

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

1791 Tullie Circle, N.E./Atlanta, GA 30329 404-636-8400

TC/TG/TRG MINUTES COVER SHEET

TC/TG/TRG NO: **TC 7.3**

DATE: **June 25, 2013**

LOCATION: **Denver, Colorado**

TC/TG/TRG TITLE: **Operation and Maintenance Management**

"Copyright symbol ©2004 ASHRAE. All rights reserved. This is a draft document intended for review only by the cognizant ASHRAE groups and other designated reviewers and is not for distribution to any private interests, individuals, third parties that are not designated as ASHRAE reviewers for this document. This document may not be distributed in whole or in part in either paper or digital form without the express permission of the chair of the committee originating this document. The appearance of any technical data or editorial material in the draft document does not constitute endorsements, warranty, or ASHRAE expressly disclaims same"

DISTRIBUTION

<i>All Members of TC/TG/TRG plus the following:</i>	
TAC SECTION HEAD:	SH7@ashrae.net
TAC CHAIR:	TACCHAIR@ashrae.net
ASHRAE MANAGER OF TECHNICAL SERVICES:	MORTS@ashrae.net
ALL COMMITTEE LIAISONS AS SHOWN ON TC/TG/TRG ROSTERS:	Program: PL7@ashrae.net Special Publications: PUBCHAIR@ashrae.net Handbook: HBA5@ashrae.net CTTC: CTTC7@ashrae.net RAC Research: RL7@ashrae.net PDC: PDCCHAIR@ashrae.net

ADDITIONAL DISTRIBUTION

MANAGER OF STANDARDS		MOS@ashrae.net			
MEMBERS PRESENT	TERM IN POSITION	MEMBERS ABSENT	TERM IN POSITION	MEMBERS ABSENT	TERM IN POSITION
Thursten Simonsen (v) (Chair)	2012-14	Davidge Warfield (v)	Davidge Warfield (v)	Patrick Murphy (cm)	2012-
Bob Baker (v) (Vice Chair) (Standard Sub Chair)	2011-15	Richard Danks (v)	2009-2013	Shawn Masterson (pcm)	2012-14
Michael Khaw (nv) (Secretary)	2012-13	Kevin Fallin (v)	2012-16	Ecton English (cm)	2006-
Angela Lewis (v) (Handbook Sub Chair)	2012-14	Chuck Dale-Derks (nv) (Webmaster)	2011-	James Gartner (cm)	2011-
Sonya Pouncy (v) (Program Sub Chair)	2012-15	Joseph Anderson (cm)	2001-	Ashok Kadakia (cm)	2006-13
Michael Bobker (nv) (Research Sub Chair)	2012-	Dennis Alejandro (cm)	2011-	Manoj Khati (cm)	2011-
Cedric Trueman (v)	2012-16	Richard Goulet (cm)	2007-		
Wayne Webster (v)	2012-16	Warren Lupson (cm)	2012-	Michael King (cm)	1988-
Richard Rooley (Non Quorum Member) (v)	2012-16	Michael Gallagher (cm)	2011-	Sung Brian Kong (cm)	2000-
Tom Cappellin (v)	2012-15	Linda Austin (cm)	2003-13	Anthony Lolas (cm)	1991-13

