TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | | **Report Number** | 2926 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | **Date** | 9/15/2010 | |
| Source of Material | WILLOW BEND PIT | Feature | Embankment | Visual Description (ASTM D 2488) | G-BR CLAY |
| Date / Time In Oven | 9/15/2010 - 1:00 P.M. | Date / Time Out of Oven | 9/16/2010 - 7:00 a.m. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 50 | 51 | 52 | | |
| Retest Of Test ID | 44 | | 46 | | |
| Station | 124+97 | 119+33 | 175+01 | | |
| Offset | F.S. +18.8 | C/L -3.7 | F.S. +25.4 | | |
| Lift Number | 1 | 5 | 2 | | |
| X-Coordinate | E3660452.0 | E3659890.9 | E3665443.3 | | |
| Y-Coordinate | N501002.2 | N501066.7 | N500648.2 | | |
| Elevation (ft) | 5.5 | 7.8 | 5.9 | | |
| a. Container / Lid Number | DT27 | DT49 | DT48 | | |
| b. Wet Soil + Tare Mass (g) | 397.75 | 392.67 | 396.65 | | |
| c. Dry Soil + Tare Mass (g) | 360.37 | 346.93 | 346.89 | | |
| d. Water Mass (g) | 37.38 | 45.74 | 49.76 | | |
| e.Tare Mass (g) | 209.56 | 176.36 | 183.47 | | |
| f. Dry Soil Mass (g) | 150.81 | 170.57 | 163.42 | | |
| Moisture Content (%) | 24.79 | 26.82 | 30.45 | | |
| Optimum Moisture Content (%) | 23.1 | 23.1 | 23.9 | | |
| Difference from Opt. Moisture | 1.69 | 3.72 | 6.55 | | |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | | **Report Number** | 2935 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | **Date** | 9/16/2010 | |
| Source of Material | WILLOW BEND PIT | Feature | Embankment | Visual Description (ASTM D 2488) | G-BR CLAY |
| Date / Time In Oven | 9/16/2010 - 5:00 P.M. | Date / Time Out of Oven | 9/17/2010 - 7:00 a.m. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 53 | 54 | 55 | 56 | 57 |
| Retest Of Test ID | | | 39 | 52 | |
| Station | 110+91 | 119+13 | 163+28 | 175+01 | 175+01 |
| Offset | F.S. +23.5' | C/L +2.5' | F.S. +21' | F.S. +25.4' | |
| Lift Number | 4 | 6 | 1 | 2 | UNCOMPACTED FILL |
| X-Coordinate | E3659560.4 | E3659870.9 | E3664273.9 | E3665443.3 | |
| Y-Coordinate | N501712.4 | N501061.8 | N500731.4 | N500648.2 | |
| Elevation (ft) | 6.8 | 8.3 | 5.9 | 5.9 | |
| a. Container / Lid Number | DT44 | DT25 | DT43 | DT47 | DT46 |
| b. Wet Soil + Tare Mass (g) | 399.69 | 392.56 | 392.48 | 391.63 | 397.24 |
| c. Dry Soil + Tare Mass (g) | 357.99 | 349.76 | 345.83 | 341.42 | 335.26 |
| d. Water Mass (g) | 41.70 | 42.80 | 46.65 | 50.21 | 61.98 |
| e.Tare Mass (g) | 176.05 | 205.76 | 180.00 | 178.19 | 177.89 |
| f. Dry Soil Mass (g) | 181.94 | 144.00 | 165.83 | 163.23 | 157.37 |
| Moisture Content (%) | 22.92 | 29.72 | 28.13 | 30.76 | 39.38 |
| Optimum Moisture Content (%) | 23.9 | 23.9 | 23.1 | 23.9 | |
| Difference from Opt. Moisture | -0.98 | 5.82 | 5.03 | 6.86 | 39.38 |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |

Remarks: TEST ID 57 WAS TAKEN FROM UNCOMPACTED FILL AREA

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | TOLUNAY-WONG ENGINEERS | | **Report Number** | 2609 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 PHASE 2, FIRST LIFT | | **Date** | 7/16/2010 | |
| Source of Material | NE STOCKPILE | Feature | Embankment | Visual Description (ASTM D 2488) | BR CLAY |
| Date / Time In Oven | 7-16 / 5 p.m. | Date / Time Out of Oven | 7-17 / 7:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | W. PROCHASKA | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 1 | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| a. Container / Lid Number | DT01 | | | | |
| b. Wet Soil + Tare Mass (g) | 393.30 | | | | |
| c. Dry Soil + Tare Mass (g) | 346.11 | | | | |
| d. Water Mass (g) | 47.19 | | | | |
| e.Tare Mass (g) | 171.85 | | | | |
| f. Dry Soil Mass (g) | 174.26 | | | | |
| Moisture Content (%) | 27.08 | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | TOLUNAY-WONG ENGINEERS | | **Report Number** | 2610 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 PHASE 2, FIRST LIFT | | **Date** | 7/16/2010 | |
| Source of Material | NE NEW PIT | Feature | Embankment | Visual Description (ASTM D 2488) | BR CLAY |
| Date / Time In Oven | 7-16 / 5 p.m. | Date / Time Out of Oven | 7-17 / 7:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | W. PROCHASKA | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 2 | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| a. Container / Lid Number | DT31 | | | | |
| b. Wet Soil + Tare Mass (g) | 393.12 | | | | |
| c. Dry Soil + Tare Mass (g) | 343.56 | | | | |
| d. Water Mass (g) | 49.56 | | | | |
| e.Tare Mass (g) | 211.08 | | | | |
| f. Dry Soil Mass (g) | 132.48 | | | | |
| Moisture Content (%) | 37.41 | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | TOLUNAY-WONG ENGINEERS | | **Report Number** | 2611 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 PHASE 2, FIRST LIFT | | **Date** | 7/16/2010 | |
| Source of Material | Sample B S.E. Corner of Stock Pile | Feature | Embankment | Visual Description (ASTM D 2488) | BR CLAY |
| Date / Time In Oven | 7-16 / 5 p.m. | Date / Time Out of Oven | 7-17 / 7:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | W. PROCHASKA | Submitted By | G. LECOQ |
| | | | | | |
| Test ID | 3 | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| | | | | | |
| a. Container / Lid Number | DT02 | | | | |
| b. Wet Soil + Tare Mass (g) | 391.06 | | | | |
| c. Dry Soil + Tare Mass (g) | 333.87 | | | | |
| d. Water Mass (g) | 57.19 | | | | |
| e.Tare Mass (g) | 178.98 | | | | |
| f. Dry Soil Mass (g) | 154.89 | | | | |
| Moisture Content (%) | 36.92 | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |
| | | | | | |
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |
| | | | | | |
| Remarks: | | | | | |

