May 11, 2015

Hi-Grade Materials
17671 Bear Valley Road
Hesperia, California 93345

Attention: Mr. Stefan Reder

Subject: Laboratory Test Results
Concrete Aggregate Conformance Testing
Hi-Grade Materials Littlerock Quarry (P.O. # LQ675120CG)
Littlerock, California

This report presents the results of laboratory tests performed on four (4) samples of concrete aggregate. The samples were delivered to Earth Systems’ Palmdale laboratory on April 16, 2014. Per your request the following tests were performed:

1) Sieve Analysis (ASTM C-136)
2) Specific Gravity (ASTM C-127)
3) Los Angeles Abrasion (ASTM C-131)
4) Sodium Sulfate Soundness (ASTM C-88)
5) Sand Equivalent (Caltest 217)
6) Durability Index (Caltest 229)
7) Clay Lumps and Friable Particles (ASTM C-142)
8) Lightweight Pieces in Aggregate (ASTM C-123)
9) Cleanliness Value (Caltest 227)
10) Organic Impurities (ASTM C-40)
11) Mortar Strength (Caltest 515)

The laboratory test results are attached. Earth Systems trust this report meets your current needs. If you have any questions please contact us.

Respectfully submitted,

Earth Systems
Southern California

Tim Thomsen
Laboratory Manager

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Summary of Laboratory Test Results
Hi-Grade Materials Littlerock Quarry
1 3/4" Concrete Aggregate (#2 Rock)
Received April 17, 2015

1) Sieve Analysis (ASTM C-136)

<table>
<thead>
<tr>
<th>Size</th>
<th>Percent Passing</th>
<th>ASTM C-33 Size No. 4</th>
<th>SSPWC No. 2 Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot;</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1 3/4&quot;</td>
<td>100</td>
<td>90-100</td>
<td>90-100</td>
</tr>
<tr>
<td>1&quot;</td>
<td>100</td>
<td>20-55</td>
<td>9-40</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>21</td>
<td>0-15</td>
<td>0-15</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>5</td>
<td>0-5</td>
<td>0-5</td>
</tr>
<tr>
<td>#200</td>
<td>0.2</td>
<td></td>
<td>0-2</td>
</tr>
</tbody>
</table>

2) Specific Gravity (ASTM C-127)

- Bulk SpG = 2.685
- Bulk SSD SpG = 2.704
- Apparent SpG = 2.737
- Absorption = 0.7%

2.58 Min.

3) Los Angeles Abrasion (ASTM C-131) - (Grading A)

<table>
<thead>
<tr>
<th>Revolutions</th>
<th>% Loss</th>
<th>15 Max.</th>
<th>52 Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>8.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>500</td>
<td>34.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4) Sodium Soundness (ASTM C-88)

Weighted Loss = 0.6
12.0% Max.

6) Durability Index (Caltest 229)

Durability Index = 85

7) Clay Lumps and Friable Particles (ASTM C-142)

Clay Lumps and Friable Particles = 0.1
3.0 Max.

8) Lightweight Pieces in Aggregate (ASTM C-123)

Coal and Lignite = 0.0
0.5 Max.

9) Cleanness Value (Caltest 227)

Cleanness Value = 94
75 Min.

EARTH SYSTEMS SOUTHERN CALIFORNIA
May 11, 2015

Summary of Laboratory Test Results
Hi-Grade Materials Little Rock Quarry
1" Concrete Aggregate (83 Rock)
Received April 17, 2015

1) Sieve Analysis (ASTM C-136)

<table>
<thead>
<tr>
<th>Size</th>
<th>Percent</th>
<th>ASTM C-33</th>
<th>SSPWC No. 3 Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/2&quot;</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1&quot;</td>
<td>99</td>
<td>90-100</td>
<td>90-100</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>73</td>
<td>40-85</td>
<td>55-85</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>26</td>
<td>10-40</td>
<td></td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>6</td>
<td>0-15</td>
<td>8-20</td>
</tr>
<tr>
<td>#4</td>
<td>2</td>
<td>0-5</td>
<td>0-5</td>
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<tr>
<td>#8</td>
<td>1</td>
<td></td>
<td>0-5</td>
</tr>
<tr>
<td>#200</td>
<td>0.2</td>
<td></td>
<td>0-2</td>
</tr>
</tbody>
</table>

2) Specific Gravity (ASTM C-127)

Bulk SpG = 2.657
Bulk SSD SpG = 2.684
Apparent SpG = 2.732
Absorption % = 1.1%

2.58 Min.

3) Los Angeles Abrasion (ASTM C-131) - (Grading B)

<table>
<thead>
<tr>
<th>Revolutions</th>
<th>% Loss</th>
<th>15 Max.</th>
<th>50 Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>8.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>500</td>
<td>36.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.0% Max.

4) Sodium Soundness (ASTM C-88)

Weighted Loss = 1.1

12.0% Max.

