

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND  
AIR-CONDITIONING ENGINEERS, INC.  
1791 Tullie Circle, NE, Atlanta, GA  
404-636-8400**

**Technical Committee 4.4  
Building Materials and Building Envelope Performance**

**Minutes  
Monday, January 26, 2015  
Chicago, Illinois**

***These minutes were approved at the ASHRAE Annual Meeting in Atlanta GA,  
June 29<sup>th</sup> 2015***

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.**

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**TC/TG/TRG MINUTES COVER SHEET**

(Minutes of all TC/TG/TRG Meetings are to be distributed to the individuals listed below within 60 days following the meeting.)

**TC/TG/SSPC:** TC 4.4  
**TC Title:** Building Materials and Building Envelope Performance  
**Date of Meeting:** Monday, January 26, 2015. Meeting convened at 2:15 pm.  
**Location:** LaSalle 1, Palmer House Hilton, Chicago, Illinois

**DISTRIBUTION**

All members of TC 4.4 plus the following:

TAC Chair

Committee Liaisons

**ADDITIONAL DISTRIBUTION**

Manager of Standards

Manager of Research and Technical Services

## ASHRAE TC 4.4 MINUTES

Monday, January 26, 2015 – Chicago, Illinois

### Building Materials and Building Envelope Performance

#### 1. Introductions/Roll Call/Attendance

The Chair, Marcus Bianchi, called the meeting to order at 2:15pm. Roll call and introductions. A total of 47 committee members and guests were present. A quorum was present (10/14 not counting NVM). Attendance is shown below.

#### Voting Members and Officers Present:

<u>Name</u>	<u>Affiliation</u>	<u>Role</u>
Marcus V Bianchi	Owens Corning	Chair
Peter J Adams	Morrison Hershfield Ltd	Vice Chair
Steven M Cornick	National Research Council Canada	Secretary/Webmaster
Samuel Glass	USDA Forest Products Laboratory	Research Chair
Stanley D Gatland	CertainTeed Corporation	Std. 160 Liaison
Charles C Cottrell	NAIMA	
Diana Fisler	Johns Manville	Std. 189.1 Liaison
Manfred Kehrer	Oak Ridge National Laboratory	
Jan Kosny	Fraunhofer/USA	
Pat Noonan	Knauf Insulation	
Richard E Peters	TBS Engineering	
Paul H Shipp	USG Corporation	
Fitsum Tariku	BCIT	

**Number of voting members present: 10 (0 non-quorum)**

#### Voting Members and Officers Absent

<u>Name</u>	<u>Affiliation</u>	<u>Role</u>	<u>Notes</u>
Fiona Aldous	WJE		Voting Member
Laverne E Dalglish	Air Barrier Assoc. Of America Inc.	Handbook Chair	Voting Member
Sean M O'Brien	Simpson Gumpertz & Heger Inc	Program Chair	Corresponding Member
Theresa A Weston	Dupont	Standards Chair, 90.2	Voting Member
Mr Larry Elkin	Law Engineering	ALI Coordinator	Corresponding Member
Jonathon Humble	American Iron & Steel Institute	90.1 Liaison	Corresponding Member
Alexander McGowan	Levelton Engineering		Voting Member
Andreas H Holm	Fraunhofer IBP		Non quorum
Carsten Rode	Technical University of Denmark		Non quorum

## Corresponding Members Present

<u>Name</u>	<u>Affiliation</u>
Ken Areskog	R50-com
Elizabeth Cassin	WJE
Ken Collier	Pittsburgh Corning
Andre O Desjarlais	Oak Ridge National Lab
Hugo Hens	BPh Consult bvba
Roderick Jackson	Oak Ridge National Laboratory
Achilles Karagiozis	Owens Corning
Edward Neal Koop	Ruskin Manufacturing
Hartwig M Kuenzel	Fraunhofer IBP
Wei Lam	WJE
Wahid Maref	National Research Council Canada
Alejandra Nieto	Roxul
Thomas E Ponder	CertainTeed Corporation
Dave Roodvoets	DLR Consulting
William Rose	University of Illinois
Paulo Cesar Tabares Velasco	National Renewable Energy Lab
Kelley Vogel	WJE
Hofu Wu	CPP