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | TOLUNAY-WONG ENGINEERS | | **Report Number** | 2641 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 PHASE 2, FIRST LIFT | | **Date** | 7/27/2010 | |
| Source of Material | SOUTH END NEW PIT | Feature | Embankment | Visual Description (ASTM D 2488) | G-BR CLAY |
| Date / Time In Oven | 7-27 / 3:00 P.M. | Date / Time Out of Oven | 7-28 / 7:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | W. PROCHASKA | Submitted By | G. LECOQ |
| | | | | | |
| Test ID | 4 | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| | | | | | |
| a. Container / Lid Number | DT02 | | | | |
| b. Wet Soil + Tare Mass (g) | 391.95 | | | | |
| c. Dry Soil + Tare Mass (g) | 353.70 | | | | |
| d. Water Mass (g) | 38.25 | | | | |
| e.Tare Mass (g) | 178.94 | | | | |
| f. Dry Soil Mass (g) | 174.76 | | | | |
| Moisture Content (%) | 21.89 | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |
| | | | | | |
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |
| | | | | | |
| Remarks: | | | | | |

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | TOLUNAY-WONG ENGINEERS | | **Report Number** | 2653 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 PHASE 2, FIRST LIFT | | **Date** | 8/2/2010 | |
| Source of Material | FLOOD SIDE | Feature | Embankment | Visual Description (ASTM D 2488) | BR. CLAY |
| Date / Time In Oven | 8/2 - 5:00 P.M. | Date / Time Out of Oven | 8/3 - 7:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 6 | 7 | 8 | | |
| Retest Of Test ID | | | | | |
| Station | 181+43 | 175+00 | 177+00 | | |
| Offset | 6' F.S. | 15' F.S. | | | |
| Lift Number | 1 | 1 | 1 | | |
| X-Coordinate | E3666066.2 | E3665443.2 | | | |
| Y-Coordinate | N500562.3 | N500655.8 | | | |
| Elevation (ft) | 6.3 | 5.7 | | | |
| | | | | | |
| a. Container / Lid Number | DT04 | DT11 | DT08 | | |
| b. Wet Soil + Tare Mass (g) | 392.80 | 393.19 | 398.65 | | |
| c. Dry Soil + Tare Mass (g) | 360.10 | 350.16 | 356.77 | | |
| d. Water Mass (g) | 32.70 | 43.03 | 41.88 | | |
| e.Tare Mass (g) | 233.43 | 181.00 | 187.43 | | |
| f. Dry Soil Mass (g) | 126.67 | 169.16 | 169.34 | | |
| Moisture Content (%) | 25.82 | 25.44 | 24.73 | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |
| | | | | | |
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |
| | | | | | |
| Remarks: | | | | | |

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | | **Report Number** | 2690 | |
| **USACE Contract Number** | W912P8-09-D-0046-0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | **Date** | 8/6/2010 | |
| Source of Material | WILLOW BEND PIT | Feature | Embankment | Visual Description (ASTM D 2488) | G-BR CLAY |
| Date / Time In Oven | 8-6 / 4:30 P.M. | Date / Time Out of Oven | 8-7 / 7:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 9 | 10 | 11 | 12 | 13 |
| Retest Of Test ID | | | | | |
| Station | 168+84.1 | 161+04.7 | 180+73.1 | 175+05 | 169+76.5 |
| Offset | 13.8 | 27.9 | -86.9 | -80.5 | -83.3 |
| Lift Number | 1 | 1 | 1 | 1 | 1 |
| X-Coordinate | E3664828.2 | E3664049.5 | E3666027.6 | E3665454.74 | E3664926.3 |
| Y-Coordinate | N500701.0 | N500738.9 | N5000668.1 | N500753.87 | N500786.6 |
| Elevation (ft) | 5.9 | 4.9 | 5.1 | 4.8 | 4.9 |
| | | | | | |
| a. Container / Lid Number | DT08 | DT48 | DT49 | DT50 | DT02 |
| b. Wet Soil + Tare Mass (g) | 390.64 | 398.91 | 397.52 | 392.98 | 390.07 |
| c. Dry Soil + Tare Mass (g) | 344.69 | 357.03 | 351.35 | 351.61 | 347.74 |
| d. Water Mass (g) | 45.95 | 41.88 | 46.17 | 41.37 | 42.33 |
| e.Tare Mass (g) | 187.50 | 183.52 | 176.43 | 180.81 | 178.99 |
| f. Dry Soil Mass (g) | 157.19 | 173.51 | 174.92 | 170.80 | 168.75 |
| Moisture Content (%) | 29.23 | 24.14 | 26.39 | 24.22 | 25.08 |
| Optimum Moisture Content (%) | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 |
| Difference from Opt. Moisture | 2.83 | -2.26 | -0.01 | -2.18 | -1.32 |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 14 | 15 | 16 | 17 | 18 |
| Retest Of Test ID | | | | | |
| Station | 164+82.8 | 159+93.8 | 154+92.5 | 149+86 | 145+01 |
| Offset | -83.3 | -77.3 | -77.5 | -76.4 | -78.7 |
| Lift Number | 1 | 1 | 1 | 1 | 1 |
| X-Coordinate | E3664434.4 | E3663945.9 | E3663445.7 | E3662940.3 | E3662457.1 |
| Y-Coordinate | N500824.7 | N500851.3 | N500884.8 | N500917.4 | N500952.1 |
| Elevation (ft) | 5.0 | 4.9 | 4.8 | 4.9 | 4.9 |
| | | | | | |
| a. Container / Lid Number | DT27 | DT25 | DT30 | DT11 | DT04 |
| b. Wet Soil + Tare Mass (g) | 400.36 | 391.78 | 397.10 | 395.76 | 393.61 |
| c. Dry Soil + Tare Mass (g) | 367.14 | 356.48 | 352.79 | 354.06 | 360.61 |
| d. Water Mass (g) | 33.22 | 35.30 | 44.31 | 41.70 | 33.00 |
| e.Tare Mass (g) | 209.68 | 205.68 | 203.33 | 181.04 | 233.43 |
| f. Dry Soil Mass (g) | 157.46 | 150.80 | 149.46 | 173.02 | 127.18 |
| Moisture Content (%) | 21.10 | 23.41 | 29.65 | 24.10 | 25.95 |
| Optimum Moisture Content (%) | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 |
| Difference from Opt. Moisture | -5.30 | -2.99 | 3.25 | -2.30 | -0.45 |