6) Durability Index (Caltest 229)

Durability Index = 85

7) Clay Lumps and Friable Particles (ASTM C-142)

Clay Lumps and Friable Particles = 0.1

3.0 Max.

8) Lightweight Pieces in Aggregate (ASTM C-123)

Coal and Lignite = 0.0

0.5 Max.

9) Cleanliness Value (Caltest 227)

Cleanliness Value = 97

75 Min.

EARTH SYSTEMS SOUTHERN CALIFORNIA
Summary of Laboratory Test Results
Hi-Grade Materials Little Rock Quarry
3/8" Concrete Aggregate (#4 Rock)
Received April 17, 2015

1) Sieve Analysis (ASTM C-136)

<table>
<thead>
<tr>
<th>Size</th>
<th>Percent Passing</th>
<th>ASTM C-33 Size No. 8</th>
<th>SSPWC No. 4 Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot;</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>95</td>
<td>85-100</td>
<td>85-100</td>
</tr>
<tr>
<td>#4</td>
<td>12</td>
<td>10-30</td>
<td>0-30</td>
</tr>
<tr>
<td>#8</td>
<td>1</td>
<td>0-10</td>
<td>0-10</td>
</tr>
<tr>
<td>#16</td>
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<td></td>
</tr>
<tr>
<td>#200</td>
<td>0.2</td>
<td></td>
<td>0-2</td>
</tr>
</tbody>
</table>

2) Specific Gravity (ASTM C-127)

Bulk SpG = 2.606
Bulk SSD SpG = 2.648
Apparent SpG = 2.720
Absorption = 1.5 %
2.58 Min.

3) Los Angeles Abrasion (ASTM C-131) - (Grading C)

<table>
<thead>
<tr>
<th>Revolutions</th>
<th>% Loss</th>
<th>15 Max.</th>
<th>52 Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>9.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>500</td>
<td>36.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4) Sodium Soundness (ASTM C-88)

Weighted Loss = 1.2
12.0% Max.

6) Durability Index (Caltest 229)

Durability Index = 85

7) Clay Lumps and Friable Particles (ASTM C-142)

Clay Lumps and Friable Particles = 0.1
3.0 Max.

8) Lightweight Pieces in Aggregate (ASTM C-123)

Coal and Lignite = 0.0
0.5 Max.

9) Cleanliness Value (Caltest 227)

Cleanliness Value = 94
75 Min.

EARTH SYSTEMS SOUTHERN CALIFORNIA
May 11, 2015

Summary of Laboratory Test Results
HI-Grade Materials Littlerock Quarry
Washed Concrete Sand
Received April 17, 2015

1) Sieve Analysis (ASTM C-136)

<table>
<thead>
<tr>
<th>Size</th>
<th>Percent Passing</th>
<th>ASTM C-33 Fine Agg</th>
<th>SSPWC Wash Con Sand</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<td>#4</td>
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<td>2-10</td>
</tr>
<tr>
<td>#200</td>
<td>4.9</td>
<td></td>
<td>0-5</td>
</tr>
</tbody>
</table>

Fineness Modulus: 2.86

2) Specific Gravity (ASTM C-128)

- Bulk SpG = 2.611
- Bulk SSD SpG = 2.652
- Apparent SpG = 2.724
- Absorption = 1.6%

3) Los Angeles Abrasion (ASTM C-131)

Not Applicable

4) Sodium Soundness (ASTM C-88)

Weighted Loss = 1.4  12.0% Max.  10.0% Max.

5) Sand Equivalent (Caltest 217)

Sand Equivalent = 80  75 Min.

6) Durability Index (Caltest 229)

Durability Index = 90

EARTH SYSTEMS SOUTHERN CALIFORNIA
# Summary of Laboratory Test Results

**Hi-Grade Materials Little Rock Quarry**  
**Washed Concrete Sand**  
**Received April 17, 2015**

<table>
<thead>
<tr>
<th>Test</th>
<th>Description</th>
<th>Standard</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Clay Lumps and Friable Particles (ASTM C-142)</td>
<td>ASTM C-33</td>
<td>Fine Aggregate: 3.0 Max.</td>
</tr>
<tr>
<td></td>
<td>Clay Lumps and Friable Particles</td>
<td>Wash Con Sand</td>
<td>0.1</td>
</tr>
<tr>
<td>8</td>
<td>Lightweight Pieces in Aggregate (ASTM C-123)</td>
<td>Coal and Lignite</td>
<td>0.5 Max.</td>
</tr>
<tr>
<td>10</td>
<td>Organic Impurities (ASTM C-40)</td>
<td>Organic Plate Number</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>11</td>
<td>Mortar Strength (Caltest 515)</td>
<td>Mortar Strength</td>
<td>98 %</td>
</tr>
</tbody>
</table>

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EARTH SYSTEMS SOUTHERN CALIFORNIA