CRRC Membership Meeting
Reno, Nevada
June 17, 2009
Technical Update

- Rating Program Changes
- Ongoing Studies
- Technical Committee
- Administrative Updates
CRRC-1 Changes

- Uncharacteristically Damaged Samples
- Single Ply Thickness Measurements
- Interim Tile Rating Procedure
Uncharacteristically Damaged Samples

As 3 samples are exposed at each of the 3 Test Farm locations, if 1 sample (and no more than 1 sample) is uncharacteristically damaged during weathering exposure, it will be removed from the calculation of the Aged Radiative Properties.
Single Ply Thickness Measurements

• For a compound rating for single ply products, a thickness test will verify that the thinnest thickness is tested.
• ASTM D571
• Thickness must be within 10% of the manufacturer stated thickness
Interim Tile Rating Procedure

- Until June 1, 2010, tile products shall be tested using CRRC-1 Test Method 1.
- A minimum of 6 measurements will be taken on 9 tiles, with additional measurements taken until the standard error is ≤ 0.02.
- Measurement locations will be marked allowing for the same locations to be measured for aged ratings.
- Tile specimens will be flat, unless only profiled products are available.
Interim Tile Rating Procedure

• Variegated 9 tile specimens must represent the range of colors and ratio of an entire roof assembly.
• 3 samples will be placed at each of the 3 test farm locations for weathering.
• Samples may be cut to remove un-testable area (due to profile).
Ongoing Studies

- High Profile Test Method
- Reflectometer Sensor Research
- E1918A Round Robin
High Profile Test Method

Researching alternatives to E1918 that can capture multiple refraction effects from profile.

Possible Test Methods:
• Modified C1549
• E1918A with an artificial light source
  – Testing by ORNL
• E1918/C1549 hybrid
• Applying a calculated correction, using a computer model
  – Testing by Device & Services
Reflectometer Sensor Research

- A study to compare the Version 5 reflectometer with the new Version 6 reflectometer.

- Testing by Device and Services and ORNL.

- Study will be complete by October 2009.
E1918A Round Robin

• Three labs have completed testing for E1918A.
• Some samples were broken during shipment
• Next Steps
TC Administrative Updates

• Technical Committee Meetings & Guidelines
• Technical Committee Voting Members & Alternates
• DOE Grant
Increased number of TC meetings to 4 per year (2 in-person & 2 conference calls)

Established data submission guidelines:
  • Data provided for every assertion, in Excel format, 2 weeks prior to TC meeting
  • Summary Sheet with investigation methods, 2 weeks prior to TC meeting
  • Analysis and conclusions supported by evidence, 1 week prior to TC meeting
## TC Voting Members & Alternates

<table>
<thead>
<tr>
<th>Voting Member</th>
<th>Company</th>
<th>Alternate</th>
<th>Company</th>
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<tbody>
<tr>
<td>1 Bill Kirn</td>
<td>National Coatings</td>
<td>Tim Kersey</td>
<td>Siplast</td>
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<td>2 Hashem Akbari</td>
<td>Lawrence Berkeley National Laboratory</td>
<td>Ronnen Levinson</td>
<td>LBNL</td>
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<td>3 Andre Desjarlais</td>
<td>Oak Ridge National Laboratory</td>
<td>Bill Miller</td>
<td>ORNL</td>
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<td>4 Stan Graveline</td>
<td>Sarnafil, Inc.</td>
<td>Mike Ennis</td>
<td>SPRI</td>
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<td>5 Darrel Higgs</td>
<td>Owens Corning</td>
<td>Jim Baker</td>
<td>ARMA</td>
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<td>6 Scott Kriner</td>
<td>MCA</td>
<td>Chuck Praeger</td>
<td>Metal Building Manufacturers Association</td>
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<td>8 David Roodvoets</td>
<td>DLR Consultants</td>
<td>Matthew Friday</td>
<td>Q-Lab Weathering Research Service</td>
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<td>9 Richard Allan Snyder</td>
<td>CertainTeed Corporation</td>
<td>Tim McQuillen</td>
<td>Firestone Building Products</td>
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<td>10 Kurt Sosinski</td>
<td>Tremco, Inc.</td>
<td>Ingo Joedicke</td>
<td>ISP Minerals Inc</td>
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<td>11 Mike Vogel</td>
<td>U.S. Tile Company</td>
<td>Yoshi Suzuki</td>
<td>MCA Clay Tile</td>
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<td>12 Jim Leonard</td>
<td>E.R. Systems</td>
<td>Tom Ennis</td>
<td>Insulating Coatings Corporation</td>
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<td>13 Marty Hastings</td>
<td>Dura Coat Products</td>
<td>Greg Crawford</td>
<td>American Iron &amp; Steel Institute</td>
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<td>14 Payam Bozorgchami</td>
<td>CEC</td>
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<tr>
<td>15 Jerry Vandewater</td>
<td>Tile Roofing Technology</td>
<td>Rick Olson</td>
<td>Tile Roofing Institute</td>
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*Annual Membership Meeting 2008*
DOE Grant

- DOE Building Envelope & Windows R&D Division
  - Cooperative Agreement
- CRRC will seek funding for Technical Committee projects:
  - High Profile Test Method
  - Asphalt Shingles Test Method
  - Case Study Demonstration Project
  - Solar Reflectance Index Study
  - CRRC Laboratory Training