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | | **Report Number** | 2690 | |
| **USACE Contract Number** | W912P8-09-D-0046-0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | **Date** | 8/6/2010 | |
| Source of Material | WILLOW BEND PIT | Feature | Embankment | Visual Description (ASTM D 2488) | G-BR CLAY |
| Date / Time In Oven | 8-6 / 4:30 P.M. | Date / Time Out of Oven | 8-7 / 7:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 19 | 20 | 21 | 22 | 23 |
| Retest Of Test ID | | | | | |
| Station | 139+99.4 | 134+96.2 | 129+97.3 | 124+98.7 | 120+99.2 |
| Offset | -78.9 | -80.7 | -82.5 | -80.0 | -79.6 |
| Lift Number | 1 | 1 | 1 | 1 | 1 |
| X-Coordinate | E3661956.8 | E3661455.2 | E3660957.9 | E3660460.3 | E3660062.1 |
| Y-Coordinate | N500987.2 | N501026.7 | N501065.7 | N501100.6 | N501129.9 |
| Elevation (ft) | 4.8 | 4.6 | 4.9 | 5.0 | 5.4 |
| a. Container / Lid Number | DT31 | DT24 | DT01 | DT20 | DT41 |
| b. Wet Soil + Tare Mass (g) | 396.83 | 395.82 | 390.95 | 391.53 | 392.40 |
| c. Dry Soil + Tare Mass (g) | 360.97 | 357.97 | 344.75 | 346.50 | 350.69 |
| d. Water Mass (g) | 35.86 | 37.85 | 46.20 | 45.03 | 41.71 |
| e.Tare Mass (g) | 210.99 | 206.44 | 171.91 | 213.14 | 178.06 |
| f. Dry Soil Mass (g) | 149.98 | 151.53 | 172.84 | 133.36 | 172.63 |
| Moisture Content (%) | 23.91 | 24.98 | 26.73 | 33.77 | 24.16 |
| Optimum Moisture Content (%) | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 |
| Difference from Opt. Moisture | -2.49 | -1.42 | 0.33 | 7.37 | -2.24 |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | | **Report Number** | 2690 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | **Date** | 8/6/2010 | |
| Source of Material | WILLOW BEND PIT | Feature | Embankment | Visual Description (ASTM D 2488) | G-BR CLAY |
| Date / Time In Oven | 8-6 / 4:30 P.M. | Date / Time Out of Oven | 8-7 / 7:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 9 | 10 | 11 | 12 | 13 |
| Retest Of Test ID | | | | | |
| Station | 168+84.1 | 161+04.7 | 180+73.1 | 175+05 | 169+76.5 |
| Offset | 13.8 | 27.9 | -86.9 | -80.5 | -83.3 |
| Lift Number | 1 | 1 | 1 | 1 | 1 |
| X-Coordinate | E3664828.2 | E3664049.5 | E3666027.6 | E3665454.74 | E3664926.3 |
| Y-Coordinate | N500701.0 | N500738.9 | N5000668.1 | N500753.87 | N500786.6 |
| Elevation (ft) | 5.9 | 4.9 | 5.1 | 4.8 | 4.9 |
| | | | | | |
| a. Container / Lid Number | DT08 | DT48 | DT49 | DT50 | DT02 |
| b. Wet Soil + Tare Mass (g) | 390.64 | 398.91 | 397.52 | 392.98 | 390.07 |
| c. Dry Soil + Tare Mass (g) | 344.69 | 357.03 | 351.35 | 351.61 | 347.74 |
| d. Water Mass (g) | 45.95 | 41.88 | 46.17 | 41.37 | 42.33 |
| e.Tare Mass (g) | 187.50 | 183.52 | 176.43 | 180.81 | 178.99 |
| f. Dry Soil Mass (g) | 157.19 | 173.51 | 174.92 | 170.80 | 168.75 |
| Moisture Content (%) | 29.23 | 24.14 | 26.39 | 24.22 | 25.08 |
| Optimum Moisture Content (%) | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 |
| Difference from Opt. Moisture | 2.83 | -2.26 | -0.01 | -2.18 | -1.32 |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 14 | 15 | 16 | 17 | 18 |
| Retest Of Test ID | | | | | |
| Station | 164+82.8 | 159+93.8 | 154+92.5 | 149+86 | 145+01 |
| Offset | -83.3 | -77.3 | -77.5 | -76.4 | -78.7 |
| Lift Number | 1 | 1 | 1 | 1 | 1 |
| X-Coordinate | E3664434.4 | E3663945.9 | E3663445.7 | E3662940.3 | E3662457.1 |
| Y-Coordinate | N500824.7 | N500851.3 | N500884.8 | N500917.4 | N500952.1 |
| Elevation (ft) | 5.0 | 4.9 | 4.8 | 4.9 | 4.9 |
| | | | | | |
| a. Container / Lid Number | DT27 | DT25 | DT30 | DT11 | DT04 |
| b. Wet Soil + Tare Mass (g) | 400.36 | 391.78 | 397.10 | 395.76 | 393.61 |
| c. Dry Soil + Tare Mass (g) | 367.14 | 356.48 | 352.79 | 354.06 | 360.61 |
| d. Water Mass (g) | 33.22 | 35.30 | 44.31 | 41.70 | 33.00 |
| e.Tare Mass (g) | 209.68 | 205.68 | 203.33 | 181.04 | 233.43 |
| f. Dry Soil Mass (g) | 157.46 | 150.80 | 149.46 | 173.02 | 127.18 |
| Moisture Content (%) | 21.10 | 23.41 | 29.65 | 24.10 | 25.95 |
| Optimum Moisture Content (%) | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 |
| Difference from Opt. Moisture | -5.30 | -2.99 | 3.25 | -2.30 | -0.45 |

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | TOLUNAY-WONG ENGINEERS | | **Report Number** | 2762 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 PHASE 2, FIRST LIFT | | **Date** | 8/20/2010 | |
| Source of Material | Material of Existing Levy | Feature | Embankment | Visual Description (ASTM D 2488) | BR. CLAY |
| Date / Time In Oven | 8/20/2010 - 4:00 P.M. | Date / Time Out of Oven | 8/23/2010 - 11:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |
| | | | | | |
| Test ID | 24 | | | | |
| Retest Of Test ID | | | | | |
| Station | 120+50 | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| | | | | | |
| a. Container / Lid Number | DT-02 | | | | |
| b. Wet Soil + Tare Mass (g) | 396.56 | | | | |
| c. Dry Soil + Tare Mass (g) | 340.23 | | | | |
| d. Water Mass (g) | 56.33 | | | | |
| e.Tare Mass (g) | 178.91 | | | | |
| f. Dry Soil Mass (g) | 161.32 | | | | |
| Moisture Content (%) | 34.92 | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |
| | | | | | |
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |
| | | | | | |
| Remarks: | | | | | |

