

**LIQUID AND PLASTIC LIMIT TEST DATA**

3/27/2008

**Client:** Bechtel

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

**Project Number:** 6468071777

**Location:** Boring B-2274A

**Depth:** 468.3-469.8

**Sample Number:** SS-48

**Material Description:** Light Gray Fat CLAY

**USCS:** CH

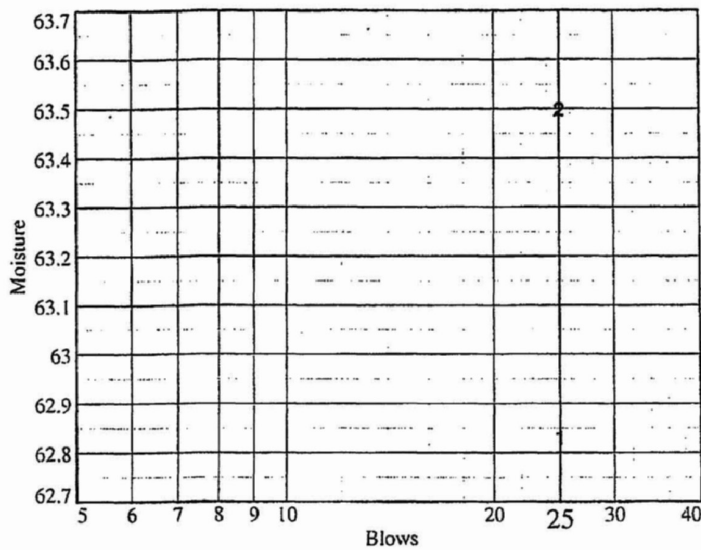
**AASHTO:** A-7-6(41)

**Tested by:** CS

**Checked by:** LBJ

**Liquid Limit Data**

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 29.53 | 29.74 |   |   |   |   |
| Dry+Tare | 24.07 | 24.26 |   |   |   |   |
| Tare     | 15.38 | 15.63 |   |   |   |   |
| # Blows  | 25    | 25    |   |   |   |   |
| Moisture | 62.8  | 63.5  |   |   |   |   |



Liquid Limit= 63  
 Plastic Limit= 21  
 Plasticity Index= 42  
 Natural Moisture= 32.0  
 Liquidity Index= 0.3

**Plastic Limit Data**

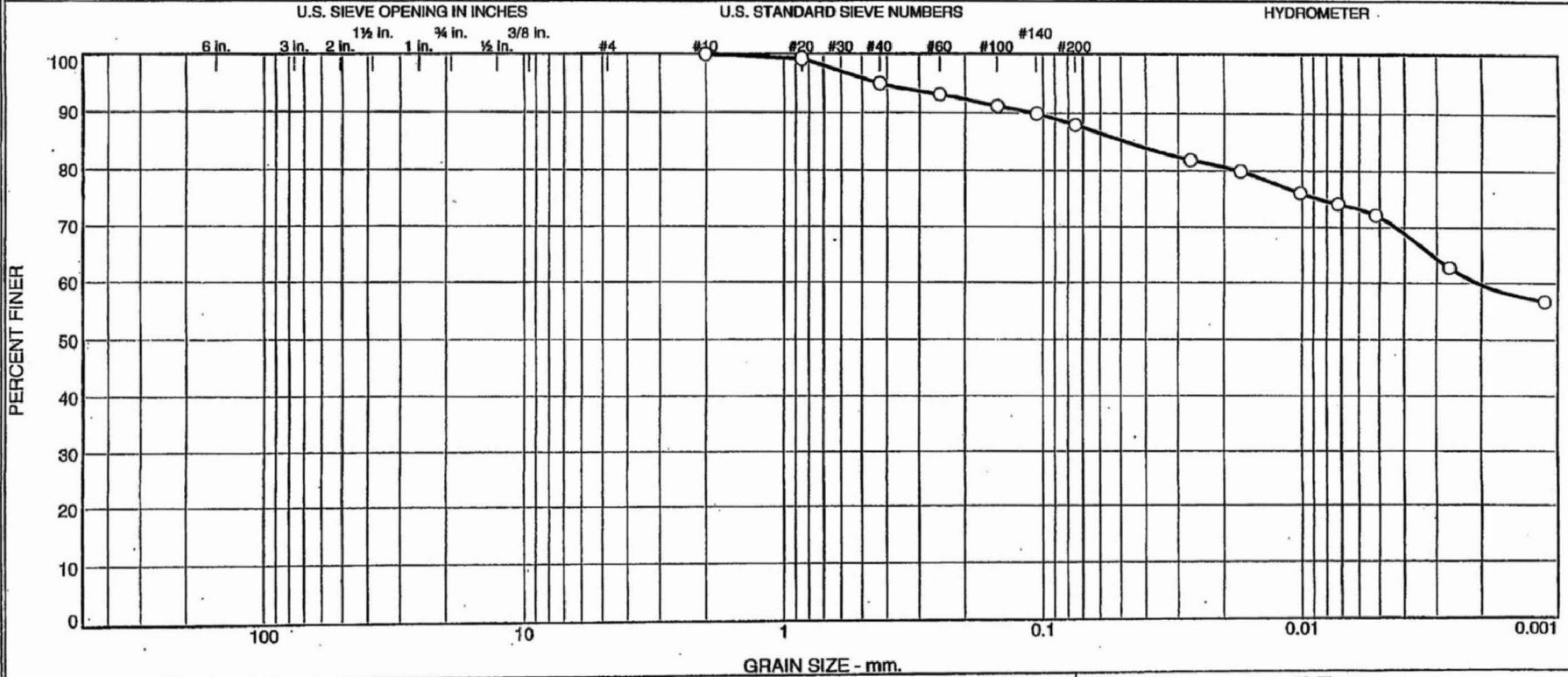
| Run No.  | 1     | 2     | 3 | 4 |
|----------|-------|-------|---|---|
| Wet+Tare | 23.28 | 23.74 |   |   |
| Dry+Tare | 21.92 | 22.27 |   |   |
| Tare     | 15.57 | 15.45 |   |   |
| Moisture | 21.4  | 21.6  |   |   |

**Natural Moisture Data**

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 64.67    | 50.58    | 6.61 | 32.0     |

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      | 0.0  | 0.0    | 5.0    | 7.0  | 16.2    | 71.8 |

| Source         | Sample # | Depth/Elev. | Date Sampled | USCS | Material Description | NM % | LL | PL |
|----------------|----------|-------------|--------------|------|----------------------|------|----|----|
| Boring B-2274A | SS-49    | 488.3-489.8 | 12-19-07     | CH   | Light Gray Fat CLAY  | 35.3 | 62 | 19 |

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

Tested By: Cs      Checked By: LBJ      DSC 3-31-08

**GRAIN SIZE DISTRIBUTION TEST DATA**

3/27/2008

**Client:** Bechtel

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

**Project Number:** 6468071777

**Location:** Boring B-2274A

**Depth:** 488.3-489.8

**Sample Number:** SS-49

**Material Description:** Light Gray Fat CLAY

**Date:** 12-19-07

**Natural Moisture:** 35.3

**Liquid Limit:** 62

**Plastic Limit:** 19

**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 |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 204.01                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 53.08                       | 0.00         | 0.00                               | #20                | 0.42                               | 99.2          |
|                             |              |                                    | #40                | 2.66                               | 95.0          |
|                             |              |                                    | #60                | 3.63                               | 93.2          |
|                             |              |                                    | #100               | 4.69                               | 91.2          |
|                             |              |                                    | #140               | 5.36                               | 89.9          |
|                             |              |                                    | #200               | 6.39                               | 88.0          |

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 53.08

Hygroscopic moisture correction:

Moist weight and tare = 28.33

Dry weight and tare = 27.86

Tare weight = 15.48

Hygroscopic moisture = 3.8%

Table of composite correction values:

Temp., deg. C: 11.2 28.4

Comp. corr.: -8.0 -4.0

Meniscus correction only = 1.0

Specific gravity of solids = 2.700

Hydrometer type = 152H

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

| Elapsed Time (min.) | Temp. (deg. C.) | Actual Reading | Corrected Reading | K      | Rm   | Eff. Depth | Diameter (mm.) | Percent Finer |
|---------------------|-----------------|----------------|-------------------|--------|------|------------|----------------|---------------|
| 2.00                | 21.1            | 48.0           | 42.3              | 0.0133 | 49.0 | 8.3        | 0.0269         | 81.8          |
| 5.00                | 21.1            | 47.0           | 41.3              | 0.0133 | 48.0 | 8.4        | 0.0172         | 79.9          |
| 15.00               | 21.1            | 45.0           | 39.3              | 0.0133 | 46.0 | 8.8        | 0.0101         | 76.0          |
| 30.00               | 21.1            | 44.0           | 38.3              | 0.0133 | 45.0 | 8.9        | 0.0072         | 74.1          |
| 60.00               | 21.1            | 43.0           | 37.3              | 0.0133 | 44.0 | 9.1        | 0.0052         | 72.1          |
| 240.00              | 21.6            | 38.0           | 32.4              | 0.0132 | 39.0 | 9.9        | 0.0027         | 62.7          |
| 1440.00             | 21.3            | 35.0           | 29.3              | 0.0132 | 36.0 | 10.4       | 0.0011         | 56.8          |

MACTEC, Inc.