## Visitors Present

<u>Name</u>	<u>Affiliation</u>
Florian Antretter	Fraunhofer IBP
Rockford Boyer	Roxul
John G. Davis	University of Wisconsin
Anthony Fontanini	Fraunhofer CSE
Henry Harvey	CSGRP
Dwight Musgrave	Thermal Visions
Aj Rao	USG
Artemis Agelariidou-Twohig	CertainTeed

## 2. Review of Agenda/Approval of June 30, 2014 Seattle Minutes

An executive session to discuss the recommendations of the 1696-RP PES was added to the agenda. (attached).

The draft minutes from the June 30, 2014 meeting in Seattle were posted on the TC Google Site in August and the ASHRAE Website for review. There were a few minor editorial changes such as a clarification to the description of MTG on Building Dampness. Steve Cornick moved to approve the Seattle minutes as amended. Paul Shipp seconded.

**VOTE: For 9, Against 0, Abstaining 0, CNV; MOTION CARRIED**

## 3. Report From the Chair/Membership/Roll-on, Roll-off

Report was presented by Chair, Marcus Bianchi

### ANNOUNCEMENTS:

Peter Adams and Marcus Bianchi attended the chairs breakfast on Sunday morning. The George Hightower award recipient was Jon Carter from TC 4.3, the Service to ASHRAE Research Award recipient was Iain Walker, also from TC 4.3.

The Committee needs a volunteer to someone to take over the Honours position.

Chair Bianchi asked the TC to consider the merits of the top TC awards; do we want do this?

A new web-based system web-based roster update is under development.

A new MTG were formed; MTG.O&MEE – Operations and Maintenance Activities That Impact Energy Efficiency. MTG.HPAS – High Performance Air-handling Systems for Building except Low-Rise Residential Buildings was disbanded after completing their charge.

The 7th beta test of Electronic and Physical (E&P) meetings, which allows some TC members to participate in the TC meeting from a remote location electronically, will occur in Chicago and the following nine TCs have agreed to participate in this test: TC 1.5, TC 2.2, TC 7.9, TC 4.2 (RP-1561 PMS & RP-1699 PMS), TC 6.8, TC 8.4, TC 8.8, and TC 9.2.

TC Volunteers needed to help improve the ASHRAE technical program for meetings

Provide to your Section Head after each Society meeting a list of qualified volunteers from your TC that are potential Technical Session chairs and reviewers of session papers that are related to TC's scope for use by the Conferences & Expositions Committee (CEC) in developing technical content for future technical programs.

**Upcoming meetings:**

**Atlanta: Program items are due February 9th 2015.**

**Orlando/tracks and dates are given in the Program Subcommittee Report.**

Is your committee website up to date? If not, please ask your webmaster to at least post the latest minutes and the Chicago meeting times and agenda. If your website has been neglected, add an action item for this meeting to appoint a responsible member of the TC/TG/TRG who will bring it back to life. This form of communication is critical to the efficient operation of your committee, and for attracting new members.

TAC and the Electronic Communications Committee (ECC) recently posted a webinar recording on how to set-up and maintain a basic TC website using the ASHRAE server and TC website template at the following link:

<http://media.ashrae.biz/webinar/TrainingWebinar.avi>

The Chair reminded everyone to update their bios.

**MEMBERSHIP: ROLL-ON/ROLL-OFF**

**Rolling off as VM's after the June meeting in Atlanta (July 2nd, 2015):**

**Marcus Bianchi**

**The Chair has added the following VM's after the June meeting in Atlanta (July 2nd, 2015):**

**Peter J.Adams**

**Hua Ge**

**Achilles Karagiozis**

**Paulo Cesar Tabares Velasco**

**The Chair noted that there is one slot open for a voting member (maximum of 18 voting members)**

**The following changes will be made to the Committee executive after the June meeting in Atlanta (July 2nd, 2015):**

**Peter J. Adams – Chair**

**Rick Peters – Vice Chair**

**Fiona Aldous – Secretary**

#### **4. Research Subcommittee**

Update was presented by Sam Glass, Research Subcommittee Chair

**Note TC 4.4 Google site:** <https://sites.google.com/site/ashraetc44/home/research-page>

**The Current Section 4 Research Liaison is Xudong Yang from Tsinghua University.**

**There is a new RTAR form, a fillable pdf. Brevity and clarity are stressed; the form has word limits and radio buttons. Please use it. <https://www.ashrae.org/standards-research--technology/research> (near bottom of page under “Information for TCs/TGs/MTGs Sponsoring Research”) Template for work statements is also posted here.**