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | | **Report Number** | 2854 | |
| **USACE Contract Number** | W912P8-09-D-0046-0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | **Date** | 9/8/2010 | |
| Source of Material | WILLOW BEND PIT | Feature | Embankment | Visual Description (ASTM D 2488) | G-BR CLAY |
| Date / Time In Oven | 9/8/2010 - 5:00 P.M. | Date / Time Out of Oven | 9/9/2010 - 7:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 36 | 37 | 38 | 39 | 40 |
| Retest Of Test ID | | | | | |
| Station | 110+96 | 119+36 | 121+99 | 163+28 | WILLOW BEND PHASE 2 |
| Offset | F.S. +15' | F.S. + 12' | F.S. +5.0 | F.S. +21' | As received proctor |
| Lift Number | 2 | 4 | 1 | 1 | |
| X-Coordinate | E3659567.7 | E3659892.3 | E3660153.5 | E3664273.9 | |
| Y-Coordinate | N501705.9 | N501050.6 | N501016.0 | N500731.4 | |
| Elevation (ft) | 5.6 | 6.8 | 5.0 | 5.6 | |
| a. Container / Lid Number | DT44 | DT27 | DT20 | DT04 | DT08 |
| b. Wet Soil + Tare Mass (g) | 399.01 | 394.93 | 393.97 | 393.88 | 390.82 |
| c. Dry Soil + Tare Mass (g) | 352.34 | 360.04 | 353.61 | 358.31 | 343.89 |
| d. Water Mass (g) | 46.67 | 34.89 | 40.36 | 35.57 | 46.93 |
| e.Tare Mass (g) | 176.04 | 209.56 | 212.67 | 233.46 | 187.50 |
| f. Dry Soil Mass (g) | 176.30 | 150.48 | 140.94 | 124.85 | 156.39 |
| Moisture Content (%) | 26.47 | 23.19 | 28.64 | 28.49 | 30.01 |
| Optimum Moisture Content (%) | 26.4 | 26.4 | 26.4 | 23.1 | |
| Difference from Opt. Moisture | 0.07 | -3.21 | 2.24 | 5.39 | information only |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | | **Report Number** | 2928 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | **Date** | 9/14/2010 | |
| Source of Material | WILLOW BEND PIT | Feature | Embankment | Visual Description (ASTM D 2488) | G-BR CLAY |
| Date / Time In Oven | 9/14/2010 - 5:30 P.M. | Date / Time Out of Oven | 9/15/2010 - 7:00 A.M. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 47 | 48 | 49 | | |
| Retest Of Test ID | 33 | 37 | | | |
| Station | 139+03 | 119+36 | 110+68 | | |
| Offset | F.S. +22' | F.S. +12' | F.S. +1' | | |
| Lift Number | 1 | 4 | 3 | | |
| X-Coordinate | E3661854.2 | E3659892.3 | E3659587.8 | | |
| Y-Coordinate | N500893.4 | N501050.6 | N501730.1 | | |
| Elevation (ft) | 4.8 | 6.8 | 6.9 | | |
| | | | | | |
| a. Container / Lid Number | DT25 | DT41 | DT30 | | |
| b. Wet Soil + Tare Mass (g) | 395.10 | 392.88 | 398.17 | | |
| c. Dry Soil + Tare Mass (g) | 359.32 | 350.48 | 360.91 | | |
| d. Water Mass (g) | 35.78 | 42.40 | 37.26 | | |
| e.Tare Mass (g) | 205.67 | 177.96 | 203.36 | | |
| f. Dry Soil Mass (g) | 153.65 | 172.52 | 157.55 | | |
| Moisture Content (%) | 23.29 | 24.58 | 23.65 | | |
| Optimum Moisture Content (%) | 23.1 | 26.4 | 23.9 | | |
| Difference from Opt. Moisture | 0.19 | -1.82 | -0.25 | | |
| | | | | | |
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |
| | | | | | |
| Remarks: | | | | | |

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | | **Report Number** | 2942 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | **Date** | 9/17/2010 | |
| Source of Material | WILLOW BEND PIT | Feature | Embankment | Visual Description (ASTM D 2488) | G-BR CLAY |
| Date / Time In Oven | 9/17/2010 - 7:00 P.M. | Date / Time Out of Oven | 9/18/2010 - 7:00 a.m. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 58 | 59 | 60 | 61 | 62 |
| Retest Of Test ID | | 56 | | 54 | |
| Station | 110+81 | 175+01 | 170+03 | 119+13 | 119+59 |
| Offset | C/L -3.2 | F.S. +25.4' | F.S. +28.6' | C/L +2.5' | P.S. -8.2' |
| Lift Number | 5 | 2 | 2 | 6 | 7 |
| X-Coordinate | E3659588.6 | E3665443.3 | E3664945.9 | E3659870.9 | E3659917.5 |
| Y-Coordinate | N501716.1 | N500648.2 | N500678.4 | N501061.8 | N501069.3 |
| Elevation (ft) | 8.2 | 5.7 | 5.8 | 8.3 | 10.9 |
| | | | | | |
| a. Container / Lid Number | DT45 | DT04 | DT21 | DT20 | DT14 |
| b. Wet Soil + Tare Mass (g) | 387.91 | 389.64 | 398.93 | 389.35 | 397.36 |
| c. Dry Soil + Tare Mass (g) | 347.15 | 354.71 | 357.84 | 355.46 | 364.10 |
| d. Water Mass (g) | 40.76 | 34.93 | 41.09 | 33.89 | 33.26 |
| e.Tare Mass (g) | 177.18 | 233.43 | 211.58 | 212.65 | 245.06 |
| f. Dry Soil Mass (g) | 169.97 | 121.28 | 146.26 | 142.81 | 119.04 |
| Moisture Content (%) | 23.98 | 28.80 | 28.09 | 23.73 | 27.94 |
| Optimum Moisture Content (%) | 23.9 | 23.9 | 23.9 | 23.9 | 23.9 |
| Difference from Opt. Moisture | 0.08 | 4.90 | 4.19 | -0.17 | 4.04 |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |

| | |
|---|---|
| Remarks: | |

TOLUNAY-WONG ENGINEERS, INC.

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | | **Report Number** | 2968 | |
| **USACE Contract Number** | W912P8-09-D-0046 0008 | | **Contractor** | Phylway, Inc. | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | **Date** | 9/18/2010 | |
| Source of Material | WILLOW BEND PIT | Feature | Embankment | Visual Description (ASTM D 2488) | G-BR CLAY |
| Date / Time In Oven | 9/18/2010 - 3:00 P.M. | Date / Time Out of Oven | 9/19/2010 - 7:00 a.m. | Oven Used | 21-350-ER |
| Tested By | B. LANDERS | Checked By | G. LECOQ | Submitted By | G. LECOQ |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | 63 | 64 | 65 | | |
| Retest Of Test ID | | | | | |
| Station | 110+75 | 119+26 | 119+84 | | |
| Offset | F.S. + 8.4 | C/L +2.9 | P.S. -126 | | |
| Lift Number | 6 | 8 | 1 | | |
| X-Coordinate | E3659578.8 | E3659883.4 | E3659951.9 | | |
| Y-Coordinate | N501724.5 | N501060.6 | N501184.8 | | |
| Elevation (ft) | 9.2 | 12.2 | 2.6 | | |
| a. Container / Lid Number | DT43 | DT47 | DT48 | | |
| b. Wet Soil + Tare Mass (g) | 398.46 | 391.23 | 383.62 | | |
| c. Dry Soil + Tare Mass (g) | 357.93 | 349.17 | 339.66 | | |
| d. Water Mass (g) | 40.53 | 42.06 | 43.96 | | |
| e.Tare Mass (g) | 179.89 | 178.15 | 183.50 | | |
| f. Dry Soil Mass (g) | 178.04 | 171.02 | 156.16 | | |
| Moisture Content (%) | 22.76 | 24.59 | 28.15 | | |
| Optimum Moisture Content (%) | 23.9 | 23.9 | 23.9 | | |
| Difference from Opt. Moisture | -1.14 | 0.69 | 4.25 | | |

| | | | | | |
|---|---|---|---|---|---|
| Test ID | | | | | |
| Retest Of Test ID | | | | | |
| Station | | | | | |
| Offset | | | | | |
| Lift Number | | | | | |
| X-Coordinate | | | | | |
| Y-Coordinate | | | | | |
| Elevation (ft) | | | | | |
| a. Container / Lid Number | | | | | |
| b. Wet Soil + Tare Mass (g) | | | | | |
| c. Dry Soil + Tare Mass (g) | | | | | |
| d. Water Mass (g) | | | | | |
| e.Tare Mass (g) | | | | | |
| f. Dry Soil Mass (g) | | | | | |
| Moisture Content (%) | | | | | |
| Optimum Moisture Content (%) | | | | | |
| Difference from Opt. Moisture | | | | | |