Adrienne Thomle (SH)	2012-16	Robert Bates (cm)	2011-	Michael Mamayek (cm)	2009-
Charles Dorgan (cm)	1984-	Christopher Becker (cm)	1994-	Alex Martinez (cm)	1994-13
Richard Dames (cm)	2012-	Christopher Benson (cm)	2011-	Bill McCartney (cm)	2010-
Robyn Ellis (cm)	2008-	Steven Blanc (cm)	2003-	Amanda McKew (cm)	2011-
Michael Brambley (cm)		Jared Higgins (pcm)	2012-2013	Gene Meyer (cm)	1993-
Matt Mullen (cm)	1996-	Kirk Bond (cm)	1994-	James Miller (cm)	1993-13
Locke Hudson (G)		James Carelock, Jr.(cm)	1997-	Ross Montgomery (cm)	2002-
James Sweeney (G)		James Carlson (cm)	1993-	Brian O'Donnell (cm)	2006-
John Frugard (G)		Patrick Carpenter (cm)	2011-	Thomas Reinarts (cm)	2002-
Andrew Windham (G)		Dominador Castro (cm)	2011-	John Rieke (cm)	1995-
Bob Sibilski (G)		Keith Dempsey (pcm)	2011-2013	Jeff Rutt (cm)	2006-
David Cantrill (G)		Joseph Driscoll III (cm)	2002-	William Ryan (cm)	2011-
Clinton Davis (G)		Chris Draper (cm)	2012-	Adolph Rydzewski (cm)	2007-
		Frank Erceg (pcm)	2012-2013	Scott Sepsy (cm)	2007-
		David Underwood (cm)	1991-	George Sestak (cm)	1993-
		Shailen Verma (cm)	2012-	Richard Shaffer (cm)	1994-13
		Forrest Young (cm)	2006-	M H Smith (cm)	2002-13
		Robert Zagar	2001	Karl Stum (cm)	1998-
		William McQuade	2012-13		

TC 7.3 Meeting Minutes

Tuesday June 25, 2013
Denver, Colorado, USA

Page 3

Call to Order/Scope/Introductions

Thursten Simonsen called the meeting to order at 1:01 PM and read the scope of the TC 7.3 committee. Attendees in the room introduced themselves. An attendance sheet was circulated.

Voting Member Roll Call

Thursten Simonsen took roll call of the voting members. TC 7.3 roster has 10 voting members and 1 non-quorum voting member. At the time of roll call, six (6) voting members were present. A quorum has been established. At a later time, two (2) voting members came to join the meeting.

Approval of the Agenda

Bob Baker motioned to approve the meeting. Sonya Pouncy seconded the motion. All in favor to approve the agenda. Motion approved 6-0-0.

Society Liaison and Guest Presentations

There is no liaison at the beginning of the meeting. Our Section Head, Adrienne Thomle joined later during the meeting.

Approval of Dallas Meeting Minutes

The draft meeting minutes from Dallas were reviewed. Richard Rooley made a motion to approve the minutes, seconded by Bob Baker. Motion approved 6-0-0.

ASHRAE Administrative Matters/Correspondence/Announcements

New MTG: TAC approved the formation of Multidisciplinary Task Group MTG.CCDG, Cold Climate Design Guide. Go to the MTG section at the ASHRAE technical committees' webpage.

Thank You Letters to Employers: ASHRAE President Tom Watson has offered to send letters to the employers of TC volunteers this year thanking them for supporting their employee's service to ASHRAE. TC committee members should receive an email in early July with details on how to request the letter.

See the ASHRAE website for upcoming workshops, conferences and expos. The ASHRAE Winter Mtg will be held in New York, and the conference website is <http://www.ashrae.org/newyork/>.

TC 7.3 Meeting Minutes

Tuesday June 25, 2013
Denver, Colorado, USA

Page 4

Sub-Committee Reports

Research Sub-Committee – Chair: Michael Bobker

Simonsen, Baker, Brambley, Lewis, Khaw, Cappellin, Bobker, Mullen, Trueman, Hutson, Cantrill, Bruecker, Ellis, Pouncy and Willson attended the Research Sub-Committee Meeting.

The meeting was called to order by Sub-Committee Chair Michael Bobker.

An attendance list was circulated.

TRP 1609: A PEC met to review 5 proposals submitted and has a recommendation ready to be presented to an Executive Session of the TC. The Executive Session will be called after the full TC meeting on Tuesday 6-25, the Executive Session's vote will be recorded onto the RTAR cover sheet and the package will be delivered to RAC.

RTAR 1650: A cover letter and RTAR revision, responding to RAC comments, were presented for review. The sub-committee recommended that the revised RTAR be forwarded to the TC with a recommendation to re-submit to RAC. The revised RTAR must be submitted to Michael Vaughn, MORTS by August 15 for consideration at the RAC's next meeting.

