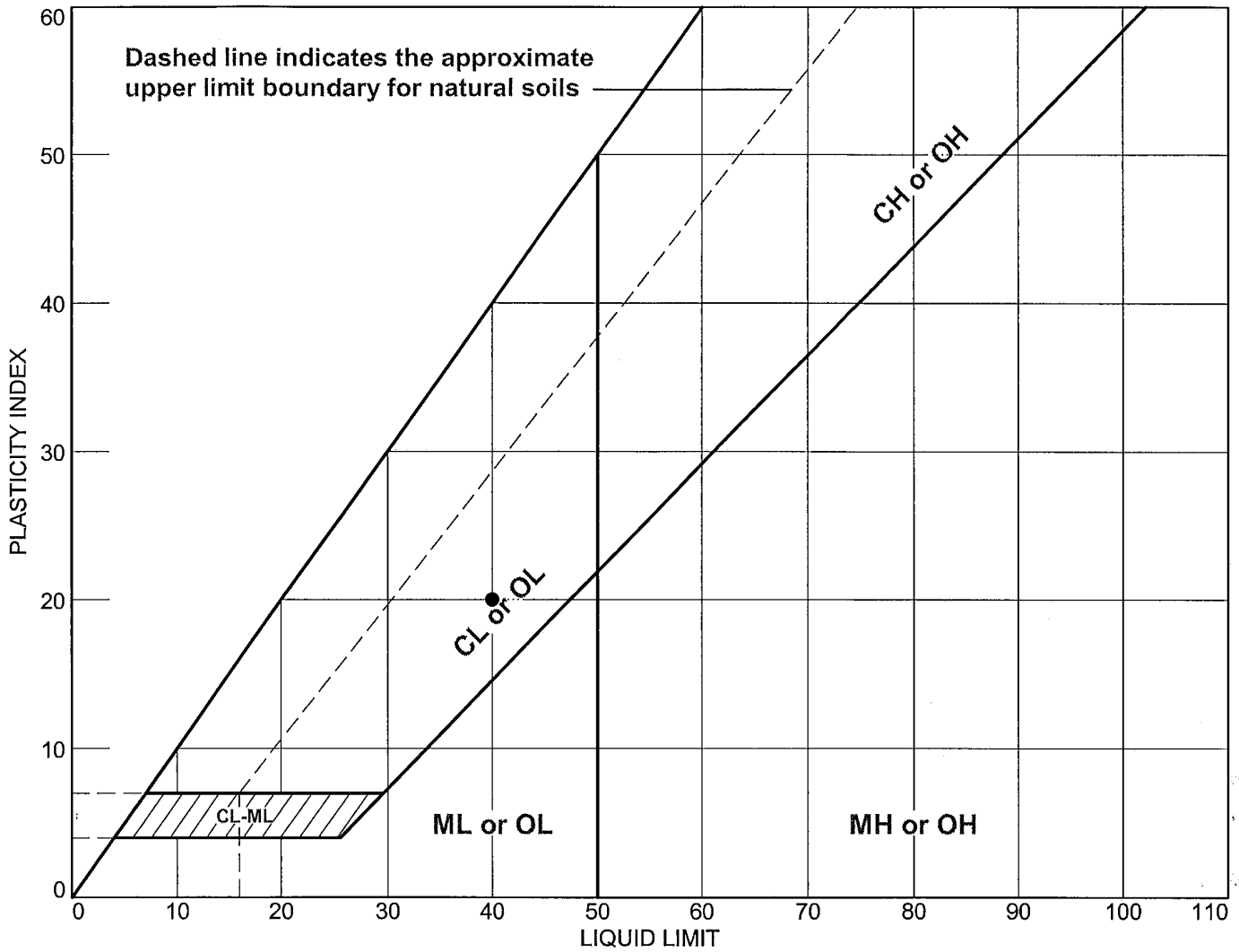
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.5	1.5	6.7	6.0	32.7	45.4	20.1	33.0	53.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0031	0.0572	0.0987	0.1743	0.2657	1.5004	2.9534

Fineness Modulus
0.72

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-14	54.0-55.5'	15.9	20	40	20	CL

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

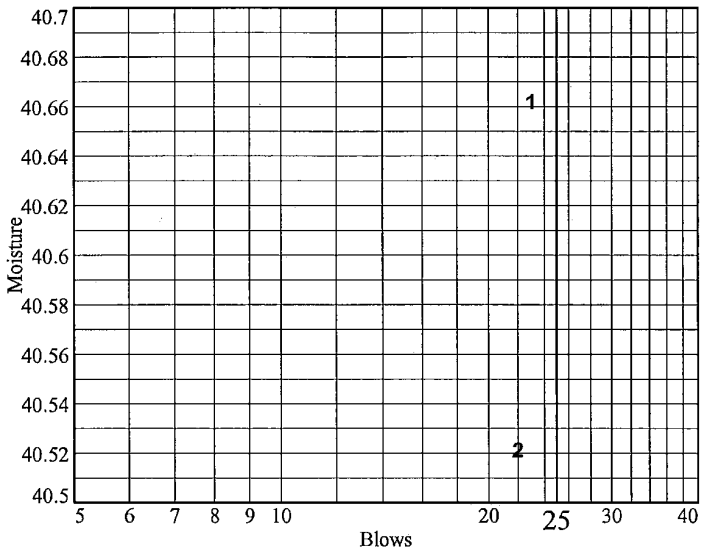
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 54.0-55.5' **Sample Number:** SS-14
Material Description: Very Pale Brown Sandy Lean CLAY
USCS: CL **AASHTO:** A-6(7)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.11	29.52				
Dry+Tare	23.04	25.48				
Tare	15.49	15.51				
# Blows	23	22				
Moisture	40.7	40.5				



Liquid Limit= 40
Plastic Limit= 20
Plasticity Index= 20
Natural Moisture= 15.9
Liquidity Index= -0.2

