

# GRAIN SIZE DISTRIBUTION TEST DATA

1/28/2008

**Client:** Bechtel

**Project:** Exelon Texas COL (Victoria)

**Project Number:** 6468071777

**Location:** Boring B-2265

**Depth:** 0-1.5

**Sample Number:** SS-1

**Material Description:** Black Lean CLAY

**Date:** 11-9-07

**Natural Moisture:** 17.0

**Liquid Limit:** 35

**Plastic Limit:** 13

**USCS Class.:** CL

**Testing Remarks:** Specific Gravity is assumed

Organic content = 5.1% (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 |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 216.97                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 47.44                       | 0.00         | 0.00                               | #20                | 0.49                               | 99.0          |
|                             |              |                                    | #40                | 0.85                               | 98.2          |
|                             |              |                                    | #60                | 1.70                               | 96.4          |
|                             |              |                                    | #100               | 3.21                               | 93.2          |
|                             |              |                                    | #140               | 4.17                               | 91.2          |
|                             |              |                                    | #200               | 4.92                               | 89.6          |

## Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 47.44

Hygroscopic moisture correction:

Moist weight and tare = 28.36

Dry weight and tare = 28.11

Tare weight = 15.56

Hygroscopic moisture = 2.0%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

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

| Elapsed Time (min.) | Temp. (deg. C.) | Actual Reading | Corrected Reading | K      | Rm   | Eff. Depth | Diameter (mm.) | Percent Finer |
|---------------------|-----------------|----------------|-------------------|--------|------|------------|----------------|---------------|
| 2.00                | 22.2            | 25.0           | 20.6              | 0.0131 | 26.0 | 12.0       | 0.0321         | 43.8          |
| 5.00                | 22.2            | 23.0           | 18.6              | 0.0131 | 24.0 | 12.4       | 0.0206         | 39.5          |
| 15.00               | 22.1            | 22.0           | 17.6              | 0.0131 | 23.0 | 12.5       | 0.0120         | 37.3          |
| 30.00               | 22.1            | 21.0           | 16.6              | 0.0131 | 22.0 | 12.7       | 0.0085         | 35.2          |
| 60.00               | 22.1            | 20.0           | 15.6              | 0.0131 | 21.0 | 12.9       | 0.0061         | 33.1          |
| 240.00              | 22.1            | 19.0           | 14.6              | 0.0131 | 20.0 | 13.0       | 0.0031         | 31.0          |
| 1440.00             | 21.5            | 18.0           | 13.4              | 0.0132 | 19.0 | 13.2       | 0.0013         | 28.5          |

MACTEC, Inc.

# Fractional Components

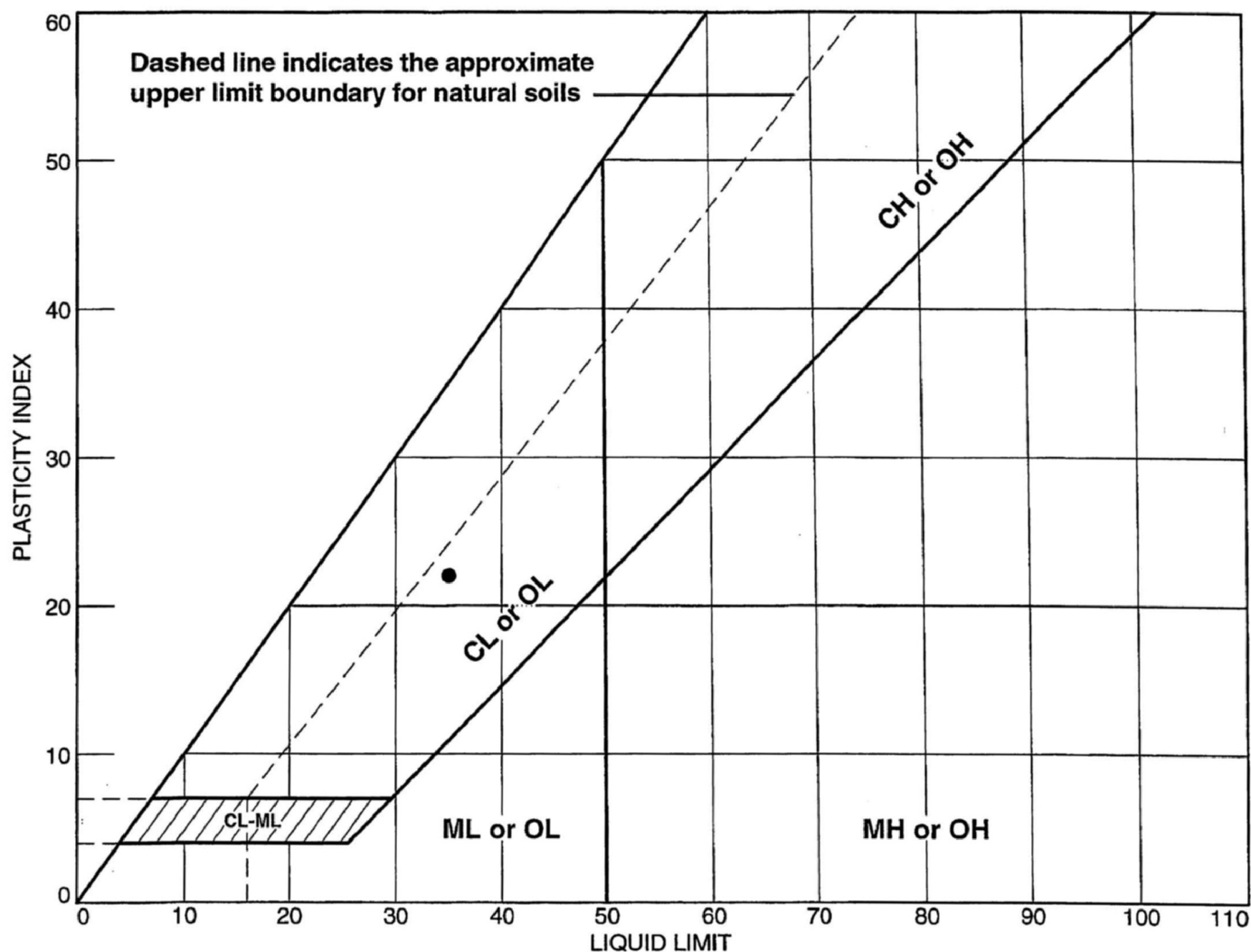
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 1.8    | 8.6  | 10.4  | 57.3  | 32.3 | 89.6  |

| D <sub>10</sub> | D <sub>15</sub> | D <sub>20</sub> | D <sub>30</sub> | D <sub>50</sub> | D <sub>60</sub> | D <sub>80</sub> | D <sub>85</sub> | D <sub>90</sub> | D <sub>95</sub> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 | 0.0021          | 0.0370          | 0.0437          | 0.0596          | 0.0657          | 0.0821          | 0.1923          |

|                     |
|---------------------|
| Fineness<br>Modulus |
| 0.12                |



# 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-2265 | SS-1       | 0-1.5 | 17.0                      | 13                | 35               | 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 3-13-08

# LIQUID AND PLASTIC LIMIT TEST DATA

1/28/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 0-1.5

Sample Number: SS-1

Material Description: Black Lean CLAY

USCS: CL

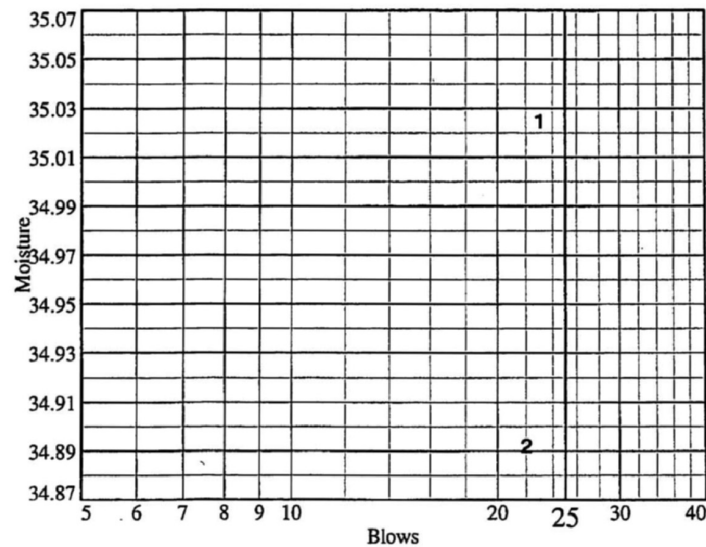
AASHTO: A-6(19)

Tested by: CS

Checked by: LBJ

## Liquid Limit Data

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 31.85 | 33.89 |   |   |   |   |
| Dry+Tare | 27.64 | 29.19 |   |   |   |   |
| Tare     | 15.62 | 15.72 |   |   |   |   |
| # Blows  | 23    | 22    |   |   |   |   |
| Moisture | 35.0  | 34.9  |   |   |   |   |



Liquid Limit= 35  
 Plastic Limit= 13  
 Plasticity Index= 22  
 Natural Moisture= 17.0  
 Liquidity Index= 0.2

## Plastic Limit Data

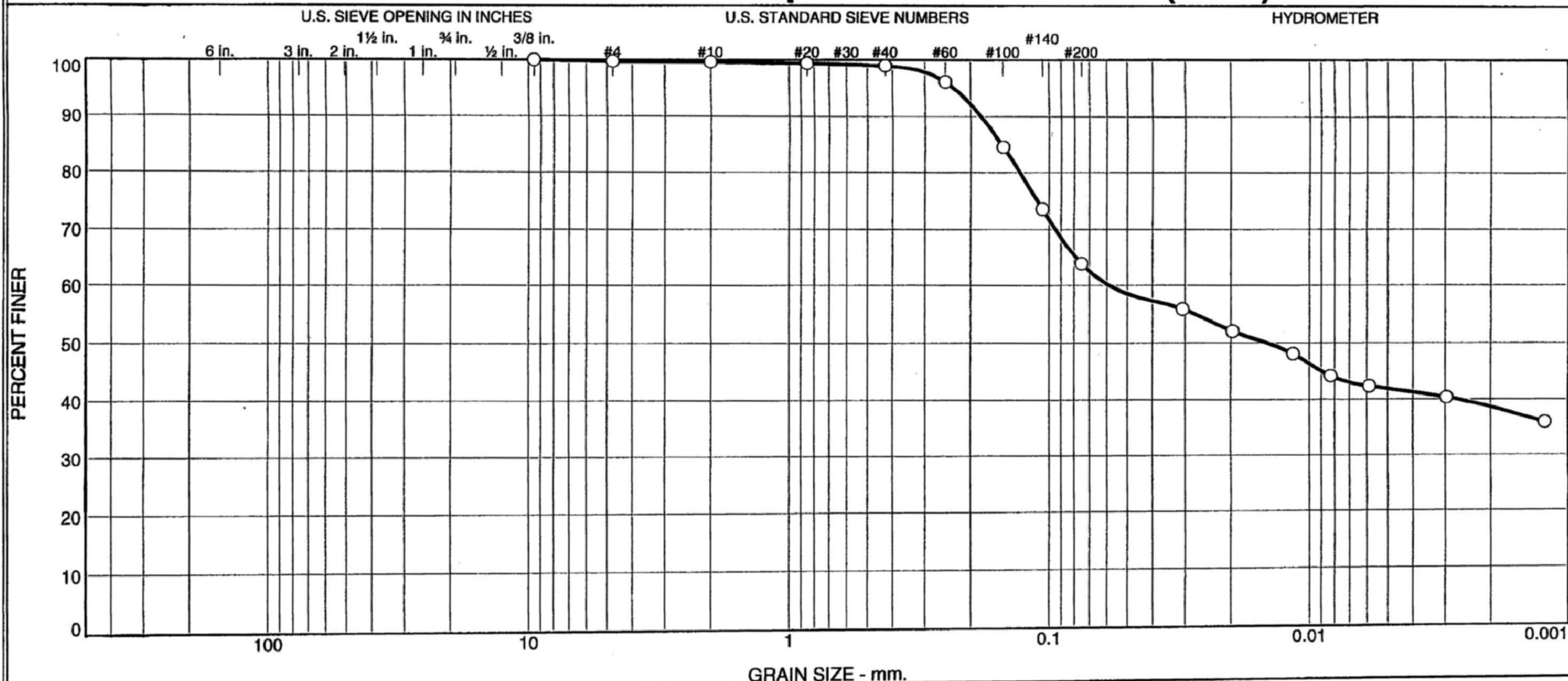
| Run No.  | 1     | 2     | 3 | 4 |
|----------|-------|-------|---|---|
| Wet+Tare | 24.59 | 26.43 |   |   |
| Dry+Tare | 23.55 | 25.20 |   |   |
| Tare     | 15.47 | 15.63 |   |   |
| Moisture | 12.9  | 12.9  |   |   |

## Natural Moisture Data

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 124.22   | 107.21   | 7.04 | 17.0     |

MACTEC, Inc.

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



| % +3" | % Gravel |      | % Sand |        |      | % Fines |      |
|-------|----------|------|--------|--------|------|---------|------|
|       | Coarse   | Fine | Coarse | Medium | Fine | Silt    | Clay |
| 0.0   | 0.0      | 0.3  | 0.1    | 0.7    | 35.0 | 22.0    | 41.9 |

| Source        | Sample # | Depth/Elev. | Date Sampled | USCS | Material Description                | NM % | LL | PL |
|---------------|----------|-------------|--------------|------|-------------------------------------|------|----|----|
| Boring B-2265 | SS-2     | 3.5-5.0     | 11-9-07      | CL   | Light Greenish Gray Sandy Lean CLAY | 16.8 | 43 | 13 |

Client Bechtel

Project Exelon Texas COL (Victoria)

Project No. 6468071777

Figure NA

**MACTEC, Inc.**

**Raleigh, North Carolina**

○ Specific Gravity = 2.665 (ASTM D854-06)  
Organic content = 3.2% (ASTM D2794-07)



## GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 3.5-5.0

Sample Number: SS-2

Material Description: Light Greenish Gray Sandy Lean CLAY

Date: 11-9-07

Natural Moisture: 16.8

Liquid Limit: 43

Plastic Limit: 13

USCS Class.: CL

Testing Remarks: Specific Gravity = 2.665 (ASTM D854-06)

Organic content = 3.2% (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 |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 172.16                      | 0.00         | 0.00                               | 3/8"               | 0.00                               | 100.0         |
|                             |              |                                    | #4                 | 0.51                               | 99.7          |
|                             |              |                                    | #10                | 0.66                               | 99.6          |
| 52.22                       | 0.00         | 0.00                               | #20                | 0.14                               | 99.3          |
|                             |              |                                    | #40                | 0.37                               | 98.9          |
|                             |              |                                    | #60                | 1.86                               | 96.1          |
|                             |              |                                    | #100               | 7.86                               | 84.6          |
|                             |              |                                    | #140               | 13.65                              | 73.6          |
|                             |              |                                    | #200               | 18.73                              | 63.9          |

## Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 99.6

Weight of hydrometer sample = 52.22

Hygroscopic moisture correction:

Moist weight and tare = 29.86

Dry weight and tare = 29.45

Tare weight = 15.68

Hygroscopic moisture = 3.0%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.665

Hydrometer type = 152H

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

| Elapsed Time (min.) | Temp. (deg. C.) | Actual Reading | Corrected Reading | K      | Rm   | Eff. Depth | Diameter (mm.) | Percent Finer |
|---------------------|-----------------|----------------|-------------------|--------|------|------------|----------------|---------------|
| 2.00                | 22.1            | 33.0           | 28.6              | 0.0132 | 34.0 | 10.7       | 0.0306         | 55.9          |
| 5.00                | 22.1            | 31.0           | 26.6              | 0.0132 | 32.0 | 11.0       | 0.0197         | 52.0          |
| 15.00               | 22.1            | 29.0           | 24.6              | 0.0132 | 30.0 | 11.4       | 0.0115         | 48.1          |
| 30.00               | 22.1            | 27.0           | 22.6              | 0.0132 | 28.0 | 11.7       | 0.0083         | 44.2          |
| 60.00               | 22.3            | 26.0           | 21.6              | 0.0132 | 27.0 | 11.9       | 0.0059         | 42.3          |
| 240.00              | 22.3            | 25.0           | 20.6              | 0.0132 | 26.0 | 12.0       | 0.0030         | 40.4          |
| 1440.00             | 21.4            | 23.0           | 18.4              | 0.0134 | 24.0 | 12.4       | 0.0012         | 36.0          |

MACTEC, Inc.

