

DELTA TESTING & INSPECTION, INC.

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JUNE 15, 2007

DBR-00155

DESCRIPTION: TESTING OF GRAVELITE EXPANDED CLAY
COARSE & FINE AGGREGATE
FOR AND REPORTED TO: BIG RIVER
P. O. BOX 37
ERWINVILLE, LA 70729

Following are results of tests conducted on gravelite lightweight aggregate samples submitted to our Baton Rouge, La. facility for testing on 4-11-07.

UNIFORMITY OF GRADING

Samples consist of fine and coarse (CM) & (CS) aggregate to be tested for compliance with ASTM C-330 -03.

Coarse Aggregate (CM) ASTM C-330

| Sieve Size | Percent Passing | | | | | ASTM C-330 REQUIRED 3/8" to #8 |
|------------------|-----------------|------|------|------|------|-----------------------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| 1/2" | 100 | 100 | 100 | 100 | 100 | 100 |
| 3/8" | 89 | 91 | 90 | 88 | 90 | 80-100 |
| #4 | 13 | 14 | 16 | 15 | 14 | 5-40 |
| #8 | 3 | 2 | 4 | 3 | 2 | 0-20 |
| #16 | 1 | 1 | 2 | 1 | 2 | 0-10 |
| Fineness Modulus | 5.93 | 5.91 | 5.89 | 5.93 | 5.94 | |

Coarse Aggregate (CS) ASTM C-330

| Sieve Size | Percent Passing | | | | | ASTM C-330 REQUIRED 1/2" to #4 |
|------------------|-----------------|------|------|------|------|-----------------------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| 3/4" | 100 | 100 | 100 | 100 | 100 | 100 |
| 1/2" | 94 | 93 | 95 | 93 | 95 | 90-100 |
| 3/8" | 71 | 70 | 69 | 72 | 71 | 40-80 |
| #4 | 7 | 5 | 7 | 6 | 6 | 0-20 |
| #8 | 3 | 4 | 3 | 3 | 4 | 0-10 |
| Fineness Modulus | 6.22 | 6.20 | 6.18 | 6.19 | 6.21 | |

Fine Aggregate ASTM C-330 & ASTM C-331

Percent Passing

| Sieve Size | Percent Passing | | | | | ASTM C-330 REQUIRED |
|---------------------|-----------------|------|------|------|------|------------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| 3/8" | 100 | 100 | 100 | 100 | 100 | 100 |
| #4 | 99 | 99 | 99 | 99 | 99 | 85-100 |
| #8 | 80 | 81 | 82 | 83 | 82 | -- |
| #16 | 52 | 51 | 50 | 51 | 49 | 40-80 |
| #50 | 19 | 20 | 19 | 20 | 20 | 10-35 |
| #100 | 12 | 12 | 13 | 14 | 12 | 5-25 |
| Fineness Modulus | 3.10 | 3.08 | 3.11 | 3.06 | 3.09 | |

UNIT WEIGHT (DRY LOOSE)

| Sample No. | Coarse Aggregate PCF | | Fine Aggregate PCF |
|---------------|-------------------------|------|-----------------------|
| | CM | CS | |
| | 1 | 39.6 | |
| 2 | 39.0 | 37.0 | 49.3 |
| 3 | 38.9 | 37.2 | 49.1 |
| 4 | 39.3 | 36.6 | 48.2 |
| 5 | 38.8 | 37.1 | 48.0 |
| Average | 39.1 | 36.9 | 48.7 |

C-330 Max. 55.0

C-330 Max. 70.0

UNIT WEIGHT (SATURATED SURFACE DRY - LOOSE)*

| Sample No. | Coarse Aggregate PCF | | Fine Aggregate PCF |
|---------------|-------------------------|------|-----------------------|
| | CM | CS | |
| | 1 | 46.3 | |
| 2 | 45.9 | 44.8 | 67.2 |
| 3 | 46.1 | 45.0 | 66.8 |
| 4 | 46.2 | 44.2 | 67.3 |
| 5 | 45.8 | 44.4 | 67.9 |
| Average | 46.0 | 44.7 | 67.5 |

* Five (5) days of complete saturation prior to testing

PHYSICAL PROPERTIES

| | Coarse | Fine | Required |
|-----------------------------------|--------|------|----------|
| Staining Properties (Stain Index) | 00 | 00 | 60 Max |
| Clay Lumps | 0.01 | 0.01 | 2.0% Max |
| Loss of Ignition | 0.40 | 0.25 | 5.0% Max |

CONCRETE MIX DESIGN PROPERTIES

| | |
|-------------------------------------|-------------------------------|
| Cement (Type I) | 564#'s |
| Gravelite CM (Saturated) Sand Ratio | 18-14 |
| Water Reducer | Manufacturer's Recommendation |
| Air Entraining Agent | Manufacturer's Recommendation |
| Water, Gallons | 25.5 |
| Slump | 4.50" |
| Air Content | 5.10% |
| Plastic Weight, PCF | 111.8 |
| 7 Day Compressive Strength, PSI | 2671 |
| 28 Day Compressive Strength, PSI | 4349 |
| Air Dry Weight PCF | 109.4 |

Very truly yours

DELTA TESTING & INSPECTION, INC.

Michael P. McGowan
Vice President