**Highlights from Research Subcommittee Chairs' breakfast:**

- **6 TRPs were approved by RAC for bid in spring 2015**
- **7 TRP bid packages will be reviewed 2015-1-28**
- **1 URP is currently under review**
- **Current research finance status: 59 active research projects with total value of \$11 million. Since July 2014, 5 projects have started and 15 new projects were approved for bid. No projects are on-hold due to funding.**
- **WS form being upgraded; will include “Go/No Go” criteria to allow PMS to exercise better control over payment approval**
- **RAC looking at improving efficiency of research processes; wants suggestions for improving quality and reducing time**

## Project Status updates:

- 1561-RP “Procedures to Adjust Observed Climatic Data for Regional or Mesoscale Climatic Variations” (TC 4.2 lead, TC 4.4 co-sponsor). Steve Cornick is PMS chair. Hartwig Künzle is the TC 4.4 liaison. Contractor is Novus Environmental Inc. PMS met in Chicago 2015-1-25. Draft report expected 2015-2-1. Draft user manual expected 2015-2-28. No cost extension through 2015-6-30. Output will be web-based tool to generate mesoscale time series weather data on a 4-km grid based on meteorological models and station data. Temperature and humidity data appear reliable but wind and rain data do not; these are much harder to model. No cost extension requested until June 30,2015.
- 1696-TRP “Thermal, Moisture and Air Transport Property Values for New Building and Insulating Materials” (Authors: Alex McGowan, Steve Cornick). RFP went out for bid 2014-10-15, closed 2014-12-15. PES includes Alex McGowan (chair), Sam Glass, Achilles Karagiozis, and Theresa Weston. PES met via teleconference on 2015-1-24 with RL present. PES recommendation was given to the Committee during the executive session.
- 1700-WS “A Global Database of Moisture Design Reference Years for Hygrothermal Analysis and Design of Buildings” (Author: Steve Cornick; TC 4.2 lead; TC 4.4 co-sponsor). TC 4.4 voted to cosponsor 2014-1-20. Andre Desjarlais and Hartwig Künzle volunteered to represent TC 4.4 on PES/PMS if WS accepted. TC 4.2 has work statement on hold pending disposition of 1325-RP results/incorporation into Standard 160.
- 1718-WS “Development of a Method to Determine the Moisture Transport Properties of a Roof Shingle System under Real Conditions” (Author: Manfred Kehrer; cosponsored by TC 1.12 and SSPC 160). TC voted to accept RTAR 2014-1-20 after revisions in response to RAC comments. RAC voted to accept with conditions (improve grammar, clarify approach and deliverables, get co-funding). First draft of WS should be submitted to RAC no later than 2016-5-15. A draft WS was distributed to TC 4.4 members 2015-1-23. Discussion in research subcommittee meeting 2015-1-25 provided some comments: WS should be specific about the temperature and humidity conditions; wetting can come from rain and from dew; WS scope should be limited to asphalt shingles; WS should set bounds on other assembly parameters (underlayment, roof decking, and configuration). It was noted that Building Science Corporation has unpublished data from a Houston test hut suggesting that moisture transfer through roof shingles is insignificant; response was that one case does not disprove the mechanism. Subcommittee thought quantifying the flow is needed.