Plastic Limit Data

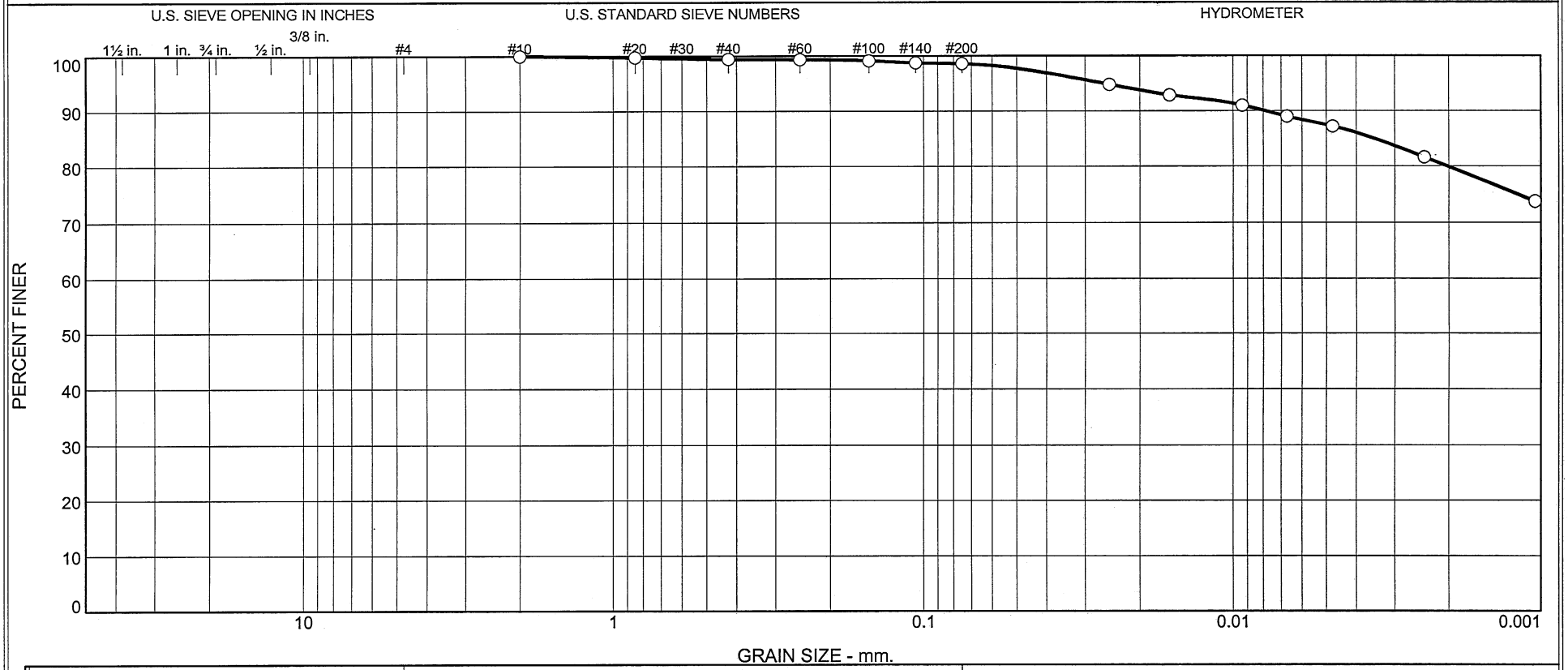
Run No.	1	2	3	4	
Wet+Tare	22.41	22.87			
Dry+Tare	21.24	21.60			
Tare	15.47	15.47			
Moisture	20.3	20.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
96.27	84.00	6.75	15.9

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.6	0.8	11.2	87.4

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-15	59.0-60.5'	2/25/09	CH	Very Pale Brown mottled Yellow Fat CLAY	22.4	79	22

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 59.0-60.5' **Sample Number:** SS-15
Material Description: Very Pale Brown mottled Yellow Fat CLAY
Date: 2/25/09 **Natural Moisture:** 22.4
Liquid Limit: 79 **Plastic Limit:** 22 **USCS Class.:** CH
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
231.78	0.00	0.00	#10	0.00	100.0
52.32	0.00	0.00	#20	0.14	99.7
			#40	0.31	99.4
			#60	0.34	99.4
			#100	0.46	99.1
			#140	0.67	98.7
			#200	0.75	98.6

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =52.32
Hygroscopic moisture correction:
Moist weight and tare = 15.99
Dry weight and tare = 15.86
Tare weight = 5.74
Hygroscopic moisture = 1.3%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.0	55.0	49.5	0.0133	56.0	7.1	0.0250	94.8
5.00	21.0	54.0	48.5	0.0133	55.0	7.3	0.0160	92.9
15.00	21.1	53.0	47.5	0.0133	54.0	7.4	0.0093	91.0
30.00	20.9	52.0	46.5	0.0133	53.0	7.6	0.0067	89.0
60.00	21.1	51.0	45.5	0.0133	52.0	7.8	0.0048	87.2
250.00	21.3	48.0	42.6	0.0132	49.0	8.3	0.0024	81.6
1440.00	21.0	44.0	38.5	0.0133	45.0	8.9	0.0010	73.7

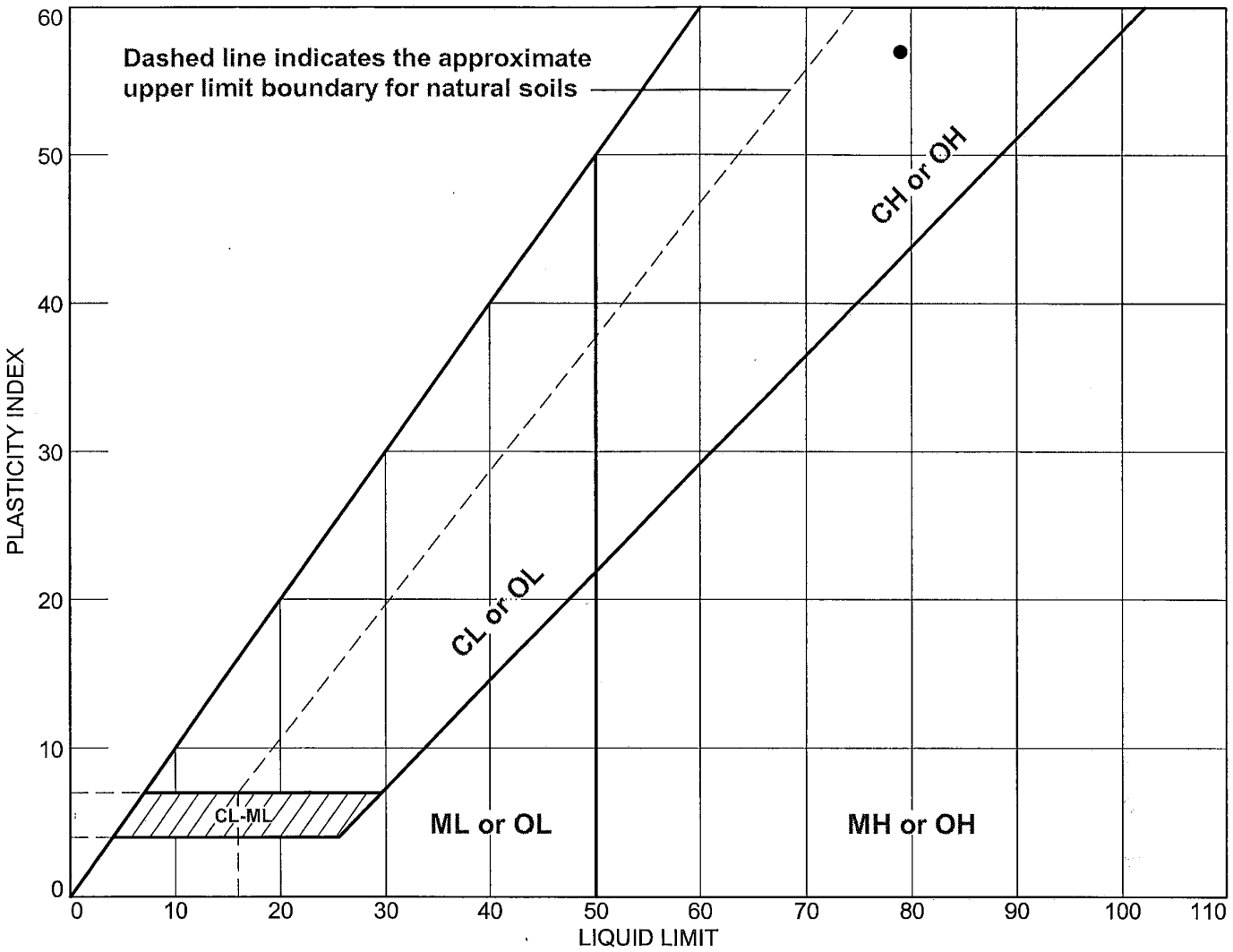
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.6	0.8	1.4	11.2	87.4	98.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
						0.0020	0.0035	0.0079	0.0263

Fineness Modulus
0.02

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-15	59.0-60.5'	22.4	22	79	57	CH