# Fractional Components

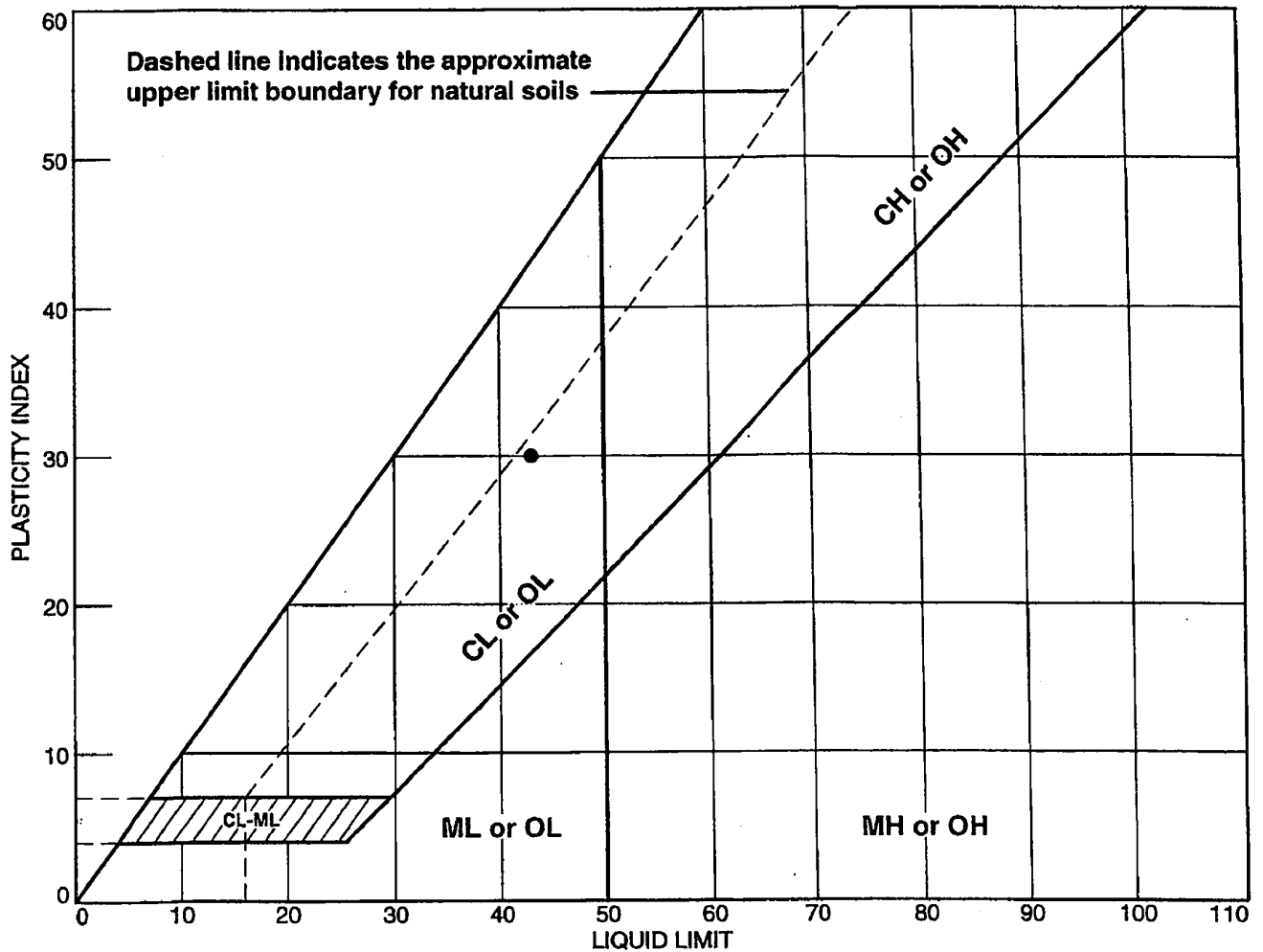
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.3  | 0.3   | 0.1    | 0.7    | 35.0 | 35.8  | 22.0  | 41.9 | 63.9  |

| D <sub>10</sub> | D <sub>15</sub> | D <sub>20</sub> | D <sub>30</sub> | D <sub>50</sub> | D <sub>60</sub> | D <sub>80</sub> | D <sub>85</sub> | D <sub>90</sub> | D <sub>95</sub> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 |                 | 0.0145          | 0.0587          | 0.1293          | 0.1519          | 0.1825          | 0.2325          |

| Fineness<br>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-2265 | SS-2       | 3.5-5.0 | 16.8                      | 13                | 43               | 30                   | CL   |

**MACTEC, Inc.**

**Raleigh, North Carolina**

**Client:** Bechtel

**Project:** Exelon Texas COL (Victoria)

**Project No.:** 6468071777

**Figure** NA

**Tested By:** CS

**Checked By:** LBJ KAW 1/26/08

# LIQUID AND PLASTIC LIMIT TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 3.5-5.0

Sample Number: SS-2

Material Description: Light Greenish Gray Sandy Lean CLAY

USCS: CL

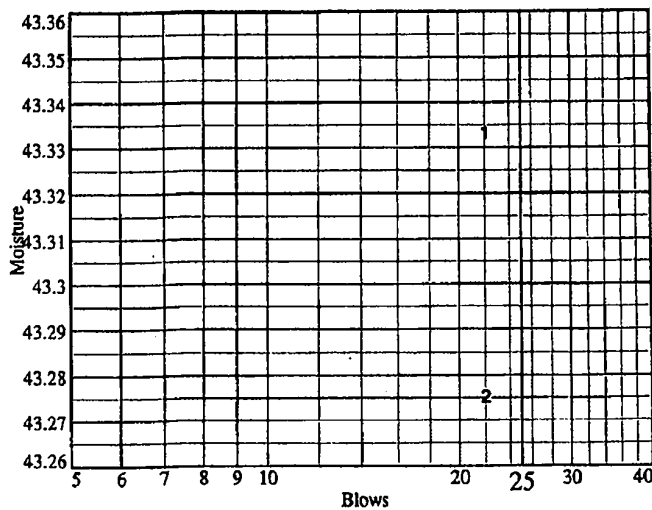
AASHTO: A-7-6(16)

Tested by: CS

Checked by: LBJ

## Liquid Limit Data

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 30.82 | 31.16 |   |   |   |   |
| Dry+Tare | 26.27 | 26.43 |   |   |   |   |
| Tare     | 15.77 | 15.50 |   |   |   |   |
| # Blows  | 22    | 22    |   |   |   |   |
| Moisture | 43.3  | 43.3  |   |   |   |   |



Liquid Limit= 43  
 Plastic Limit= 13  
 Plasticity Index= 30  
 Natural Moisture= 16.8  
 Liquidity Index= 0.1

## Plastic Limit Data

| Run No.  | 1     | 2     | 3 | 4 |
|----------|-------|-------|---|---|
| Wet+Tare | 23.20 | 25.52 |   |   |
| Dry+Tare | 22.30 | 24.42 |   |   |
| Tare     | 15.27 | 15.64 |   |   |
| Moisture | 12.8  | 12.5  |   |   |

## Natural Moisture Data

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 145.18   | 125.51   | 8.24 | 16.8     |

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: 1/16/08

SAMPLE IDENTIFICATION: B-2265 SS-2

|                                                                             |         |
|-----------------------------------------------------------------------------|---------|
| (A) Mass of oven-dried soil, grams:                                         | 51.03   |
| (B) Mass of pycnometer filled with water at test temperature (T), grams:    | 654.91  |
| (C) Mass of pycnometer, water and soil, grams:                              | 686.80  |
| (T) Temperature of pycnometer, water and soil, °C when mass (C) determined: | 22.3    |
| (G) Specific Gravity at observed temperature: $A / [C - (C - A)]$           | 2.666   |
| (F) <i>Correction factor:</i>                                               | 0.99950 |
| (G x F) <b>SPECIFIC GRAVITY @ 20°C:</b>                                     | 2.665   |

MATERIAL TESTED: ☒ ☐  
                                  - # 4                   - # 10

PREPARATION METHOD: ☒ ☐  
                                  DRY                   WET (dispersed)

REMARKS: Estimated % Passing # 4 : 100%  
              Sandy Lean CLAY (CL)

EQUIPMENT USED  
                  SCALES : 3.1.19  
                  OVEN : 5.1.16  
THERMOMETER : 5.1.01  
PYCNOMETER : P-5

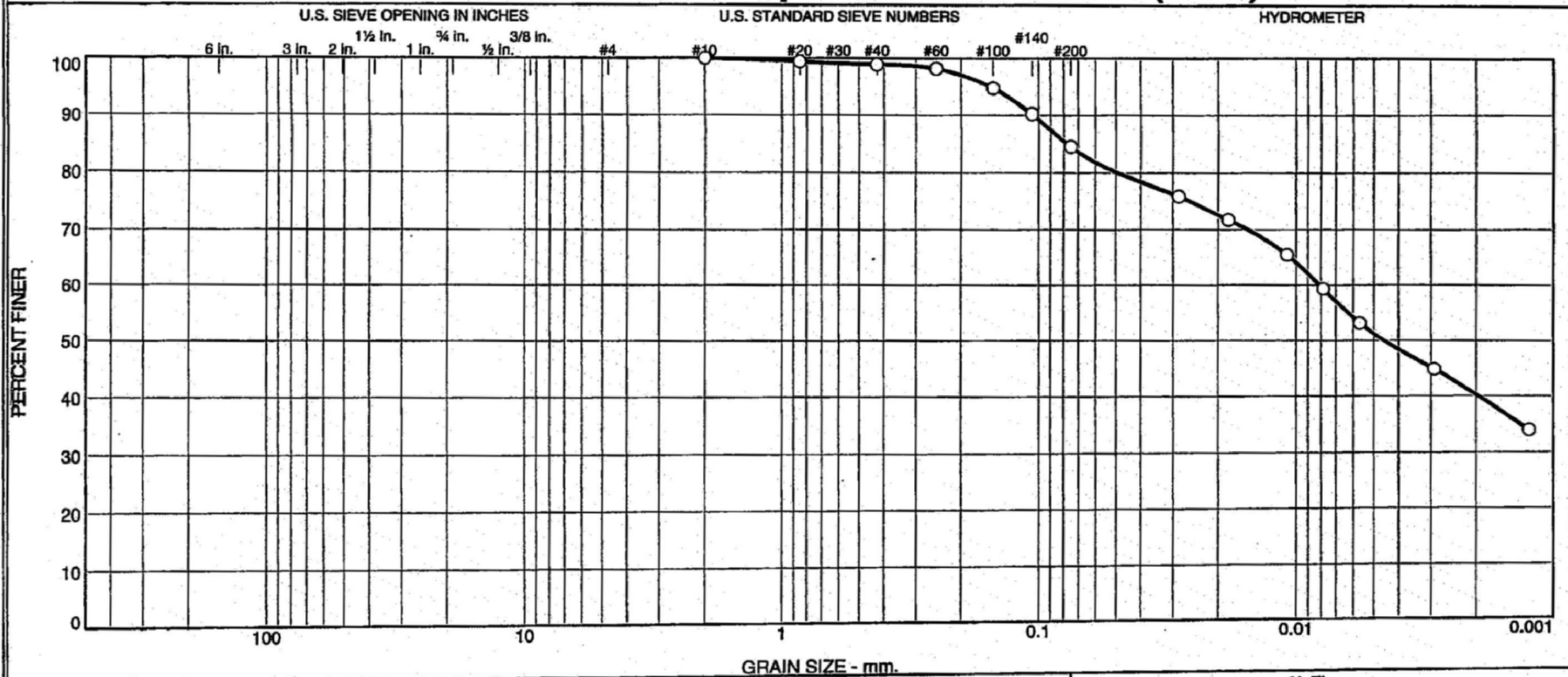
TESTED BY: CS

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

REVIEWED BY: Brian Johnson

KAW 1/26/08

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





# GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 6-7.5

Sample Number: SS-3

Material Description: Light Greenish Gray Lean CLAY with sand

Date: 11-9-07

Natural Moisture: 16.5

Liquid Limit: 46

Plastic Limit: 13

USCS Class.: CL

Testing Remarks: Specific Gravity is assumed

Tested by: CS

Checked by: LBJ

## Sieve Test Data

| Dry Sample and Tare (grams) | Tare (grams) | Cumulative Pan Tare Weight (grams) | Sieve Opening Size | Cumulative Weight Retained (grams) | Percent Finer |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 181.57                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 48.69                       | 0.00         | 0.00                               | #20                | 0.29                               | 99.4          |
|                             |              |                                    | #40                | 0.55                               | 98.9          |
|                             |              |                                    | #60                | 0.88                               | 98.2          |
|                             |              |                                    | #100               | 2.59                               | 94.7          |
|                             |              |                                    | #140               | 4.76                               | 90.2          |
|                             |              |                                    | #200               | 7.49                               | 84.6          |

## Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 48.69

Hygroscopic moisture correction:

Moist weight and tare = 28.80

Dry weight and tare = 28.51

Tare weight = 15.47

Hygroscopic moisture = 2.2%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

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

| Elapsed Time (min.) | Temp. (deg. C.) | Actual Reading | Corrected Reading | K      | Rm   | Eff. Depth | Diameter (mm.) | Percent Finer |
|---------------------|-----------------|----------------|-------------------|--------|------|------------|----------------|---------------|
| 2.00                | 22.1            | 41.0           | 36.6              | 0.0131 | 42.0 | 9.4        | 0.0284         | 75.9          |
| 5.00                | 22.1            | 39.0           | 34.6              | 0.0131 | 40.0 | 9.7        | 0.0183         | 71.8          |
| 15.00               | 22.1            | 36.0           | 31.6              | 0.0131 | 37.0 | 10.2       | 0.0108         | 65.5          |
| 30.00               | 22.1            | 33.0           | 28.6              | 0.0131 | 34.0 | 10.7       | 0.0078         | 59.3          |
| 60.00               | 22.2            | 30.0           | 25.6              | 0.0131 | 31.0 | 11.2       | 0.0057         | 53.1          |
| 240.00              | 22.2            | 26.0           | 21.6              | 0.0131 | 27.0 | 11.9       | 0.0029         | 44.8          |
| 1440.00             | 21.4            | 21.0           | 16.4              | 0.0132 | 22.0 | 12.7       | 0.0012         | 34.0          |

MACTEC, Inc.