Remarks:

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3034 |
| **USACE Contract No** | W912P8-09-D-0046 0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 9/29/2010 |
| **Oven Start Time (Date Time)** | 9/29/2010 - 6:00 P.M. | **Oven Stop Time (Date Time)** | 9/30/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 92 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | | | | | |
| **Station** | 99+25 | | | | |
| **Offset** | Proctor | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT51 | | | | |
| **Tare Mass (g)** | 140.19 | | | | |
| **Wet Soil + Tare Mass (g)** | 316.41 | | | | |
| **Dry Soil + Tare Mass (g)** | 279.34 | | | | |
| **Moisture Content (%)** | **26.6** | | | | |
| **Test Result** | **Info Only** | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 4506 |
| **USACE Contract No** | W912P8-09-D-0046-0007 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-15a.2 Phase 2, First Lift | | | **Sample Date** | 4/28/2011 |
| **Oven Start Time (Date Time)** | 4/28/2011 - 2:00 P.M. | **Oven Stop Time (Date Time)** | 4/29/2011 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | RODNEY FISHER | **Reviewed By** | B. LANDERS | **Submitted By** | B. LANDERS |
| **Test No** | 1013 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | G. BR. CLAY | | | | |
| **Station** | 474+24 | | | | |
| **Offset** | P.S. -119.7 | | | | |
| **Lift No** | 5 | | | | |
| **Latitude (°N)** | 29.870302 | | | | |
| **Longitude (°W)** | 90.176477 | | | | |
| **Elevation (ft)** | -1.4 | | | | |
| **Tare No** | DT46 | | | | |
| **Tare Mass (g)** | 177.88 | | | | |
| **Wet Soil + Tare Mass (g)** | 385.94 | | | | |
| **Dry Soil + Tare Mass (g)** | 336.30 | | | | |
| **Moisture Content (%)** | **31.3** | | | | |
| **Test Result** | **Info Only** | | | | |
| | | | | | |
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | Sample collected On-Site Willow Bend | | | | |
| **Version** | **MVNQS04-101028** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3115 |
| **USACE Contract No** | W912P8-09-D-0046 0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/6/2010 |
| **Oven Start Time (Date Time)** | 10/6/2010 - 6:00 P.M. | **Oven Stop Time (Date Time)** | 10/7/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 115 | 116 | 117 | 118 | 119 |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | Borrow Pit | Borrow Pit | Borrow Pit |
| **Feature** | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment |
| **Visual Description** | GR. BR. CL. | GR. BR. CL. GR. BR. CL. | GR. BR. CL. | GR. BR. CL. | GR. BR. CL. |
| **Station** | 106+00 | 170+00 | 172+00 | 176+00 | 108+00 |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT14 | DT31 | DT44 | DT41 | DT01 |
| **Tare Mass (g)** | 245.01 | 210.95 | 175.98 | 177.93 | 171.83 |
| **Wet Soil + Tare Mass (g)** | 395.46 | 396.36 | 395.60 | 392.62 | 396.42 |
| **Dry Soil + Tare Mass (g)** | 361.10 | 348.22 | 348.92 | 341.36 | 339.89 |
| **Moisture Content (%)** | **29.6** | **35.1** | **27.0** | **31.4** | **33.6** |
| **Test Result** | **Info Only** | **Info Only** | **Info Only** | **Info Only** | **Info Only** |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 120 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | GR. BR. CL. | | | | |
| **Station** | 171+00 | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT21 | | | | |
| **Tare Mass (g)** | 211.56 | | | | |
| **Wet Soil + Tare Mass (g)** | 391.29 | | | | |
| **Dry Soil + Tare Mass (g)** | 347.31 | | | | |
| **Moisture Content (%)** | **32.4** | | | | |
| **Test Result** | **Info Only** | | | | |
| **Remarks** | | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3140 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/8/2010 |
| **Oven Start Time (Date Time)** | 10/8/2010 - 6:00 P.M. | **Oven Stop Time (Date Time)** | 10/9/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 123 | 124 | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | | | |
| **Feature** | Levee Embankment | Levee Embankment | | | |
| **Visual Description** | G. CL. | G. SA. CL. | | | |
| **Station** | 105+00 | 167+00 | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT27 | DT49 | | | |
| **Tare Mass (g)** | 209.56 | 176.35 | | | |
| **Wet Soil + Tare Mass (g)** | 398.72 | 393.36 | | | |
| **Dry Soil + Tare Mass (g)** | 355.61 | 345.17 | | | |
| **Moisture Content (%)** | **29.5** | **28.5** | | | |
| **Test Result** | **Info Only** | **Info Only** | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | UNCOMPACTED FILL TEST | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3183 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/14/2010 |
| **Oven Start Time (Date Time)** | 10/14/2010 - 5:00 P.M. | **Oven Stop Time (Date Time)** | 10/15/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 139 | 140 | 141 | 142 | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | Borrow Pit | Borrow Pit | |
| **Feature** | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment | |
| **Visual Description** | G. BR. CL | G. BR. CL. | G. BR. CL | G. BR. CL | |
| **Station** | 100+50 | 101+50 | 157+00 | 159+00 | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT48 | DT45 | DT24 | DT30 | |
| **Tare Mass (g)** | 183.46 | 177.19 | 206.41 | 203.31 | |
| **Wet Soil + Tare Mass (g)** | 394.99 | 396.49 | 399.31 | 392.51 | |
| **Dry Soil + Tare Mass (g)** | 340.70 | 350.40 | 353.20 | 349.20 | |
| **Moisture Content (%)** | **34.5** | **26.6** | **31.4** | **29.7** | |
| **Test Result** | **Info Only** | **Info Only** | **Info Only** | **Info Only** | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | UNCOMPACTED FILL TEST | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3194 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/15/2010 |
| **Oven Start Time (Date Time)** | 10/15/2010 - 4:00 P.M. | **Oven Stop Time (Date Time)** | 10/16/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 143 | 144 | 145 | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | Borrow Pit | | |
| **Feature** | Levee Embankment | Levee Embankment | Levee Embankment | | |
| **Visual Description** | G. BR. CL. | G. BR. CL. | G. BR. CL. | | |
| **Station** | 103+00 | 152+00 | 155+00 | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT48 | DT45 | DT24 | | |
| **Tare Mass (g)** | 183.46 | 177.20 | 206.38 | | |
| **Wet Soil + Tare Mass (g)** | 391.14 | 390.10 | 399.43 | | |
| **Dry Soil + Tare Mass (g)** | 346.38 | 339.03 | 358.25 | | |
| **Moisture Content (%)** | **27.5** | **31.6** | **27.1** | | |
| **Test Result** | **Info Only** | **Info Only** | **Info Only** | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | UNCOMPACTED FILL TEST | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3200 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/16/2010 |
| **Oven Start Time (Date Time)** | 10/16/2010 - 3:00 P.M. | **Oven Stop Time (Date Time)** | 10/17/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 151 | 152 | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | | | |
| **Feature** | Levee Embankment | Levee Embankment | | | |
| **Visual Description** | | | | | |
| **Station** | 98+00 | 150+00 | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT04 | DT08 | | | |
| **Tare Mass (g)** | 233.41 | 187.42 | | | |
| **Wet Soil + Tare Mass (g)** | 392.45 | 392.83 | | | |
| **Dry Soil + Tare Mass (g)** | 356.04 | 346.64 | | | |
| **Moisture Content (%)** | **29.7** | **29.0** | | | |
| **Test Result** | **Info Only** | **Info Only** | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | UNCOMPACTED FILL TEST | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3202 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/17/2010 |
| **Oven Start Time (Date Time)** | 10/17/2010 -5:00 P.M. | **Oven Stop Time (Date Time)** | 10/18/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 155 | 156 | 157 | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | Borrow Pit | | |
| **Feature** | Levee Embankment | Levee Embankment | Levee Embankment | | |
| **Visual Description** | G. BR. CL. | G. BR. CL. | G. BR. CL. | | |
| **Station** | 148+50 | 146+00 | 95+00 | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT14 | DT40 | DT42 | | |
| **Tare Mass (g)** | 245.10 | 176.27 | 178.23 | | |
| **Wet Soil + Tare Mass (g)** | 392.58 | 352.53 | 394.76 | | |
| **Dry Soil + Tare Mass (g)** | 358.40 | 314.02 | 341.89 | | |
| **Moisture Content (%)** | **30.2** | **28.0** | **32.3** | | |
| **Test Result** | **Info Only** | **Info Only** | **Info Only** | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |

| | | |
|---|---|---|
| **Remarks** | UNCOMPACTED FILL TEST | |
| **Version** | **MVNQS04-100625** | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3218 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/19/2010 |
| **Oven Start Time (Date Time)** | 10/19/2010 -5:00 P.M. | **Oven Stop Time (Date Time)** | 10/20/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 162 | 163 | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | | | |
| **Feature** | Levee Embankment | Levee Embankment | | | |
| **Visual Description** | G. BR. CL. | G. BR. CL. | | | |
| **Station** | 87+00 | 144+00 | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT44 | DT47 | | | |
| **Tare Mass (g)** | 176.01 | 178.11 | | | |
| **Wet Soil + Tare Mass (g)** | 392.97 | 395.74 | | | |
| **Dry Soil + Tare Mass (g)** | 328.57 | 334.09 | | | |
| **Moisture Content (%)** | **42.2** | **39.5** | | | |
| **Test Result** | **Info Only** | **Info Only** | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | UNCOMPACTED FILL TEST | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3236 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/21/2010 |
| **Oven Start Time (Date Time)** | 10/21/2010 -5:00 P.M. | **Oven Stop Time (Date Time)** | 10/22/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 167 | 168 | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | | | |
| **Feature** | Levee Embankment | Levee Embankment | | | |
| **Visual Description** | G. BR. CL. | G. BR. CL. | | | |
| **Station** | 87+00 | 88+00 | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT21 | DT14 | | | |
| **Tare Mass (g)** | 211.57 | 245.05 | | | |
| **Wet Soil + Tare Mass (g)** | 392.21 | 397.73 | | | |
| **Dry Soil + Tare Mass (g)** | 342.71 | 366.29 | | | |
| **Moisture Content (%)** | **37.7** | **25.9** | | | |
| **Test Result** | **Info Only** | **Info Only** | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | UNCOMPACTED FILL TEST | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3266 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/26/2010 |
| **Oven Start Time (Date Time)** | 10/26/2010 -5:30 P.M. | **Oven Stop Time (Date Time)** | 10/27/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 176 | 177 | 178 | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | Jobsite | | |
| **Feature** | Levee Embankment | Levee Embankment | Levee Embankment | | |
| **Visual Description** | G. BR. CL. | G. BR. CL. | G. BR. CL. | | |
| **Station** | 75+00 | 78+00 | 82+00 | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT04 | DT08 | DT30 | | |
| **Tare Mass (g)** | 233.43 | 187.44 | 203.33 | | |
| **Wet Soil + Tare Mass (g)** | 400.20 | 392.53 | 392.20 | | |
| **Dry Soil + Tare Mass (g)** | 355.86 | 348.06 | 346.58 | | |
| **Moisture Content (%)** | **36.2** | **27.7** | **31.8** | | |
| **Test Result** | **Info Only** | **Info Only** | **Info Only** | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | UNCOMPACTED FILL TEST | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3291 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/29/2010 |
| **Oven Start Time (Date Time)** | 10/29/2010 -3:00 P.M. | **Oven Stop Time (Date Time)** | 10/30/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 184 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | G. BR. CL. | | | | |
| **Station** | 169+80 | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT54 | | | | |
| **Tare Mass (g)** | 140.20 | | | | |
| **Wet Soil + Tare Mass (g)** | 445.30 | | | | |
| **Dry Soil + Tare Mass (g)** | 391.43 | | | | |
| **Moisture Content (%)** | **21.4** | | | | |
| **Test Result** | **Info Only** | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | PROTOR PULLED FROM ON-SITE MATERIAL | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3297 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 10/30/2010 |
| **Oven Start Time (Date Time)** | 10/30/2010 -5:30 P.M. | **Oven Stop Time (Date Time)** | 10/31/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 197 | 198 | 199 | 200 | 201 |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | Borrow Pit | Borrow Pit | Borrow Pit |
| **Feature** | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment |
| **Visual Description** | G. BR. CL. | G. BR. CL. | G. BR. CL. | G. BR. CL. | G. BR. CL. |
| **Station** | 59+00 | 61+00 | 66+00 | 70+00 | 73+00 |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT02 | DT46 | DT24 | DT43 | DT50 |
| **Tare Mass (g)** | 178.90 | 177.85 | 206.42 | 179.89 | 180.68 |
| **Wet Soil + Tare Mass (g)** | 394.76 | 391.38 | 392.05 | 393.25 | 398.07 |
| **Dry Soil + Tare Mass (g)** | 340.53 | 343.31 | 344.20 | 343.80 | 340.26 |
| **Moisture Content (%)** | **33.6** | **29.1** | **34.7** | **30.2** | **36.2** |
| **Test Result** | **Info Only** | **Info Only** | **Info Only** | **Info Only** | **Info Only** |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 202 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | G. BR. CL. | | | | |
| **Station** | 88+00 | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT42 | | | | |
| **Tare Mass (g)** | 178.13 | | | | |
| **Wet Soil + Tare Mass (g)** | 395.62 | | | | |
| **Dry Soil + Tare Mass (g)** | 335.39 | | | | |
| **Moisture Content (%)** | **38.3** | | | | |
| **Test Result** | **Info Only** | | | | |
| **Remarks** | UNCOMPACTED FILL TEST | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3301 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 11/1/2010 |
| **Oven Start Time (Date Time)** | 11/1/2010 -5:00 P.M. | **Oven Stop Time (Date Time)** | 11/2/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 211 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | G. BR. CL. | | | | |
| **Station** | 58+00 | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT40 | | | | |
| **Tare Mass (g)** | 176.22 | | | | |
| **Wet Soil + Tare Mass (g)** | 391.25 | | | | |
| **Dry Soil + Tare Mass (g)** | 343.45 | | | | |
| **Moisture Content (%)** | **28.6** | | | | |
| **Test Result** | **Info Only** | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | UNCOMPACTED FILL | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3371 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14C.2 Phase 2, First Lift | | | **Sample Date** | 11/10/2010 |