**Fractional Components**

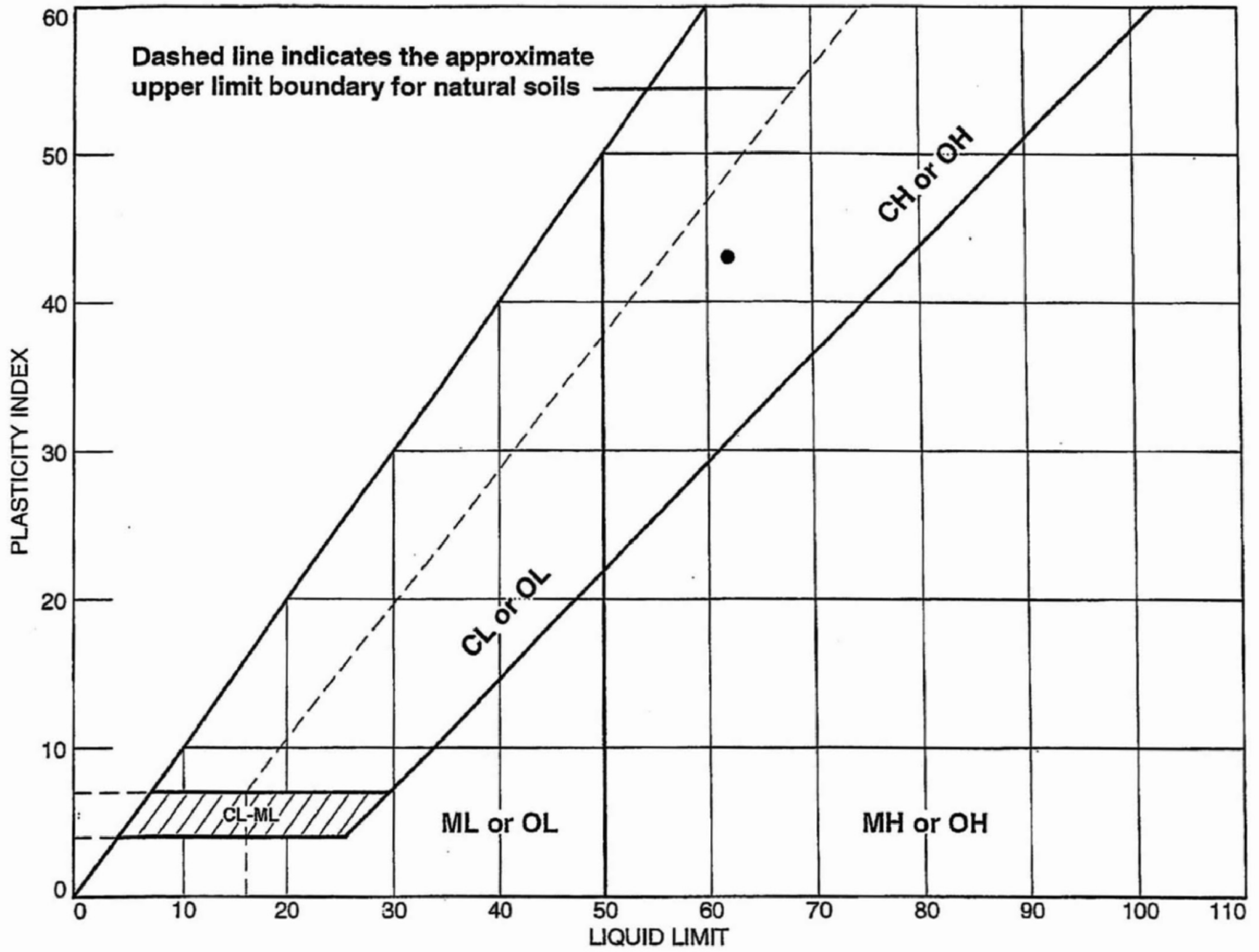
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 5.0    | 7.0  | 12.0  | 16.2  | 71.8 | 88.0  |

| 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> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 |                 |                 | 0.0021          | 0.0176          | 0.0477          | 0.1084          | 0.4260          |

|                         |
|-------------------------|
| <b>Fineness Modulus</b> |
| 0.18                    |

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-2274A | SS-49      | 488.3-489.8 | 35.3                      | 19                | 62               | 43                   | CH   |

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

Tested By: CS Checked By: LBJ DSC 3-31-08

**LIQUID AND PLASTIC LIMIT TEST DATA**

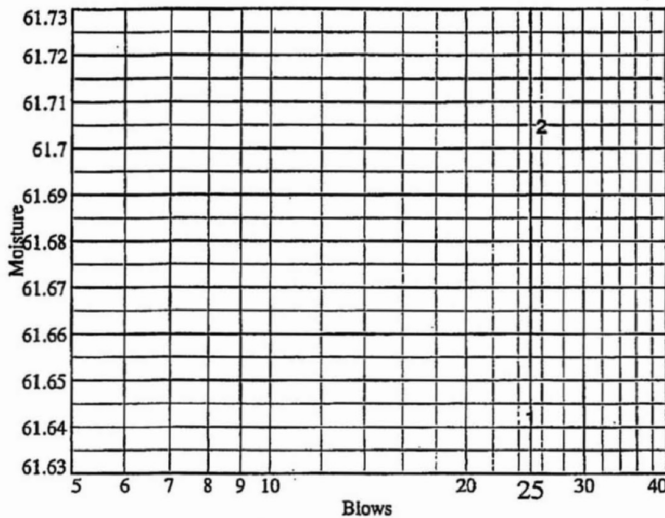
3/27/2008

**Client:** Bechtel  
**Project:** Exelon Texas COL (Victoria)  
**Project Number:** 6468071777  
**Location:** Boring B-2274A  
**Depth:** 488.3-489.8  
**Material Description:** Light Gray Fat CLAY  
**USCS:** CH  
**Tested by:** CS

**Sample Number:** SS-49  
**AASHTO:** A-7-6(41)  
**Checked by:** LBJ

**Liquid Limit Data**

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 27.57 | 28.23 |   |   |   |   |
| Dry+Tare | 22.99 | 23.38 |   |   |   |   |
| Tare     | 15.56 | 15.52 |   |   |   |   |
| # Blows  | 25    | 26    |   |   |   |   |
| Moisture | 61.6  | 61.7  |   |   |   |   |



Liquid Limit= 62  
 Plastic Limit= 19  
 Plasticity Index= 43  
 Natural Moisture= 35.3  
 Liquidity Index= 0.4

**Plastic Limit Data**

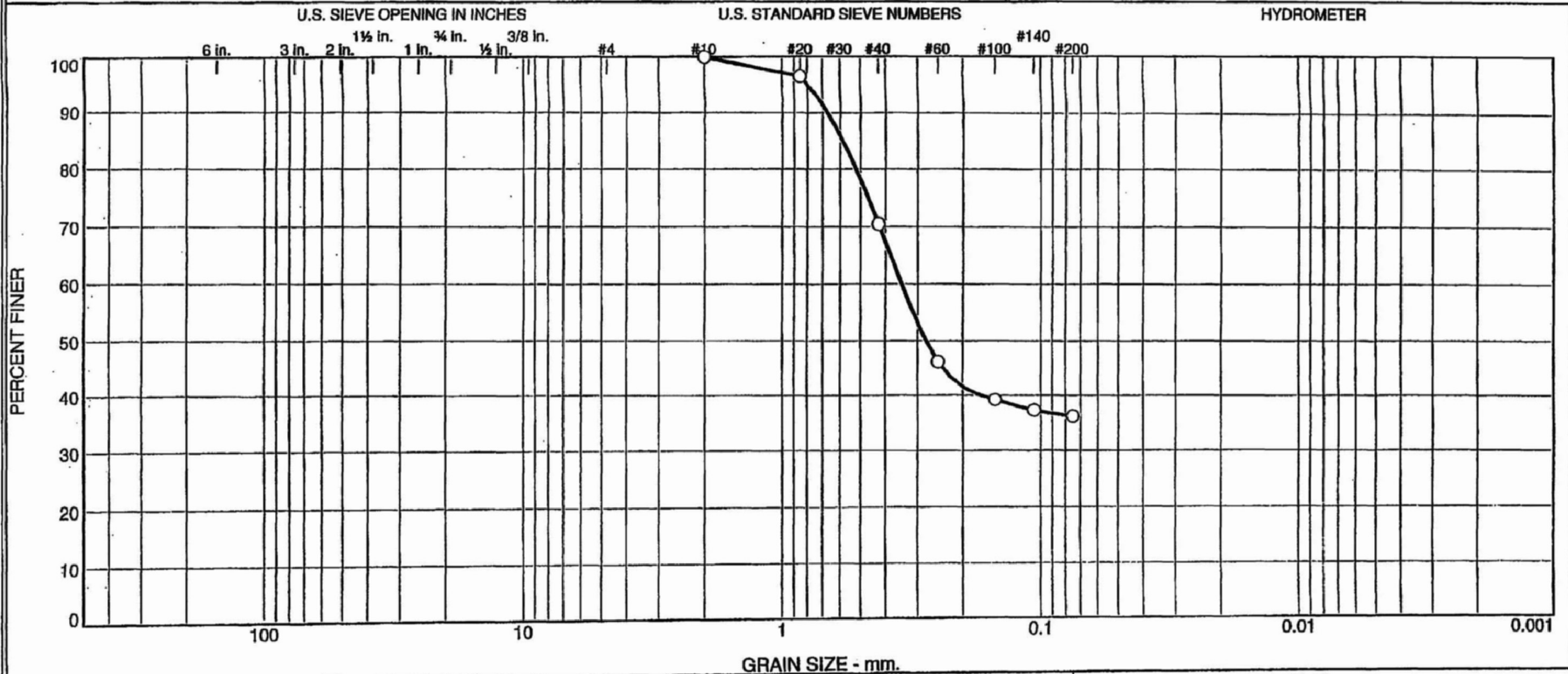
| Run No.  | 1     | 2     | 3 | 4 |
|----------|-------|-------|---|---|
| Wet+Tare | 24.82 | 24.30 |   |   |
| Dry+Tare | 23.30 | 22.89 |   |   |
| Tare     | 15.51 | 15.53 |   |   |
| Moisture | 19.5  | 19.2  |   |   |

**Natural Moisture Data**

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 125.30   | 95.03    | 9.17 | 35.3     |

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    | 29.5   | 34.3 | 36.2    |      |

| Source         | Sample # | Depth/Elev. | Date Sampled | USCS | Material Description                       | NM % | LL | PL |
|----------------|----------|-------------|--------------|------|--------------------------------------------|------|----|----|
| Boring B-2274A | SS-51    | 528.1-529.6 | 12-20-08     | SC   | Light Brownish Yellow Clayey SAND (Visual) | ND   | ND | ND |

|                                     |                         |                                              |
|-------------------------------------|-------------------------|----------------------------------------------|
| Client Bechtel                      | <b>MACTEC, Inc.</b>     | ○ SIEVE ANALYSIS ONLY<br>ND = Not Determined |
| Project Exelon Texas COL (Victoria) |                         |                                              |
| Project No. 6468071777              | Raleigh, North Carolina |                                              |