# Report Summary

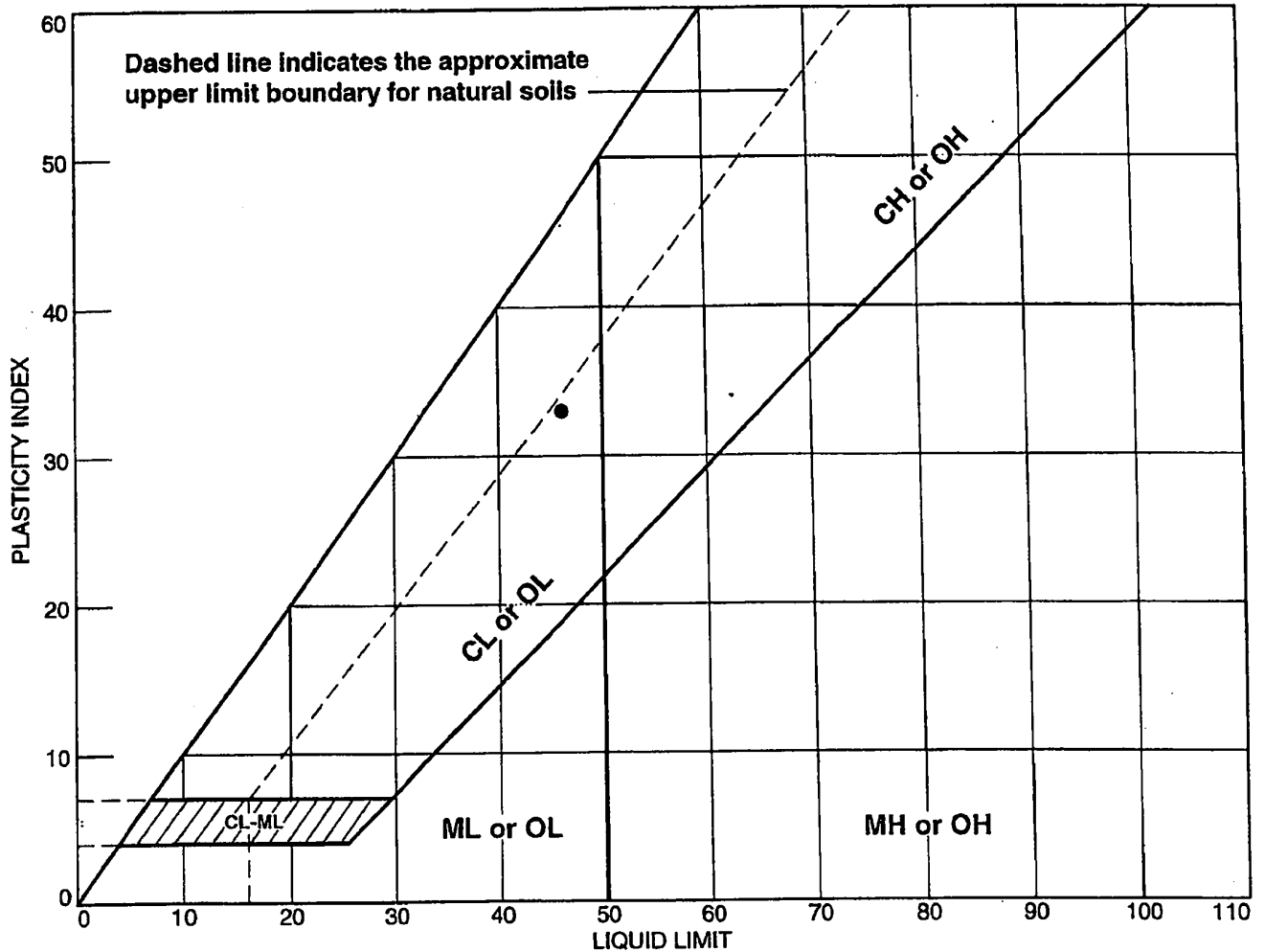
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 1.1    | 14.3 | 15.4  | 33.4  | 51.2 | 84.6  |

| D10 | D15 | D20 | D30 | D50    | D60    | D80    | D85    | D90    | D95    |
|-----|-----|-----|-----|--------|--------|--------|--------|--------|--------|
|     |     |     |     | 0.0046 | 0.0081 | 0.0492 | 0.0770 | 0.1045 | 0.1548 |

| Fineness Modulus |
|------------------|
| 0.08             |

MACTEC, 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-2265 | SS-3       | 6-7.5 | 16.5                      | 13                | 46               | 33                   | CL   |

**MACTEC, Inc.**

**Raleigh, North Carolina**

**Client:** Bechtel

**Project:** Exelon Texas COL (Victoria)

**Project No.:** 6468071777

**Figure** NA

**Tested By:** CS

**Checked By:** LBJ

**KAW 1/26/08**

# LIQUID AND PLASTIC LIMIT TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 6-7.5

Sample Number: SS-3

Material Description: Light Greenish Gray Lean CLAY with sand

USCS: CL

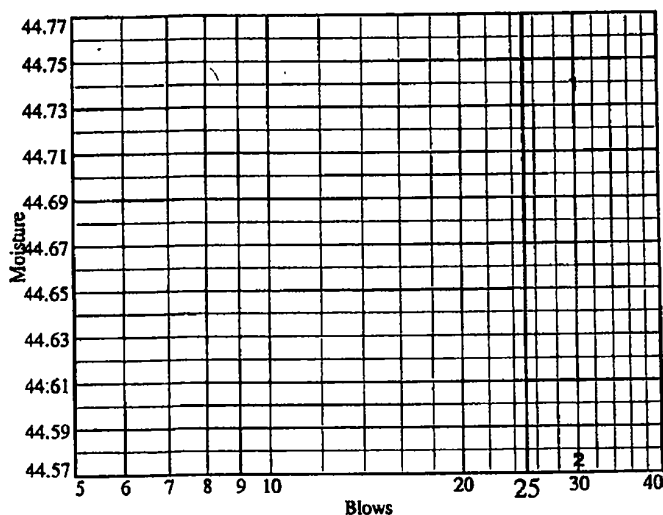
AASHTO: A-7-6(28)

Tested by: CS

Checked by: LBJ

## Liquid Limit Data

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 31.63 | 33.87 |   |   |   |   |
| Dry+Tare | 26.57 | 28.20 |   |   |   |   |
| Tare     | 15.26 | 15.48 |   |   |   |   |
| # Blows  | 30    | 30    |   |   |   |   |
| Moisture | 44.7  | 44.6  |   |   |   |   |



Liquid Limit= 46  
 Plastic Limit= 13  
 Plasticity Index= 33  
 Natural Moisture= 16.5  
 Liquidity Index= 0.1

## Plastic Limit Data

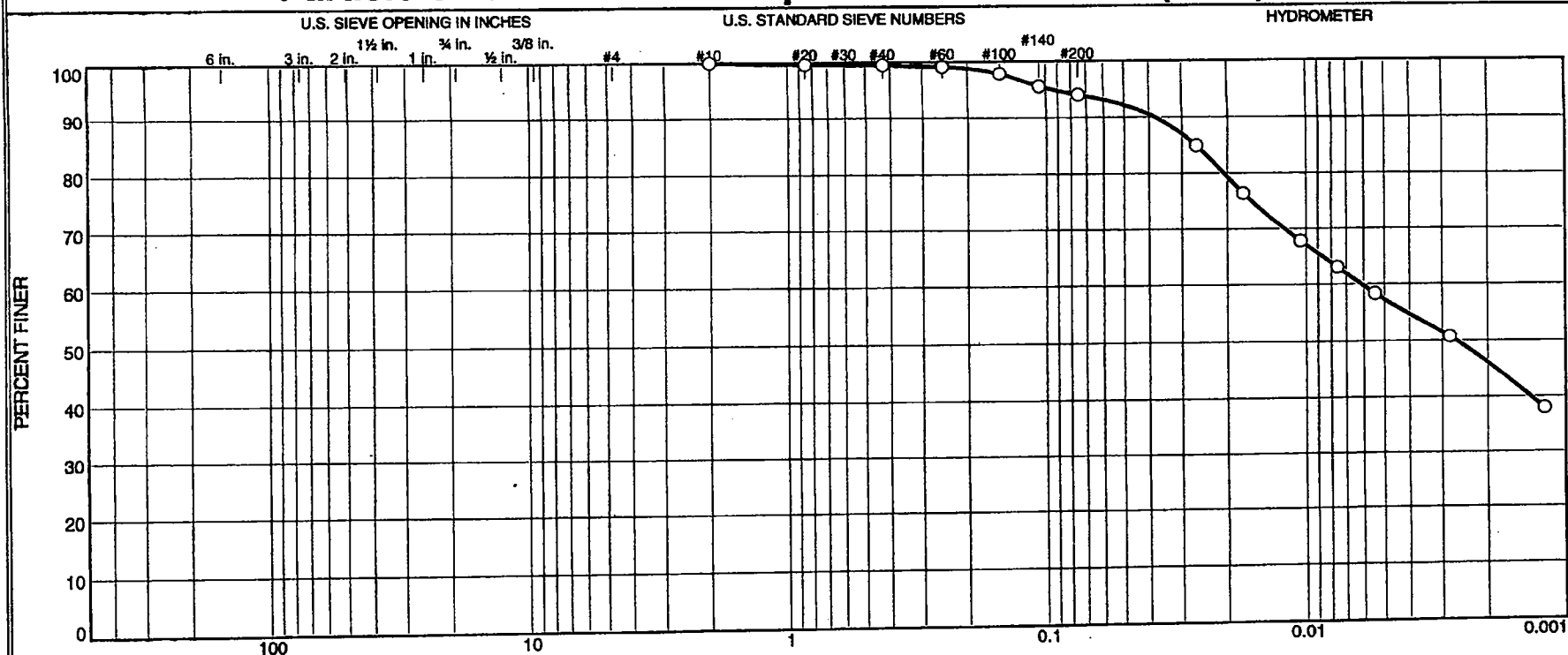
| Run No.  | 1     | 2     | 3 | 4 |  |
|----------|-------|-------|---|---|--|
| Wet+Tare | 22.58 | 24.46 |   |   |  |
| Dry+Tare | 21.77 | 23.40 |   |   |  |
| Tare     | 15.55 | 15.54 |   |   |  |
| Moisture | 13.0  | 13.5  |   |   |  |

## Natural Moisture Data

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 108.60   | 94.22    | 6.86 | 16.5     |

MACTEC, Inc.

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



GRAIN SIZE - mm.

| % +3" | % Gravel |      | % Sand |        |      | % Fines |      |
|-------|----------|------|--------|--------|------|---------|------|
|       | Coarse   | Fine | Coarse | Medium | Fine | Silt    | Clay |
| 0.0   | 0.0      | 0.0  | 0.0    | 0.5    | 5.5  | 36.7    | 57.3 |

| Source        | Sample # | Depth/Elev. | Date Sampled | USCS | Material Description          | NM % | LL | PL |
|---------------|----------|-------------|--------------|------|-------------------------------|------|----|----|
| Boring B-2265 | SS-4     | 8.5-10.0    | 11-9-07      | CL   | Light Greenish Gray Lean CLAY | 18.4 | 48 | 15 |

Client Bechtel

Project Exelon Texas COL (Victoria)

Project No. 6468071777

Figure NA

MACTEC, Inc.

Raleigh, North Carolina

○ Specific Gravity is assumed  
Organic content = 2.7% (ASTM D2794-07)

Tested By: CS

Checked By: LBI KAW 1/26/08



# GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 8.5-10.0

Sample Number: SS-4

Material Description: Light Greenish Gray Lean CLAY

Date: 11-9-07

Natural Moisture: 18.4

Liquid Limit: 48

Plastic Limit: 15

USCS Class.: CL

Testing Remarks: Specific Gravity is assumed

Organic content = 2.7% (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 |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 194.62                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 53.26                       | 0.00         | 0.00                               | #20                | 0.20                               | 99.6          |
|                             |              |                                    | #40                | 0.28                               | 99.5          |
|                             |              |                                    | #60                | 0.48                               | 99.1          |
|                             |              |                                    | #100               | 1.17                               | 97.8          |
|                             |              |                                    | #140               | 2.38                               | 95.5          |
|                             |              |                                    | #200               | 3.20                               | 94.0          |

## Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 53.26

Hygroscopic moisture correction:

Moist weight and tare = 28.49

Dry weight and tare = 28.15

Tare weight = 15.56

Hygroscopic moisture = 2.7%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

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

| Elapsed Time (min.) | Temp. (deg. C.) | Actual Reading | Corrected Reading | K      | Rm   | Eff. Depth | Diameter (mm.) | Percent Finer |
|---------------------|-----------------|----------------|-------------------|--------|------|------------|----------------|---------------|
| 2.00                | 22.1            | 49.0           | 44.6              | 0.0131 | 50.0 | 8.1        | 0.0264         | 85.0          |
| 5.00                | 22.1            | 44.5           | 40.1              | 0.0131 | 45.5 | 8.8        | 0.0174         | 76.4          |
| 15.00               | 22.1            | 40.0           | 35.6              | 0.0131 | 41.0 | 9.6        | 0.0105         | 67.8          |
| 30.00               | 22.1            | 37.5           | 33.1              | 0.0131 | 38.5 | 10.0       | 0.0076         | 63.1          |
| 60.00               | 22.3            | 35.0           | 30.6              | 0.0131 | 36.0 | 10.4       | 0.0054         | 58.4          |
| 240.00              | 22.3            | 31.0           | 26.6              | 0.0131 | 32.0 | 11.0       | 0.0028         | 50.8          |
| 1440.00             | 21.5            | 24.5           | 19.9              | 0.0132 | 25.5 | 12.1       | 0.0012         | 37.9          |

MACTEC, Inc.

