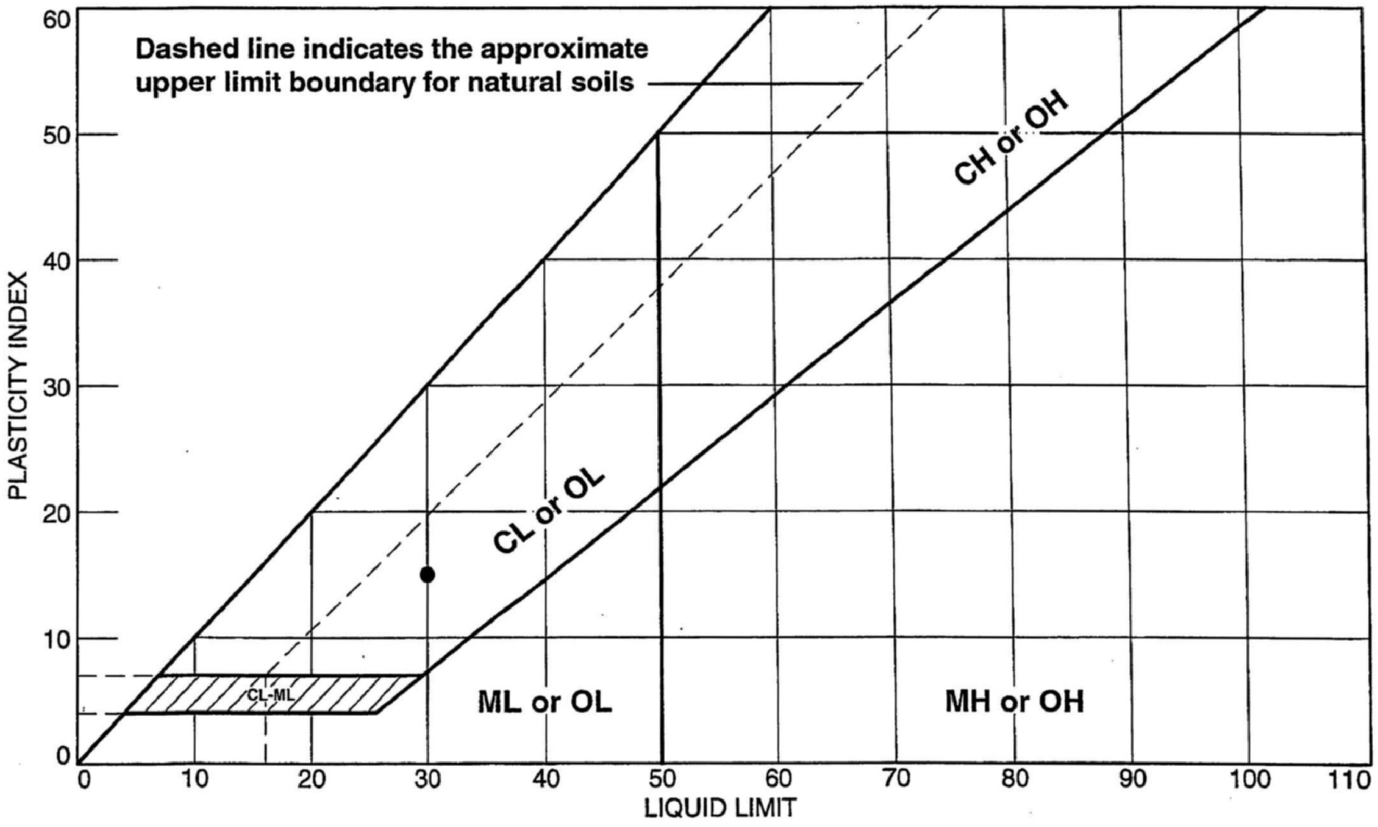
LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA

	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-2251	SS-10	33.5-35'	19.1	15	30	15	SC

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

Tested By: CS **Checked By:** LBJ DSC 1-25-08

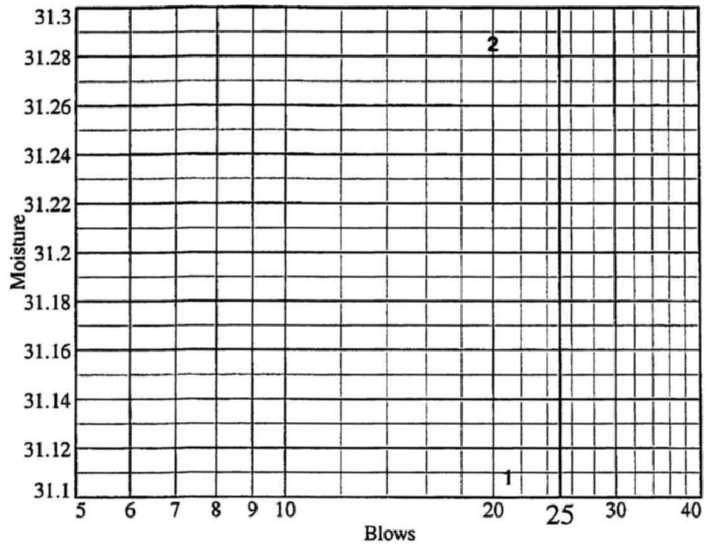
LIQUID AND PLASTIC LIMIT TEST DATA

1/24/2008

Client: Bechtel
Project: Exelon Texas COL (Victoria)
Project Number: 6468071777
Location: Boring B-2251
Depth: 33.5-35' **Sample Number:** SS-10
Material Description: Greenish Gray Clayey SAND
USCS: SC **AASHTO:** A-6(3)
Tested by: CS **Checked by:** LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	21.51	27.09				
Dry+Tare	19.04	24.34				
Tare	11.10	15.55				
# Blows	21	20				
Moisture	31.1	31.3				