Tested By: CS      Checked By: LBJ      DSC 3-31-08

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**GRAIN SIZE DISTRIBUTION TEST DATA**

3/27/2008

**Client:** Bechtel

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

**Project Number:** 6468071777

**Location:** Boring B-2274A

**Depth:** 528.1-529.6

**Sample Number:** SS-51

**Material Description:** Light Brownish Yellow Clayey SAND (Visual)

**Date:** 12-20-08

**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 |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 233.51                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 103.86                      | 0.00         | 0.00                               | #20                | 3.54                               | 96.6          |
|                             |              |                                    | #40                | 30.69                              | 70.5          |
|                             |              |                                    | #60                | 55.86                              | 46.2          |
|                             |              |                                    | #100               | 63.17                              | 39.2          |
|                             |              |                                    | #140               | 65.18                              | 37.2          |
|                             |              |                                    | #200               | 66.29                              | 36.2          |

**Fractional Components**

| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 29.5   | 34.3 | 63.8  |       |      | 36.2  |

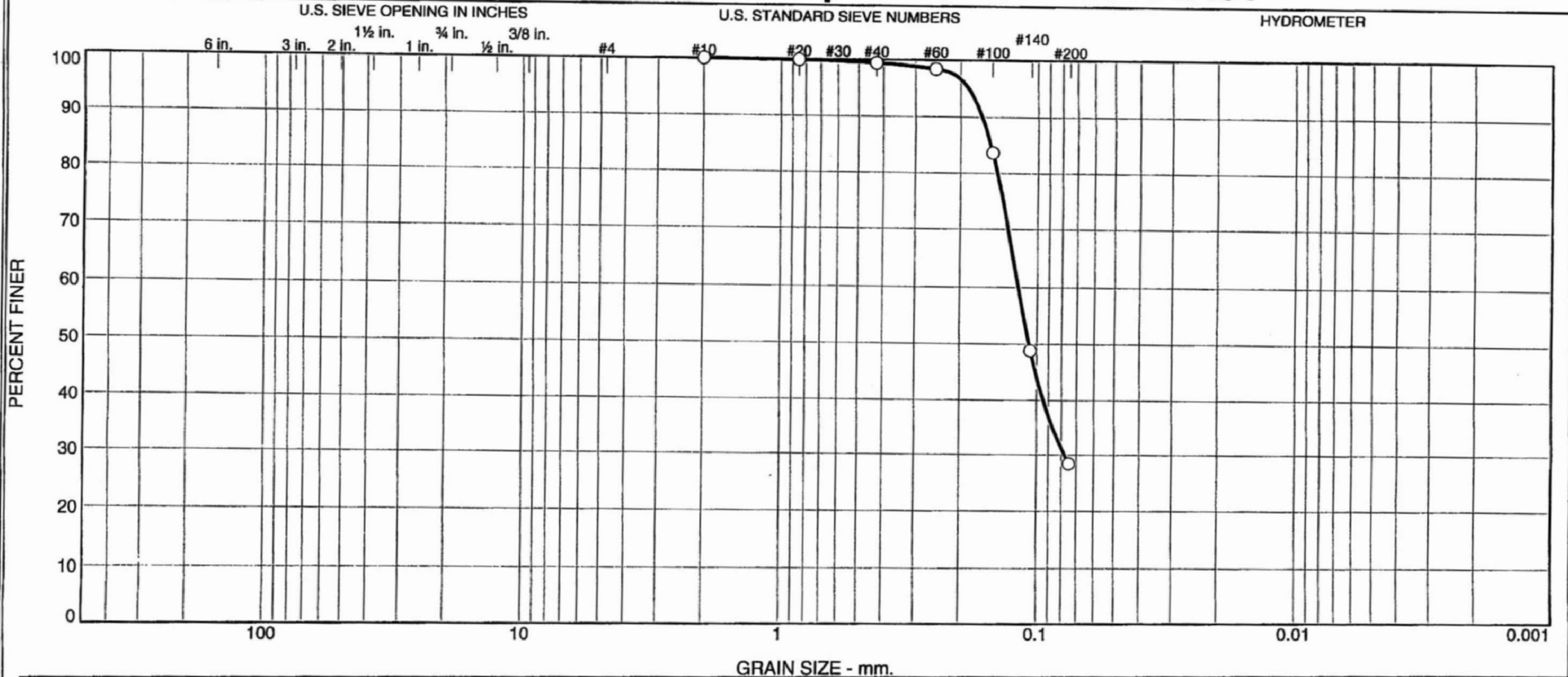
| D <sub>10</sub> | D <sub>15</sub> | D <sub>20</sub> | D <sub>30</sub> | D <sub>50</sub> | D <sub>60</sub> | D <sub>80</sub> | D <sub>85</sub> | D <sub>90</sub> | D <sub>95</sub> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 |                 | 0.2784          | 0.3463          | 0.5198          | 0.5853          | 0.6702          | 0.7934          |

|                         |
|-------------------------|
| <b>Fineness Modulus</b> |
| 1.24                    |

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    | 0.6    | 71.0 | 28.4    |      |

| Source         | Sample # | Depth/Elev. | Date Sampled | USCS | Material Description           | NM % | LL | PL |
|----------------|----------|-------------|--------------|------|--------------------------------|------|----|----|
| Boring B-2274A | SS-52    | 548.1-549.0 | 12-20-07     | SM   | Pale Brown Silty SAND (visual) | 18.1 | ND | ND |

|                                     |                     |                       |
|-------------------------------------|---------------------|-----------------------|
| Client Bechtel                      | <b>MACTEC, Inc.</b> | ○ SIEVE ANALYSIS ONLY |
| Project Exelon Texas COL (Victoria) |                     |                       |
| Project No. 6468071777              |                     |                       |

Tested By: CS

Checked By: LBJ ZHU 4-28-08

**GRAIN SIZE DISTRIBUTION TEST DATA**

4/28/2008

**Client:** Bechtel

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

**Project Number:** 6468071777

**Location:** Boring B-2274A

**Depth:** 548.1-549.0

**Sample Number:** SS-52

**Material Description:** Pale Brown Silty SAND (visual)

**Date:** 12-20-07

**Natural Moisture:** 18.1

**Liquid Limit:** ND

**Plastic Limit:** ND

**USCS Class.:** SM

**Testing Remarks:** SIEVE ANALYSIS ONLY

**Tested by:** CS

**Checked by:** LBJ

**Sieve Test Data**

| Dry Sample and Tare (grams) | Tare (grams) | Cumulative Pan Tare Weight (grams) | Sieve Opening Size | Cumulative Weight Retained (grams) | Percent Finer |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 221.41                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 97.65                       | 0.00         | 0.00                               | #20                | 0.16                               | 99.8          |
|                             |              |                                    | #40                | 0.58                               | 99.4          |
|                             |              |                                    | #60                | 1.52                               | 98.4          |
|                             |              |                                    | #100               | 15.92                              | 83.7          |
|                             |              |                                    | #140               | 50.02                              | 48.8          |
|                             |              |                                    | #200               | 69.91                              | 28.4          |

**Fractional Components**

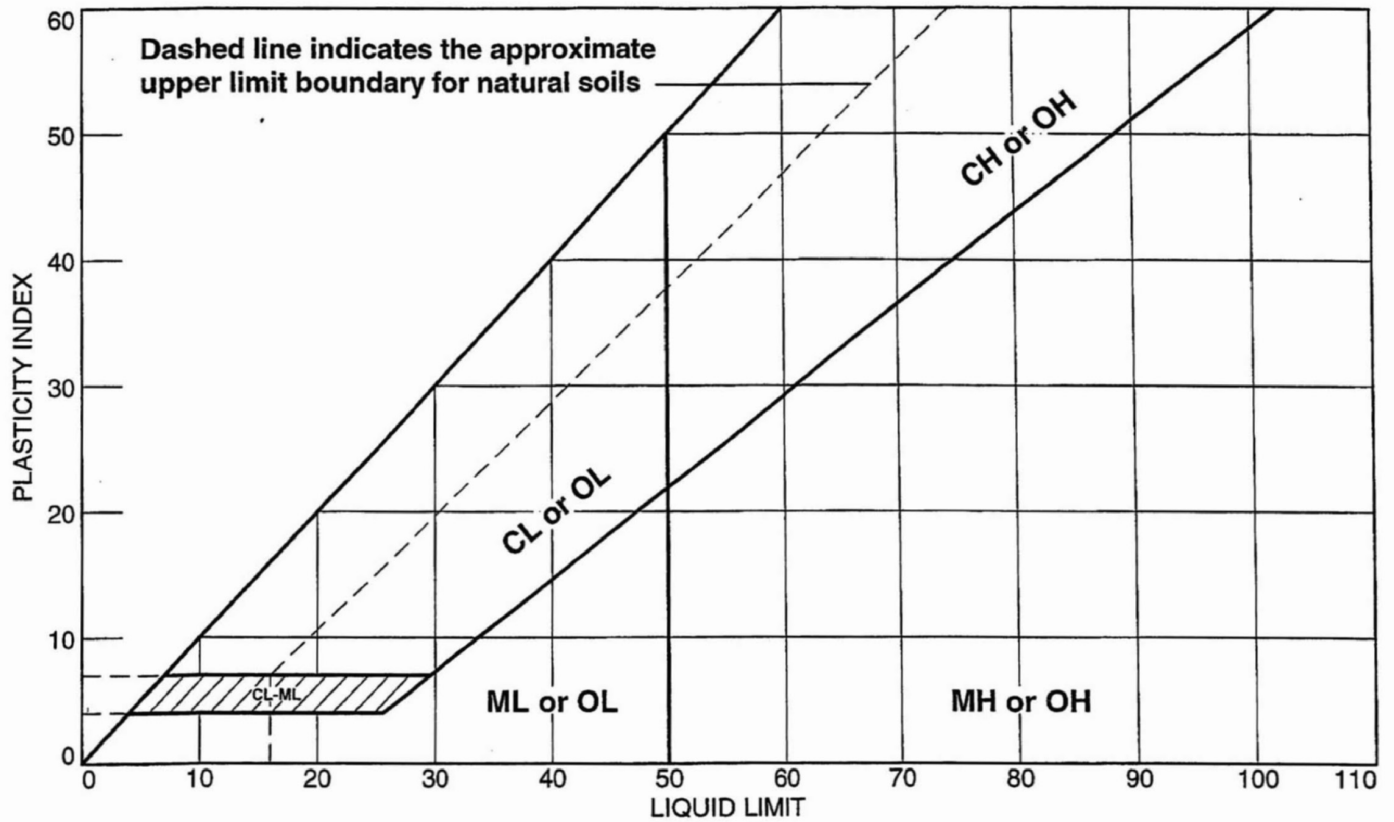
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 0.6    | 71.0 | 71.6  |       |      | 28.4  |

| 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> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 | 0.0777          | 0.1074          | 0.1187          | 0.1437          | 0.1525          | 0.1647          | 0.1860          |

|                         |
|-------------------------|
| <b>Fineness Modulus</b> |
| 0.18                    |

MACTEC, Inc.

# LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



| SOIL DATA |                |            |             |                           |                   |                  |                      |      |
|-----------|----------------|------------|-------------|---------------------------|-------------------|------------------|----------------------|------|
|           | SOURCE         | SAMPLE NO. | DEPTH       | NATURAL WATER CONTENT (%) | PLASTIC LIMIT (%) | LIQUID LIMIT (%) | PLASTICITY INDEX (%) | USCS |
| •         | Boring B-2274A | SS-52      | 548.1-549.0 | 18.1                      | ND                | ND               | ND                   | SM   |

**MACTEC, Inc.**

**Raleigh, North Carolina**

Client: Bechtel

Project: Exelon Texas COL (Victoria)

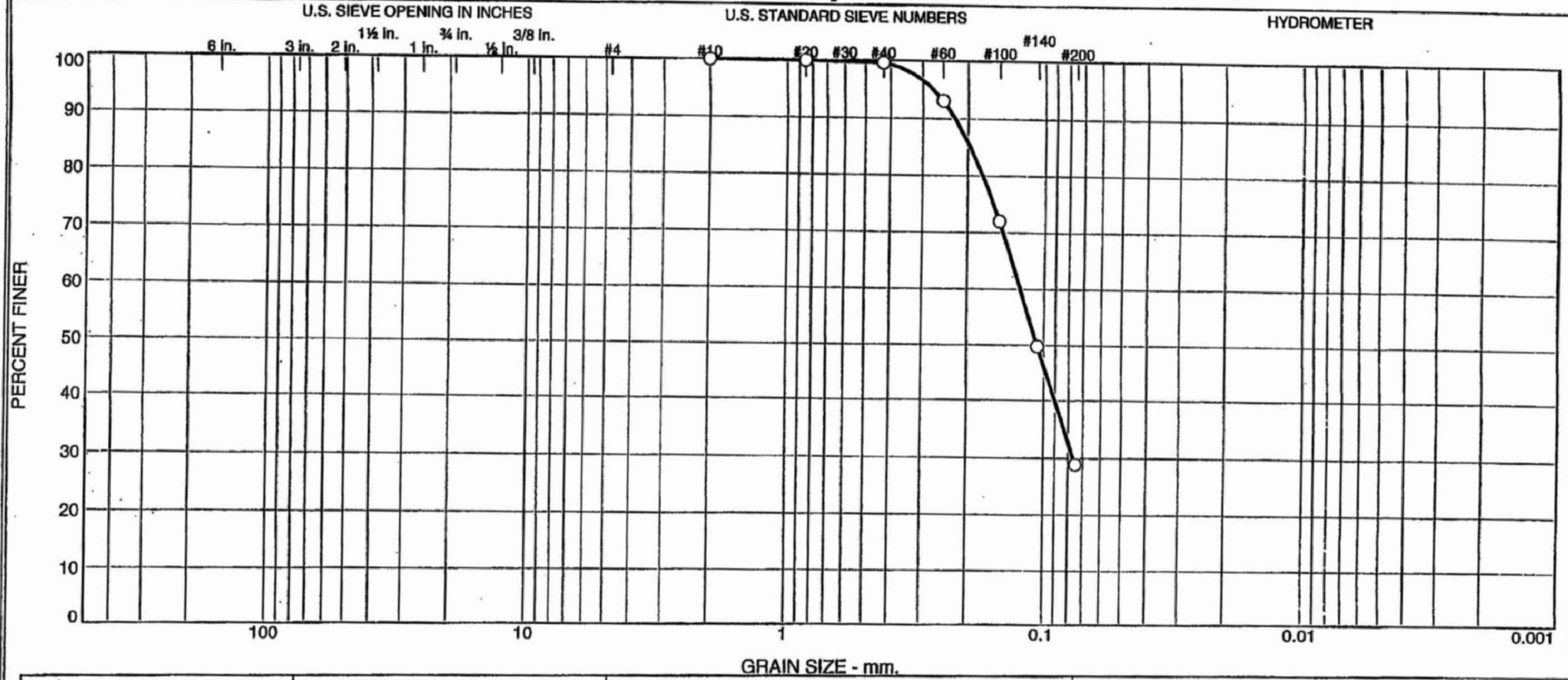
Project No.: 6468071777

Figure NB

Tested By: CS

Checked By: LBJ ZHU 4-28-08

# 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    | 0.4    | 70.7 | 28.9    |      |

| Source         | Sample # | Depth/Elev. | Date Sampled | USCS | Material Description                       | NM % | LL | PL |
|----------------|----------|-------------|--------------|------|--------------------------------------------|------|----|----|
| Boring B-2274A | SS-53A   | 568.1-569.3 | 12-20-07     | SC   | Light Yellowish Brown Clayey SAND (Visual) | ND   | ND | ND |

|                                            |                     |                                              |
|--------------------------------------------|---------------------|----------------------------------------------|
| Client <b>Bechtel</b>                      | <b>MACTEC, Inc.</b> | ○ SIEVE ANALYSIS ONLY<br>ND = Not Determined |
| Project <b>Exelon Texas COL (Victoria)</b> |                     |                                              |
| Project No. <b>6468071777</b>              | Figure <b>NA</b>    | <b>Raleigh, North Carolina</b>               |

Tested By: CS                      Checked By: LBJ    DSC 3-31-08

**GRAIN SIZE DISTRIBUTION TEST DATA**

3/27/2008

**Client:** Bechtel

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

**Project Number:** 6468071777

**Location:** Boring B-2274A

**Depth:** 568.1-569.3

**Sample Number:** SS-53A

**Material Description:** Light Yellowish Brown Clayey SAND (Visual)

**Date:** 12-20-07

**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 |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 304.37                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 103.65                      | 0.00         | 0.00                               | #20                | 0.11                               | 99.9          |
|                             |              |                                    | #40                | 0.38                               | 99.6          |
|                             |              |                                    | #60                | 7.15                               | 93.1          |
|                             |              |                                    | #100               | 29.06                              | 72.0          |
|                             |              |                                    | #140               | 51.96                              | 49.9          |
|                             |              |                                    | #200               | 73.72                              | 28.9          |

**Fractional Components**

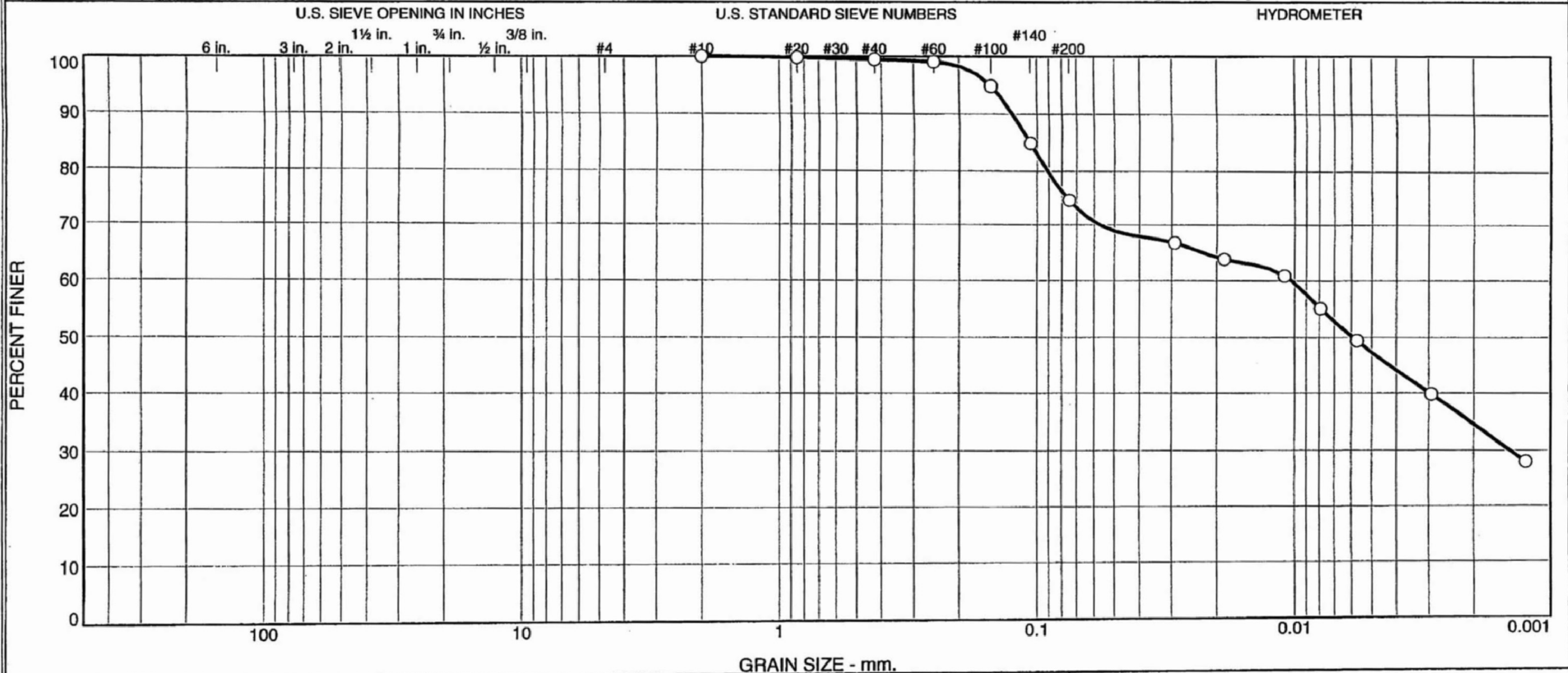
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 0.4    | 70.7 | 71.1  |       |      | 28.9  |

| D10 | D15 | D20 | D30    | D50    | D60    | D80    | D85    | D90    | D95    |
|-----|-----|-----|--------|--------|--------|--------|--------|--------|--------|
|     |     |     | 0.0764 | 0.1062 | 0.1238 | 0.1746 | 0.1954 | 0.2242 | 0.2721 |

|                         |
|-------------------------|
| <b>Fineness Modulus</b> |
| 0.32                    |

MACTEC, Inc.