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

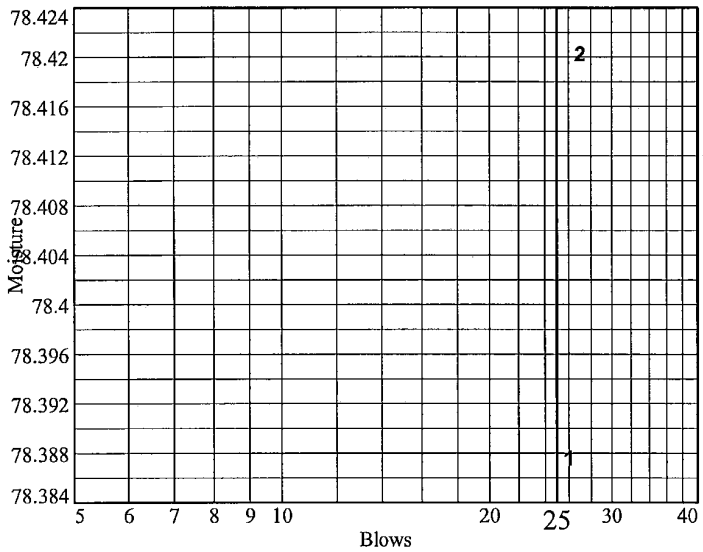
LIQUID AND PLASTIC LIMIT TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 59.0-60.5' **Sample Number:** SS-15
Material Description: Very Pale Brown mottled Yellow Fat CLAY
USCS: CH **AASHTO:** A-7-6(65)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.82	23.75				
Dry+Tare	21.25	18.19				
Tare	15.42	11.10				
# Blows	26	27				
Moisture	78.4	78.4				



Liquid Limit= 79
Plastic Limit= 22
Plasticity Index= 57
Natural Moisture= 22.4
Liquidity Index= 0.0

Plastic Limit Data

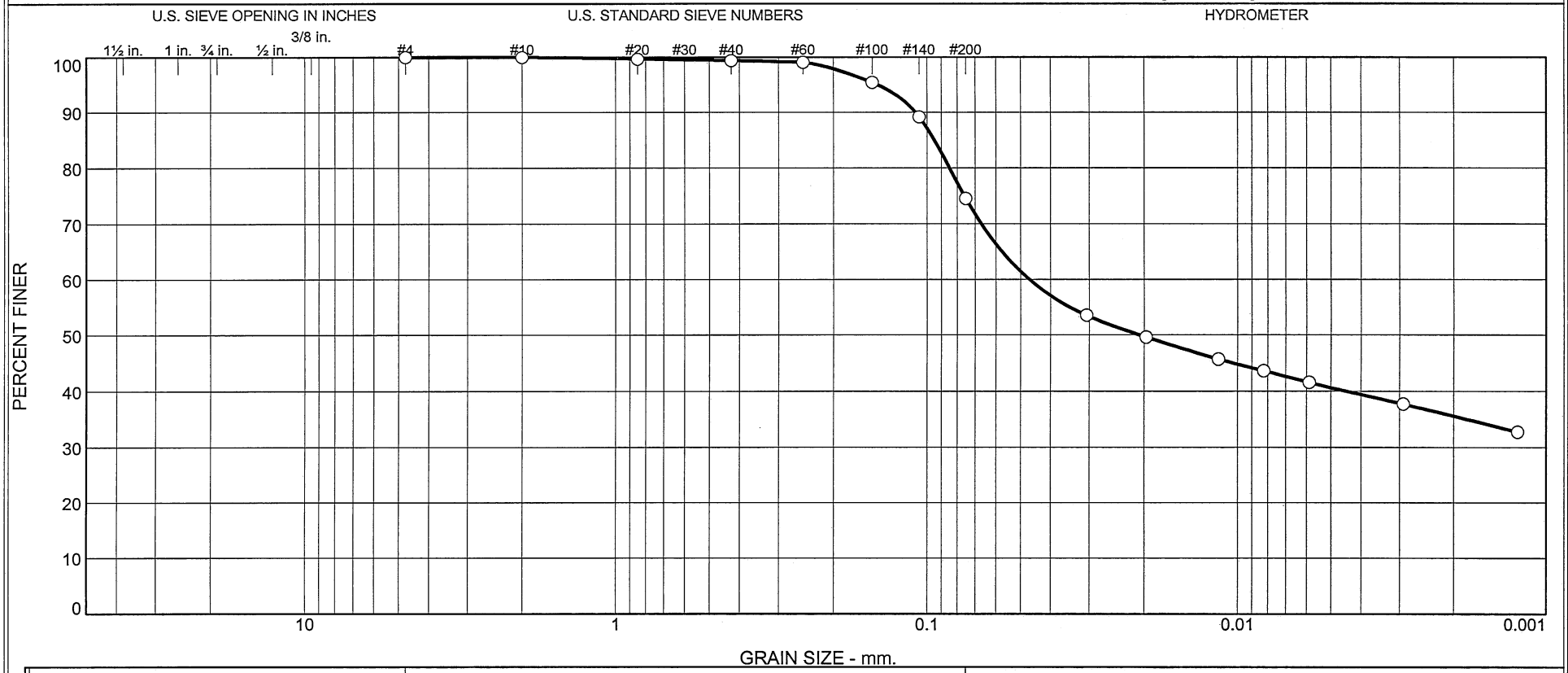
Run No.	1	2	3	4	
Wet+Tare	21.56	21.75			
Dry+Tare	20.47	20.63			
Tare	15.49	15.52			
Moisture	21.9	21.9			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
113.92	94.34	6.87	22.4

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.6	24.9	33.8	40.7

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-16	64.0-65.5'	2/25/09	CL	Very Pale Brown mottled Yellow Lean CLAY with sand	21.2	37	18

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 64.0-65.5' **Sample Number:** SS-16
Material Description: Very Pale Brown mottled Yellow Lean CLAY with sand
Date: 2/25/09 **Natural Moisture:** 21.2
Liquid Limit: 37 **Plastic Limit:** 18 **USCS Class.:** CL
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
286.48	0.00	0.00	#4	0.00	100.0
			#10	0.04	100.0
51.44	0.00	0.00	#20	0.16	99.7
			#40	0.31	99.4
			#60	0.48	99.1
			#100	2.36	95.4
			#140	5.60	89.1
			#200	13.11	74.5

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =51.44
Hygroscopic moisture correction:
Moist weight and tare = 20.00
Dry weight and tare = 19.89
Tare weight = 5.71
Hygroscopic moisture = 0.8%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	33.0	27.6	0.0132	34.0	10.7	0.0306	53.5
5.00	21.3	31.0	25.6	0.0132	32.0	11.0	0.0197	49.6
15.00	21.3	29.0	23.6	0.0132	30.0	11.4	0.0115	45.7
30.00	21.1	28.0	22.5	0.0133	29.0	11.5	0.0082	43.7
60.00	20.9	27.0	21.5	0.0133	28.0	11.7	0.0059	41.6
250.00	20.9	25.0	19.5	0.0133	26.0	12.0	0.0029	37.7
1440.00	20.7	22.5	16.9	0.0133	23.5	12.4	0.0012	32.7