Liquid Limit= 30
Plastic Limit= 15
Plasticity Index= 15
Natural Moisture= 19.1
Liquidity Index= 0.3

Plastic Limit Data

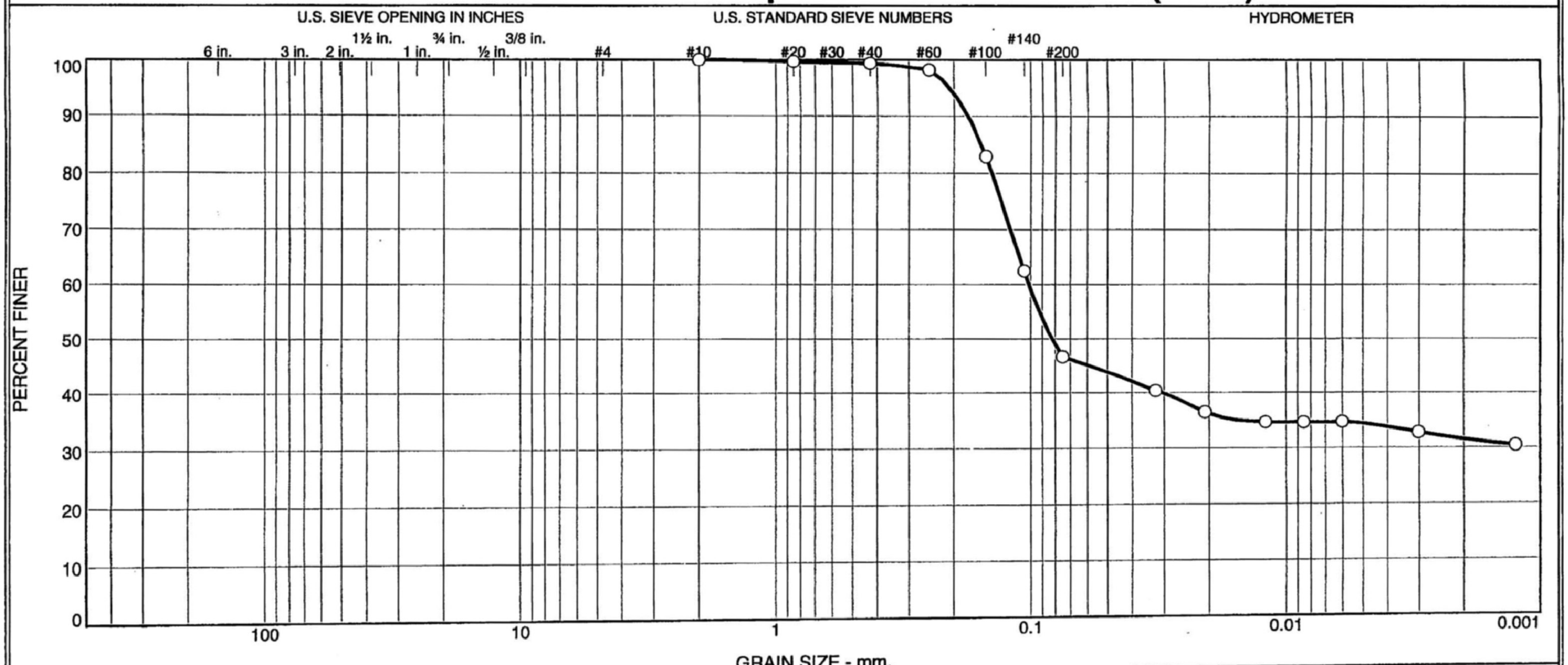
Run No.	1	2	3	4	
Wet+Tare	22.97	22.16			
Dry+Tare	22.01	21.31			
Tare	15.49	15.50			
Moisture	14.7	14.6			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
114.58	97.70	9.26	19.1

MACTEC, Inc.

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



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.6	52.7	12.4	34.3

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-2251	SS-11	38.5-40'	12-03-07	SC	Greenish Gray Clayey SAND	17.7	36	17

Client Bechtel

Project Exelon Texas COL (Victoria)

Project No. 6468071777 Figure NA

MACTEC, Inc.

Raleigh, North Carolina

○ Specific Gravity = 2.673 (ASTM D854-06)
Organic content = 3.7% (ASTM D2794-07)

Tested By: CS Checked By: LBJ DSC 1-25-08

GRAIN SIZE DISTRIBUTION TEST DATA

1/24/2008

Client: Bechtel
Project: Exelon Texas COL (Victoria)
Project Number: 6468071777
Location: Boring B-2251
Depth: 38.5-40' **Sample Number:** SS-11
Material Description: Greenish Gray Clayey SAND
Date: 12-03-07 **Natural Moisture:** 17.7
Liquid Limit: 36 **Plastic Limit:** 17 **USCS Class.:** SC
Testing Remarks: Specific Gravity = 2.673 (ASTM D854-06)
Organic content = 3.7% (ASTM D2794-07)
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
184.07	0.00	0.00	#10	0.00	100.0
51.90	0.00	0.00	#20	0.18	99.7
			#40	0.33	99.4
			#60	0.95	98.2
			#100	8.83	83.0
			#140	19.47	62.5
			#200	27.68	46.7

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =51.9
Hygroscopic moisture correction:
Moist weight and tare = 27.30
Dry weight and tare = 27.07
Tare weight = 15.51
Hygroscopic moisture = 2.0%
Table of composite correction values:

Temp., deg. C:	12.3	27.3
Comp. corr.:	-7.0	-3.0

Meniscus correction only = 1.0
Specific gravity of solids = 2.673
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	22.2	25.0	20.6	0.0132	26.0	12.0	0.0323	40.3
5.00	22.2	23.0	18.6	0.0132	24.0	12.4	0.0207	36.4
15.00	22.4	22.0	17.7	0.0132	23.0	12.5	0.0120	34.6
30.00	22.3	22.0	17.7	0.0132	23.0	12.5	0.0085	34.5
60.00	22.4	22.0	17.7	0.0132	23.0	12.5	0.0060	34.6
240.00	22.5	21.0	16.7	0.0131	22.0	12.7	0.0030	32.7
1440.00	21.9	20.0	15.6	0.0132	21.0	12.9	0.0013	30.4

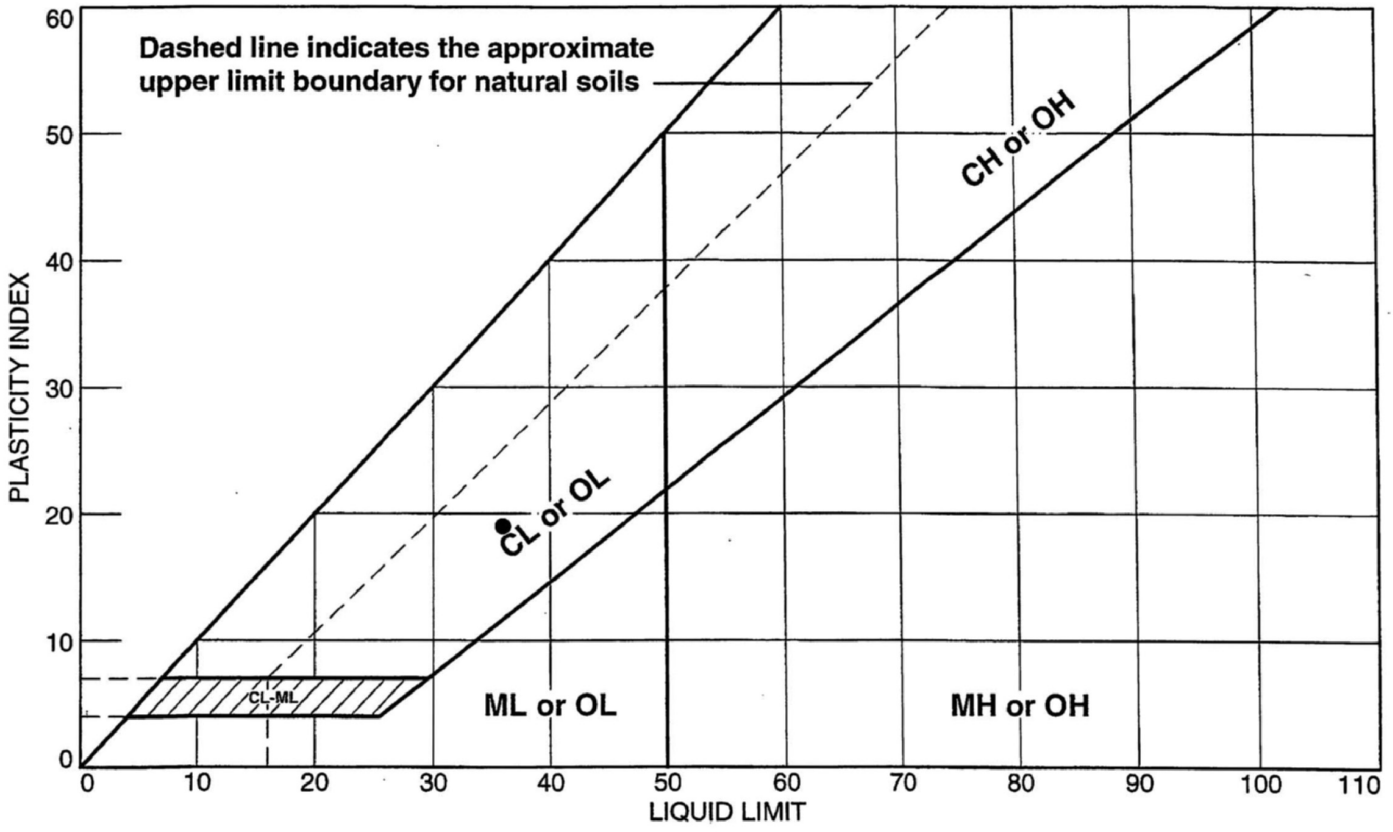
Fractional Components

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	52.7	53.3	12.4	34.3	46.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0824	0.1015	0.1419	0.1563	0.1761	0.2083

Fineness Modulus
0.19

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-2251	SS-11	38.5-40'	17.7	17	36	19	SC

MACTEC, Inc.