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



| % +3" | % Gravel |      | % Sand |        |      | % Fines |      |
|-------|----------|------|--------|--------|------|---------|------|
|       | Coarse   | Fine | Coarse | Medium | Fine | Silt    | Clay |
| 0.0   | 0.0      | 0.0  | 0.0    | 0.5    | 24.9 | 27.2    | 47.4 |

| Source         | Sample # | Depth/Elev. | Date Sampled | USCS | Material Description           | NM % | LL | PL |
|----------------|----------|-------------|--------------|------|--------------------------------|------|----|----|
| Boring B-2274A | SS-54    | 588.3-589.8 | 1-2-08       | CL   | Pale Brown Lean CLAY with sand | 13.1 | 39 | 13 |

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

Tested By: CS

Checked By: LBJ *ZHU 4-28-08*

**GRAIN SIZE DISTRIBUTION TEST DATA**

4/10/2008

**Client:** Bechtel

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

**Project Number:** 6468071777

**Location:** Boring B-2274A

**Depth:** 588.3-589.8

**Sample Number:** SS-54

**Material Description:** Pale Brown Lean CLAY with sand

**Date:** 1-2-08

**Natural Moisture:** 13.1

**Liquid Limit:** 39

**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 |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 302.25                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 51.52                       | 0.00         | 0.00                               | #20                | 0.09                               | 99.8          |
|                             |              |                                    | #40                | 0.27                               | 99.5          |
|                             |              |                                    | #60                | 0.49                               | 99.0          |
|                             |              |                                    | #100               | 2.67                               | 94.8          |
|                             |              |                                    | #140               | 7.74                               | 85.0          |
|                             |              |                                    | #200               | 13.11                              | 74.6          |

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 51.52

Hygroscopic moisture correction:

Moist weight and tare = 28.81

Dry weight and tare = 28.58

Tare weight = 15.39

Hygroscopic moisture = 1.7%

Table of composite correction values:

Temp., deg. C: 11.2 28.4

Comp. corr.: -8.0 -4.0

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                | 20.7            | 40.0           | 34.2              | 0.0133 | 41.0 | 9.6        | 0.0292         | 66.8          |
| 5.00                | 20.6            | 38.5           | 32.7              | 0.0133 | 39.5 | 9.8        | 0.0187         | 63.8          |
| 15.00               | 20.6            | 37.0           | 31.2              | 0.0133 | 38.0 | 10.1       | 0.0109         | 60.9          |
| 30.00               | 20.8            | 34.0           | 28.2              | 0.0133 | 35.0 | 10.6       | 0.0079         | 55.1          |
| 60.00               | 21.1            | 31.0           | 25.3              | 0.0133 | 32.0 | 11.0       | 0.0057         | 49.4          |
| 240.00              | 21.6            | 26.0           | 20.4              | 0.0132 | 27.0 | 11.9       | 0.0029         | 39.9          |
| 1440.00             | 21.3            | 20.0           | 14.3              | 0.0132 | 21.0 | 12.9       | 0.0012         | 28.0          |

MACTEC, Inc.

**Fractional Components**

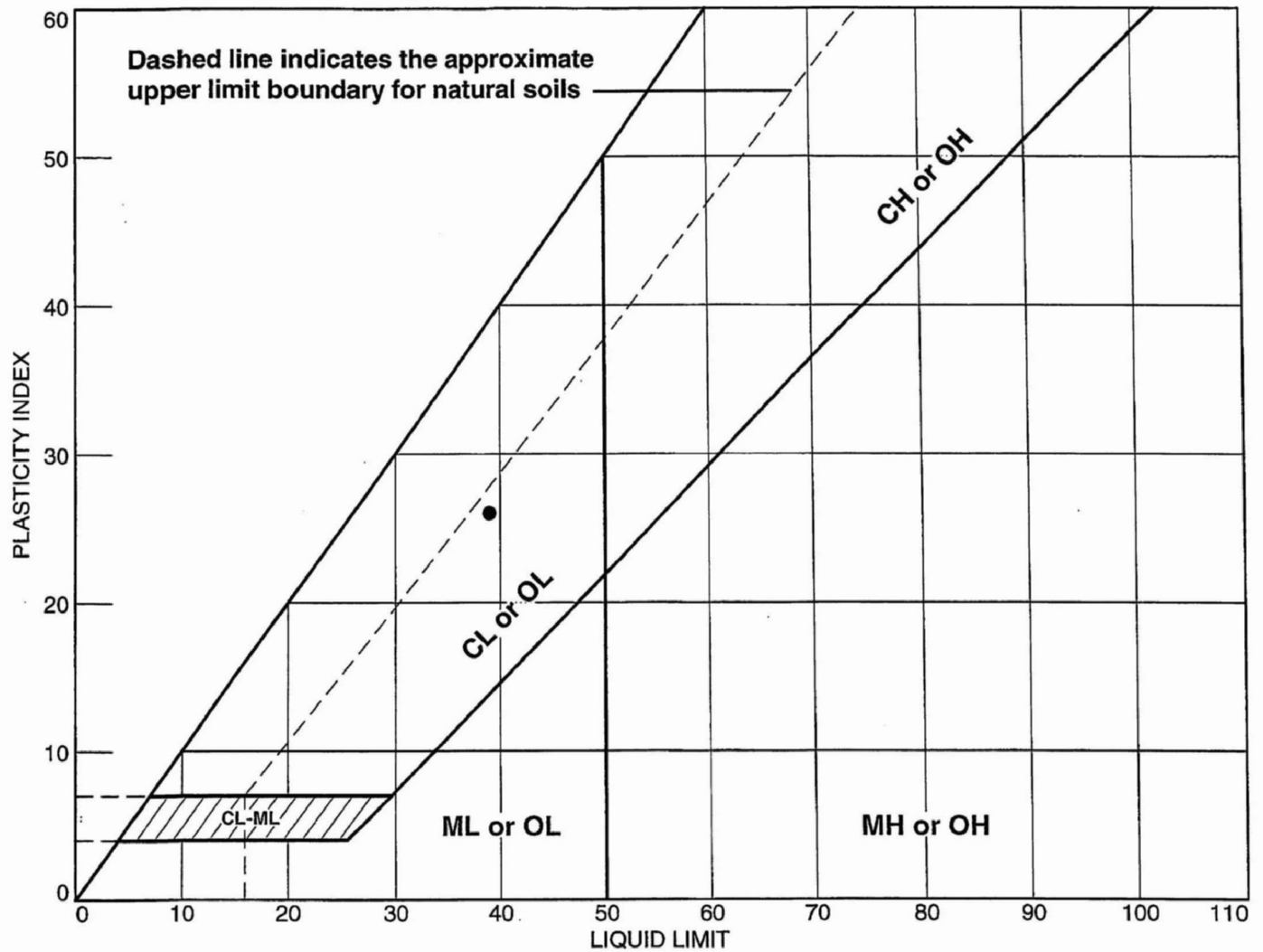
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 0.5    | 24.9 | 25.4  | 27.2  | 47.4 | 74.6  |

| D10 | D15 | D20 | D30    | D50    | D60    | D80    | D85    | D90    | D95    |
|-----|-----|-----|--------|--------|--------|--------|--------|--------|--------|
|     |     |     | 0.0014 | 0.0059 | 0.0103 | 0.0910 | 0.1061 | 0.1242 | 0.1514 |

|                             |
|-----------------------------|
| <b>Fineness<br/>Modulus</b> |
| 0.06                        |



# LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D4318 (05)



| SOIL DATA |                |            |             |                           |                   |                  |                      |      |
|-----------|----------------|------------|-------------|---------------------------|-------------------|------------------|----------------------|------|
| SYMBOL    | SOURCE         | SAMPLE NO. | DEPTH       | NATURAL WATER CONTENT (%) | PLASTIC LIMIT (%) | LIQUID LIMIT (%) | PLASTICITY INDEX (%) | USCS |
| •         | Boring B-2274A | SS-54      | 588.3-589.8 | 13.1                      | 13                | 39               | 26                   | CL   |

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

Figure **NA**

Tested By: CS

Checked By: LBJ ZHU 2-28-08

**LIQUID AND PLASTIC LIMIT TEST DATA**

4/10/2008

**Client:** Bechtel

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

**Project Number:** 6468071777

**Location:** Boring B-2274A

**Depth:** 588.3-589.8

**Sample Number:** SS-54

**Material Description:** Pale Brown Lean CLAY with sand

**USCS:** CL

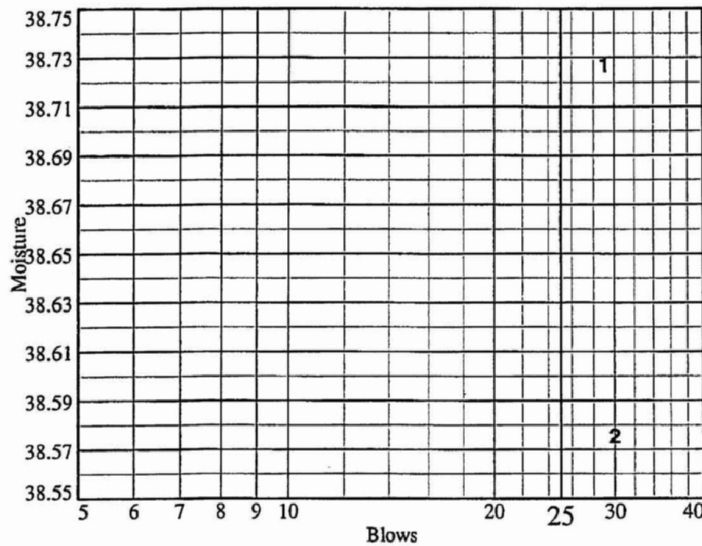
**AASHTO:** A-6(17)