Bob Baker indicated that his concept for an RTAR on the impact of coil fouling on heat transfer and energy use is still on hold. He will attempt to have a draft for NYC meeting in January.

The sub-committee discussed ideas for new RTARs. Michael Bobker will distribute the new RTAR forms for use.

Sonya Pouncy will draft an RTAR on the gap between model-predicted and measured energy use. Several different ways of approaching this research were discussed, including using the BEEP/BEQ data. Sonya will check with Michael Vaughn about what research along these lines may be in the works.

Matt Mullen is developing an RTAR for TC 7.8 on rooftop unit run-to-failure strategies of Big Box stores. The sub-committee agreed that 7.3 should sign-on as a co-sponsor of this RTAR.

Locke Hutson will draft an RTAR for research on current guidance, practice, and need for HVAC "design for maintenance". It was discussed that this could have significant value to the industry and could result in updates to Handbook sections.

The sub-committee meeting was adjourned.

The minutes was prepared by Michael Bobker and will be presentation by Michael Khaw to the full TC.

Sonya Pouncy made a motion to approve the research sub-committee report, seconded by Cendric Trueman. Motion approved 8-0-0.

TC 7.3 Meeting Minutes

Tuesday June 25, 2013
Denver, Colorado, USA

Page 5

Handbook Sub-Committee – Chair: Angela Lewis

Attended by Simonsen, Brambley, Lewis, Khaw, Bobker, Ellis, Cantrill, Pouncy and Hutson.

The subcommittee met on Jun 24 from about 5:30 to 6:30PM. The main topics discussed were the revisions of sections that included maintenance definitions and automated fault detection diagnostics (AFDD). A rough schedule to complete the revisions was agreed to during the meeting to be one month from the Denver meeting. Revisions not complete by the deadline will be saved for future revisions.

After the revisions, the chapter will be sent out to voting members and the handbook subcommittee for review before vote. A conference call will be planned for November and December to discuss the chapter in preparation for vote at the January 2014 in New York.

Content for future editions of the chapter are anticipated to include design for maintenance, as well as a detailed review of the definitions of maintenance from various sources inside and outside of the HVAC&R industry.

Handbook Sub-Committee Report was approved 8-0-0.

Program Sub-Committee – Chair: Sonya Pouncy

Simonsen, Baker, Brambley, Lewis, Khaw, Bobker, Trueman, Bruecker, Ellis, Pouncy, Sibilski and Webster attended the Program Sub-Committee Meeting.

The meeting was called to order by Program Sub-Committee Chair Sonya Pouncy.

Agenda was reviewed. There was no amendments to the agenda.

Programs co-sponsored by TC 7.3 in Denver:

a. TC 7.3 co-sponsored:

Seminar 12: Quality BIM Objects for Lifelong Building Reality in a Virtual World
(Mon 8:00 AM – 9:30 AM)

Special Session (Workshop) 3: Achieving High Performance Buildings through
IPD and Design Build (Sun. 8 AM – 9 AM)

Special Session (Workshop) 4: Does Automated Building Energy Modeling
Replace Measurement and Verification? (Sun 8 AM – 9 AM).

b. Discussed the viability of the workshop format:

TC 7.3 Meeting Minutes

Tuesday June 25, 2013
Denver, Colorado, USA

Page 6

- i. Simonsen chaired Workshop 3. Simonsen commented that the Workshop format may replace the Forum. In his opinion, one benefit of the Workshop is that it allows for more Q&A, but it also constricts the presentation time. He was unaware that a networking session.
 - ii. Brambley questioned whether the Workshop should replace the Forum as Forums allow TC's to get direct member feedback prior to taking action on issues it may be considering.
 - iii. ACTION ITEM: Pouncy to raise concerns of Workshops replacing Forums and insufficient communication regarding the networking session being transmitted to session chairs at the Program Sub-Committee meeting on Tuesday.