***Action items:** TC members to send comments to Kehrer by 2015-2-15. Glass to help revise for grammar and clarity (RAC condition). Kehrer/Glass to distribute to TC members by 2015-3-15 for further comment. Goal is to have WS ready to letter ballot by 2015-4-1.*

- 1730-WS “Research to Determine the Pressure Coefficients and Pressure Drop for Standard Venting Strategies and Components in Attic Spaces with Sloped Roofs” (Authors: Anthony Fontanini, Dave Roodvoets; cosponsored by TCs 4.3, 4.5, and 4.7). TC voted to accept RTAR by letter ballot 2014-5-14. RAC voted to accept with conditions. First draft of the work statement

should be submitted to RAC no later than 2016-5-15. Discussion in research subcommittee meeting 2015-1-25 identified volunteers for task group to provide input to draft WS: Stan Gatland, Fitsum Tariku, Marcus Bianchi, and Peter Adams. Bill Rose mentioned zonal pressure/airflow measurements of attics in weatherization work and will make a report available to the TC.

**Action items:** task group to meet via teleconference or web meeting by 2015-2-9 and prepare a draft work statement by 2015-4-1. Rose to distribute zonal pressure/airflow report.

- **1703-RTAR (TC 1.8): “Performance of Vapor Retarder Systems Used on Mechanical Insulation” (Author: Charles Petty). TC 4.4 voted to cosponsor 2014-1-20. Andre Desjarlais volunteered to represent TC 4.4 on PES/PMS if RTAR/WS accepted. RAC returned RTAR with comments. Under revision in TC 1.8.**
- **Draft RTAR “Impact of Air-Flow on Thermal Performance of Airspaces behind Cladding” (Authors: Jay Crandell, David Yarbrough, Jonathan Humble; SSPC 90.1 envelope subcommittee). SSPC 90.1 approached TC 4.4 with request for TC 4.4 to sponsor RTAR and SSPC 90.1 to cosponsor. Brief presentation and discussion at research subcommittee 2014-1-19. Draft RTAR subsequently posted on TC Google site and comments received from Peter Adams and Marcus Bianchi. Revised RTAR distributed to TC members 2015-1-16. Discussion in research subcommittee meeting 2015-1-25 raised questions about whether the budget was realistic and whether it would be better to separate the two phases of the RTAR into two separate projects. Glass consulted with RL who recommended splitting it into two projects.**

**Action items:** authors to revise RTAR by 2015-2-2. Letter ballot and submit to RAC by 2015-2-15.

- **Draft RTAR “Evaluating the Accuracy of Whole Building Energy Simulations by Comparison with Field Measurement Data” (Author: Sean O’Brien). Research subcommittee discussed 2014-1-19. Will be revised and posted on Google site for comments. Also seeking input from TC 4.7. No further action.**
- **Draft RTAR “Hygrothermal Properties of Aged Construction Materials” (Author: Steve Cornick). Research subcommittee discussed 2014-1-19. No further action.**
- **Draft RTAR “Moisture Transfer in Building Materials at High Temperatures” (Author: Sam Glass). Discussed at research subcommittee 2014-1-19. Comments requested. No further action.**
- **Research topic brainstorming session Planned for 12:00 noon Sunday, June 28, in Atlanta. Volunteers: Theresa Weston, Andre Desjarlais, Wahid Maref, Sam Glass.**

## 5. Handbook Subcommittee

Update was presented by Peter Adams on behalf Laverne Dalgliesh, Handbook Subcommittee Chair



For Handbook issues go to the following website:

<https://www.ashrae.org/resources--publications/ashrae-handbook-central>

The Handbook – Fundamentals is to be revised for 2017. The names of Handbook team are:

Laverne Dalglish Handbook Subcommittee Chair

Handbook – Fundamentals revisers

- Chapter 25 – Marcus Bianchi
- Chapter 26 – Alex McGowan
- Chapter 27 – Charles Cottrell

Handbook – Applications reviser

- Chapter 44 – Peter J. Adams

Handbook – Applications (HOA): Chapter 44 of the 2015 Handbook – The deadline for submitting the Chapter to ASHRAE was missed but there is still a chance to the chapter into the final printed edition.

Handbook – Fundamentals (HOF): Laverne Dalglish will send out a notice for reviews for the Atlanta. New ideas, edits, and reviews are requested and general reviews are requested from the Committee members for Atlanta using the TC Google Site and via email. Revisers will send a Word version requesting feedback. Cornick will post a production schedule for the 2017 HOF (attached).