# Gradual Components

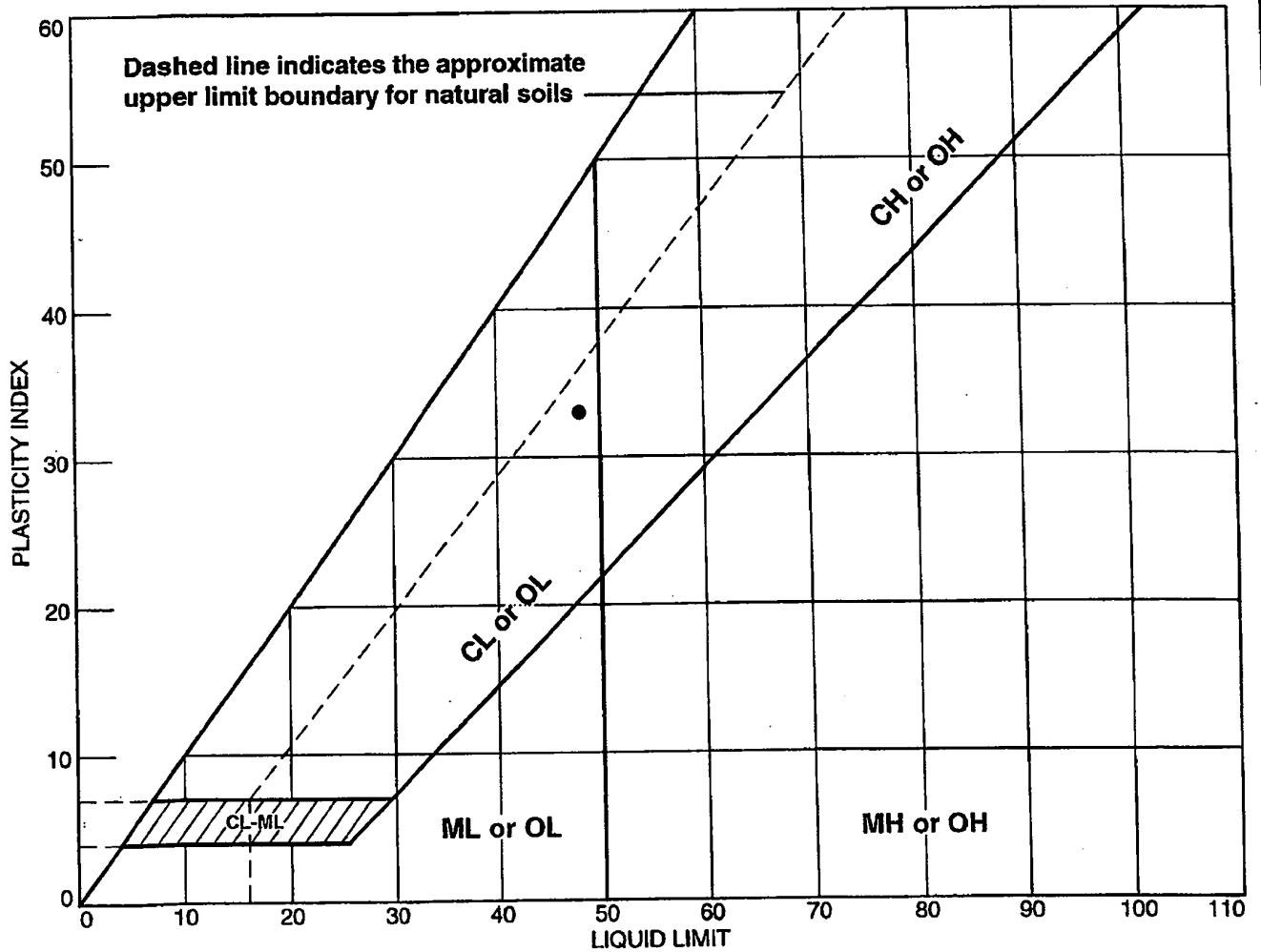
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 0.5    | 5.5  | 6.0   | 36.7  | 57.3 | 94.0  |

| D <sub>10</sub> | D <sub>15</sub> | D <sub>20</sub> | D <sub>30</sub> | D <sub>50</sub> | D <sub>60</sub> | D <sub>80</sub> | D <sub>85</sub> | D <sub>90</sub> | D <sub>95</sub> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 |                 | 0.0026          | 0.0061          | 0.0206          | 0.0264          | 0.0379          | 0.0960          |

|                     |
|---------------------|
| Fineness<br>Modulus |
| 0.04                |

MACTEC, 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-2265 | SS-4       | 8.5-10.0 | 18.4                      | 15                | 48               | 33                   | CL   |

**MACTEC, Inc.**

**Raleigh, North Carolina**

**Client:** Bechtel

**Project:** Exelon Texas COL (Victoria)

**Project No.:** 6468071777

**Figure** NA

**Tested By:** CS

**Checked By:** LBJ KAW 1/26/08

# LIQUID AND PLASTIC LIMIT TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 8.5-10.0

Sample Number: SS-4

Material Description: Light Greenish Gray Lean CLAY

USCS: CL

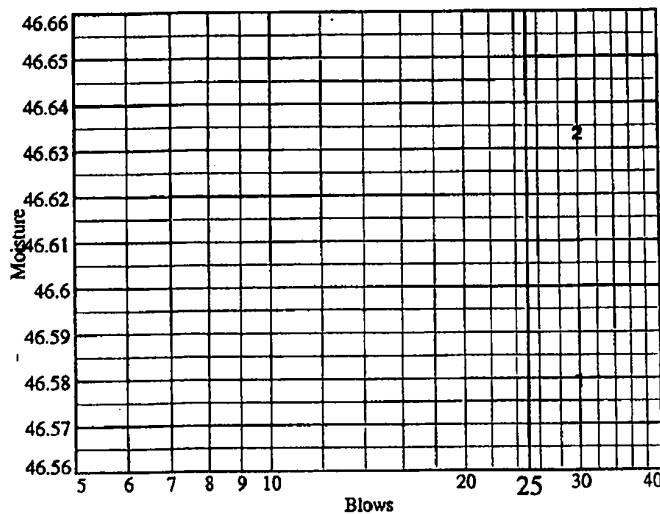
AASHTO: A-7-6(32)

Tested by: CS

Checked by: LBJ

## Liquid Limit Data

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 30.08 | 33.08 |   |   |   |   |
| Dry+Tare | 25.45 | 27.47 |   |   |   |   |
| Tare     | 15.51 | 15.44 |   |   |   |   |
| # Blows  | 30    | 30    |   |   |   |   |
| Moisture | 46.6  | 46.6  |   |   |   |   |



Liquid Limit= 48  
 Plastic Limit= 15  
 Plasticity Index= 33  
 Natural Moisture= 18.4  
 Liquidity Index= 0.1

## Plastic Limit Data

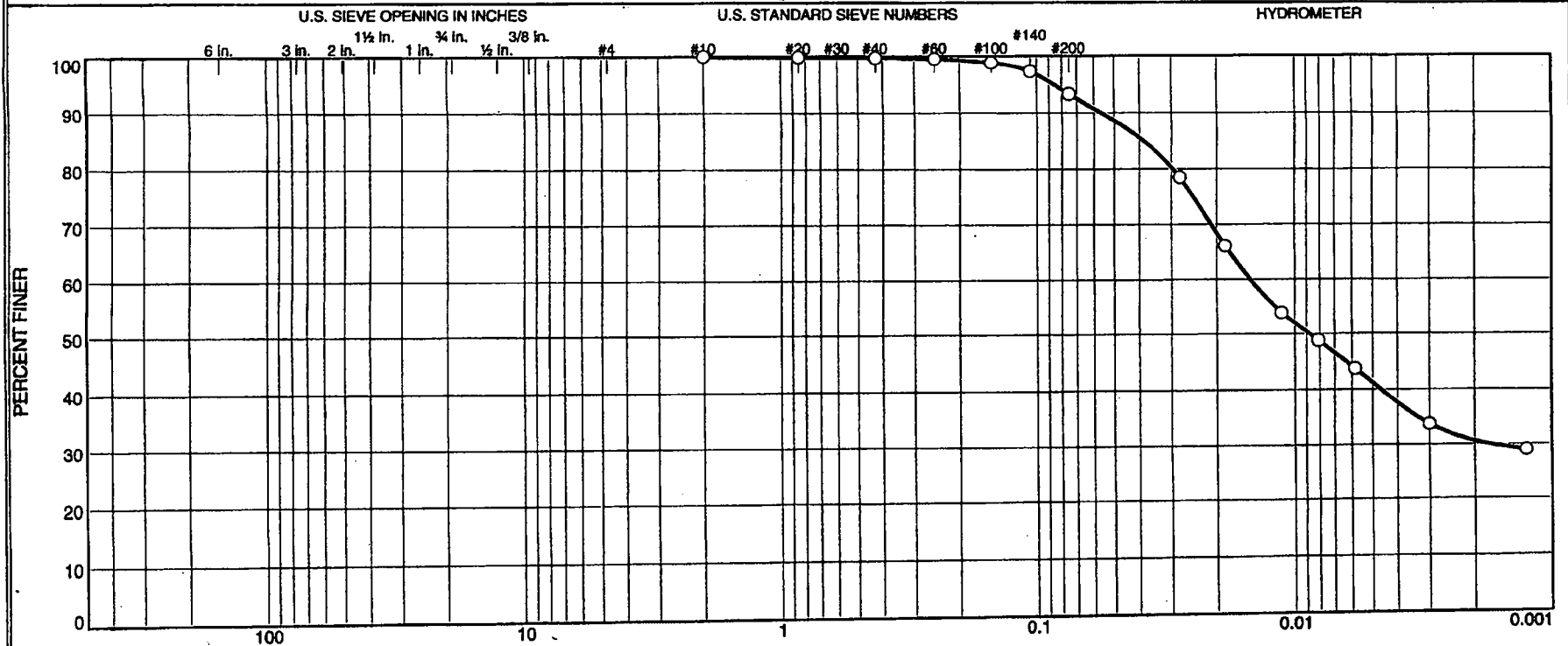
| Run No.  | 1     | 2     | 3 | 4 |  |
|----------|-------|-------|---|---|--|
| Wet+Tare | 26.32 | 26.31 |   |   |  |
| Dry+Tare | 24.88 | 24.94 |   |   |  |
| Tare     | 15.48 | 15.61 |   |   |  |
| Moisture | 15.3  | 14.7  |   |   |  |

## Natural Moisture Data

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 125.45   | 107.42   | 9.18 | 18.4     |

MACTEC, Inc.

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



## GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 11.0-12.5

Sample Number: SS-5

Material Description: Light Greenish Gray Lean CLAY

Date: 11-9-07

Natural Moisture: 22.6

Liquid Limit: 40

Plastic Limit: 14

USCS Class.: CL

Testing Remarks: Specific Gravity is assumed

Tested by: CS

Checked by: LBJ

## Sieve Test Data

| Dry Sample and Tare (grams) | Tare (grams) | Cumulative Pan Tare Weight (grams) | Sieve Opening Size | Cumulative Weight Retained (grams) | Percent Finer |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 180.40                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 49.62                       | 0.00         | 0.00                               | #20                | 0.10                               | 99.8          |
|                             |              |                                    | #40                | 0.16                               | 99.7          |
|                             |              |                                    | #60                | 0.26                               | 99.5          |
|                             |              |                                    | #100               | 0.60                               | 98.8          |
|                             |              |                                    | #140               | 1.36                               | 97.3          |
|                             |              |                                    | #200               | 3.35                               | 93.2          |

## Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 49.62

Hygroscopic moisture correction:

Moist weight and tare = 24.36

Dry weight and tare = 24.12

Tare weight = 11.20

Hygroscopic moisture = 1.9%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

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

| Elapsed Time (min.) | Temp. (deg. C.) | Actual Reading | Corrected Reading | K      | Rm   | Eff. Depth | Diameter (mm.) | Percent Finer |
|---------------------|-----------------|----------------|-------------------|--------|------|------------|----------------|---------------|
| 2.00                | 22.4            | 43.0           | 38.6              | 0.0131 | 44.0 | 9.1        | 0.0278         | 78.5          |
| 5.00                | 22.2            | 37.0           | 32.6              | 0.0131 | 38.0 | 10.1       | 0.0186         | 66.2          |
| 15.00               | 22.2            | 31.0           | 26.6              | 0.0131 | 32.0 | 11.0       | 0.0112         | 54.0          |
| 30.00               | 22.1            | 28.5           | 24.1              | 0.0131 | 29.5 | 11.5       | 0.0081         | 48.9          |
| 60.00               | 22.1            | 26.0           | 21.6              | 0.0131 | 27.0 | 11.9       | 0.0058         | 43.8          |
| 240.00              | 22.4            | 21.0           | 16.6              | 0.0131 | 22.0 | 12.7       | 0.0030         | 33.8          |
| 1440.00             | 21.2            | 19.0           | 14.3              | 0.0132 | 20.0 | 13.0       | 0.0013         | 29.1          |

MACTEC, Inc.

**Percent Total Comparison**

| 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    | 6.5  | 6.8   | 51.9  | 41.3 | 93.2  |

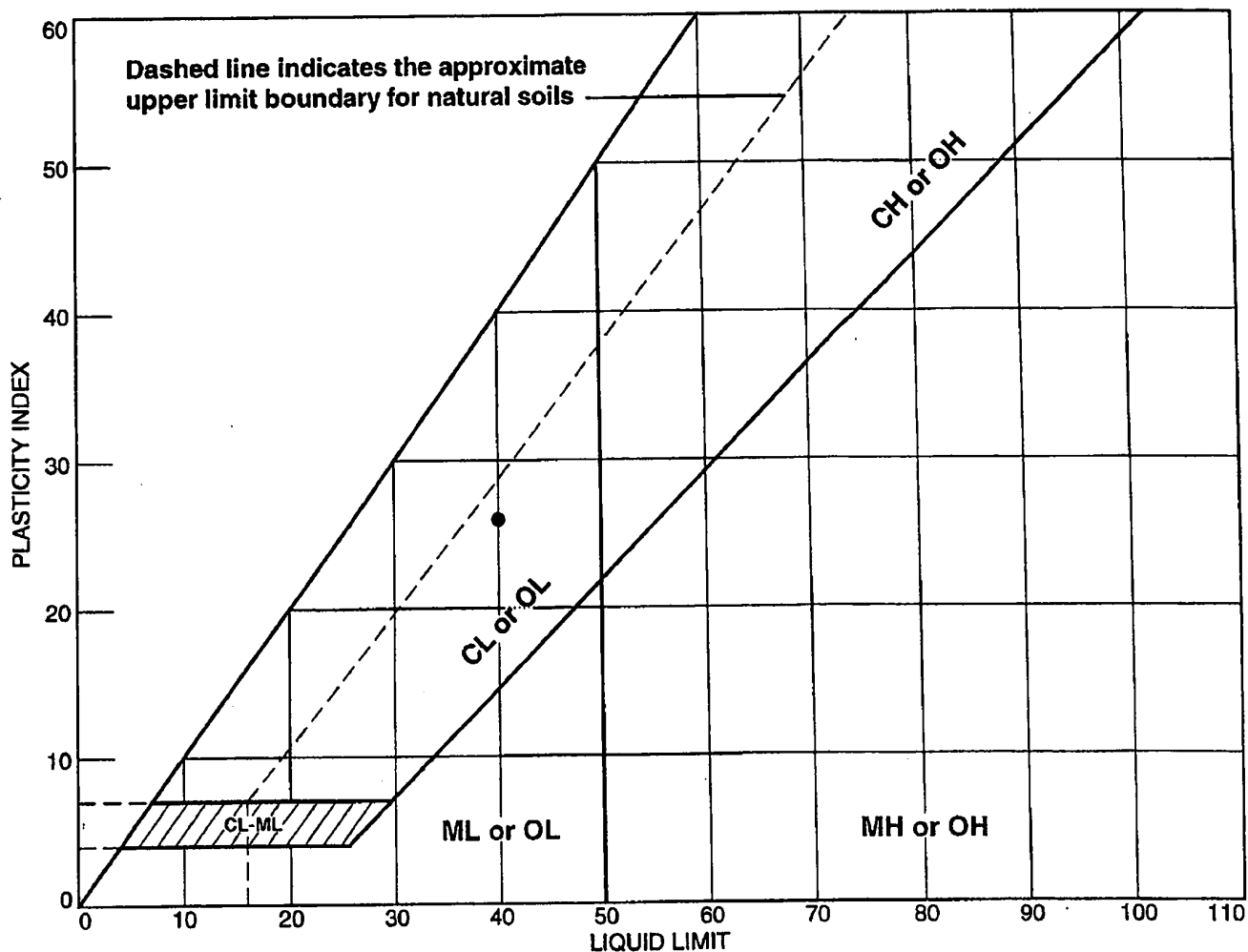
| D <sub>10</sub> | D <sub>15</sub> | D <sub>20</sub> | D <sub>30</sub> | D <sub>50</sub> | D <sub>60</sub> | D <sub>80</sub> | D <sub>85</sub> | D <sub>90</sub> | D <sub>95</sub> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 | 0.0017          | 0.0088          | 0.0148          | 0.0296          | 0.0380          | 0.0560          | 0.0862          |

|                             |
|-----------------------------|
| <b>Fineness<br/>Modulus</b> |
| 0.02                        |