Raleigh, North Carolina

Client: Bechtel
Project: Exelon Texas COL (Victoria)
Project No.: 6468071777
Figure NA

Tested By: CS **Checked By:** LBJ DSC 1-25-08

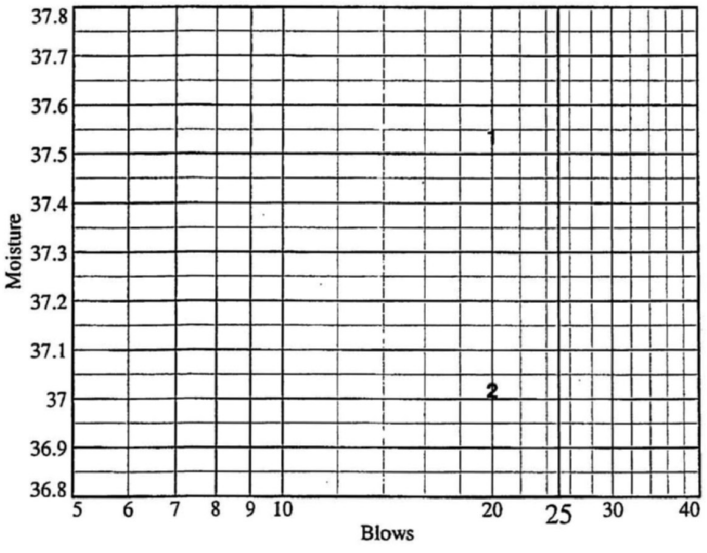
LIQUID AND PLASTIC LIMIT TEST DATA

1/24/2008

Client: Bechtel
Project: Exelon Texas COL (Victoria)
Project Number: 6468071777
Location: Boring B-2251
Depth: 38.5-40'
Sample Number: SS-11
Material Description: Greenish Gray Clayey SAND
USCS: SC
AASHTO: A-6(5)
Tested by: CS
Checked by: LBJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.09	26.20				
Dry+Tare	22.47	23.32				
Tare	15.49	15.54				
# Blows	20	20				
Moisture	37.5	37.0				



Liquid Limit= 36
Plastic Limit= 17
Plasticity Index= 19
Natural Moisture= 17.7
Liquidity Index= 0.0

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	26.90	26.43			
Dry+Tare	25.32	24.86			
Tare	15.73	15.51			
Moisture	16.5	16.8			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
149.29	128.2	9.18	17.7

MACTEC, Inc.

MACTEC ENGINEERING AND CONSULTING, INC.
RALEIGH, NORTH CAROLINA

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

PROJECT NAME:EXELON COL PROJECT [VICTORIA]

PROJECT NUMBER: 6468071777

DATE: 1/5/08

SAMPLE IDENTIFICATION: B-2251 SS-11

(A) Mass of oven-dried soil, grams:		48.35
(B) Mass of pycnometer filled with water at test temperature (T), grams:		654.89
(C) Mass of pycnometer, water and soil, grams:		685.16
(T) Temperature of pycnometer, water and soil, °C when mass (C) determined:		22.5
(G) Specific Gravity at observed temperature:	A / [A + (B - C)]	2.674
(F)	***Correction factor:***	0.99945
(G x F)	**SPECIFIC GRAVITY @ 20°C:**	2.673

MATERIAL TESTED: [X] **- # 4** [ ] **- # 10**

PREPARATION METHOD: [X] **DRY** [ ] **WET (dispersed)**

REMARKS: Estimated % Passing # 4 : 100%

Clayey SAND (SC)