**Tested by:** CS

**Checked by:** LBJ

**Liquid Limit Data**

| Run No.         | 1     | 2     | 3 | 4 | 5 | 6 |
|-----------------|-------|-------|---|---|---|---|
| <b>Wet+Tare</b> | 30.66 | 34.16 |   |   |   |   |
| <b>Dry+Tare</b> | 26.40 | 28.96 |   |   |   |   |
| <b>Tare</b>     | 15.40 | 15.48 |   |   |   |   |
| <b># Blows</b>  | 29    | 30    |   |   |   |   |
| <b>Moisture</b> | 38.7  | 38.6  |   |   |   |   |



**Liquid Limit=** 39  
**Plastic Limit=** 13  
**Plasticity Index=** 26  
**Natural Moisture=** 13.1  
**Liquidity Index=** 0.0

**Plastic Limit Data**

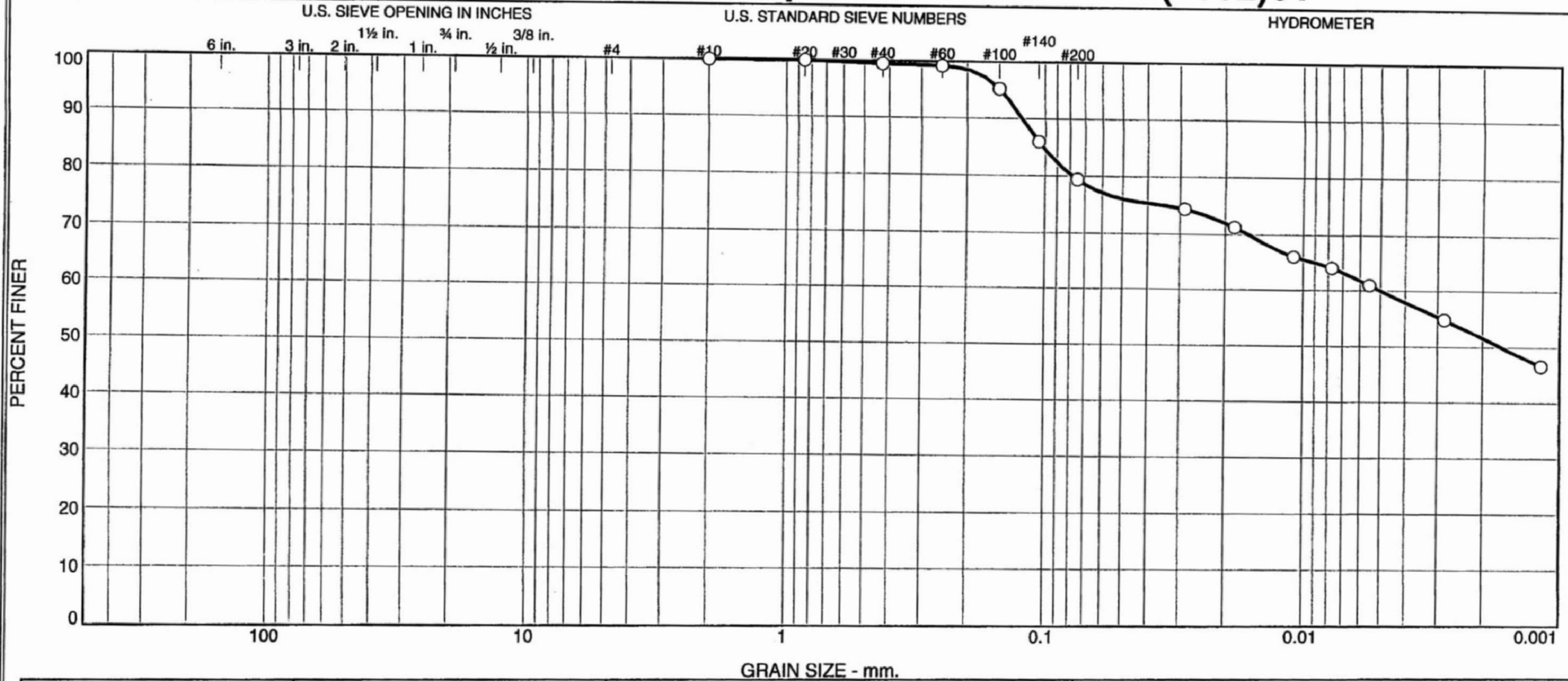
| Run No.         | 1     | 2     | 3 | 4 |
|-----------------|-------|-------|---|---|
| <b>Wet+Tare</b> | 22.38 | 25.94 |   |   |
| <b>Dry+Tare</b> | 21.60 | 24.74 |   |   |
| <b>Tare</b>     | 15.50 | 15.55 |   |   |
| <b>Moisture</b> | 12.8  | 13.1  |   |   |

**Natural Moisture Data**

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 124.45   | 110.80   | 6.72 | 13.1     |

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    | 0.5    | 20.1 | 19.4    | 60.0 |

| Source         | Sample # | Depth/Elev. | Date Sampled | USCS | Material Description           | NM % | LL | PL |
|----------------|----------|-------------|--------------|------|--------------------------------|------|----|----|
| Boring B-2274A | SS-55    | 593.2-594.7 | 1-3-08       | CL   | Light Gray Lean CLAY with sand | 12.3 | 39 | 13 |

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

Tested By: CS

Checked By: LBJ *ZHU 4-28-08*

**GRAIN SIZE DISTRIBUTION TEST DATA**

4/10/2008

**Client:** Bechtel

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

**Project Number:** 6468071777

**Location:** Boring B-2274A

**Depth:** 593.2-594.7

**Sample Number:** SS-55

**Material Description:** Light Gray Lean CLAY with sand

**Date:** 1-3-08

**Natural Moisture:** 12.3

**Liquid Limit:** 39

**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 |
|-----------------------------|--------------|------------------------------------|--------------------|------------------------------------|---------------|
| 293.26                      | 0.00         | 0.00                               | #10                | 0.00                               | 100.0         |
| 49.09                       | 0.00         | 0.00                               | #20                | 0.03                               | 99.9          |
|                             |              |                                    | #40                | 0.25                               | 99.5          |
|                             |              |                                    | #60                | 0.39                               | 99.2          |
|                             |              |                                    | #100               | 2.36                               | 95.2          |
|                             |              |                                    | #140               | 6.90                               | 85.9          |
|                             |              |                                    | #200               | 10.13                              | 79.4          |

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 49.01

Hygroscopic moisture correction:

Moist weight and tare = 28.76

Dry weight and tare = 28.35

Tare weight = 15.59

Hygroscopic moisture = 3.2%

Table of composite correction values:

Temp., deg. C: 11.2 28.4

Comp. corr.: -8.0 -4.0

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                | 20.8            | 41.5           | 35.7              | 0.0133 | 42.5 | 9.3        | 0.0287         | 74.4          |
| 5.00                | 20.8            | 40.0           | 34.2              | 0.0133 | 41.0 | 9.6        | 0.0184         | 71.3          |
| 15.00               | 20.8            | 37.5           | 31.7              | 0.0133 | 38.5 | 10.0       | 0.0109         | 66.1          |
| 30.00               | 21.0            | 36.5           | 30.8              | 0.0133 | 37.5 | 10.1       | 0.0077         | 64.1          |
| 60.00               | 21.0            | 35.0           | 29.3              | 0.0133 | 36.0 | 10.4       | 0.0055         | 61.0          |
| 240.00              | 21.2            | 32.0           | 26.3              | 0.0132 | 33.0 | 10.9       | 0.0028         | 54.8          |
| 1440.00             | 21.3            | 28.0           | 22.3              | 0.0132 | 29.0 | 11.5       | 0.0012         | 46.5          |

MACTEC, Inc.

**Fractional Components**

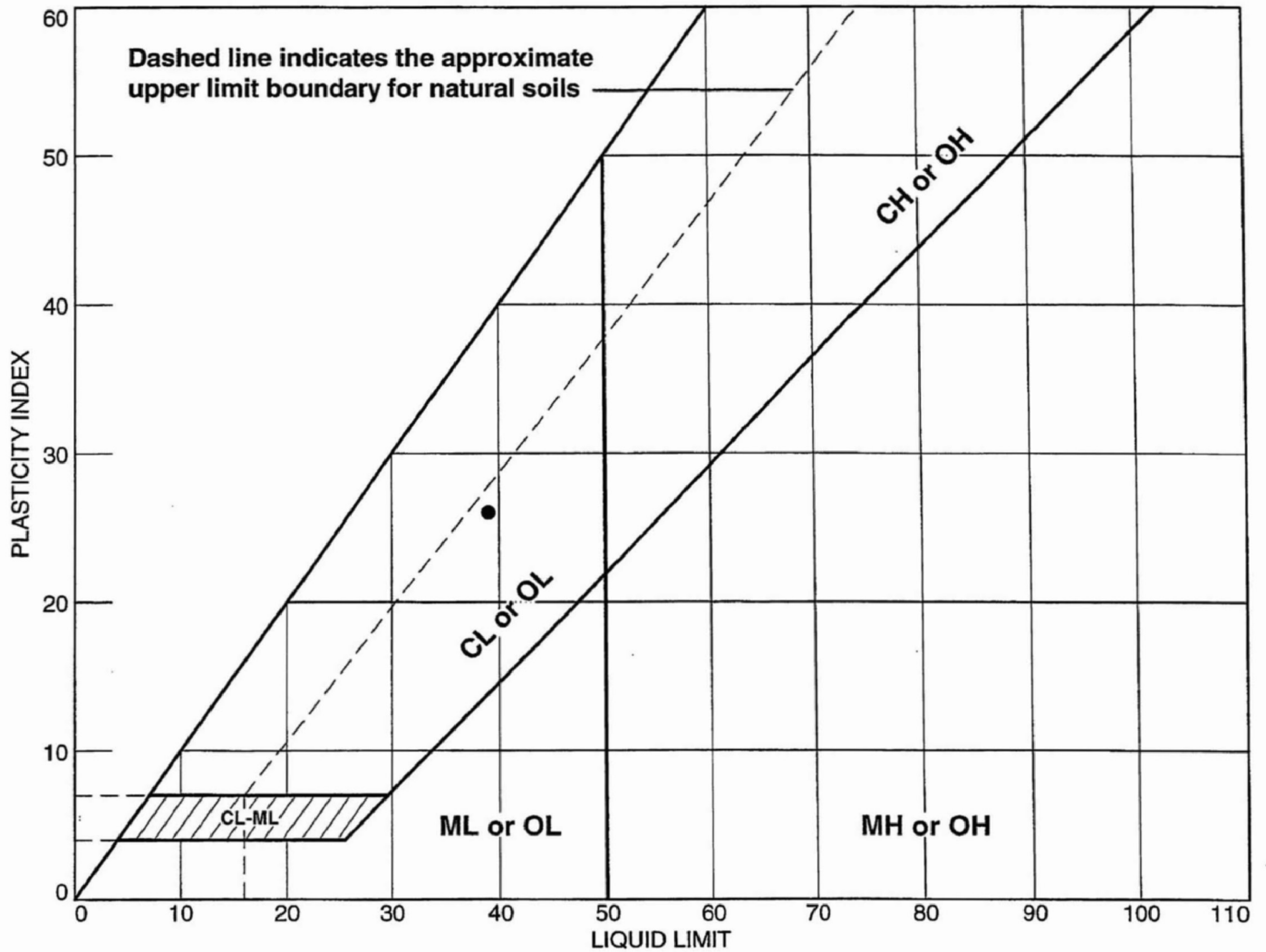
| Cobbles | Gravel |      |       | Sand   |        |      |       | Fines |      |       |
|---------|--------|------|-------|--------|--------|------|-------|-------|------|-------|
|         | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt  | Clay | Total |
| 0.0     | 0.0    | 0.0  | 0.0   | 0.0    | 0.5    | 20.1 | 20.6  | 19.4  | 60.0 | 79.4  |