**MACTEC, 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-2265 | SS-5       | 11.0-12.5 | 22.6                      | 14                | 40               | 26                   | CL   |

**MACTEC, Inc.**

**Raleigh, North Carolina**

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project No.: 6468071777

Figure **NA**

Tested By: **CS**

Checked By: **LBJ KAW 1/26/08**

# LIQUID AND PLASTIC LIMIT TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 11.0-12.5

Sample Number: SS-5

Material Description: Light Greenish Gray Lean CLAY

USCS: CL

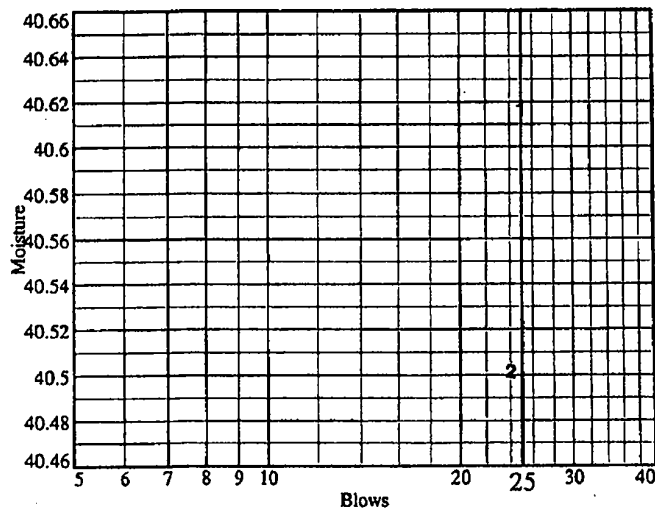
AASHTO: A-6(24)

Tested by: CS

Checked by: LBJ

## Liquid Limit Data

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 26.58 | 31.28 |   |   |   |   |
| Dry+Tare | 22.10 | 26.76 |   |   |   |   |
| Tare     | 11.07 | 15.60 |   |   |   |   |
| # Blows  | 25    | 24    |   |   |   |   |
| Moisture | 40.6  | 40.5  |   |   |   |   |



Liquid Limit= 40  
 Plastic Limit= 14  
 Plasticity Index= 26  
 Natural Moisture= 22.6  
 Liquidity Index= 0.3

## Plastic Limit Data

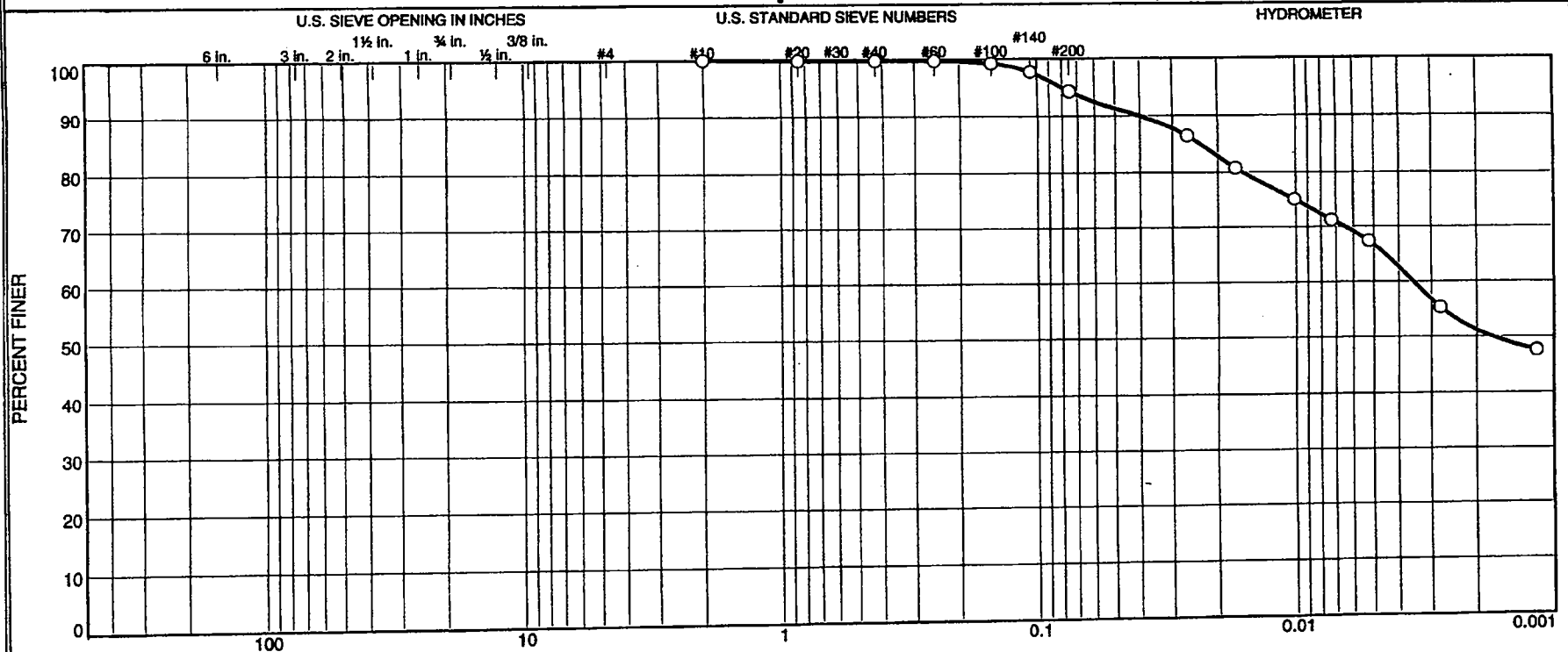
| Run No.  | 1     | 2     | 3 | 4 |
|----------|-------|-------|---|---|
| Wet+Tare | 25.33 | 24.39 |   |   |
| Dry+Tare | 24.14 | 23.28 |   |   |
| Tare     | 15.50 | 15.51 |   |   |
| Moisture | 13.8  | 14.3  |   |   |

## Natural Moisture Data

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 107.03   | 88.96    | 9.12 | 22.6     |

MACTEC, Inc.

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



# GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 13.5-15.0

Sample Number: SS-6

Material Description: Light Greenish Gray Fat CLAY

Date: 11-9-07

Natural Moisture: 21.9

Liquid Limit: 64

Plastic Limit: 16

USCS Class.: CH

Testing Remarks: Specific Gravity = 2.676 (ASTM D854-06)

Organic content = 3.0% (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 |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 182.05                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 52.12                       | 0.00         | 0.00                               | #20                | 0.09                               | 99.8          |
|                             |              |                                    | #40                | 0.12                               | 99.8          |
|                             |              |                                    | #60                | 0.14                               | 99.7          |
|                             |              |                                    | #100               | 0.41                               | 99.2          |
|                             |              |                                    | #140               | 1.21                               | 97.7          |
|                             |              |                                    | #200               | 3.03                               | 94.2          |

## Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 52.12

Hygroscopic moisture correction:

Moist weight and tare = 29.06

Dry weight and tare = 28.90

Tare weight = 15.42

Hygroscopic moisture = 1.2%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.676

Hydrometer type = 152H

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

| Elapsed Time (min.) | Temp. (deg. C.) | Actual Reading | Corrected Reading | K      | Rm   | Eff. Depth | Diameter (mm.) | Percent Finer |
|---------------------|-----------------|----------------|-------------------|--------|------|------------|----------------|---------------|
| 2.00                | 23.0            | 49.0           | 44.8              | 0.0131 | 50.0 | 8.1        | 0.0263         | 86.5          |
| 5.00                | 23.1            | 46.0           | 41.8              | 0.0130 | 47.0 | 8.6        | 0.0171         | 80.8          |
| 15.00               | 23.4            | 43.0           | 38.9              | 0.0130 | 44.0 | 9.1        | 0.0101         | 75.1          |
| 30.00               | 23.4            | 41.0           | 36.9              | 0.0130 | 42.0 | 9.4        | 0.0073         | 71.3          |
| 60.00               | 23.5            | 39.0           | 35.0              | 0.0130 | 40.0 | 9.7        | 0.0052         | 67.5          |
| 240.00              | 22.6            | 33.0           | 28.7              | 0.0131 | 34.0 | 10.7       | 0.0028         | 55.4          |
| 1440.00             | 22.5            | 29.0           | 24.7              | 0.0131 | 30.0 | 11.4       | 0.0012         | 47.6          |

MACTEC, Inc.

**Proportional Components**

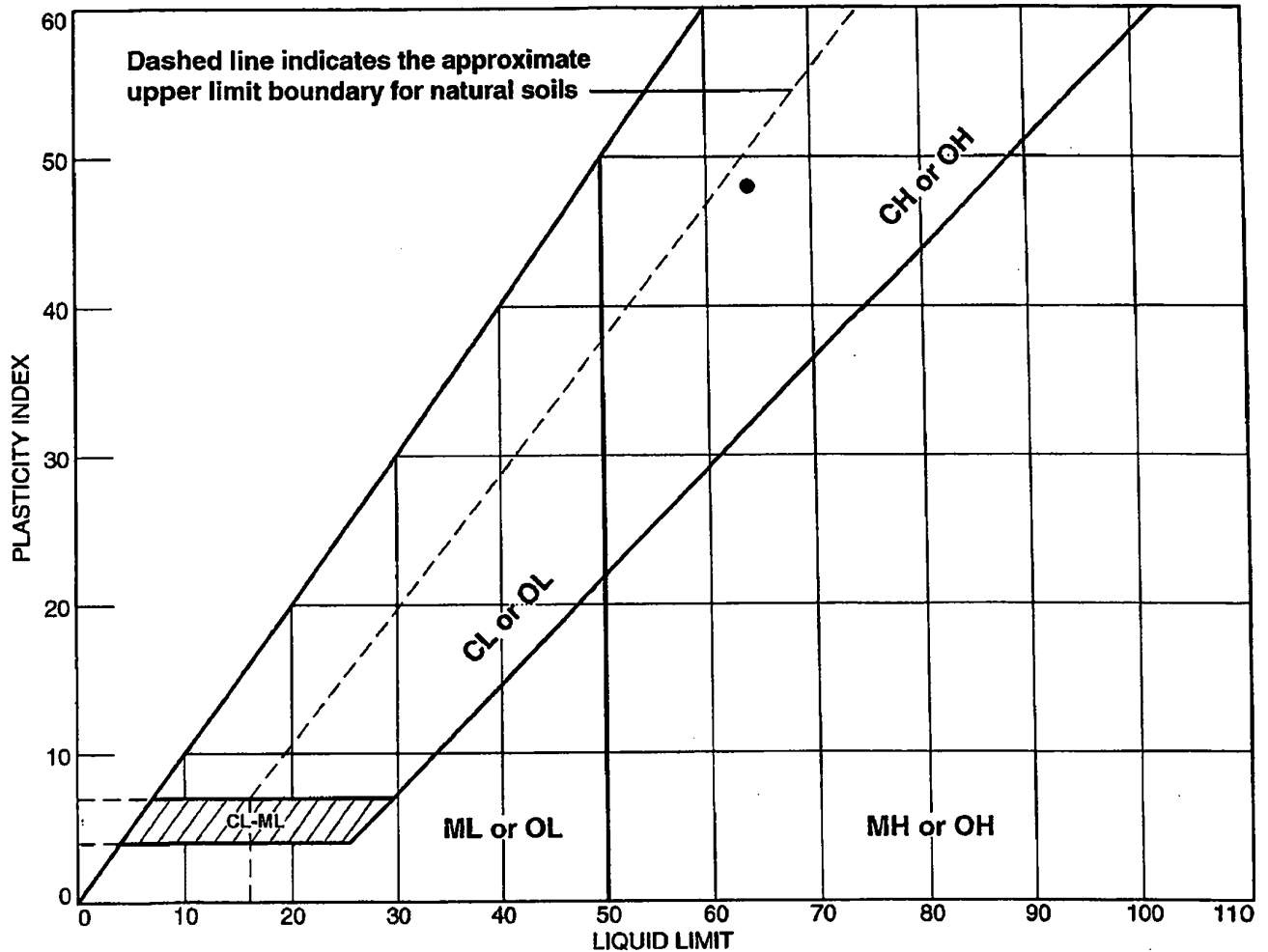
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 0.2    | 5.6  | 5.8   | 27.4  | 66.8 | 94.2  |

| D <sub>10</sub> | D <sub>15</sub> | D <sub>20</sub> | D <sub>30</sub> | D <sub>50</sub> | D <sub>60</sub> | D <sub>80</sub> | D <sub>85</sub> | D <sub>90</sub> | D <sub>95</sub> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 |                 | 0.0017          | 0.0035          | 0.0160          | 0.0233          | 0.0402          | 0.0812          |

|                             |
|-----------------------------|
| <b>Fineness<br/>Modulus</b> |
| 0.01                        |