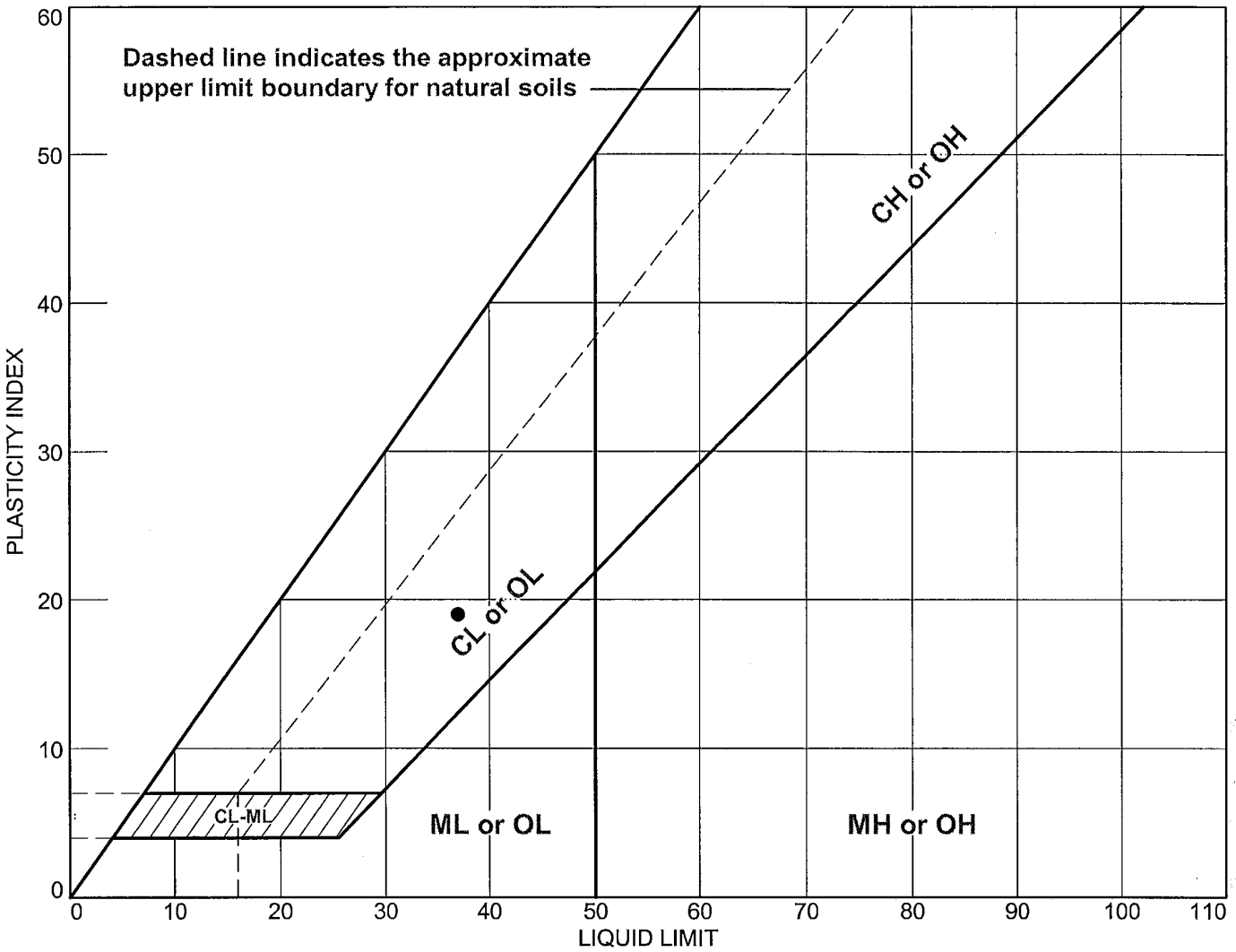
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.6	24.9	25.5	33.8	40.7	74.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0207	0.0469	0.0848	0.0950	0.1092	0.1444

Fineness Modulus
0.06

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-16	64.0-65.5'	21.2	18	37	19	CL

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

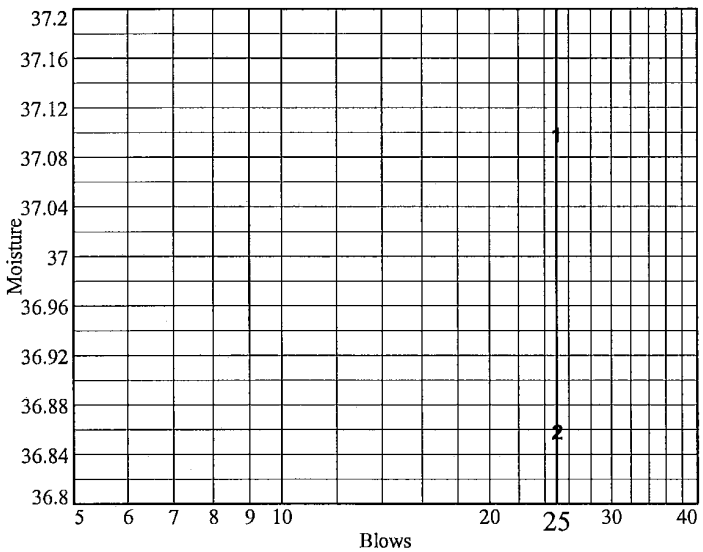
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 64.0-65.5' **Sample Number:** SS-16
Material Description: Very Pale Brown mottled Yellow Lean CLAY with sand
USCS: CL **AASHTO:** A-6(13)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.63	28.75				
Dry+Tare	25.05	25.23				
Tare	15.40	15.68				
# Blows	25	25				
Moisture	37.1	36.9				



Liquid Limit= 37
Plastic Limit= 18
Plasticity Index= 19
Natural Moisture= 21.2
Liquidity Index= 0.2

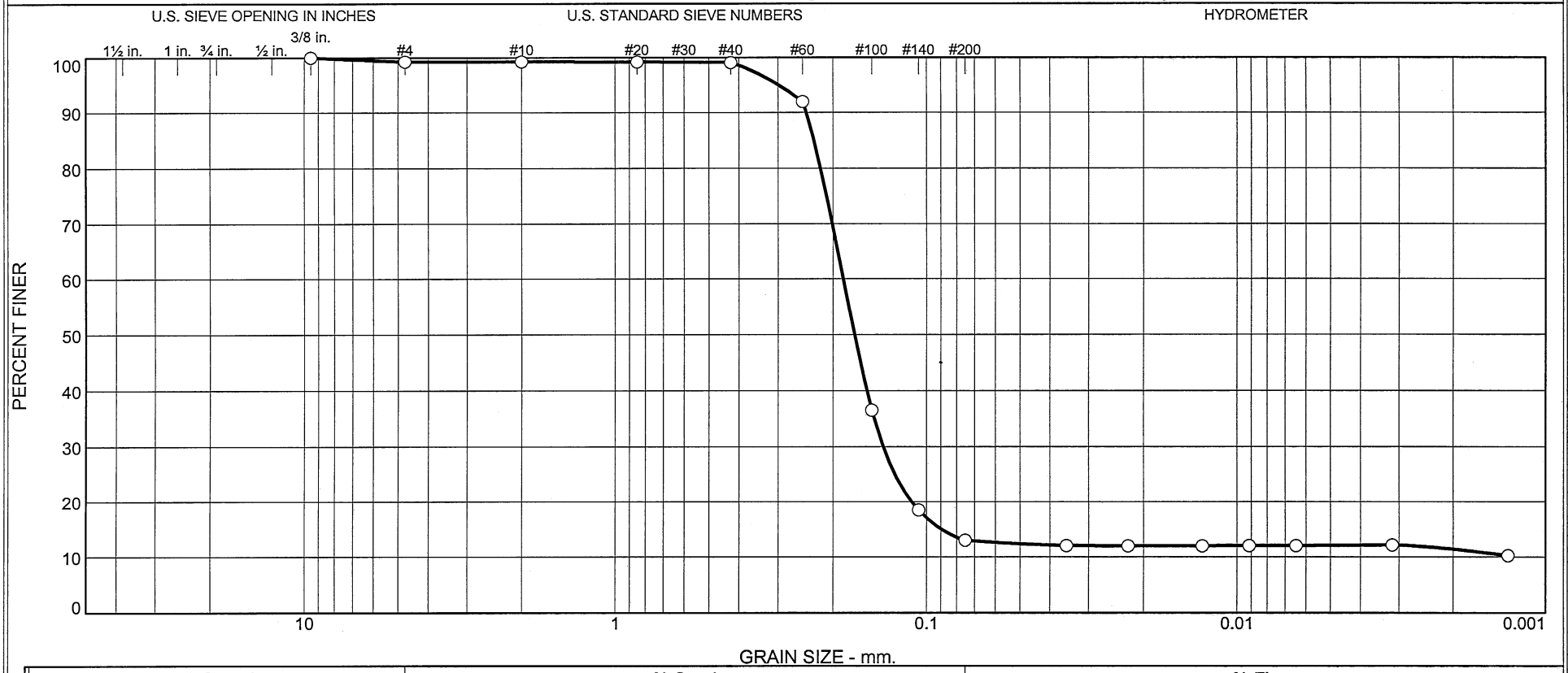
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	22.59	21.62			
Dry+Tare	21.55	20.72			
Tare	15.62	15.58			
Moisture	17.5	17.5			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
101.28	84.81	7.10	21.2