- c. Discussed the increase in speaker fee from \$90 to \$130:
 - i. The sub-committee is concerned that the speaker fee will adversely affect the willingness of speakers, particularly those who are non-ASHRAE members, to volunteer their time and expertise to the organization. This is evinced by the fact that, as a professional courtesy, Simonsen paid the fee for Workshop 3 speakers.
 - ii. ACTION ITEM: Pouncy to raise the concerns regarding speaker fees at the Program Sub-Committee meeting on Tuesday. Suggested alternatives are to
 - 1. Waive the speaker fee for non-members only. Fees would only be charged to members who would likely attend the conference anyway.
 - 2. Offer speakers a one-day conference admission.

Upcoming Conferences and Due Dates:

- a. Dates for the 2014 Winter Conference in New York are:

March 15	Conference Paper abstracts due
April 5	Conference Paper accept/reject notifications
April 19	Full Technical Papers due
June 1	Web Site Opens for Seminar and Forum Proposals
July 2	Final Conference Papers Submitted for Review (Includes Bio, Learning Objectives and Methods of Assessment)
Aug. 13	Seminar and Forum Program Proposals Due
Aug. 13	Technical Papers Final Review
Sept. 20	Notifications of Seminar and Forum Accept/Reject Distributed
Dec. 6	Upload of PPTs Begin
January 3, 2014	All PPTs Due Online
Jan. 18	Speaker's Lounge Opens

TC 7.3 Meeting Minutes

Tuesday June 25, 2013
Denver, Colorado, USA

Page 7

b. The Conference has the following tracks:

- i. Track 1: Systems and Equipment
- ii. Track 2: Fundamentals and Applications
- iii. Track 3: Indoor Environmental Health/Indoor Environmental Quality
- iv. Track 4: Building Information Systems; Integrating Technology for Control, Management, Optimization and Efficiency
- v. Track 5: International Design
- vi. Track 6: Improving Building Performance through Commissioning, Operation and Maintenance
- vii. Track 7: Hydronic System Design for Efficiency and Large Bldgs.
- viii. Track 8: Tall bldgs: Performance Meets Policy

Dates for the 2014 Summer Meeting in Seattle are:

- Sept. 23** Conference Paper abstracts due
- Sept. 23** Technical Papers due
- Oct. 7 Conference Abstract accept/reject notifications
- Jan. 6, 2014** Web Site Opens for Seminar and Forum Proposals
- Jan. 9, 2014 Final Conference Papers Submitted for Review (Includes Bio, Learning Objectives and Methods of Assessment)
- Feb. 13** Seminar and Forum Program Proposals Due
- Feb. 21 Conference Paper accept/reject notifications
- Feb. 25 Technical Papers Final Review
- March 25 Notifications of Seminar and Forum Accept/Reject Distributed
- May 6 Upload of PPTs Begin
- June 2** All PPTs Due Online
- June 28 Speaker's Lounge Opens

The Conference has the following tracks:

- i. Research Summit with particular emphasis on high performance building design and its role in a clean energy economy,
- ii. Refrigeration,
- iii. The Ground Source Heat Pumps State of the Art: Design, Performance and Research,
- iv. **Installation, Commissioning, Operation, Maintenance of Existing Buildings** - With the prevalence of low energy and zero energy buildings, many issues arise with installation, startup, commissioning and operations and maintenance (O&M). This track seeks papers focusing on lessons

TC 7.3 Meeting Minutes

Tuesday June 25, 2013
Denver, Colorado, USA

Page 8

learned, improvements in processes and team communication as well as efforts to improve the installation, startup, O&M and commissioning of HVAC systems.

- v. Standards, Guidelines and Codes,
- vi. The Indoor Environment—Health, Comfort and Productivity, and
- vii. Professional Skills Development.

A program ideas plan was circulated to the Sub Committee.

Program Sub-Committee Report was approved 8-0-0.

Standards Sub-Committee – Chair: Bob Baker

Simonsen, Baker, Brambley, Lewis, Khaw, Bobker, Trueman, Bruecker, Ellis, Pouncy, Sibilski and Webster attended the Standards Sub-Committee Meeting.