**MACTEC, 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-2265 | SS-6       | 13.5-15.0 | 21.9                      | 16                | 64               | 48                   | CH   |

|                                                       |  |                                                                                                         |                  |
|-------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------|------------------|
| <b>MACTEC, Inc.</b><br><b>Raleigh, North Carolina</b> |  | <b>Client:</b> Bechtel<br><b>Project:</b> Exelon Texas COL (Victoria)<br><b>Project No.:</b> 6468071777 | <b>Figure</b> NA |
|-------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------|------------------|

Tested By: CS

Checked By: LBJ KAW 1/26/08

# LIQUID AND PLASTIC LIMIT TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 13.5-15.0

Sample Number: SS-6

Material Description: Light Greenish Gray Fat CLAY

AASHTO: A-7-6(49)

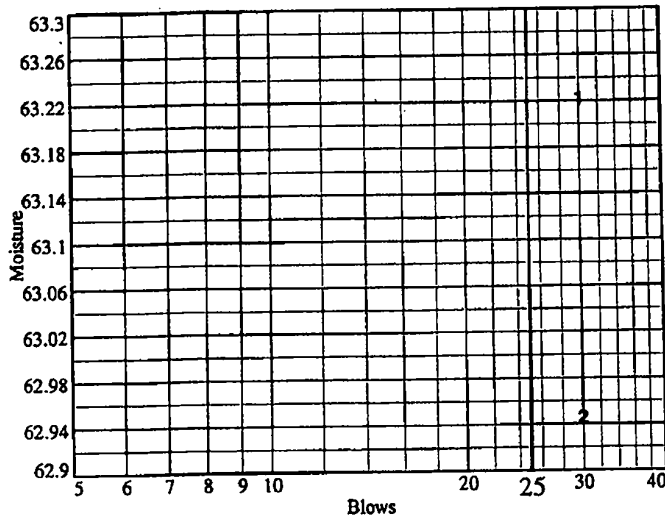
USCS: CH

Checked by: LBJ

Tested by: CS

## Liquid Limit Data

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 28.75 | 30.08 |   |   |   |   |
| Dry+Tare | 23.61 | 24.44 |   |   |   |   |
| Tare     | 15.48 | 15.48 |   |   |   |   |
| # Blows  | 30    | 30    |   |   |   |   |
| Moisture | 63.2  | 62.9  |   |   |   |   |



Liquid Limit= 64  
 Plastic Limit= 16  
 Plasticity Index= 48  
 Natural Moisture= 21.9  
 Liquidity Index= 0.1

## Plastic Limit Data

| Run No.  | 1     | 2     | 3 | 4 |
|----------|-------|-------|---|---|
| Wet+Tare | 21.40 | 24.10 |   |   |
| Dry+Tare | 20.56 | 22.89 |   |   |
| Tare     | 15.45 | 15.51 |   |   |
| Moisture | 16.4  | 16.4  |   |   |

## Natural Moisture Data

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 169.23   | 140.06   | 6.87 | 21.9     |

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: 1/16/08

SAMPLE IDENTIFICATION: B-2265 SS-6

|                                                                             |         |
|-----------------------------------------------------------------------------|---------|
| (A) Mass of oven-dried soil, grams:                                         | 49.63   |
| (B) Mass of pycnometer filled with water at test temperature (T), grams:    | 655.03  |
| (C) Mass of pycnometer, water and soil, grams:                              | 686.12  |
| (T) Temperature of pycnometer, water and soil, °C when mass (C) determined: | 22.0    |
| (G) Specific Gravity at observed temperature: $A / [C - (C - A)]$           | 2.677   |
| (F) <i>Correction factor:</i>                                               | 0.99957 |
| (G x F) <b>SPECIFIC GRAVITY @ 20°C:</b>                                     | 2.676   |

MATERIAL TESTED: ☒ - # 4 ☐ - # 10

PREPARATION METHOD: ☒ DRY ☐ WET (dispersed)

REMARKS: Estimated % Passing # 4 : 100%

Fat CLAY (CH)

**EQUIPMENT USED**

SCALES : 3.1.19

OVEN : 5.1.16

THERMOMETER : 5.1.01

PYCNO METER : P-5

TESTED BY: CS

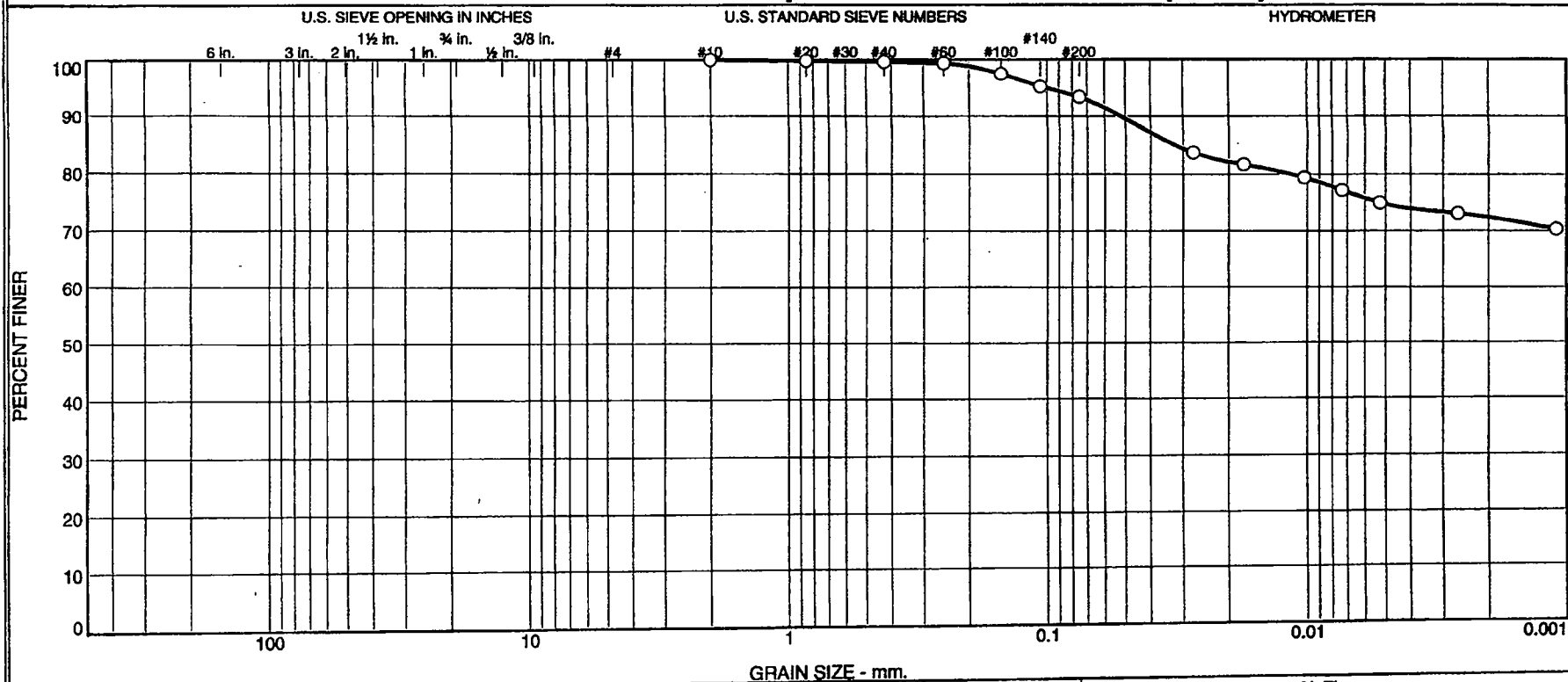
\\Test Reports\\Soils\\SPECIFIC GRAVITY(ref).xls

REVIEWED BY: Brian Johnson

KAW 1/26/08



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



| % +3" | % Gravel |      | % Sand |        |      | % Fines |      |
|-------|----------|------|--------|--------|------|---------|------|
|       | Coarse   | Fine | Coarse | Medium | Fine | Silt    | Clay |
| 0.0   | 0.0      | 0.0  | 0.0    | 0.4    | 6.3  | 18.7    | 74.6 |

| Source        | Sample # | Depth/Elev. | Date Sampled | USCS | Material Description           | NM % | LL | PL |
|---------------|----------|-------------|--------------|------|--------------------------------|------|----|----|
| Boring B-2265 | SS-7     | 18.5-20.0   | 11-9-07      | CH   | Light Yellowish Brown Fat CLAY | 29.8 | 80 | 22 |

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

Tested By: CS

Checked By: LBJ KAW 1/26/08

## GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 18.5-20.0

Sample Number: SS-7

Material Description: Light Yellowish Brown Fat CLAY

Date: 11-9-07

Natural Moisture: 29.8

Liquid Limit: 80

Plastic Limit: 22

USCS Class.: CH

Testing Remarks: Specific Gravity is assumed

Tested by: CS

Checked by: LBJ

## Sieve Test Data

| Dry Sample and Tare (grams) | Tare (grams) | Cumulative Pan Tare Weight (grams) | Sieve Opening Size | Cumulative Weight Retained (grams) | Percent Finer |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 159.90                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 48.40                       | 0.00         | 0.00                               | #20                | 0.10                               | 99.8          |
|                             |              |                                    | #40                | 0.19                               | 99.6          |
|                             |              |                                    | #60                | 0.29                               | 99.4          |
|                             |              |                                    | #100               | 1.20                               | 97.5          |
|                             |              |                                    | #140               | 2.32                               | 95.2          |
|                             |              |                                    | #200               | 3.23                               | 93.3          |

## Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 48.4

Hygroscopic moisture correction:

Moist weight and tare = 29.04

Dry weight and tare = 28.62

Tare weight = 15.52

Hygroscopic moisture = 3.2%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

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

| Elapsed Time (min.) | Temp. (deg. C.) | Actual Reading | Corrected Reading | K      | Rm   | Eff. Depth | Diameter (mm.) | Percent Finer |
|---------------------|-----------------|----------------|-------------------|--------|------|------------|----------------|---------------|
| 2.00                | 22.7            | 44.0           | 39.7              | 0.0130 | 45.0 | 8.9        | 0.0275         | 83.8          |
| 5.00                | 22.7            | 43.0           | 38.7              | 0.0130 | 44.0 | 9.1        | 0.0175         | 81.7          |
| 15.00               | 22.4            | 42.0           | 37.6              | 0.0131 | 43.0 | 9.2        | 0.0102         | 79.4          |
| 30.00               | 22.1            | 41.0           | 36.6              | 0.0131 | 42.0 | 9.4        | 0.0073         | 77.1          |
| 60.00               | 21.9            | 40.0           | 35.5              | 0.0131 | 41.0 | 9.6        | 0.0052         | 74.9          |
| 240.00              | 22.4            | 39.0           | 34.6              | 0.0131 | 40.0 | 9.7        | 0.0026         | 73.1          |
| 1440.00             | 21.3            | 38.0           | 33.3              | 0.0132 | 39.0 | 9.9        | 0.0011         | 70.3          |

MACTEC, Inc.

# Fractional Components

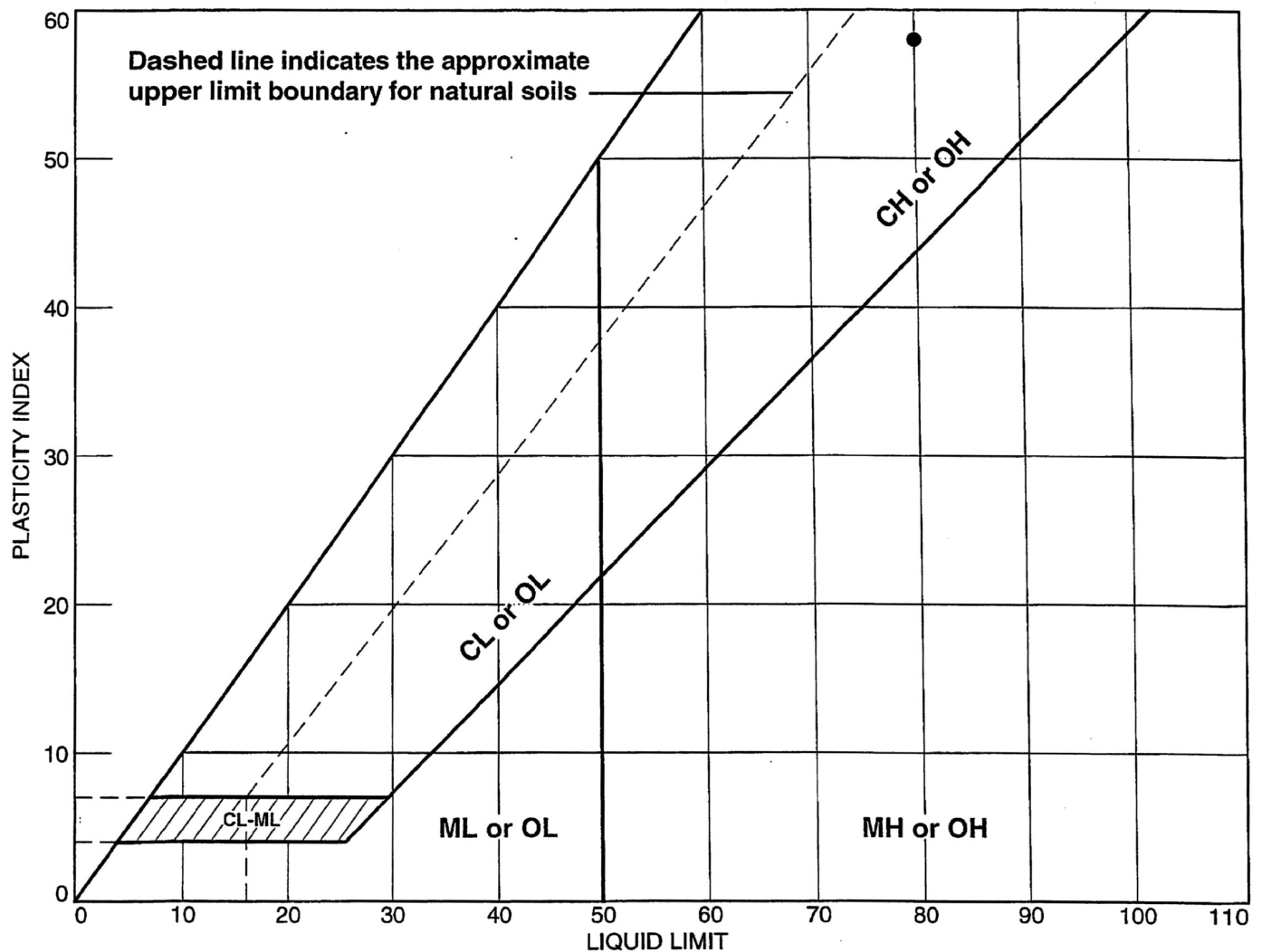
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 0.4    | 6.3  | 6.7   | 18.7  | 74.6 | 93.3  |

| D <sub>10</sub> | D <sub>15</sub> | D <sub>20</sub> | D <sub>30</sub> | D <sub>50</sub> | D <sub>60</sub> | D <sub>80</sub> | D <sub>85</sub> | D <sub>90</sub> | D <sub>95</sub> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 |                 |                 |                 | 0.0115          | 0.0319          | 0.0517          | 0.1022          |

|                     |
|---------------------|
| Fineness<br>Modulus |
| 0.03                |