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.8	0.0	0.1	86.1	1.0	12.0

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-17	69-70.5'	2/25/09	SM	Very Pale Brown Silty SAND	23.2	NV	NP

Client Bechtel
Project Exelon Texas COL Project - Supplemental Investigation, including UHS
Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.
Raleigh, North Carolina

○ Specific Gravity is assumed
NV = No Value
NP = Non Plastic

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 69-70.5' **Sample Number:** SS-17
Material Description: Very Pale Brown Silty SAND
Date: 2/25/09 **Natural Moisture:** 23.2
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Specific Gravity is assumed
NV = No Value
NP = Non Plastic
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
241.81	0.00	0.00	3/8"	0.00	100.0
			#4	1.83	99.2
			#10	1.86	99.2
53.11	0.00	0.00	#20	0.02	99.2
			#40	0.09	99.1
			#60	3.90	91.9
			#100	33.55	36.5
			#140	43.21	18.5
			#200	46.17	13.0

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.2
Weight of hydrometer sample =53.11
Hygroscopic moisture correction:
Moist weight and tare = 17.23
Dry weight and tare = 17.18
Tare weight = 5.66
Hygroscopic moisture = 0.4%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.9	12.0	6.5	0.0133	13.0	14.2	0.0354	12.0
5.00	20.8	12.0	6.4	0.0133	13.0	14.2	0.0224	11.9
15.00	20.8	12.0	6.4	0.0133	13.0	14.2	0.0129	11.9
30.00	20.9	12.0	6.5	0.0133	13.0	14.2	0.0091	12.0
60.00	20.9	12.0	6.5	0.0133	13.0	14.2	0.0065	12.0
250.00	21.1	12.0	6.5	0.0133	13.0	14.2	0.0032	12.1
1440.00	21.0	11.0	5.5	0.0133	12.0	14.3	0.0013	10.2

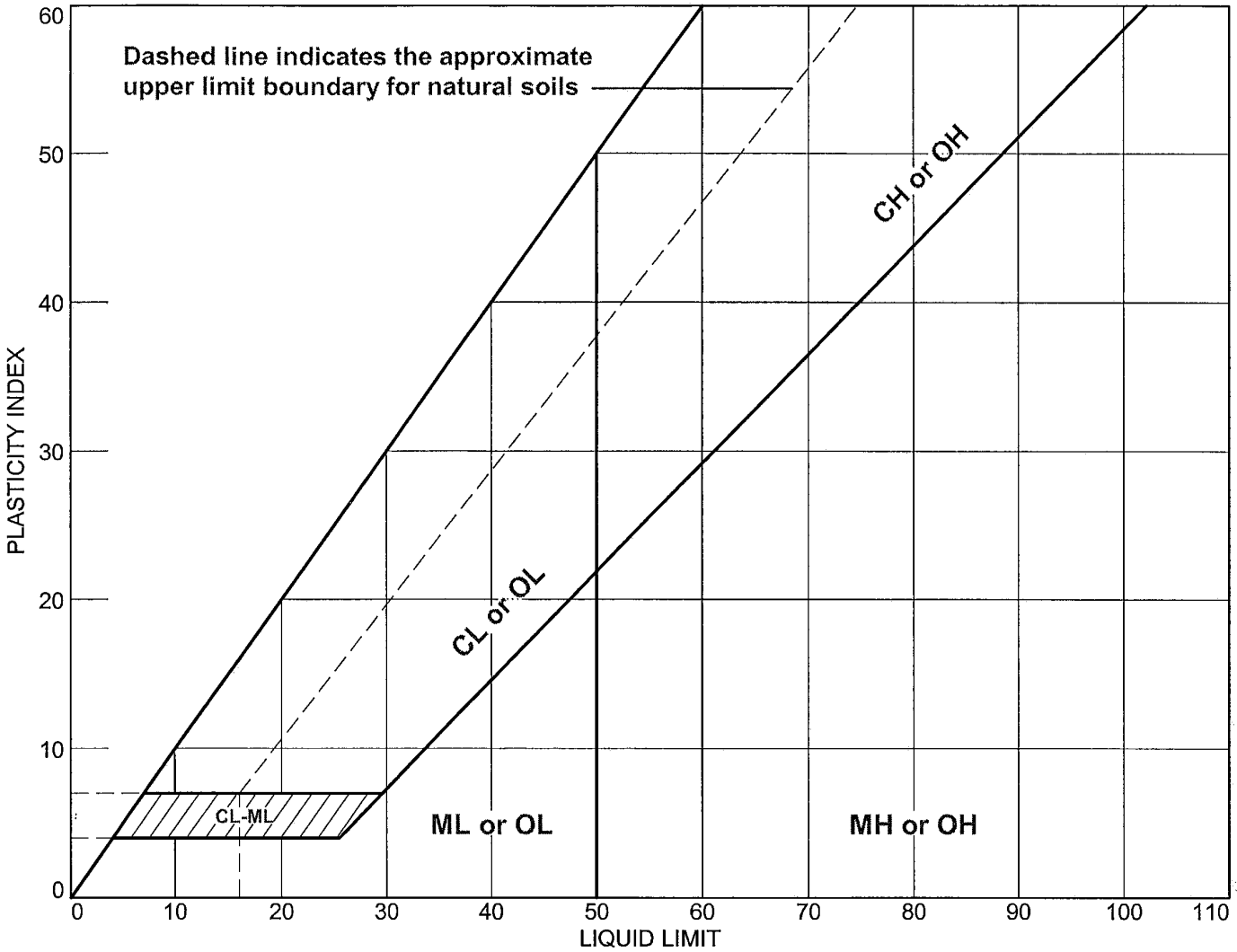
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.8	0.8	0.0	0.1	86.1	86.2	1.0	12.0	13.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0895	0.1117	0.1380	0.1706	0.1854	0.2195	0.2305	0.2437	0.2985

Fineness Modulus
0.72

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-17	69-70.5'	23.2	NP	NV	NP	SM