The meeting was called to order by Standards Sub-Committee Chair Bob Baker.

An attendance list was circulated and attendees introduced themselves.

Old Business:

Update on Standard 180 and Western HVAC Performance Alliance implementation:

Mr. Baker stated that the alliance continues the process of adopting Standard 180 as the way that Commercial HVAC systems must be maintained in California. The committees within the WHPA that are dealing with the details of the implementation contributed to the 2012 update (Economizers) and are accumulating suggestions for the next update. All of this keeps Standard 180 well recognized. As evidence, Bob pointed that the Standard is sold out in the ASHRAE bookstore at this meeting. Bob also passed around statistics developed by WHPA that show both the industry involvement (160 organizations) and the Standard Google position (April-page 1, 3rd position with 1,830,000 competitive links).

Communications/announcements:

Angela noted that Guideline 1.4 (Systems Manual for Facilities) is out for Advisory Review and they have an objective of publishing by the New York meeting. Thursten noted that when we re-affirmed Guideline 4, we committed to re-visiting that decision based on the final content of G1.4. We could revise, reaffirm, merge the two or develop some other recommendation.

Standard 100 (Energy Efficiency in Existing Buildings) has been out for Public Review and there are many comments. The contentious issue is Source vs. Site as basis. How this ultimately plays out will impact 7.3 so we need to follow closely.

The Standards Sub-Committee Report was approved 8-0-0.

TC 7.3 Meeting Minutes

Tuesday June 25, 2013
Denver, Colorado, USA

Page 9

Liaison Reports

ALI Activities – Liaison: Davidge Warfield

No ALI report.

Old Business

Education and Training Sub-Committee

Thursten discussed the title and scope of the new sub-committee.

There is a need for more education and training for O & M.

Danny Taasevigen has volunteered to be the new sub-committee chair.

A very energetic discussion was observed amongst all in the topic of Training and Education for O & M.

What should ASHRAE TC 7.3 Be?

There were discussions by many regarding the future of TC 7.3. The discussions will continue next meeting.

New Business

Education and Training Sub-Committee:

Thursten Simonsen said there will be a telephone conference call before the New York meeting regarding this new Education and Training Sub-Committee.

For ALI, Angela Lewis and Laurie Gilmer were the instructors for the O&M of High Performance Buildings short course. Angela Lewis said the course was well attended (15 people). There were many questions.

TC 7.3 Liaisons:

It was discussed if TC 7.3 should have more liaisons to other TCs. The following were suggested:

- TC 1.4 Controls – Angela Lewis could serve as liaison
- TC 7.5 Fault Detection – Andrew Windham was mentioned
- TC 7.9 Commissioning
- TC 7.8 O&M costs – there is already a liaison, but it is difficult to coordinate with TC7.8 because the TC meets at the same time as TC7.3

YEA was also suggested as an area TC 7.3 should liaise with.

TC 7.3 Meeting Minutes

Tuesday June 25, 2013
Denver, Colorado, USA

Page 10

Electronic Meetings:

We discussed electronic meetings.

Thank you:

Thursten Simonsen thanked Davidge Warfield and Richard Danks for their contributions to TC 7.3 as they have rolled off as TC 7.3 Voting Members.

New Voting Members:

Thursten Simonsen welcomed Robyn Ellis and Michael Khaw as new TC 7.3 Voting Member for 2013-2014 year.

The Executive Session was called after the TC main meeting for:

TRP 1609: A PES met to review 5 proposals submitted and has a recommendation ready to be presented to an Executive Session of the TC. The Executive Session was called after the full TC meeting on Tuesday 6-25-13, the Executive Session's vote will be recorded onto the TRP cover sheet and the package will be delivered to RAC.

Thursten Simonsen reported that the motion approved 8-0-0.

Next Meeting

The New York, New York meeting will be Tuesday January 21, 2014, from 1:00 PM -3:30PM. Sub-committee meetings will be held on Monday afternoon January 20, 2014 (rooms to be announced).

Adjournment

The chair adjourned the meeting at 3:24 PM.