<https://sites.google.com/site/ashraetc44/home/handbook-page>

**Action items:** Dalglish to post notices requesting revisions and reviews; HOF Revisers to post Word versions of the Chapters on the TC Google Site. Cornick will post a production schedule for the 2017 HOF Handbook.

## 6. Program Subcommittee

Update was presented by Marcus Bianchi on behalf of Sean O'Brien, Program Subcommittee Chair

**General items:** There were no TC 4.4 sponsored program items at the Chicago Winter Meeting. The reviews of the Seattle Annual Meeting program items were generally positive. The one program session rejected for Seattle will be resubmitted for Atlanta. The annual research summit will be held at the St. Louis Annual meeting in 2016.

Possible seminar items include:

- a) Thermal bridging and compliance methods for 90.1 (past 1365-RP) – Sean O'Brien expressed interest in this topic
- b) Solar driven vapour flows (past RP-1235)
- c) VIPs in practice

- d) Double skin facades
- e) Envelope tracks – suggest a track to CEC on envelope

**Items to be submitted for Atlanta:**

**The Building Envelope and its Impacts on Occupant Comfort – Chair Sean O’Brien (hold over from Seattle)**

**U-factors, Thermal Bridging, and What They Mean for Energy Code Compliance – Chair Sean O’Brien**

**Moisture Issues with Sealed and Semi-Conditioned Attics – Chair Dave Roodvoets**

**CEC deadlines for the Atlanta and Orlando conferences are below.**

**Atlanta Meeting - June 27 – July 1, 2015**

- Conference Paper accept/reject notifications sent January 30, 2015
- Seminar, Forum and Workshop Proposals Due on February 9, 2015
- Revised Conference Papers/Final Technical Papers due February 13, 2015
- Conference and Technical Paper Final Accept/Reject Notifications sent Feb. 27, 2015
- Seminar, Forum, Workshop Accept/Reject Notifications sent March 23, 2015
- All PPTs Due Online by June 5, 2015
- Final Day for Commercialism Revision Upload prior to on-site by June 17, 2015
- Conference website: [www.ashrae.org/atlanta](http://www.ashrae.org/atlanta)

**Orlando Meeting - January 23 - 27, 2016**

- Conference Paper abstracts due on March 23, 2015
- Conference Paper Abstract Accept/Reject Notifications sent April 6, 2015
- Technical papers due by April 20, 2015
- Website Opens for Seminar, Forum and Workshop Proposals on June 4, 2015
- Final Conference Papers Submitted for Review by July 6, 2015
- Conference Paper accept/reject notifications sent August 3, 2015
- Seminar, Forum and Workshop Proposals Due on August 10, 2015
- Revised Conference Papers/Final Technical Papers Due on August 21, 2015
- Conference and Technical Paper Final Accept/Reject Notifications sent August 28, 2015
- Seminar, Forum, Workshop Accept/Reject Notifications sent September 11, 2015
- Conference Website: <http://www.ashrae.org/orlando/>

**Program Focus at Orlando Winter Conference**

- Track 1: Systems and Equipment Track chair: Gary C. Debes - [gcdebes@verizon.net](mailto:gcdebes@verizon.net)
- Track 2: Fundamentals and Applications Track chair: Cynthia Moreno - [cindym@tmmechanical.com](mailto:cindym@tmmechanical.com)

- Track 3: Design Build Track chair: James Liston - [jfliston@verizon.net](mailto:jfliston@verizon.net)
- Track 4: International Design Track chair: Leon Shapiro - [leoneshapiro@gmail.com](mailto:leoneshapiro@gmail.com)
- Track 5: Standards, Guidelines and Codes Track chair: Michael Collarin - [Michael.Collarin@parsons.com](mailto:Michael.Collarin@parsons.com)
- Track 6: Cutting-Edge Technologies Track chair: Ann Peratt - [agregg.ksu@gmail.com](mailto:agregg.ksu@gmail.com)
- Track 7: The Great Debate Track chair: Chuck Curlin - [ccurlin@shultzeg.com](mailto:ccurlin@shultzeg.com)
- Track 8: Modern Residential Systems Track chair: Rocky Alazazi - [mralazazi@yahoo.com](mailto:mralazazi@yahoo.com)

Also of note: 2015 ASHRAE Energy Modelling Conference— September 30-October 2, 2015 – Atlanta, GA USA. Contact: <https://www.ashrae.org/membership--conferences/conferences/ashrae-conferences/2015-ashrae-energy-modeling-conference>.