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

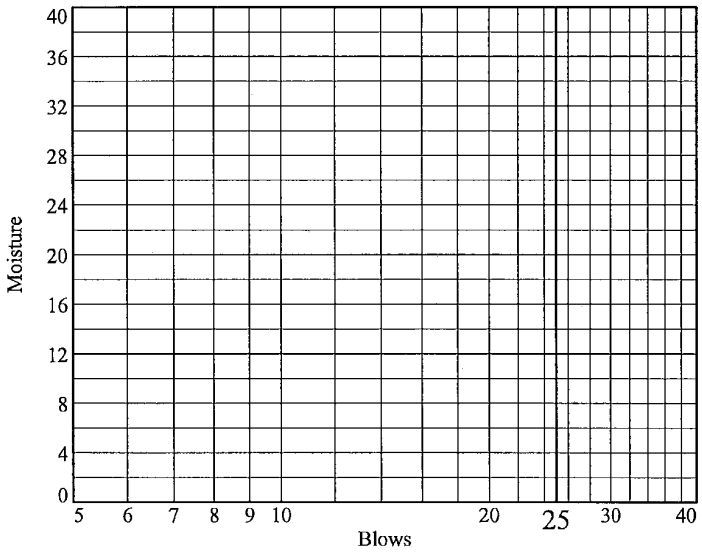
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 69-70.5' **Sample Number:** SS-17
Material Description: Very Pale Brown Silty SAND
USCS: SM **AASHTO:** A-2-4(0)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 23.2

Plastic Limit Data

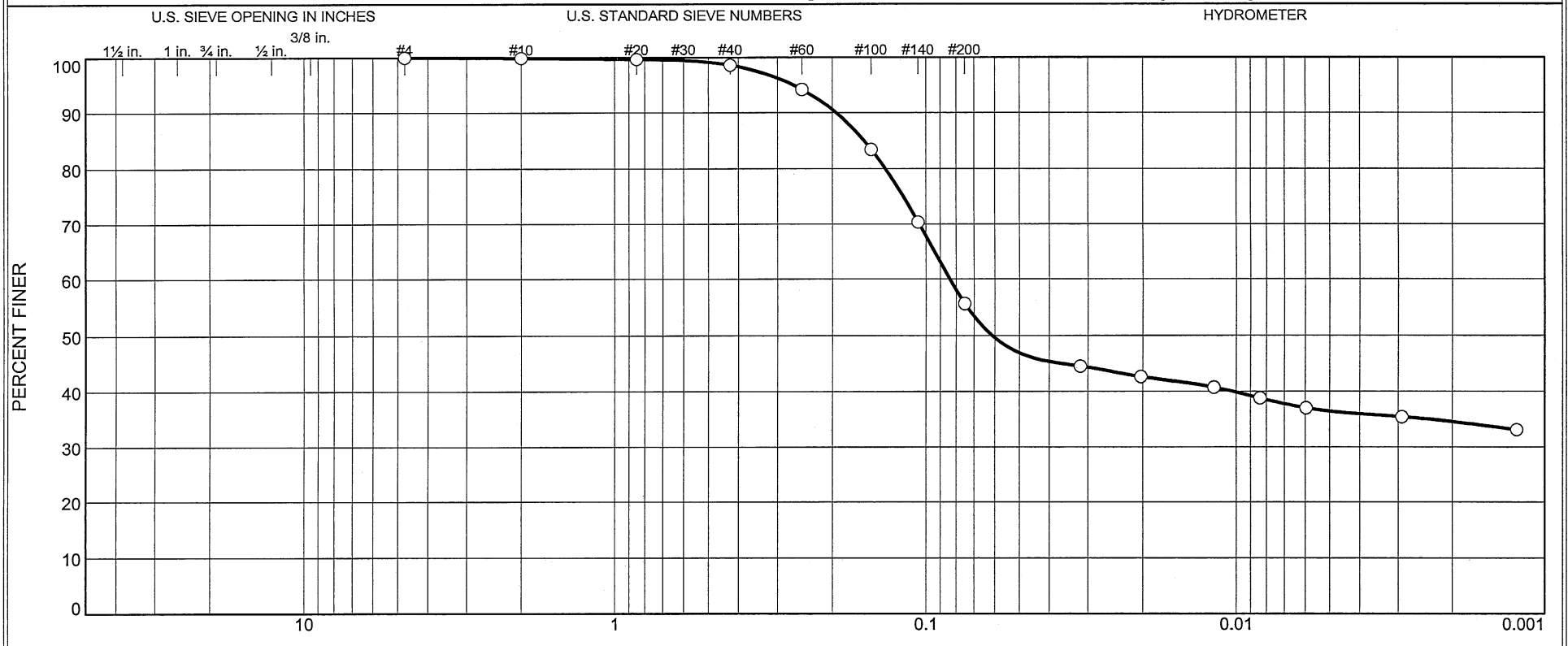
Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
101.52	83.65	6.59	23.2

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.1	1.3	43.0	19.1	36.5

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-18	74.0-75.5'	2/25/09	CL	Very Pale Brown mottled Yellow Sandy Lean CLAY	14.4	37	17

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 74.0-75.5' **Sample Number:** SS-18
Material Description: Very Pale Brown mottled Yellow Sandy Lean CLAY
Date: 2/25/09 **Natural Moisture:** 14.4
Liquid Limit: 37 **Plastic Limit:** 17 **USCS Class.:** CL
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
278.05	0.00	0.00	#4	0.00	100.0
			#10	0.32	99.9
52.42	0.00	0.00	#20	0.12	99.7
			#40	0.69	98.6
			#60	3.00	94.2
			#100	8.63	83.4
			#140	15.51	70.3
			#200	23.25	55.6

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer sample =52.42
Hygroscopic moisture correction:
Moist weight and tare = 23.93
Dry weight and tare = 23.81
Tare weight = 11.16
Hygroscopic moisture = 0.9%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	29.0	23.4	0.0133	30.0	11.4	0.0318	44.5
5.00	20.7	28.0	22.4	0.0133	29.0	11.5	0.0202	42.6
15.00	20.7	27.0	21.4	0.0133	28.0	11.7	0.0118	40.7
30.00	20.7	26.0	20.4	0.0133	27.0	11.9	0.0084	38.8
60.00	20.9	25.0	19.5	0.0133	26.0	12.0	0.0060	37.0
250.00	21.4	24.0	18.6	0.0132	25.0	12.2	0.0029	35.5
1440.00	20.7	23.0	17.4	0.0133	24.0	12.4	0.0012	33.1

MACTEC Engineering and Consulting, Inc.