MACTEC, 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-2265 | SS-7       | 18.5-20.0 | 29.8                      | 22                | 80               | 58                   | CH   |

**MACTEC, Inc.**

**Raleigh, North Carolina**

**Client:** Bechtel

**Project:** Exelon Texas COL (Victoria)

**Project No.:** 6468071777

**Figure** NA

**Tested By:** CS

**Checked By:** LBJ KAW 1/26/08

# LIQUID AND PLASTIC LIMIT TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 18.5-20.0

Sample Number: SS-7

Material Description: Light Yellowish Brown Fat CLAY

USCS: CH

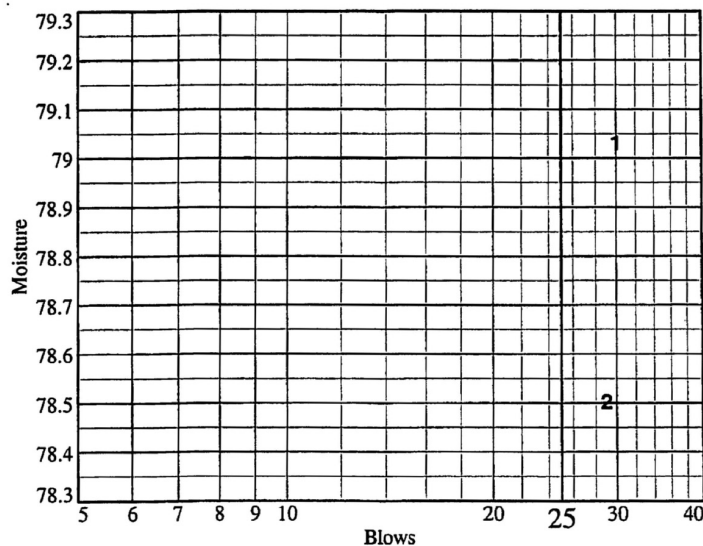
AASHTO: A-7-6(61)

Tested by: CS

Checked by: LBJ

## Liquid Limit Data

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 28.83 | 30.62 |   |   |   |   |
| Dry+Tare | 22.95 | 24.01 |   |   |   |   |
| Tare     | 15.51 | 15.59 |   |   |   |   |
| # Blows  | 30    | 29    |   |   |   |   |
| Moisture | 79.0  | 78.5  |   |   |   |   |



Liquid Limit= 80  
 Plastic Limit= 22  
 Plasticity Index= 58  
 Natural Moisture= 29.8  
 Liquidity Index= 0.1

## Plastic Limit Data

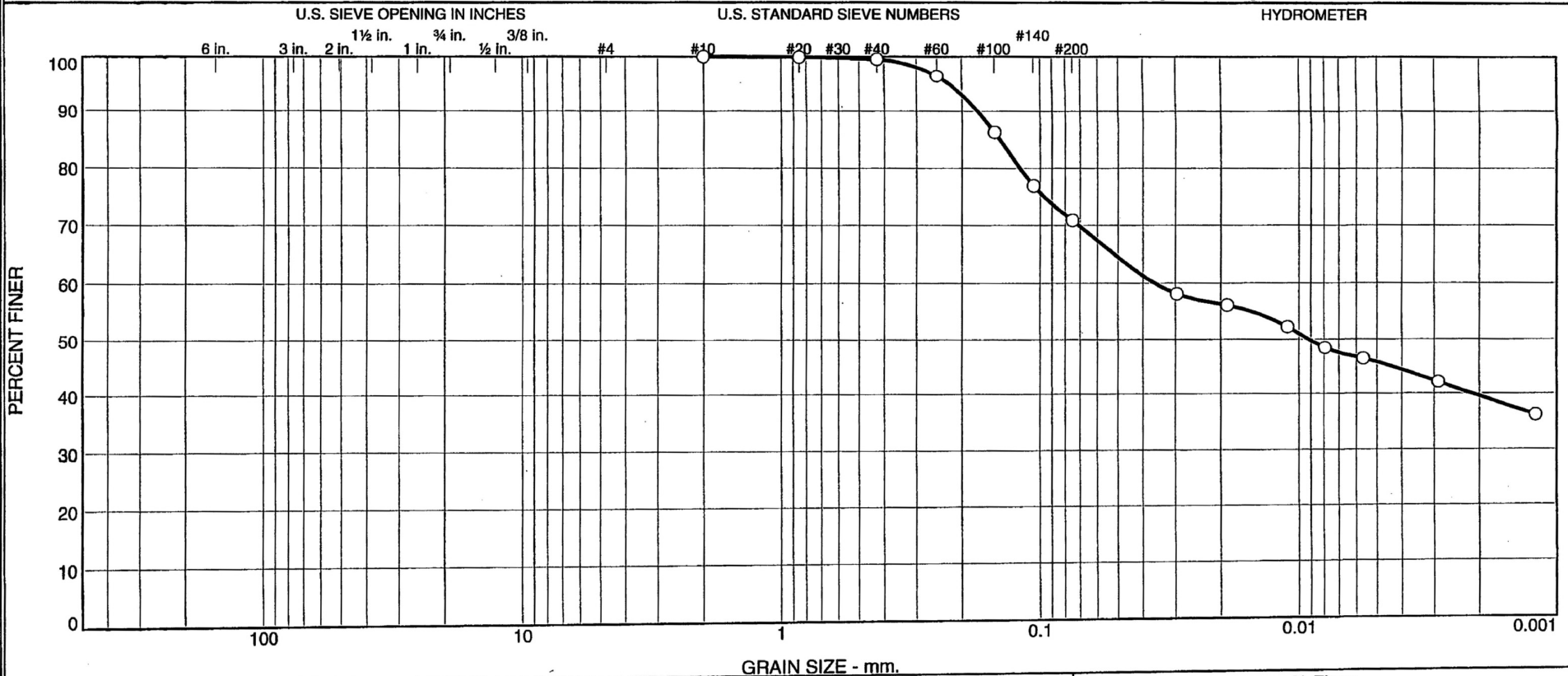
| Run No.  | 1     | 2     | 3 | 4 |
|----------|-------|-------|---|---|
| Wet+Tare | 21.37 | 23.38 |   |   |
| Dry+Tare | 20.29 | 21.94 |   |   |
| Tare     | 15.46 | 15.48 |   |   |
| Moisture | 22.4  | 22.3  |   |   |

## Natural Moisture Data

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 114.42   | 89.69    | 6.60 | 29.8     |

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    | 0.4    | 28.7 | 25.1    | 45.8 |
|       |          |      |        |        |      |         |      |
|       |          |      |        |        |      |         |      |

| Source        | Sample # | Depth/Elev. | Date Sampled | USCS | Material Description              | NM % | LL | PL |
|---------------|----------|-------------|--------------|------|-----------------------------------|------|----|----|
| Boring B-2265 | SS-8     | 23.5-25.0   | 11-9-07      | CL   | Greenish Gray Lean CLAY with sand | 15.9 | 34 | 13 |
|               |          |             |              |      |                                   |      |    |    |
|               |          |             |              |      |                                   |      |    |    |

|                                            |                  |                                |                                                   |
|--------------------------------------------|------------------|--------------------------------|---------------------------------------------------|
| Client <u>Bechtel</u>                      |                  | <b>MACTEC, Inc.</b>            | <input type="radio"/> Specific Gravity is assumed |
| Project <u>Exelon Texas COL (Victoria)</u> |                  |                                |                                                   |
|                                            |                  |                                |                                                   |
| Project No. <u>6468071777</u>              | Figure <u>NA</u> | <b>Raleigh, North Carolina</b> |                                                   |

# GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 23.5-25.0

Sample Number: SS-8

Material Description: Greenish Gray Lean CLAY with sand

Date: 11-9-07

Natural Moisture: 15.9

Liquid Limit: 34

Plastic Limit: 13

USCS Class.: CL

Testing Remarks: Specific Gravity is assumed

Tested by: CS

Checked by: LBJ

## Sieve Test Data

| Dry Sample and Tare (grams) | Tare (grams) | Cumulative Pan Tare Weight (grams) | Sieve Opening Size | Cumulative Weight Retained (grams) | Percent Finer |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 204.50                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 51.40                       | 0.00         | 0.00                               | #20                | 0.04                               | 99.9          |
|                             |              |                                    | #40                | 0.23                               | 99.6          |
|                             |              |                                    | #60                | 1.83                               | 96.4          |
|                             |              |                                    | #100               | 7.04                               | 86.3          |
|                             |              |                                    | #140               | 11.86                              | 76.9          |
|                             |              |                                    | #200               | 14.96                              | 70.9          |

## Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 51.40

Hygroscopic moisture correction:

Moist weight and tare = 29.14

Dry weight and tare = 29.04

Tare weight = 15.49

Hygroscopic moisture = 0.7%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

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

| Elapsed Time (min.) | Temp. (deg. C.) | Actual Reading | Corrected Reading | K      | Rm   | Eff. Depth | Diameter (mm.) | Percent Finer |
|---------------------|-----------------|----------------|-------------------|--------|------|------------|----------------|---------------|
| 2.00                | 23.6            | 34.0           | 30.0              | 0.0129 | 35.0 | 10.6       | 0.0296         | 58.1          |
| 5.00                | 23.5            | 33.0           | 29.0              | 0.0129 | 34.0 | 10.7       | 0.0189         | 56.1          |
| 15.00               | 23.5            | 31.0           | 27.0              | 0.0129 | 32.0 | 11.0       | 0.0111         | 52.2          |
| 30.00               | 23.6            | 29.0           | 25.0              | 0.0129 | 30.0 | 11.4       | 0.0079         | 48.4          |
| 60.00               | 23.6            | 28.0           | 24.0              | 0.0129 | 29.0 | 11.5       | 0.0056         | 46.5          |
| 240.00              | 22.7            | 26.0           | 21.7              | 0.0130 | 27.0 | 11.9       | 0.0029         | 42.1          |
| 1440.00             | 22.5            | 23.0           | 18.7              | 0.0130 | 24.0 | 12.4       | 0.0012         | 36.2          |

MACTEC, Inc.

# Fractional Components

| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 0.4    | 28.7 | 29.1  | 25.1  | 45.8 | 70.9  |

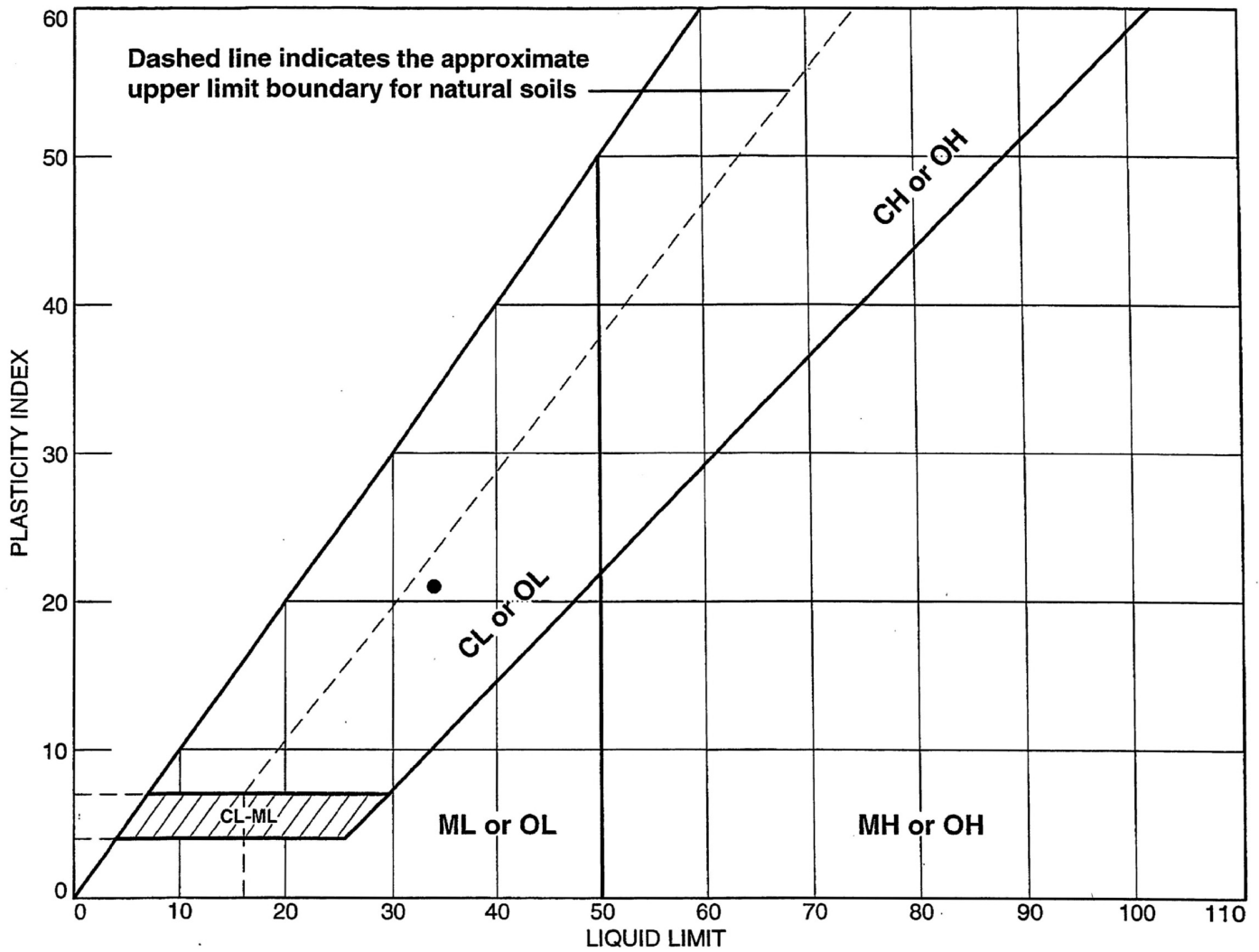
| D <sub>10</sub> | D <sub>15</sub> | D <sub>20</sub> | D <sub>30</sub> | D <sub>50</sub> | D <sub>60</sub> | D <sub>80</sub> | D <sub>85</sub> | D <sub>90</sub> | D <sub>95</sub> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 |                 | 0.0092          | 0.0361          | 0.1197          | 0.1430          | 0.1739          | 0.2253          |

|                     |
|---------------------|
| Fineness<br>Modulus |
| 0.16                |

MACTEC, 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-2265 | SS-8       | 23.5-25.0 | 15.9                      | 13                | 34               | 21                   | CL   |