| **Oven Start Time (Date Time)** | 11/10/2010 -5:00 P.M. | **Oven Stop Time (Date Time)** | 11/11/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | R. Fisher | **Reviewed By** | B. Landers | **Submitted By** | B. Landers |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 235 | 236 | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | | | |
| **Feature** | Levee Embankment | Levee Embankment | | | |
| **Visual Description** | G. BR. CL. | G. BR. CL. | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT02 | DT27 | | | |
| **Tare Mass (g)** | 178.85 | 209.47 | | | |
| **Wet Soil + Tare Mass (g)** | 393.05 | 396.72 | | | |
| **Dry Soil + Tare Mass (g)** | 348.53 | 339.48 | | | |
| **Moisture Content (%)** | **26.2** | **44.0** | | | |
| **Test Result** | **Info Only** | **Info Only** | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | TEST SAMPLED FROM STOCKPILE IN RIVER BURCH PIT UNCOMPACTED FILL | | | | |
| **Version** | **MVNQS04-100625** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3510 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | | **Sample Date** | 12/8/2010 |
| **Oven Start Time (Date Time)** | 12/8/2010 - 4:00 P.M. | **Oven Stop Time (Date Time)** | 12/9/2010 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | RODNEY FISHER | **Reviewed By** | B. LANDERS | **Submitted By** | B. LANDERS |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 330 | 331 | 332 | 333 | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | Borrow Pit | Borrow Pit | Borrow Pit | |
| **Feature** | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment | |
| **Visual Description** | G. BR. CLAY | G. BR. CLAY | G. BR. CLAY | G. BR. CLAY | |
| **Station** | 54+50 | 53+00 | 56+00 | 51+50 | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT53 | DT01 | DT24 | DT45 | |
| **Tare Mass (g)** | 141.00 | 171.81 | 206.36 | 177.14 | |
| **Wet Soil + Tare Mass (g)** | 398.24 | 397.88 | 395.64 | 391.20 | |
| **Dry Soil + Tare Mass (g)** | 345.73 | 343.44 | 358.39 | 341.37 | |
| **Moisture Content (%)** | **25.6** | **31.7** | **24.5** | **30.3** | |
| **Test Result** | **Info Only** | **Info Only** | **Info Only** | **Info Only** | |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | UNCOMPACTED FILL | | | | |
| **Version** | **MVNQS04-101028** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3824 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | | **Sample Date** | 1/22/2011 |
| **Oven Start Time (Date Time)** | 1/22/2011 - 4:00 P.M. | **Oven Stop Time (Date Time)** | 1/23/2011 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | RODNEY FISHER | **Reviewed By** | B. LANDERS | **Submitted By** | B. LANDERS |
| **Test No** | 389 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | G. BR. CLAY | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT40 | | | | |
| **Tare Mass (g)** | 176.20 | | | | |
| **Wet Soil + Tare Mass (g)** | 400.61 | | | | |
| **Dry Soil + Tare Mass (g)** | 324.88 | | | | |
| **Moisture Content (%)** | **50.9** | | | | |
| **Test Result** | **Info Only** | | | | |
| | | | | | |
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | Sample collected from River Burch Pit. Center of Stock Pile A. | | | | |
| **Version** | **MVNQS04-101028** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3857A |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | | **Sample Date** | 1/27/2011 |
| **Oven Start Time (Date Time)** | 1/27/2011 - 5:00 P.M. | **Oven Stop Time (Date Time)** | 1/28/2011 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | RODNEY FISHER | **Reviewed By** | B. LANDERS | **Submitted By** | B. LANDERS |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 390 | 391 | 392 | 393 | 394 |
| **Retest of Test ID** | | | | | |
| **Material Source** | Jobsite | Jobsite | Jobsite | Jobsite | Jobsite |
| **Feature** | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment |
| **Visual Description** | Br. Cl. | Br. Cl. | Br. Cl. | Br. Cl. | Br. Cl. |
| **Station** | 180+00 | 175+00 | 170+00 | 165+00 | 159+99 |
| **Offset** | P.S. -46 | P.S. -34.5 | P.S. -32.4 | P.S. -33.4 | P.S. -34.5 |
| **Lift No** | | | | | |
| **Latitude (°N)** | 29.871061 | 29.871249 | 29.871350 | 29.871459 | 29.871568 |
| **Longitude (°W)** | 90.118211 | 90.119791 | 90.121363 | 90.122940 | 90.124515 |
| **Elevation (ft)** | 5.9 | 6.3 | 6.9 | 6.1 | 6.2 |
| **Tare No** | DT27 | DT42 | DT44 | DT25 | DT01 |
| **Tare Mass (g)** | 209.52 | 178.18 | 175.98 | 205.66 | 171.85 |
| **Wet Soil + Tare Mass (g)** | 395.95 | 392.98 | 391.71 | 398.54 | 393.82 |
| **Dry Soil + Tare Mass (g)** | 352.59 | 340.15 | 343.70 | 361.11 | 344.82 |
| **Moisture Content (%)** | **30.3** | **32.6** | **28.6** | **24.1** | **28.3** |
| **Test Result** | **Info Only** | **Info Only** | **Info Only** | **Info Only** | **Info Only** |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 395 | 396 | 397 | 398 | 399 |
| **Retest of Test ID** | | | | | |
| **Material Source** | Jobsite | Jobsite | Jobsite | Jobsite | Jobsite |
| **Feature** | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment |
| **Visual Description** | Br. Cl. | Br. Cl. | Br. Cl. | Br. Cl. | Br. Cl. |
| **Station** | 154+98 | 144+98 | 134+99 | 125+01 | 130+00 |
| **Offset** | P.S. -34.9 | P.S. -35.4 | P.S. -33.2 | P.S. -35.3 | P.S. -32.9 |
| **Lift No** | | | | | |
| **Latitude (°N)** | 29.871676 | 29.871889 | 29.872110 | 29.872349 | 29.872227 |
| **Longitude (°W)** | 90.126089 | 90.129234 | 90.132376 | 90.135512 | 90.133945 |
| **Elevation (ft)** | 6.1 | 6.1 | 6.4 | 6.1 | 6.3 |
| **Tare No** | DT24 | DT53 | DT51 | DT54 | DT55 |
| **Tare Mass (g)** | 206.42 | 141.05 | 140.11 | 139.95 | 141.64 |
| **Wet Soil + Tare Mass (g)** | 397.14 | 396.88 | 393.41 | 397.38 | 396.35 |
| **Dry Soil + Tare Mass (g)** | 354.73 | 347.73 | 324.27 | 349.15 | 317.51 |
| **Moisture Content (%)** | **28.6** | **23.8** | **37.5** | **23.1** | **44.8** |
| **Test Result** | **Info Only** | **Info Only** | **Info Only** | **Info Only** | **Info Only** |