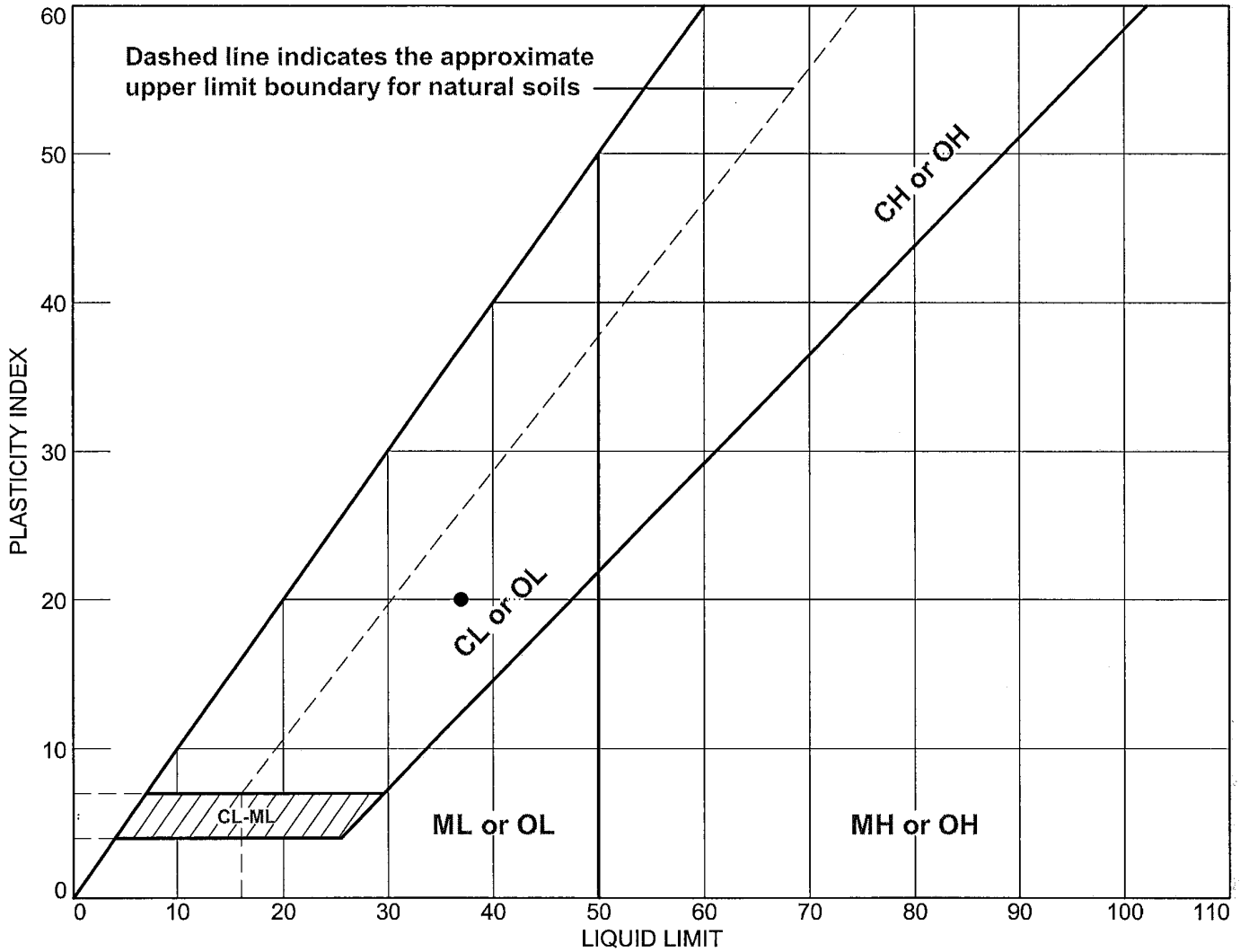
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.1	1.3	43.0	44.4	19.1	36.5	55.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0612	0.0840	0.1352	0.1581	0.1944	0.2671

Fineness Modulus
0.21

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-18	74.0-75.5'	14.4	17	37	20	CL

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

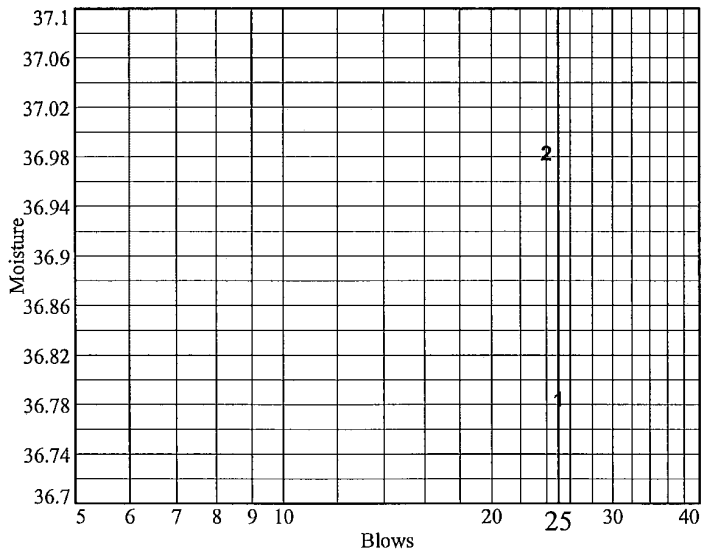
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 74.0-75.5' **Sample Number:** SS-18
Material Description: Very Pale Brown mottled Yellow Sandy Lean CLAY
USCS: CL **AASHTO:** A-6(8)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	29.15	28.73				
Dry+Tare	25.42	25.15				
Tare	15.28	15.47				
# Blows	25	24				
Moisture	36.8	37.0				



Liquid Limit= 37
Plastic Limit= 17
Plasticity Index= 20
Natural Moisture= 14.4
Liquidity Index= -0.1

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.48	18.06			
Dry+Tare	16.57	17.03			
Tare	11.12	11.08			
Moisture	16.7	17.3			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
138.93	122.44	8.21	14.4

MACTEC Engineering and Consulting, Inc.

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.7	56.2	20.7	22.4

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-19	79-80.5'	2/25/09	SC	Very Pale Brown Clayey SAND	19.1	25	16

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 79-80.5' **Sample Number:** SS-19
Material Description: Very Pale Brown Clayey SAND
Date: 2/25/09 **Natural Moisture:** 19.1
Liquid Limit: 25 **Plastic Limit:** 16 **USCS Class.:** SC
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
301.77	0.00	0.00	#10	0.00	100.0
52.94	0.00	0.00	#20	0.21	99.6
			#40	0.38	99.3
			#60	1.72	96.8
			#100	8.17	84.6
			#140	20.64	61.0
			#200	30.12	43.1

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =52.94
Hygroscopic moisture correction:
Moist weight and tare = 25.52
Dry weight and tare = 25.35
Tare weight = 11.29
Hygroscopic moisture = 1.2%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-9.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	20.0	14.4	0.0133	21.0	12.9	0.0338	27.2
5.00	20.7	19.0	13.4	0.0133	20.0	13.0	0.0215	25.3
15.00	20.7	19.0	13.4	0.0133	20.0	13.0	0.0124	25.3
30.00	20.6	18.0	12.4	0.0133	19.0	13.2	0.0088	23.4
60.00	20.8	17.5	11.9	0.0133	18.5	13.3	0.0063	22.6
250.00	21.3	17.0	11.6	0.0132	18.0	13.3	0.0031	21.9
1440.00	20.6	16.0	10.4	0.0133	17.0	13.5	0.0013	19.6

MACTEC Engineering and Consulting, Inc.