**MACTEC, Inc.**

**Raleigh, North Carolina**

**Client:** Bechtel

**Project:** Exelon Texas COL (Victoria)

**Project No.:** 6468071777

**Figure** NA

**Tested By:** CS

**Checked By:** LBJ 8/26/08

# LIQUID AND PLASTIC LIMIT TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 23.5-25.0

Sample Number: SS-8

Material Description: Greenish Gray Lean CLAY with sand

USCS: CL

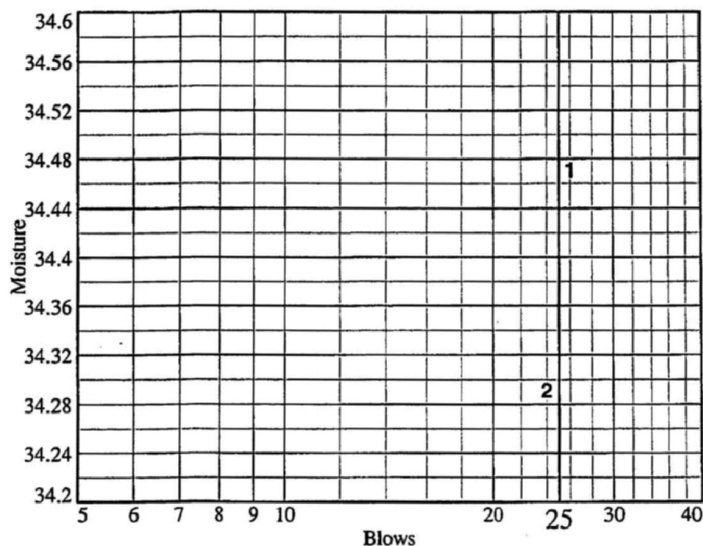
AASHTO: A-6(12)

Tested by: CS

Checked by: LBJ

## Liquid Limit Data

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 31.78 | 34.63 |   |   |   |   |
| Dry+Tare | 27.64 | 29.74 |   |   |   |   |
| Tare     | 15.63 | 15.48 |   |   |   |   |
| # Blows  | 26    | 24    |   |   |   |   |
| Moisture | 34.5  | 34.3  |   |   |   |   |



Liquid Limit= 34  
 Plastic Limit= 13  
 Plasticity Index= 21  
 Natural Moisture= 15.9  
 Liquidity Index= 0.1

## Plastic Limit Data

| Run No.  | 1     | 2     | 3 | 4 |
|----------|-------|-------|---|---|
| Wet+Tare | 22.43 | 26.38 |   |   |
| Dry+Tare | 21.63 | 25.12 |   |   |
| Tare     | 15.48 | 15.61 |   |   |
| Moisture | 13.0  | 13.2  |   |   |

## Natural Moisture Data

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 123.67   | 107.89   | 8.72 | 15.9     |

MACTEC, Inc.

U.S. SIEVE OPENING IN INCHES

U.S. STANDARD SIEVE NUMBERS

HYDROMETER

PERCENT FINER

GRAIN SIZE - mm.

| Grain Size (mm) | Percent Finer (%) |
|-----------------|-------------------|
| 100             | 100               |
| 60              | 100               |
| 40              | 100               |
| 30              | 100               |
| 20              | 100               |
| 15              | 100               |
| 10              | 100               |
| 7.5             | 100               |
| 6               | 100               |
| 4.75            | 100               |
| 3.75            | 100               |
| 3.0             | 100               |
| 2.5             | 100               |
| 2.0             | 100               |
| 1.5             | 100               |
| 1.18            | 100               |
| 0.85            | 100               |
| 0.75            | 100               |
| 0.6             | 100               |
| 0.425           | 100               |
| 0.3             | 100               |
| 0.25            | 100               |
| 0.2             | 100               |
| 0.15            | 100               |
| 0.125           | 100               |
| 0.106           | 100               |
| 0.085           | 100               |
| 0.075           | 100               |
| 0.06            | 100               |
| 0.05            | 100               |
| 0.0425          | 100               |
| 0.0375          | 100               |
| 0.03            | 100               |
| 0.025           | 100               |
| 0.02            | 100               |
| 0.015           | 100               |
| 0.0125          | 100               |
| 0.0106          | 100               |
| 0.0085          | 100               |
| 0.0075          | 100               |
| 0.006           | 100               |
| 0.005           | 100               |
| 0.00425         | 100               |
| 0.00375         | 100               |
| 0.003           | 100               |
| 0.0025          | 100               |
| 0.002           | 100               |
| 0.0015          | 100               |
| 0.00125         | 100               |
| 0.00106         | 100               |
| 0.00085         | 100               |
| 0.00075         | 100               |
| 0.0006          | 100               |
| 0.0005          | 100               |
| 0.000425        | 100               |
| 0.000375        | 100               |
| 0.0003          | 100               |
| 0.00025         | 100               |
| 0.0002          | 100               |
| 0.00015         | 100               |
| 0.000125        | 100               |
| 0.000106        | 100               |
| 0.000085        | 100               |
| 0.000075        | 100               |
| 0.00006         | 100               |
| 0.00005         | 100               |
| 0.0000425       | 100               |
| 0.0000375       | 100               |
| 0.00003         | 100               |
| 0.000025        | 100               |
| 0.00002         | 100               |
| 0.000015        | 100               |
| 0.0000125       | 100               |
| 0.0000106       | 100               |
| 0.0000085       | 100               |
| 0.0000075       | 100               |
| 0.000006        | 100               |
| 0.000005        | 100               |
| 0.00000425      | 100               |
| 0.00000375      | 100               |
| 0.000003        | 100               |
| 0.0000025       | 100               |
| 0.000002        | 100               |
| 0.0000015       | 100               |
| 0.00000125      | 100               |
| 0.00000106      | 100               |
| 0.00000085      | 100               |
| 0.00000075      | 100               |
| 0.0000006       | 100               |
| 0.0000005       | 100               |
| 0.000000425     | 100               |
| 0.000000375     | 100               |
| 0.0000003       | 100               |
| 0.00000025      | 100               |
| 0.0000002       | 100               |
| 0.00000015      | 100               |
| 0.000000125     | 100               |
| 0.000000106     | 100               |
| 0.000000085     | 100               |
| 0.000000075     | 100               |
| 0.00000006      | 100               |
| 0.00000005      | 100               |
| 0.0000000425    | 100               |
| 0.0000000375    | 100               |
| 0.00000003      | 100               |
| 0.000000025     | 100               |
| 0.00000002      | 100               |
| 0.000000015     | 100               |
| 0.0000000125    | 100               |
| 0.0000000106    | 100               |
| 0.0000000085    | 100               |
| 0.0000000075    | 100               |
| 0.000000006     | 100               |
| 0.000000005     | 100               |
| 0.00000000425   | 100               |
| 0.00000000375   | 100               |
| 0.000000003     | 100               |
| 0.0000000025    | 100               |
| 0.000000002     | 100               |
| 0.0000000015    | 100               |
| 0.00000000125   | 100               |
| 0.00000000106   | 100               |
| 0.00000000085   | 100               |
| 0.00000000075   | 100               |
| 0.0000000006    | 100               |
| 0.0000000005    | 100               |
| 0.000000000425  | 100               |
| 0.000000000375  | 100               |
| 0.0000000003    | 100               |
| 0.00000000025   | 100               |
| 0.0             |                   |

| GRAIN SIZE - mm. |          |      |        |        |      |         |      |
|------------------|----------|------|--------|--------|------|---------|------|
| % +3"            | % Gravel |      | % Sand |        |      | % Fines |      |
|                  | Coarse   | Fine | Coarse | Medium | Fine | Silt    | Clay |
| 0.0              | 0.0      | 0.0  | 0.0    | 0.3    | 49.2 | 25.9    | 24.6 |
|                  |          |      |        |        |      |         |      |
|                  |          |      |        |        |      |         |      |

[illegible]

Figure NA

## Raleigh, North Carolina

○ Specific Gravity is assumed

# GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2008

Client: Bechtel

Project: Exelon Texas COL (Victoria)

Project Number: 6468071777

Location: Boring B-2265

Depth: 28.5-30

Sample Number: SS-9

Material Description: Greenish Gray Sandy Lean CLAY

Date: 11-9-07

Natural Moisture: 14.1

Liquid Limit: 28

Plastic Limit: 12

USCS Class.: CL

Testing Remarks: Specific Gravity is assumed

Tested by: CS

Checked by: LBJ

## Sieve Test Data

| Dry Sample and Tare (grams) | Tare (grams) | Cumulative Pan Tare Weight (grams) | Sieve Opening Size | Cumulative Weight Retained (grams) | Percent Finer |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 205.14                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 50.90                       | 0.00         | 0.00                               | #20                | 0.00                               | 100.0         |
|                             |              |                                    | #40                | 0.13                               | 99.7          |
|                             |              |                                    | #60                | 1.53                               | 97.0          |
|                             |              |                                    | #100               | 8.81                               | 82.7          |
|                             |              |                                    | #140               | 17.65                              | 65.3          |
|                             |              |                                    | #200               | 25.22                              | 50.5          |

## Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 50.90

Hygroscopic moisture correction:

Moist weight and tare = 29.47

Dry weight and tare = 29.38

Tare weight = 15.58

Hygroscopic moisture = 0.7%

Table of composite correction values:

Temp., deg. C: 12.8 27.3

Comp. corr.: -7.0 -3.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

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

| Elapsed Time (min.) | Temp. (deg. C.) | Actual Reading | Corrected Reading | K      | Rm   | Eff. Depth | Diameter (mm.) | Percent Finer |
|---------------------|-----------------|----------------|-------------------|--------|------|------------|----------------|---------------|
| 2.00                | 23.4            | 22.0           | 17.9              | 0.0129 | 23.0 | 12.5       | 0.0323         | 35.1          |
| 5.00                | 23.3            | 19.0           | 14.9              | 0.0129 | 20.0 | 13.0       | 0.0208         | 29.1          |
| 15.00               | 23.2            | 18.0           | 13.9              | 0.0129 | 19.0 | 13.2       | 0.0121         | 27.1          |
| 30.00               | 23.2            | 17.0           | 12.9              | 0.0129 | 18.0 | 13.3       | 0.0086         | 25.2          |
| 60.00               | 23.5            | 17.0           | 13.0              | 0.0129 | 18.0 | 13.3       | 0.0061         | 25.3          |
| 240.00              | 22.9            | 16.0           | 11.8              | 0.0130 | 17.0 | 13.5       | 0.0031         | 23.0          |
| 1440.00             | 22.4            | 15.0           | 10.6              | 0.0131 | 16.0 | 13.7       | 0.0013         | 20.8          |

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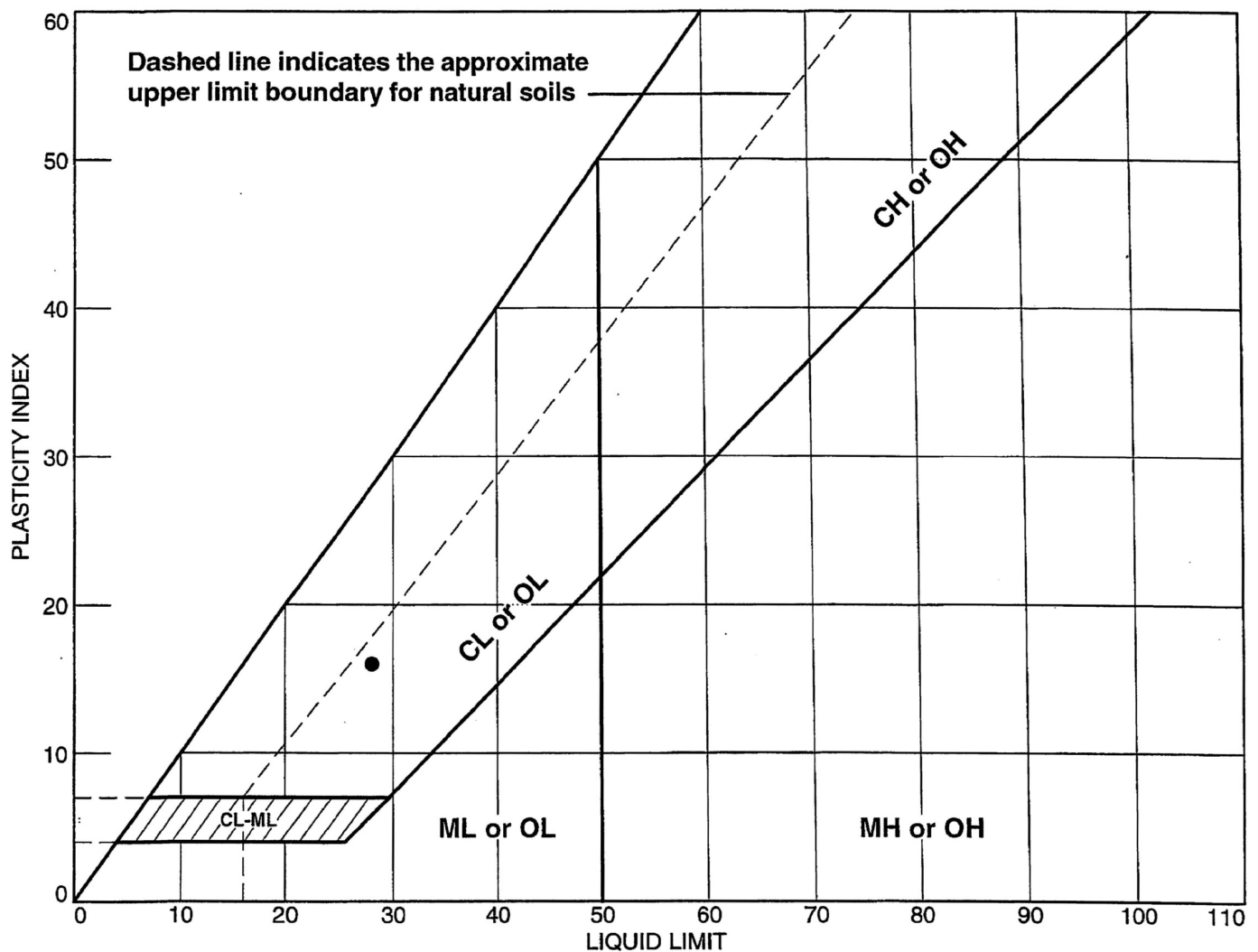
# Fractional Components

| 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    | 49.2 | 49.5  | 25.9  | 24.6 | 50.5  |

| D <sub>10</sub> | D <sub>15</sub> | D <sub>20</sub> | D <sub>30</sub> | D <sub>50</sub> | D <sub>60</sub> | D <sub>80</sub> | D <sub>85</sub> | D <sub>90</sub> | D <sub>95</sub> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 | 0.0227          | 0.0740          | 0.0950          | 0.1414          | 0.1585          | 0.1824          | 0.2221          |

|                             |
|-----------------------------|
| <b>Fineness<br/>Modulus</b> |
| 0.19                        |

# 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-2265 | SS-9       | 28.5-30 | 14.1                      | 12                | 28               | 16                   | CL   |

**MACTEC, Inc.**

**Raleigh, North Carolina**

**Client:** Bechtel

**Project:** Exelon Texas COL (Victoria)

**Project No.:** 6468071777

**Figure** Nk

**Tested By:** CS

**Checked By:** LBJ KAW 1/26/08