EQUIPMENT USED

SCALES : 3.1.99

OVEN : 5.1.16

THERMOMETER : 5.1.01

PYCNOMETER : P-5

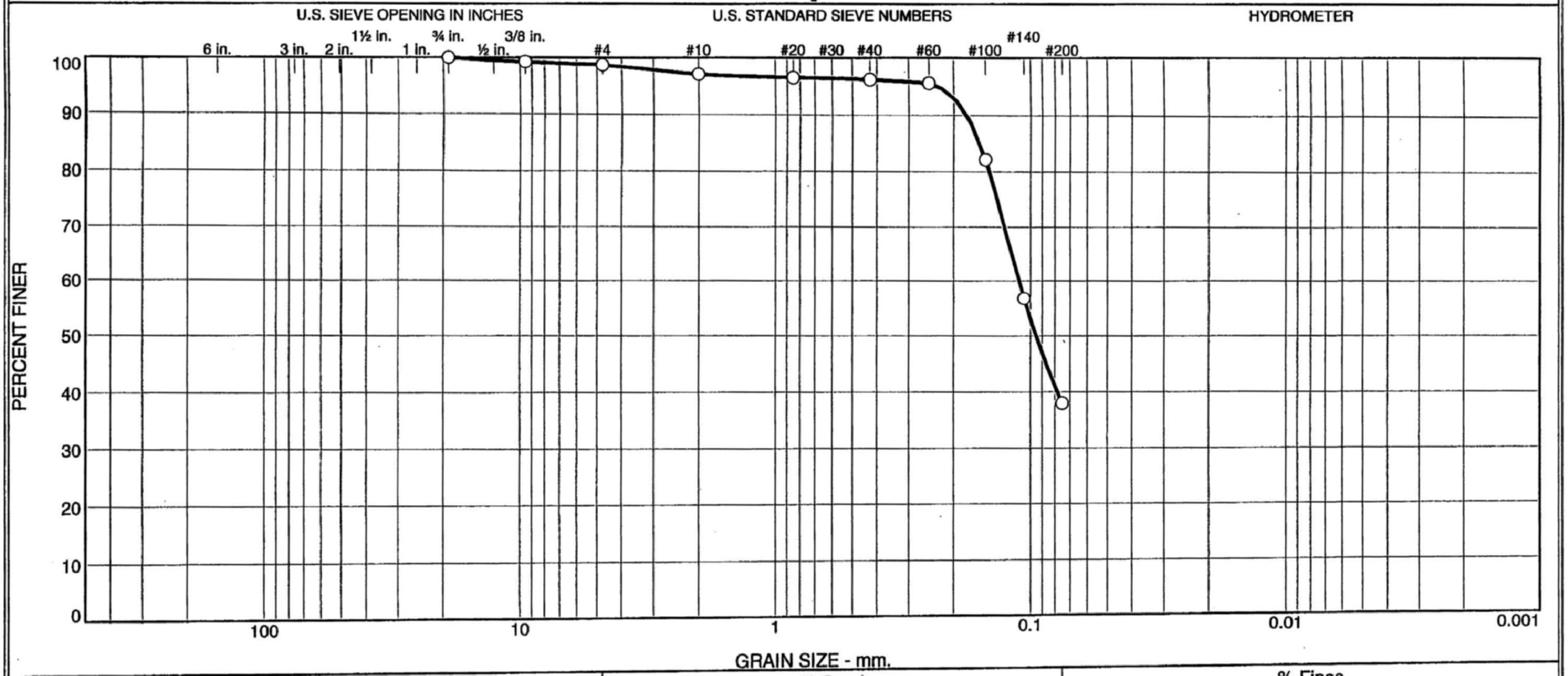
TESTED BY: CS

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

REVIEWED BY: **Brian Johnson**

DSC 1-25-08

Particle Size Distribution Report / ASTM D- 6913-04e1



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.3	1.6	0.9	58.2	38.0	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-2251	SS-12	43.5-45'	12-03-07	SC	Greenish Gray Clayey SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL (Victoria)

Project No. 6468071777 Figure NA

MACTEC, Inc.

Raleigh, North Carolina

○ SIEVE ANALYSIS ONLY
ND = Not Determined

Tested By: CS **Checked By:** LBJ DSC 1-25-08

GRAIN SIZE DISTRIBUTION TEST DATA

1/24/2008

Client: Bechtel
Project: Exelon Texas COL (Victoria)
Project Number: 6468071777
Location: Boring B-2251
Depth: 43.5-45' **Sample Number:** SS-12
Material Description: Greenish Gray Clayey SAND (Visual)
Date: 12-03-07 **Natural Moisture:** ND
Liquid Limit: ND **Plastic Limit:** ND **USCS Class.:** SC
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
204.36	0.00	0.00	3/4	0.00	100.0
			3/8"	1.56	99.2
			#4	2.70	98.7
			#10	5.99	97.1
51.28	0.00	0.00	#20	0.32	96.5
			#40	0.48	96.2
			#60	0.81	95.5
			#100	7.82	82.3
			#140	21.28	56.8
			#200	31.20	38.0

Fractional Components

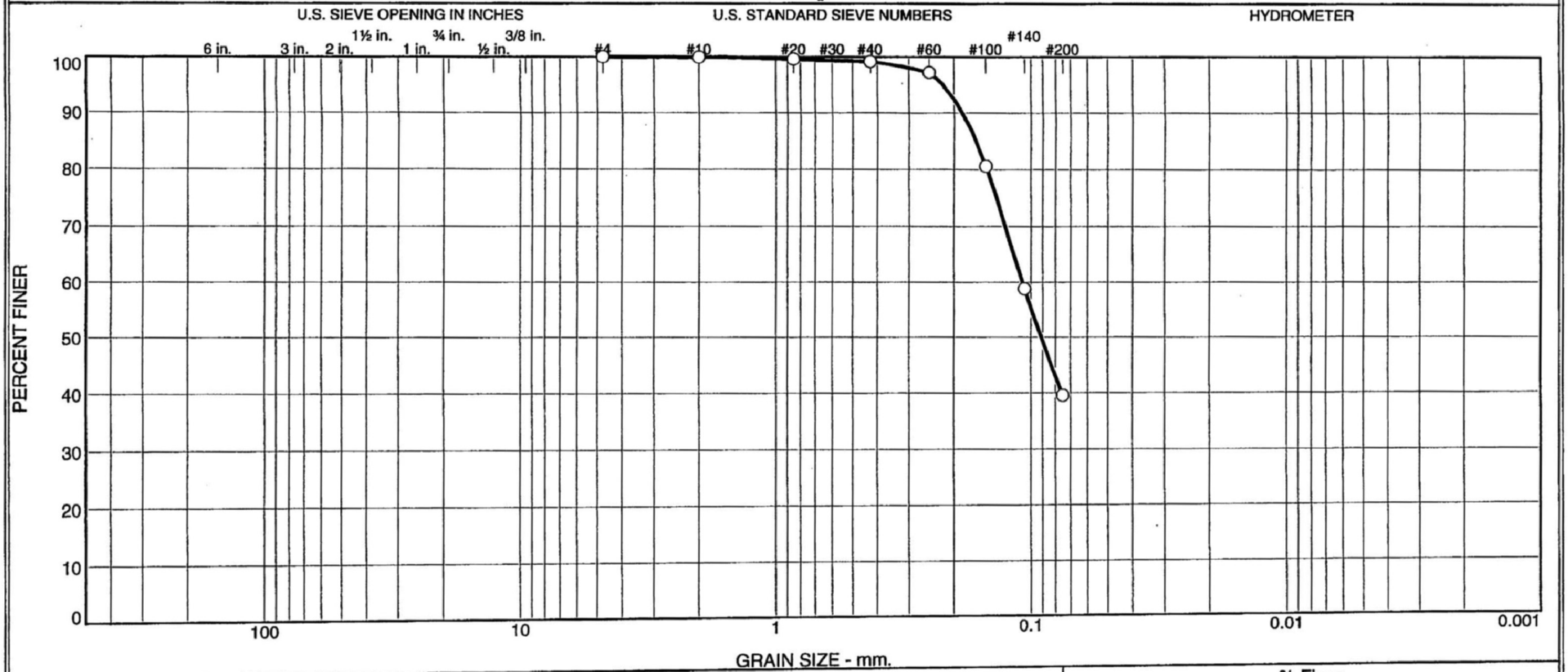
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.3	1.3	1.6	0.9	58.2	60.7			38.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0952	0.1109	0.1447	0.1576	0.1778	0.2316

Fineness Modulus
0.34

MACTEC, Inc.