| | | |
|---|---|---|
| **Remarks** | Samples collected from existing levee. | |
| **Version** | **MVNQS04-101028** | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

| | | | | | |
|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 3857B |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | | **Sample Date** | 1/27/2011 |
| **Oven Start Time (Date Time)** | 1/27/2011 - 5:00 P.M. | **Oven Stop Time (Date Time)** | 1/28/2011 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | RODNEY FISHER | **Reviewed By** | B. LANDERS | **Submitted By** | B. LANDERS |

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|---|---|---|---|---|---|
| **Test No** | 400 | 401 | 402 | 403 | 404 |
| **Retest of Test ID** | | | | | |
| **Material Source** | Jobsite | Jobsite | Jobsite | Jobsite | Jobsite |
| **Feature** | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment | Levee Embankment |
| **Visual Description** | Br. Cl. | Br. Cl. | Br. Cl. | Br. Cl. | Br. Cl. |
| **Station** | 105+00 | 100+00 | 195+00 | 90+00 | 85+00 |
| **Offset** | P.S. -35 | P.S. -44 | P.S. -47 | P.S. -49 | P.S. -48 |
| **Lift No** | | | | | |
| **Latitude (°N)** | 29.875716 | 29.887041 | 29.878358 | 29.879668 | 29.880993 |
| **Longitude (°W)** | 90.137687 | 90.137272 | 90.136829 | 90.136375 | 90.135924 |
| **Elevation (ft)** | 6.0 | 6.1 | 5.6 | 5.1 | 5.2 |
| **Tare No** | DT08 | DT49 | DT21 | DT11 | DT45 |
| **Tare Mass (g)** | 187.44 | 176.41 | 211.55 | 180.91 | 177.15 |
| **Wet Soil + Tare Mass (g)** | 395.37 | 390.88 | 393.08 | 393.56 | 391.99 |
| **Dry Soil + Tare Mass (g)** | 337.44 | 349.03 | 337.27 | 347.55 | 344.49 |
| **Moisture Content (%)** | **38.6** | **24.2** | **44.4** | **27.6** | **28.4** |
| **Test Result** | **Info Only** | **Info Only** | **Info Only** | **Info Only** | **Info Only** |

| | | | | | |
|---|---|---|---|---|---|
| **Test No** | 405 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Jobsite | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | Br. Cl. | | | | |
| **Station** | 65+00 | | | | |
| **Offset** | P.S. -55 | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | 29.885737 | | | | |
| **Longitude (°W)** | 90.135984 | | | | |
| **Elevation (ft)** | 5.3 | | | | |
| **Tare No** | DT20 | | | | |
| **Tare Mass (g)** | 212.63 | | | | |
| **Wet Soil + Tare Mass (g)** | 394.65 | | | | |
| **Dry Soil + Tare Mass (g)** | 359.76 | | | | |
| **Moisture Content (%)** | **23.7** | | | | |
| **Test Result** | **Info Only** | | | | |
| **Remarks** | Samples collected from existing levee. | | | | |
| **Version** | **MVNQS04-101028** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

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|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 4017 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | | **Sample Date** | 2/20/2011 |
| **Oven Start Time (Date Time)** | 2/20/2011 - 4:00 P.M. | **Oven Stop Time (Date Time)** | 2/21/2011 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | RODNEY FISHER | **Reviewed By** | B. LANDERS | **Submitted By** | B. LANDERS |
| **Test No** | 439 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | G. BR. CLAY | | | | |
| **Station** | 62+02 | | | | |
| **Offset** | C/L | | | | |
| **Lift No** | 7 | | | | |
| **Latitude (°N)** | 29.885712 | | | | |
| **Longitude (°W)** | 90.136334 | | | | |
| **Elevation (ft)** | 11.7 | | | | |
| **Tare No** | DT21 | | | | |
| **Tare Mass (g)** | 211.55 | | | | |
| **Wet Soil + Tare Mass (g)** | 396.86 | | | | |
| **Dry Soil + Tare Mass (g)** | 353.58 | | | | |
| **Moisture Content (%)** | **30.5** | | | | |
| **Test Result** | **Info Only** | | | | |
| | | | | | |
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | | | | | |
| **Version** | **MVNQS04-101028** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

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|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 4094 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | | **Sample Date** | 3/1/2011 |
| **Oven Start Time (Date Time)** | 3/1/2011 - 4:00 P.M. | **Oven Stop Time (Date Time)** | 3/3/2011 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | RODNEY FISHER | **Reviewed By** | B. LANDERS | **Submitted By** | B. LANDERS |
| **Test No** | 462 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | G. BR. CLAY | | | | |
| **Station** | 112+00 | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | DT25 | | | | |
| **Tare Mass (g)** | 205.68 | | | | |
| **Wet Soil + Tare Mass (g)** | 392.25 | | | | |
| **Dry Soil + Tare Mass (g)** | 310.69 | | | | |
| **Moisture Content (%)** | **77.7** | | | | |
| **Test Result** | **Info Only** | | | | |
| | | | | | |
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | UNCOMPACTED FILL | | | | |
| **Version** | **MVNQS04-101028** | | | | |

US Army Corps of Engineers

# Moisture Content Determination - ASTM D 2216 (Method B)

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|---|---|---|---|---|---|
| **Laboratory** | Tolunay-Wong Engineers, Inc. | **Lab Type** | QC | **Report No** | 4716 |
| **USACE Contract No** | W912P8-09-D-0046-0008 | **Contractor** | Phylway, Inc. | **Revision** | |
| **Project** | WBV-14c.2 Phase 2, First Lift | | | **Sample Date** | 5/24/2011 |
| **Oven Start Time (Date Time)** | 5/24/2011 - 5:00 P.M. | **Oven Stop Time (Date Time)** | 5/25/2011 - 7:00 A.M. | **Oven Used** | 21-350-ER |
| **Lab Tested By** | RODNEY FISHER | **Reviewed By** | B. LANDERS | **Submitted By** | B. LANDERS |
| **Test No** | 763 | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | Borrow Pit | | | | |
| **Feature** | Levee Embankment | | | | |
| **Visual Description** | Br. Cl. | | | | |
| **Station** | 8+75 | | | | |
| **Offset** | P.S. -26 | | | | |
| **Lift No** | 7 | | | | |
| **Latitude (°N)** | 29.888899 | | | | |
| **Longitude (°W)** | 90.153081 | | | | |
| **Elevation (ft)** | 10.6 | | | | |
| **Tare No** | DT14 | | | | |
| **Tare Mass (g)** | 245.12 | | | | |
| **Wet Soil + Tare Mass (g)** | 398.67 | | | | |
| **Dry Soil + Tare Mass (g)** | 362.71 | | | | |
| **Moisture Content (%)** | **30.6** | | | | |
| **Test Result** | **Info Only** | | | | |
| | | | | | |
| **Test No** | | | | | |
| **Retest of Test ID** | | | | | |
| **Material Source** | | | | | |
| **Feature** | | | | | |
| **Visual Description** | | | | | |
| **Station** | | | | | |
| **Offset** | | | | | |
| **Lift No** | | | | | |
| **Latitude (°N)** | | | | | |
| **Longitude (°W)** | | | | | |
| **Elevation (ft)** | | | | | |
| **Tare No** | | | | | |
| **Tare Mass (g)** | | | | | |
| **Wet Soil + Tare Mass (g)** | | | | | |
| **Dry Soil + Tare Mass (g)** | | | | | |
| **Moisture Content (%)** | | | | | |
| **Test Result** | | | | | |
| **Remarks** | PROCTOR | | | | |
| **Version** | **MVNQS04-101028** | | | | |