## 7. Standards Subcommittee

Update was presented by Marcus Bianchi on the behalf of the Standards Subcommittee Chair, Theresa Weston.

**Std.90.1:** (Jonathan Humble Liaison) The envelope Subcommittee is looking at the cost effectiveness of window systems and shading requirements. With respect to new metal building systems the focus is on measuring U-values for walls. Changes in climates zones due to update s in ASHRAE/ANSI Standard 169 are being considered.

**Std. 90.2:** (Theresa Weston Liaison) The new standard 90.2 is to become a performance-based standard.

**Std. 160:** (Stan Gatland Liaison) ASHRAE/ANSI Standard 160 is focusing on updating several topics. First up is the addition of section on mould and establishing a failure criterion based on VTT's mould index model. A section on modelling air-flow modeling in 1D simulations is being developed. Finally consideration is being given to developing a user guide or compliance manual, either by the committee or by contract

**Std. 189.1:** (Diane Fidler Liaison) There was nothing of direct interest to report from Standard 189.1 Some recommendations were possible 10% peak load reduction; exhaust heat recovery and biomass heating.

**GPC34P "Energy Guideline for Historical Buildings and Structures":** Bill Rose reported that the committee would be meeting on Tuesday hoped to have a public review draft ready by Atlanta.

**MTG.DB "Building Dampness":** Cornick reported that as a direct consequence of ASHRAE's updated mould position document at MTG was formed to develop the definition of a damp building.

## 8. Old Business

Nothing to report.

## **9. New Business**

Nothing to report.

## **10. Executive Session**

An executive session was held so the 1696-PES could make its recommendation to the TC. The PES made its recommendation to the committee. The results of the TC recommendation will be communicated to MORTS.

## **11. Adjournment**

Steve Cornick moved to adjourn the meeting at 16:15

*Steve Cornick – Secretary, TC 4.4*

*Next meeting Atlanta GA, June 29, 2015*

## Action items

From the Chicago Winter January 26, 2015 meeting.

Person	Item	Date
All members	Send Comments to Manfred Kehrer regarding 1718-WS “Development of a method to determine the moisture transport of a roof shingle system under real conditions”	Feb 15, 2015
O’Brien	Resubmit Seattle rejected seminar “The Building Envelope and its Impacts on Occupant Comfort”	Feb 9, 2015
O’Brien	Submit new seminar “U-factors, Thermal Bridging, and What They Mean for Energy Code Compliance.”	Feb 9, 2015
Roodvoets	Submit new seminar “Moisture Issues with Sealed and Semi-Conditioned Attics.”	Feb 9, 2015
Jay Crandell, David Yarbrough, Jonathan Humble	Draft RTAR “Impact of Air-Flow on Thermal Performance of Airspaces behind Cladding” - Authors to revise RTAR by 2015-2-2. Letter ballot and submit to RAC	Feb 2, 2015
Dalglish	Post notices of Handbook –Fundamentals revision to Google site and to Google groups.	March 1, 2015
Bianchi, McGowan, Cottrell	Revisers to post Word version of Chapters 25, 26, and 27 respectively to the Google site for revision, review, and comment,	March 1, 2015
Cornick	Post 2017 Handbook –Fundamentals production schedule to the Google Site.	March 1, 2015
Glass & Kehrer	To review and revise and circulate to the membership for further comments March 15, 2015. Letter ballot to TC	April 1, 2015
Anthony Fontanini, Dave Roodvoets, Stan Gatland, Fitsum Tariku, Marcus Bianchi, and Peter Adams	1730-WS “Research to Determine the Pressure Coefficients and Pressure Drop for Standard Venting Strategies and Components in Attic Spaces with Sloped Roofs” Task group to provide input to draft WS:. Task group to meet via teleconference or web meeting by 2015-2-9 and prepare a draft work statement.	April 1, 2015
Bill Rose	Circulate zonal pressure/airflow measurements of attics in weatherization work to the TC.	April, 2015

## Summary of Research Projects

From the Chicago Winter January 26, 2015 meeting.