Particle Size Distribution Report / ASTM D 6913-04e1



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.8	59.7	39.5	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-2251	SS-13	48.5-50'	12-03-07	SC	Greenish Gray Clayey SAND (Visual)	ND	ND	ND

Client Bechtel

Project Exelon Texas COL (Victoria)

Project No. 6468071777 Figure N/A

MACTEC, Inc.

Raleigh, North Carolina

○ SIEVE ANALYSIS ONLY
ND = Not Determined.

Tested By: CS Checked By: LBL DSC 1-25-08

GRAIN SIZE DISTRIBUTION TEST DATA

1/24/2008

Client: Bechtel
Project: Exelon Texas COL (Victoria)
Project Number: 6468071777
Location: Boring B-2251
Depth: 48.5-50'
Sample Number: SS-13
Material Description: Greenish Gray Clayey SAND (Visual)
Date: 12-03-07
Natural Moisture: ND
Liquid Limit: ND
Plastic Limit: ND
USCS Class.: SC
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
170.81	0.00	0.00	#4	0.00	100.0
			#10	0.06	100.0
91.74	0.00	0.00	#20	0.36	99.6
			#40	0.73	99.2
			#60	2.57	97.2
			#100	17.77	80.6
			#140	37.73	58.9
			#200	55.46	39.5

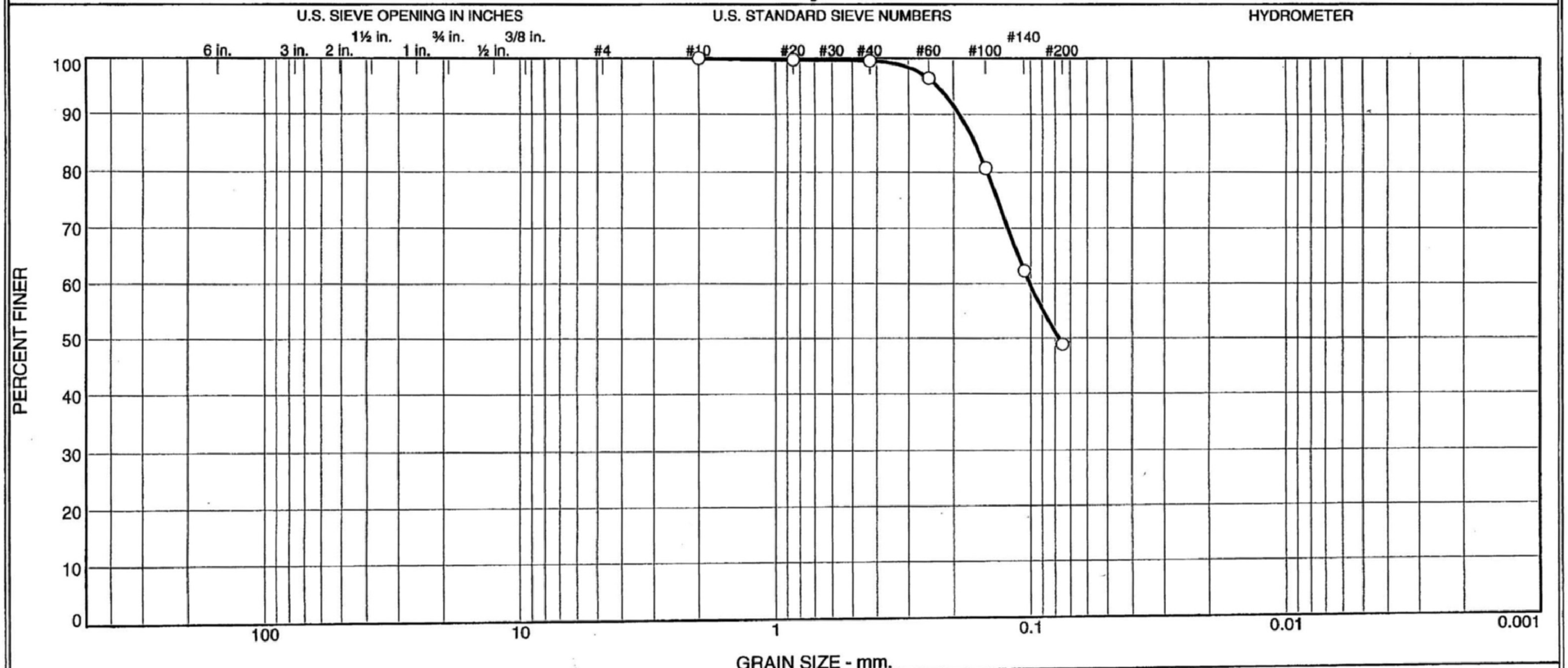
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.8	59.7	60.5			39.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0911	0.1080	0.1484	0.1638	0.1853	0.2212

Fineness Modulus
0.22

Particle Size Distribution Report / ASTM D- 6913-04e1



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.5	50.6	48.9	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-2251	SS-14	53.5-55'	12-03-07	SC	Greenish Gray Clayey SAND (Visual)	ND	ND	ND

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

MACTEC, Inc.