| 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          | 0.0050          | 0.0786          | 0.1021          | 0.1226          | 0.1486          |

|                         |
|-------------------------|
| <b>Fineness Modulus</b> |
| 0.06                    |

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-2274A | SS-55      | 593.2-594.7 | 12.3                      | 13                | 39               | 26                   | CL   |

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

Tested By: CS

Checked By: LBJ ZHU 4-28-08

**LIQUID AND PLASTIC LIMIT TEST DATA**

4/10/2008

**Client:** Bechtel

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

**Project Number:** 6468071777

**Location:** Boring B-2274A

**Depth:** 593.2-594.7

**Sample Number:** SS-55

**Material Description:** Light Gray Lean CLAY with sand

**USCS:** CL

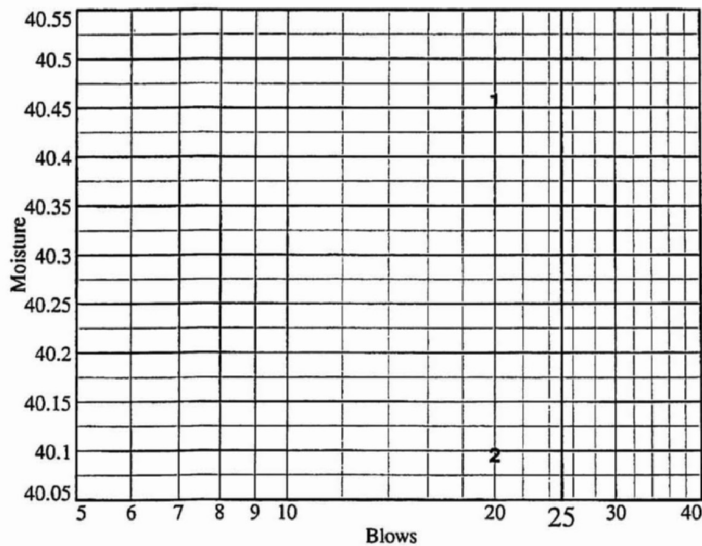
**AASHTO:** A-6(19)

**Tested by:** CS

**Checked by:** LBJ

**Liquid Limit Data**

| Run No.  | 1     | 2     | 3 | 4 | 5 | 6 |
|----------|-------|-------|---|---|---|---|
| Wet+Tare | 29.63 | 30.06 |   |   |   |   |
| Dry+Tare | 25.56 | 25.89 |   |   |   |   |
| Tare     | 15.50 | 15.49 |   |   |   |   |
| # Blows  | 20    | 20    |   |   |   |   |
| Moisture | 40.5  | 40.1  |   |   |   |   |



**Liquid Limit=** 39  
**Plastic Limit=** 13  
**Plasticity Index=** 26  
**Natural Moisture=** 12.3  
**Liquidity Index=** 0.0

**Plastic Limit Data**

| Run No.  | 1     | 2     | 3 | 4 |
|----------|-------|-------|---|---|
| Wet+Tare | 25.36 | 26.36 |   |   |
| Dry+Tare | 24.20 | 25.13 |   |   |
| Tare     | 15.49 | 15.36 |   |   |
| Moisture | 13.3  | 12.6  |   |   |

**Natural Moisture Data**

| Wet+Tare | Dry+Tare | Tare | Moisture |
|----------|----------|------|----------|
| 136.98   | 123.00   | 9.63 | 12.3     |

MACTEC, Inc.

# Organic Test Data





## ORGANIC CONTENT TEST REPORT

(ASTM D2974-07)

Project No. 6468071777  
 Tested By CS  
 Test Date 12/24/2007

Project Name Exelon COL  
 Reviewed By *Zee Be Johnson*  
 Review Date 1/26/08  
 ICAW 1/26/08

|                                              |         |        |           |           |
|----------------------------------------------|---------|--------|-----------|-----------|
| Boring No.                                   | B-2151  | B-2151 | B-2151    | B-2151    |
| Sample No.                                   | SS-1    | SS-3   | SS-5      | SS-7      |
| Sample Depth, Ft.                            | 0 - 1.5 | 6 - 7  | 11 - 12.5 | 19.5 - 21 |
| A) Tare No.                                  | I       | JP-4   | 75        | 305       |
| B) Tare Weight, grams                        | 9.10    | 6.91   | 6.82      | 9.45      |
| C) Wet Soil + Tare, grams                    | 138.93  | 121.75 | 161.15    | 149.75    |
| D) Dry Soil + Tare, grams                    | 116.68  | 103.10 | 114.38    | 123.71    |
| E) Weight of Dry Soil, grams [D - B]         | 107.58  | 96.19  | 107.56    | 114.26    |
| F) Weight of Moisture, grams [C - D]         | 22.25   | 18.65  | 46.77     | 26.04     |
| G) Moisture Content, % [F * 100 / E]         | 20.7    | 19.4   | 43.5      | 22.8      |
| (based on oven-dried weight)                 |         |        |           |           |
|                                              |         |        |           |           |
| H) Tare No.                                  | A       | S      | R         | N         |
| I) Weight of Tare, grams                     | 56.10   | 52.62  | 52.23     | 55.53     |
| J) Weight of Over-Dried Soil + Tare, grams   | 111.10  | 146.94 | 140.79    | 121.23    |
| K) Weight of Oven- Dried Soil, grams [J - I] | 55.00   | 94.32  | 88.56     | 65.70     |
| L) Weight of Ignited Soil + Tare, grams      | 109.73  | 145.30 | 138.58    | 118.34    |
| M) Ash, grams [L - I]                        | 53.63   | 92.68  | 86.35     | 62.81     |
| N) Ash Content, % [M *100 / K]               | 97.5    | 98.3   | 97.5      | 95.6      |
| O) Organic Matter, % [100 - N]               | 2.5     | 1.7    | 2.5       | 4.4       |

Remarks: Furnace temperature set @ 440° C.

Equipment used:

oven: 5.1.16  
 scales: 3.1.19

muffle furnace 5.1.17



## ORGANIC CONTENT TEST REPORT

(ASTM D2974-07)

Project No. 6468071777  
 Tested By CS  
 Test Date 12/24/2007

Project Name Exelon COL  
 Reviewed By *Lee B. Johnson*  
 Review Date 1/26/08  
 KAW 1/26/08

|                                              |            |            |            |            |
|----------------------------------------------|------------|------------|------------|------------|
| Boring No.                                   | B-2151     | B-2151     | B-2151     | B-2151     |
| Sample No.                                   | SS-9       | SS-11      | SS-13      | SS-15      |
| Sample Depth, Ft.                            | 29.5 - 30  | 39.5 - 41  | 49.5 - 51  | 59.5 - 61  |
| A) Tare No.                                  | 319        | Orange     | JP - 23    | 89         |
| B) Tare Weight, grams                        | 9.23       | 9.18       | 6.71       | 6.59       |
| C) Wet Soil + Tare, grams                    | 111.93     | 147.50     | 128.30     | 171.79     |
| D) Dry Soil + Tare, grams                    | 92.23      | 113.51     | 108.06     | 141.07     |
| E) Weight of Dry Soil, grams [D - B]         | 83.00      | 104.33     | 101.35     | 134.48     |
| F) Weight of Moisture, grams [C - D]         | 19.70      | 33.99      | 20.24      | 30.72      |
| G) Moisture Content, % [F * 100 / E]         | 23.7       | 32.6       | 20.0       | 22.8       |
| (based on oven-dried weight)                 |            |            |            |            |
|                                              |            |            |            |            |
| H) Tare No.                                  | A          | S          | S          | A          |
| I) Weight of Tare, grams                     | 55.50      | 52.63      | 52.63      | 55.50      |
| J) Weight of Over-Dried Soil + Tare, grams   | 142.02     | 112.62     | 156.57     | 138.91     |
| K) Weight of Oven- Dried Soil, grams [J - I] | 86.52      | 59.99      | 103.94     | 83.41      |
| L) Weight of Ignited Soil + Tare, grams      | 137.43     | 108.47     | 152.50     | 137.40     |
| M) Ash, grams [L - I]                        | 81.93      | 55.84      | 99.87      | 81.90      |
| N) Ash Content, % [M *100 / K]               | 94.7       | 93.1       | 96.1       | 98.2       |
| O) Organic Matter, % [100 - N]               | <b>5.3</b> | <b>6.9</b> | <b>3.9</b> | <b>1.8</b> |

Remarks: Furnace temperature set @ 440° C.