ID	Title	Champion	Status
1561-RP (TC 4.2)	Procedures to Adjust Observed Climatic Data for Regional or Mesoscale Climatic Variations	Steve Cornick	Extension to 2015-6-30. Contractor is Novus Environmental Inc. Draft report expected 2015-2-1. Draft user manual expected 2015-2-28.
1696-TRP	Thermal, Moisture and Air Transport Property Values for New Building and Insulating Materials	Alex McGowan, Steve Cornick	Re-bid spring 2015 with clarifying language added to RFP.
1700-WS (TC 4.2)	A Global Database of Moisture Design Reference Years for Hygrothermal Analysis and Design of Buildings	Steve Cornick	TC 4.4 cosponsor. On hold pending disposition of 1325-RP results/incorporation into Std 160.
1718-WS	Development of a Method to Determine the Moisture Transport Properties of a Roof Shingle System under Real Conditions	Manfred Kehrer	RTAR accepted with conditions. Draft WS distributed to TC members; comments due by 2015-2-15.
1730-WS	Research to Determine the Pressure Coefficients and Pressure Drop for Standard Venting Strategies and Components in Attic Spaces with Sloped Roofs	Anthony Fontanini, David Roodvoets	RTAR accepted with conditions. Task group to prepare draft WS by 2015-4-1.
1703-RTAR (TC 1.8)	Performance of Vapor Retarder Systems Used on Mechanical Insulation	Charles Petty	Voted to co-sponsor 2014-1-20. RAC returned RTAR with comments. TC 1.8 to revise and resubmit.
Draft RTAR	Impact of Air-Flow on Thermal Performance of Airspaces Behind Cladding	David Yarbrough, Jonathan Humble, Jay Crandell	Draft RTAR to be revised to cover phase 1 project. Letter ballot and submit by 2015-2-15.
Draft RTAR	Evaluating the Accuracy of Whole Building Energy Simulations by Comparison with Field Measurement Data	Sean O'Brien	Under revision.
Draft RTAR	Hygrothermal Properties of Aged Construction Materials	Steve Cornick	Under revision.
Draft RTAR	Moisture Transfer in Building Materials at High Temperatures	Sam Glass	Under revision.

**ASHRAE Technical Committee 4.4**  
**Building Materials and Building Envelope Performance**

Main Committee Agenda

**Date:** Monday, January 26, 2015

**Time:** 2:15 pm – 4:15 pm

**Location:** Lasalle 1, Seventh Floor  
Palmer House Hilton  
Chicago, Illinois

- |     |   |      |
|-----|---|------|
| 1.  | Introductions/Roll call/Attendance – Marcus Bianchi<br>[Marcus.V.Bianchi@owenscorning.com]                | 2:15 |
| 2.  | Agenda/Approval of minutes – Steve Cornick [cornicksm@gmail.com]  | 2:20 |
| 3.  | Report from the Chair.Membership/Roll-on roll-off – Marcus Bianchi<br>[Marcus.V.Bianchi@owenscorning.com] | 2:25 |
| 4.  | Research Subcommittee – Sam Glass [svglass@fs.fed.us]   | 2:35 |
| 5.  | Handbook Subcommittee Peter Adams [PAdams@morrisonhershfield.com]   | 2:50 |
| 6.  | Program Subcommittee – Sean O’Brien [smobrien@sgh.com]  | 3:00 |
| 7.  | Standards Subcommittee – Theresa Weston [theresa.a.weston@usa.dupont.com]                                 | 3:10 |
| 8.  | Old business  | 3:25 |
| 9.  | New business  | 3:30 |
| 10. | Executive Session – Marcus Bianchi [Marcus.V.Bianchi@owenscorning.com]                                    | 3:35 |
| 11. | Adjournment   | 4:15 |

**(End)**

# 2017 Handbook Production Schedule