Raleigh, North Carolina

○ SIEVE ANALYSIS ONLY
ND = Not Determined

Tested By: CS **Checked By:** LBJ DSC 1-25-08

GRAIN SIZE DISTRIBUTION TEST DATA

1/24/2008

Client: Bechtel
Project: Exelon Texas COL (Victoria)
Project Number: 6468071777
Location: Boring B-2251
Depth: 53.5-55'
Sample Number: SS-14
Material Description: Greenish Gray Clayey SAND (Visual)
Date: 12-03-07
Natural Moisture: ND
Liquid Limit: ND
Plastic Limit: ND
USCS Class.: SC
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
241.13	0.00	0.00	#10	0.00	100.0
47.69	0.00	0.00	#20	0.14	99.7
			#40	0.23	99.5
			#60	1.75	96.3
			#100	9.21	80.7
			#140	17.94	62.4
			#200	24.38	48.9

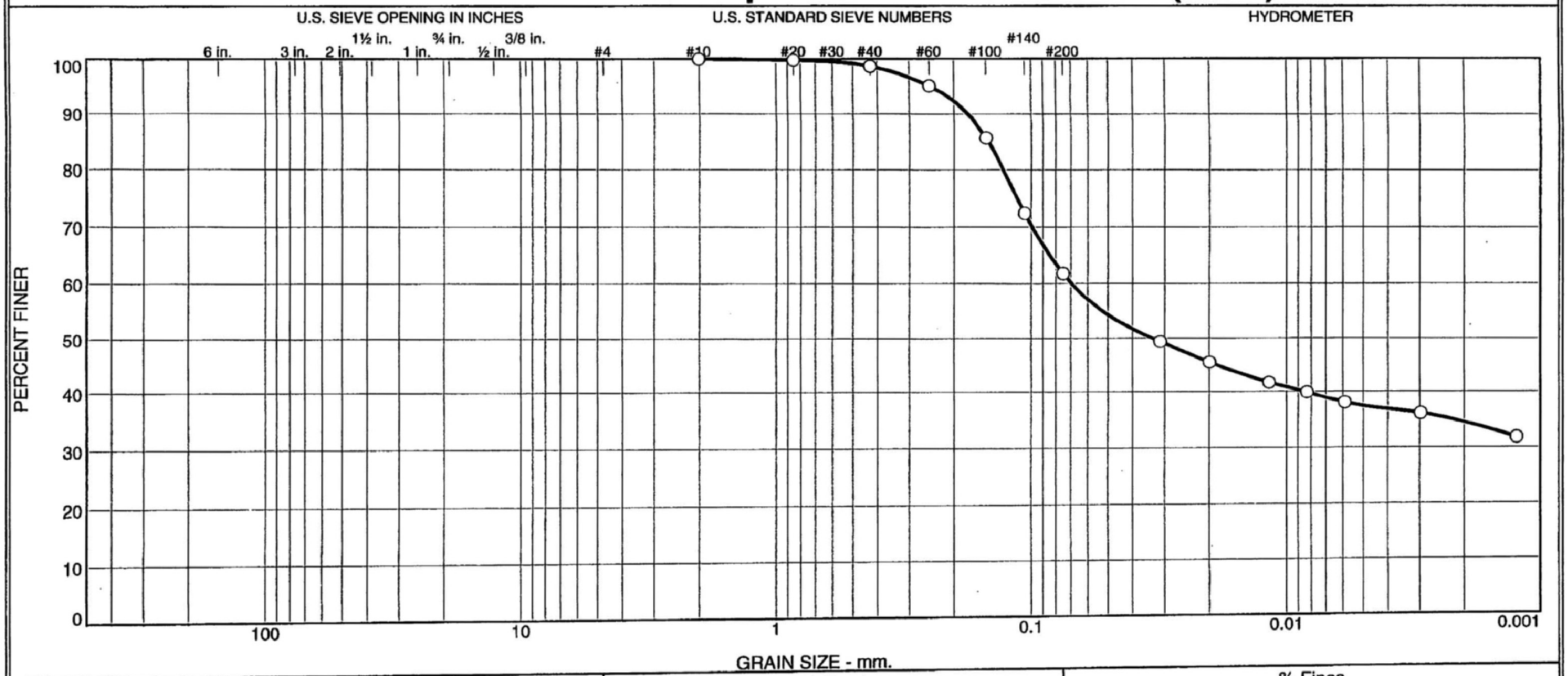
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.5	50.6	51.1			48.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0775	0.1007	0.1479	0.1652	0.1898	0.2315

Fineness Modulus
0.21

Particle Size Distribution Report / ASTM D 422-63-04(2002)e1



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	1.3	36.9	24.5	37.3

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring B-2251	SS-15	58.5-60'	12-03-07	CL	Light Greenish Gray Sandy Lean CLAY	ND	36	14

Client Bechtel

Project Exelon Texas COL (Victoria)

Project No. 6468071777 Figure NA

MACTEC, Inc.