Equipment used:

oven: 5.1.16  
 scales: 3.1.19

muffle furnace 5.1.17



## ORGANIC CONTENT TEST REPORT (ASTM D2974-07)

**Project No.** 6468071777  
**Tested By** CS  
**Test Date** 12/24/2007

**Project Name** Exelon COL  
**Reviewed By** *RAJ*  
**Review Date** 1/26/08  
KAW 1/26/08

|                                                                      |             |           |             |             |
|----------------------------------------------------------------------|-------------|-----------|-------------|-------------|
| Boring No.                                                           | B-2151      | B-2151    | B-2151      | B-2151      |
| Sample No.                                                           | SS-17       | SS-21     | SS-25       | SS-28       |
| Sample Depth, Ft.                                                    | 69.5 - 70.1 | 89.5 - 91 | 119.5 - 121 | 149.6 - 151 |
| A) Tare No.                                                          | II          | 2P-4      | C-21        | 76          |
| B) Tare Weight, grams                                                | 8.05        | 7.23      | 9.34        | 6.65        |
| C) Wet Soil + Tare, grams                                            | 145.84      | 138.54    | 145.13      | 156.40      |
| D) Dry Soil + Tare, grams                                            | 115.34      | 118.16    | 119.60      | 129.02      |
| E) Weight of Dry Soil, grams [D - B]                                 | 107.29      | 110.93    | 110.26      | 122.37      |
| F) Weight of Moisture, grams [C - D]                                 | 30.50       | 20.38     | 25.53       | 27.38       |
| G) Moisture Content, % [F * 100 / E]<br>(based on oven-dried weight) | 28.4        | 18.4      | 23.2        | 22.4        |
|                                                                      |             |           |             |             |
| H) Tare No.                                                          | R           | R         | N           | N           |
| I) Weight of Tare, grams                                             | 52.20       | 52.25     | 55.60       | 55.60       |
| J) Weight of Over-Dried Soil + Tare, grams                           | 112.30      | 113.38    | 116.80      | 128.84      |
| K) Weight of Oven- Dried Soil, grams [J - I]                         | 60.10       | 61.13     | 61.20       | 73.24       |
| L) Weight of Ignited Soil + Tare, grams                              | 108.65      | 112.10    | 113.88      | 127.61      |
| M) Ash, grams [L - I]                                                | 56.45       | 59.85     | 58.28       | 72.01       |
| N) Ash Content, % [M *100 / K]                                       | 93.9        | 97.9      | 95.2        | 98.3        |
| O) Organic Matter, % [100 - N]                                       | 6.1         | 2.1       | 4.8         | 1.7         |

Remarks: Furnace temperature set @ 440° C.

**Equipment used:**

oven: 5.1.16  
 scales: 3.1.19

muffle furnace 5.1.17



## ORGANIC CONTENT TEST REPORT

(ASTM D2974-07)

Project No. 6468071777  
 Tested By CS  
 Test Date 1/12-23/08

Project Name Exelon COL  
 Reviewed By [Signature]  
 Review Date 1/26/08

KAW 1/26/08

|                                             |         |           |          |           |
|---------------------------------------------|---------|-----------|----------|-----------|
| Boring No.                                  | B-2160  | B-2160    | B-2160   | B-2160    |
| Sample No.                                  | SS-1    | SS-2      | SS-4     | SS-6      |
| Sample Depth, Ft.                           | 0 - 1.5 | 3.5 - 5.0 | 8.5 - 10 | 18.5 - 20 |
| A) Tare No.                                 | Orange  | Q         | 30       | QQ        |
| B) Tare Weight, grams                       | 9.16    | 6.77      | 9.18     | 6.79      |
| C) Wet Soil + Tare, grams                   | 109.31  | 169.45    | 120.79   | 188.80    |
| D) Dry Soil + Tare, grams                   | 97.78   | 139.27    | 106.17   | 163.11    |
| E) Weight of Dry Soil, grams [D - B]        | 88.62   | 132.50    | 96.99    | 156.32    |
| F) Weight of Moisture, grams [C - D]        | 11.53   | 30.18     | 14.62    | 25.69     |
| G) Moisture Content, % [F * 100 / E]        | 13.0    | 22.8      | 15.1     | 16.4      |
| (based on oven-dried weight)                |         |           |          |           |
|                                             |         |           |          |           |
| H) Tare No.                                 | S       | A         | N        | S         |
| I) Weight of Tare, grams                    | 52.60   | 55.50     | 55.56    | 52.60     |
| J) Weight of Over-Dried Soil + Tare, grams  | 141.38  | 136.41    | 153.56   | 152.76    |
| K) Weight of Oven-Dried Soil, grams [J - I] | 88.78   | 80.91     | 98.00    | 100.16    |
| L) Weight of Ignited Soil + Tare, grams     | 138.78  | 133.29    | 150.79   | 148.98    |
| M) Ash, grams [L - I]                       | 86.18   | 77.79     | 95.23    | 96.38     |
| N) Ash Content, % [M * 100 / K]             | 97.1    | 96.1      | 97.2     | 96.2      |
| O) Organic Matter, % [100 - N]              | 2.9     | 3.9       | 2.8      | 3.8       |

Remarks: Furnace temperature set @ 440° C

**Equipment used:**

oven: 5.1.16  
 scales: 3.1.19

muffle furnace 5.1.17



## ORGANIC CONTENT TEST REPORT (ASTM D2974-07)

**Project No.** 6468071777  
**Tested By** CS  
**Test Date** 1/12-23/08

**Project Name** Exelon COL  
**Reviewed By** *Z. G. Johnson*  
**Review Date** 1/26/08  
KAW 1/26/08

|                                                                      |            |            |            |            |
|----------------------------------------------------------------------|------------|------------|------------|------------|
| Boring No.                                                           | B-2160     | B-2160     | B-2160     | B-2160     |
| Sample No.                                                           | SS-8       | SS-10      | SS-12      | SS-14      |
| Sample Depth, Ft.                                                    | 23.5 - 25  | 32.5 - 35  | 43.5 - 45  | 53.5 - 55  |
| A) Tare No.                                                          | L          | 2P-23      | UA         | 2P-16      |
| B) Tare Weight, grams                                                | 7.00       | 6.70       | 8.20       | 6.80       |
| C) Wet Soil + Tare, grams                                            | 133.99     | 160.08     | 176.90     | 177.50     |
| D) Dry Soil + Tare, grams                                            | 107.72     | 130.34     | 142.26     | 152.86     |
| E) Weight of Dry Soil, grams [D - B]                                 | 100.72     | 123.64     | 134.06     | 146.06     |
| F) Weight of Moisture, grams [C - D]                                 | 26.27      | 29.74      | 34.64      | 24.64      |
| G) Moisture Content, % [F * 100 / E]<br>(based on oven-dried weight) | 26.1       | 24.1       | 25.8       | 16.9       |
|                                                                      |            |            |            |            |
| H) Tare No.                                                          | R          | A          | N          | S          |
| I) Weight of Tare, grams                                             | 52.24      | 55.49      | 55.56      | 52.62      |
| J) Weight of Over-Dried Soil + Tare, grams                           | 157.85     | 131.04     | 175.60     | 165.93     |
| K) Weight of Oven- Dried Soil, grams [J - I]                         | 105.61     | 75.55      | 120.04     | 113.31     |
| L) Weight of Ignited Soil + Tare, grams                              | 151.62     | 127.19     | 168.90     | 160.31     |
| M) Ash, grams [L - I]                                                | 99.38      | 71.70      | 113.34     | 107.69     |
| N) Ash Content, % [M *100 / K]                                       | 94.1       | 94.9       | 94.4       | 95.0       |
| O) Organic Matter, % [100 - N]                                       | <b>5.9</b> | <b>5.1</b> | <b>5.6</b> | <b>5.0</b> |

Remarks: Furnace temperature set @ 440° C

**Equipment used:**

oven: 5.1.16  
 scales: 3.1.19

muffle furnace 5.1.17



## ORGANIC CONTENT TEST REPORT

(ASTM D2974-07)

Project No. 6468071777  
 Tested By CS  
 Test Date 1/12-23/08

Project Name Exelon COL  
 Reviewed By *[Signature]*  
 Review Date 1/26/09

|                                              |           |             |             |  |
|----------------------------------------------|-----------|-------------|-------------|--|
| Boring No.                                   | B-2160    | B-2160      | B-2160      |  |
| Sample No.                                   | SS-16     | SS-24       | SS-28       |  |
| Sample Depth, Ft.                            | 63.5 - 65 | 108.5 - 110 | 148.5 - 150 |  |
| A) Tare No.                                  | 520       | II          | R           |  |
| B) Tare Weight, grams                        | 9.40      | 6.80        | 6.90        |  |
| C) Wet Soil + Tare, grams                    | 168.00    | 154.10      | 176.80      |  |
| D) Dry Soil + Tare, grams                    | 138.69    | 118.02      | 152.76      |  |
| E) Weight of Dry Soil, grams [D - B]         | 129.29    | 111.22      | 145.86      |  |
| F) Weight of Moisture, grams [C - D]         | 29.31     | 36.08       | 24.04       |  |
| G) Moisture Content, % [F * 100 / E]         | 22.7      | 32.4        | 16.5        |  |
| (based on oven-dried weight)                 |           |             |             |  |
|                                              |           |             |             |  |
| H) Tare No.                                  | R         | A           | R           |  |
| I) Weight of Tare, grams                     | 52.27     | 55.49       | 51.53       |  |
| J) Weight of Over-Dried Soil + Tare, grams   | 147.77    | 118.32      | 142.36      |  |
| K) Weight of Oven- Dried Soil, grams [J - I] | 95.50     | 62.83       | 90.83       |  |
| L) Weight of Ignited Soil + Tare, grams      | 144.44    | 115.86      | 139.76      |  |
| M) Ash, grams [L - I]                        | 92.17     | 60.37       | 88.23       |  |
| N) Ash Content, % [M *100 / K]               | 96.5      | 96.1        | 97.1        |  |
| O) Organic Matter, % [100 - N]               | 3.5       | 3.9         | 2.9         |  |

Remarks: Furnace temperature set @ 440° C

Equipment used:

oven: 5.1.16  
 scales: 3.1.19

muffle furnace 5.1.17