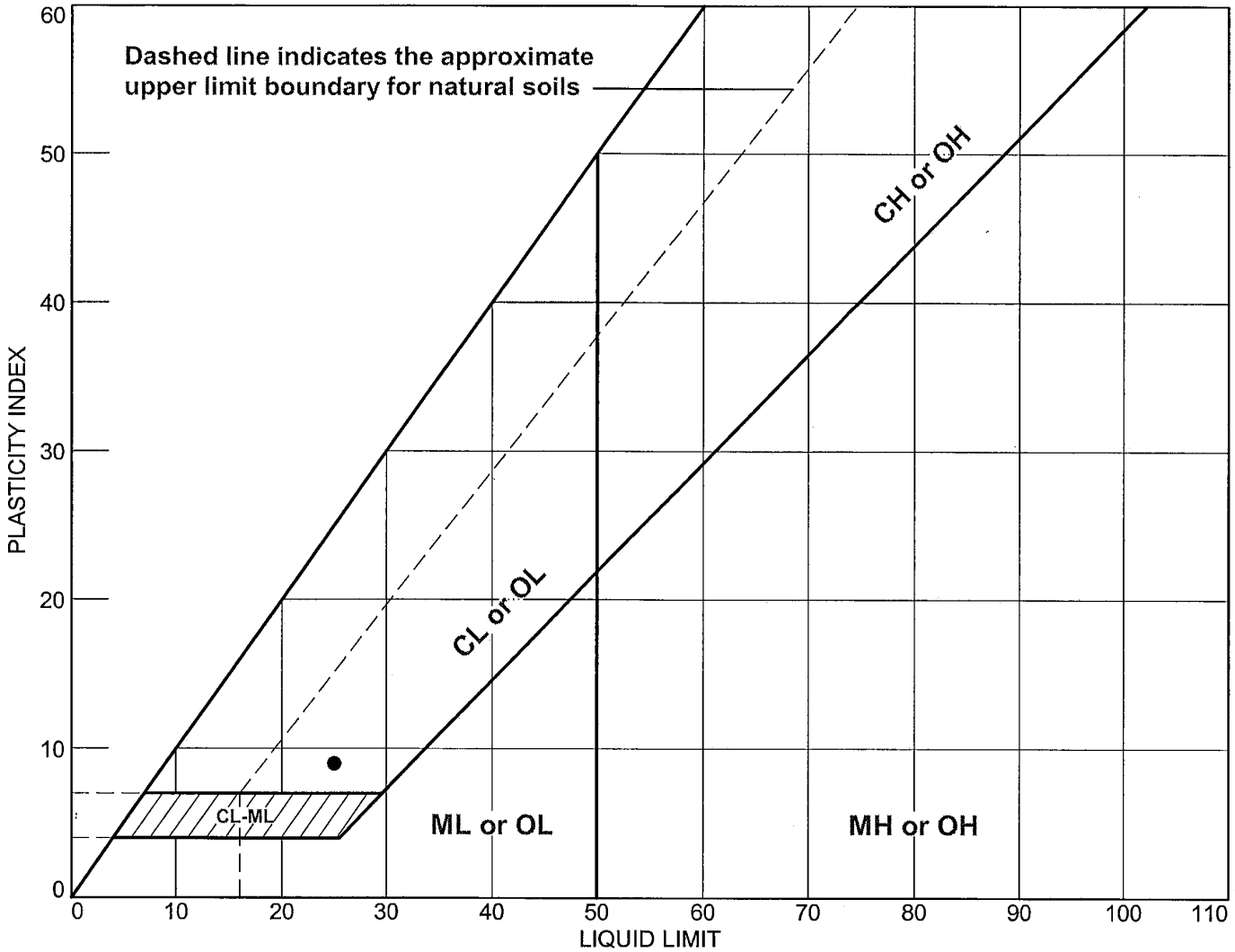
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.7	56.2	56.9	20.7	22.4	43.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0015	0.0442	0.0877	0.1044	0.1389	0.1512	0.1697	0.2100

Fineness Modulus
0.18

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-3170A	SS-19	79-80.5'	19.1	16	25	9	SC

MACTEC Engineering and Consulting, Inc. **Raleigh, North Carolina**	**Client:** Bechtel **Project:** Exelon Texas COL Project - Supplemental Investigation, including UHS **Project No.:** 6468071777 **Figure** NA

Tested By: CS **Checked By:** BS DSC 5-4-09

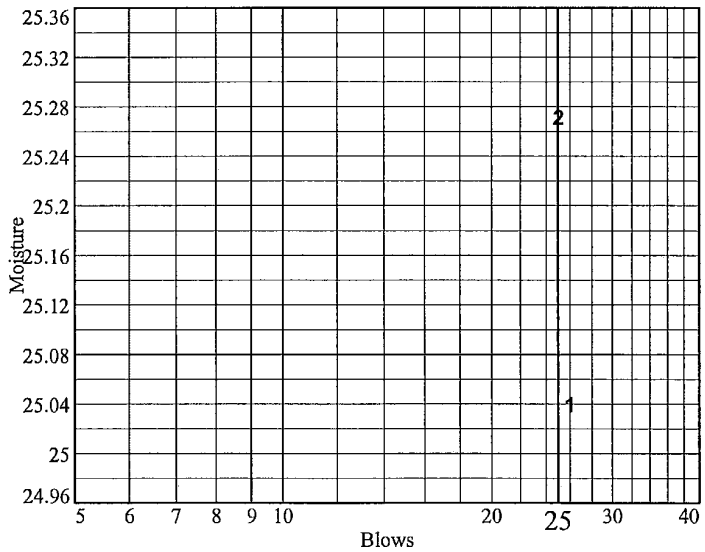
LIQUID AND PLASTIC LIMIT TEST DATA

4/29/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 79-80.5' **Sample Number:** SS-19
Material Description: Very Pale Brown Clayey SAND
USCS: SC **AASHTO:** A-4(1)
Tested by: CS **Checked by:** BS

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	31.13	29.19				
Dry+Tare	28.00	26.40				
Tare	15.50	15.36				
# Blows	26	25				
Moisture	25.0	25.3				



Liquid Limit= 25
Plastic Limit= 16
Plasticity Index= 9
Natural Moisture= 19.1
Liquidity Index= 0.3

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.62	23.04			
Dry+Tare	20.79	22.03			
Tare	15.58	15.43			
Moisture	15.9	15.3			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
123.78	105.49	9.50	19.1

Particle Size Distribution Report ASTM D 422-63(2007)



	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	3.0	3.6	2.1	8.5	48.6	29.6	4.6

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-3170A	SS-20	84.0-85.5'	2/25/09	SC-SM	Very Pale Brown Silty, Clayey SAND	12.3	17	10

Client Bechtel

Project Exelon Texas COL Project - Supplemental Investigation, including UHS

Project No. 6468071777 Figure NA

MACTEC Engineering and Consulting, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed

Tested By: CS **Checked By:** BS DSC 5-4-09

GRAIN SIZE DISTRIBUTION TEST DATA

5/1/2009

Client: Bechtel
Project: Exelon Texas COL Project - Supplemental Investigation, including UHS
Project Number: 6468071777
Location: Boring B-3170A
Depth: 84.0-85.5' **Sample Number:** SS-20
Material Description: Very Pale Brown Silty, Clayey SAND
Date: 2/25/09 **Natural Moisture:** 12.3
Liquid Limit: 17 **Plastic Limit:** 10 **USCS Class.:** SC-SM
Testing Remarks: Specific Gravity is assumed
Tested by: CS **Checked by:** BS

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
339.50	0.00	0.00	1.0	0.00	100.0
			3/4	10.07	97.0
			3/8"	13.55	96.0
			#4	22.28	93.4
			#10	29.67	91.3
51.57	0.00	0.00	#20	1.35	88.9
			#40	4.80	82.8
			#60	12.41	69.3
			#100	26.16	45.0
			#140	30.48	37.3
			#200	32.26	34.2

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 91.3
Weight of hydrometer sample =51.57
Hygroscopic moisture correction:
Moist weight and tare = 31.66
Dry weight and tare = 31.54
Tare weight = 17.10
Hygroscopic moisture = 0.8%
Table of composite correction values:

Temp., deg. C:	10.6	28.4
Comp. corr.:	-8.0	-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 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.8	10.0	4.9	0.0133	11.0	14.5	0.0358	8.6
5.00	20.8	9.5	4.4	0.0133	10.5	14.6	0.0227	7.7
15.00	20.8	9.0	3.9	0.0133	10.0	14.7	0.0132	6.8
30.00	20.7	8.5	3.3	0.0133	9.5	14.7	0.0093	5.9
60.00	20.7	8.0	2.8	0.0133	9.0	14.8	0.0066	5.0
250.00	21.1	7.5	2.4	0.0133	8.5	14.9	0.0032	4.3
1440.00	20.9	7.0	1.9	0.0133	8.0	15.0	0.0014	3.3

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	3.0	3.6	6.6	2.1	8.5	48.6	59.2	29.6	4.6	34.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0381	0.0444	0.0503	0.0645	0.1688	0.2059	0.3598	0.5072	1.1340	6.7482

Fineness Modulus	C_u	C_c
1.25	5.40	0.53