Raleigh, North Carolina

○ Specific Gravity = 2.685 (ASTM D854-06)
ND = Not Determined

Tested By: CS **Checked By:** LBJ DSC 1-25-08

GRAIN SIZE DISTRIBUTION TEST DATA

1/24/2008

Client: Bechtel
Project: Exelon Texas COL (Victoria)
Project Number: 6468071777
Location: Boring B-2251
Depth: 58.5-60'
Sample Number: SS-15
Material Description: Light Greenish Gray Sandy Lean CLAY
Date: 12-03-07
Natural Moisture: ND
Liquid Limit: 36
Plastic Limit: 14
USCS Class.: CL
Testing Remarks: Specific Gravity = 2.685 (ASTM D854-06)
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
209.01	0.00	0.00	#10	0.00	100.0
51.79	0.00	0.00	#20	0.12	99.8
			#40	0.69	98.7
			#60	2.55	95.1
			#100	7.40	85.7
			#140	14.27	72.4
			#200	19.79	61.8

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =51.79
Hygroscopic moisture correction:
Moist weight and tare = 29.19
Dry weight and tare = 29.12
Tare weight = 15.53
Hygroscopic moisture = 0.5%
Table of composite correction values:

Temp., deg. C:	12.3	27.3
Comp. corr.:	-7.0	-3.0

Meniscus correction only = 1.0
Specific gravity of solids = 2.685
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	22.2	30.0	25.6	0.0131	31.0	11.2	0.0311	49.4
5.00	22.2	28.0	23.6	0.0131	29.0	11.5	0.0200	45.5
15.00	22.2	26.0	21.6	0.0131	27.0	11.9	0.0117	41.7
30.00	22.4	25.0	20.7	0.0131	26.0	12.0	0.0083	39.8
60.00	22.5	24.0	19.7	0.0131	25.0	12.2	0.0059	38.0
240.00	22.5	23.0	18.7	0.0131	24.0	12.4	0.0030	36.0
1440.00	21.7	21.0	16.5	0.0132	22.0	12.7	0.0012	31.8

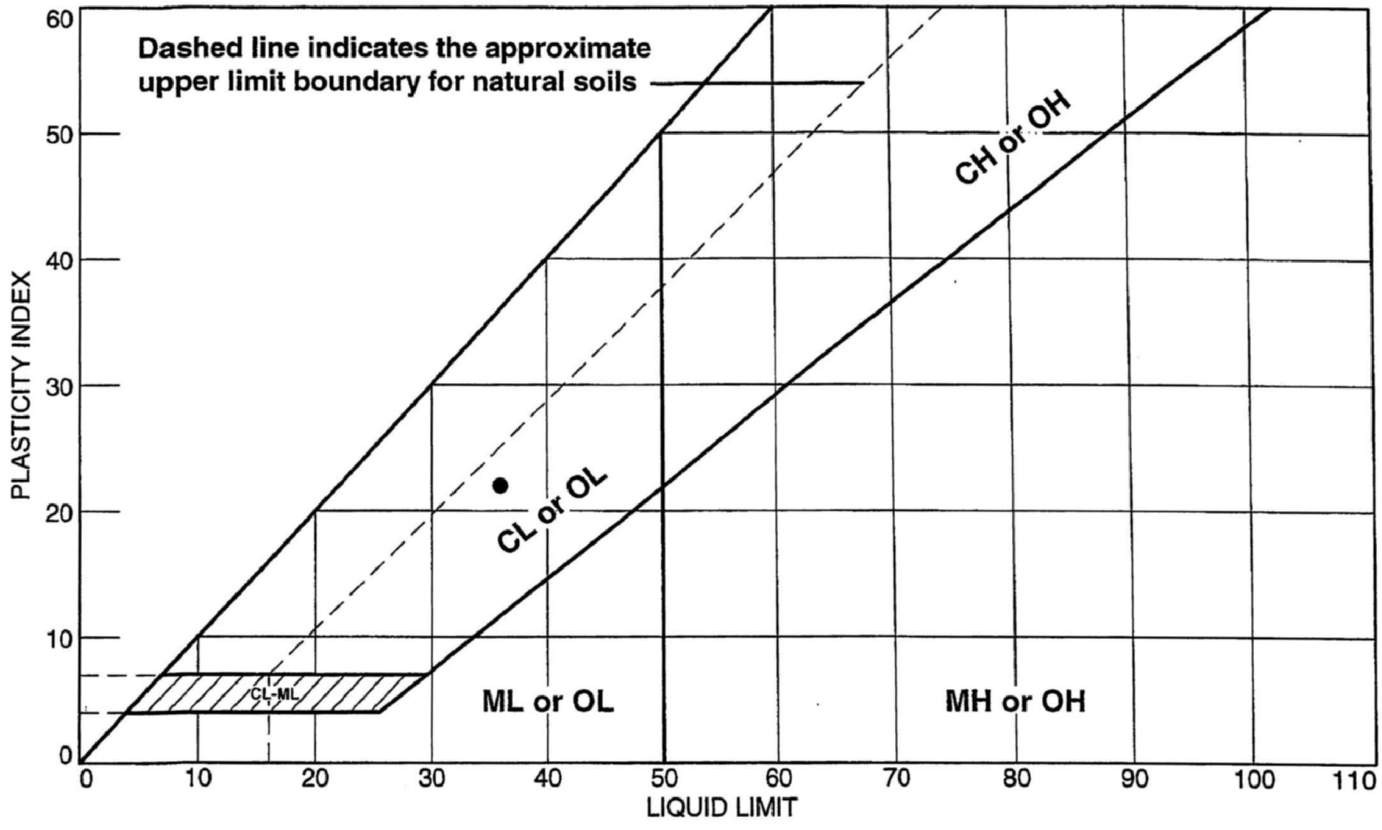
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	1.3	36.9	38.2	24.5	37.3	61.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0334	0.0694	0.1283	0.1468	0.1763	0.2481

Fineness Modulus
0.18

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



SOIL DATA								
	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring B-2251	SS-15	58.5-60'	ND	14	36	22	CL

MACTEC, Inc.

Raleigh, North Carolina

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project No.: 6468071777 **Figure** NA

Tested By: CS **Checked By:** LBJ DSC 1-25-08