TC/TG/MTG/TRG MINUTES COVER SHEET

(Minutes of all Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/MTG/TRG No. 77
TC/TG/MTG/TRG TITLE TESTING & BALANCING
DATE
DATE OF MEETING 20-Jan-14
LOCATION HILTON HOTEL NEW YORK, NY

<table>
<thead>
<tr>
<th>MEMBERS PRESENT</th>
<th>YEAR APPTD</th>
<th>MEMBERS ABSENT</th>
<th>YEAR APPTD</th>
<th>EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE</th>
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<tbody>
<tr>
<td>Mr Mark C Hegberg</td>
<td>2013</td>
<td>Mr David E Bornside</td>
<td>2013</td>
<td>Mr Donald Prather</td>
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<td>Mr Justin Foster Garner, PE</td>
<td>2013</td>
<td>Mr Jack L Stegall</td>
<td>2011</td>
<td>Mr Thomas P Schlueter, PE</td>
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<td>Mr Frank J Spevak</td>
<td>2012</td>
<td>Mr Charles C Wright</td>
<td>2013</td>
<td>Mr Robert J Linder</td>
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<td>Mr Frederick A Lorch, PE</td>
<td>2010</td>
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<td>Mr M Kent Anderson</td>
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<td>Mr Eugene W Faris</td>
<td>2012</td>
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<td>Mr Lloyd Le</td>
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<td>Mr John R Hamilton</td>
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<td>Thomas E Cappellin, PE</td>
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<td>Mr James F Hoctor, Eng</td>
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<td>Mr R Gaylon Richardson</td>
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<td>Mr Gerald J Kettler, PE</td>
<td>2011</td>
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<td>Stanley Fleischer</td>
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<td>Mr Richard M Rose</td>
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<td>Paul Levy</td>
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<td>Victor Smith</td>
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<td>Adrienne Thomle</td>
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DISTRIBUTION

All Members of TC/TG/MTG/TRG plus the following:

<table>
<thead>
<tr>
<th>TAC SECTION HEAD:</th>
<th>Adrienne Thomle</th>
<th><a href="mailto:adrienne.thomle@honeywell.com">adrienne.thomle@honeywell.com</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>TAC CHAIR:</td>
<td>Walter Grondzik</td>
<td><a href="mailto:gnik@polaris.net">gnik@polaris.net</a></td>
</tr>
<tr>
<td>ALI/PDC LIAISON</td>
<td>Hugh McMillan</td>
<td><a href="mailto:hmcmillan3@cpmcast.net">hmcmillan3@cpmcast.net</a></td>
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<tr>
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<td>Chad Moore</td>
<td><a href="mailto:cmoore@ergms.com">cmoore@ergms.com</a></td>
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<tr>
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<td><a href="mailto:rick.ashrae@gmail.com">rick.ashrae@gmail.com</a></td>
</tr>
<tr>
<td>Manager of Standards</td>
<td>Stephanie Reiniche</td>
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<tr>
<td>Manager of Research &amp; Technology</td>
<td>Mike Vaughn</td>
<td><a href="mailto:morts@ashrae.net">morts@ashrae.net</a></td>
</tr>
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Minutes
TC 7.7 Testing and Balancing
Annual Meeting
Monday, January 20, 2014 (2:15-4:15 PM)
New York Hilton
Mercury Ballroom (H3)
New York NY

1. Call to Order
   Mark Hegberg
   a. Mr. Hegberg called the meeting to order and stated that all members present should verify the roster information and update it as needed on a master copy and guests should provide contact information on a sign in sheet being passed around.
   b. Attendance: 8/12 Voting Members – Quorum Present
   c. Justin Garner was present at the start, but left a few minutes early

2. Introductions
   Mr. Hegberg asked those present to introduce themselves and to identify the organization or company they represented. Those present introduced themselves.

3. Approve minutes of Denver Meeting
   Minutes from the Denver were introduced after a brief discussion a motion to accept them as written was made by Mr. Spevak, Second by Mr. Garner. The motion passed 8-0-0 Chair Voting

4. Recognize Liaisons
   Section Head Adrienne Thomele was in attendance (nothing to report)

5. Discuss issues from TC Breakfast (Attachment will be provided)
   a. Members were asked to review a 15 page ASHRAE ethics document
   b. Committee members were encouraged to identify deserving persons and to submit application for the Hightower that recognizes outstanding technical leadership and contributions on a TC/TG/TRG during the past Society year, excluding research and standards activities. Please go to the Technical Committee page of the ASHRAE website at the following link under the “Procedures and Forms…” heading: http://www.ashrae.org/standards-research--technology/technical-committees
   c. Members were encouraged to check their Bio before each meeting and to click on the save button so the ASHRAE records will indicate they are updated.
   d. ASHRAE wants indication on the sign in sheets for TCs for YEA members
   e. TC 7.7 to post future meeting minute drafts before they are approved so their web page information will be considered up to date by ASHRAE
f. ASHRAE is no longer enforcing balance on TCs but still encourages diversity when possible.

6. Subcommittee Reports
   a. Handbook
      i. Chapter should be ready for a committee vote at the June meeting 2014: 1st a copy will be made available for advanced review by committee members in March; 2nd based on committee input a final version will be provided in APRIL before the meeting in June so members will have time to review it.
      ii. There was an extended explanatory discussion on the simultaneous updates for GPC 11, and Standard 111, The discussion centered on the information contained in the two documents that could fit better in the chapter and the information in the chapter that would be better placed in GPC 11 or Standard 111. All three committees have liaisons and are working to provide document with the information that needs to be covered without overlap or conflicts.

b. Program
   i. The following program tracks for Seattle:
      1. Indoor Environment – Health, Comfort and productivity
      2. Research Summit
      4. HVAC&R Systems & Equipment
      5. HVAC&R Fundamentals and Applications
      6. Standards, Guidelines and Codes
      7. Refrigeration
      8. Installation, Commissioning, Operation, Maintenance of Existing Buildings
      9. Professional Skills
   ii. June 28-July 2, 2015 Seattle Meeting deadlines still active
      Conference Paper Abstract due Jan. 9, 2014
      Technical Paper Final review; Feb 25, 2014
   iii. June 28-July 2, 2015 Atlanta Meeting Deadlines
      Technical Papers Due September 23, 2014
     Forum Proposal; January 6, 2015
   iv. Possible future presentations discussed included:
      • Presentation on a tools based on the handbook and Standard 111
      • Forum on Commissioning requirements being put into code
by some cities.

c. Membership

Mark Hegberg

Mr. Hegberg welcomed guests and requested that any who wished to become members should contact a committee officer and update the required information on their my ASHRAE web account.

d. Research

Frank Spevak

i. RP 1245 is still open pending a presentation required for completion

ii. RTAR 5-1500-Is no longer active

iii. RP-1292 is completed

iv. ASHRAE currently has 62 active Research Projects (RP) with a total value of $10.8 million.

v. Since June 2013 there have been 6 projects completed, 10 new projects approved for funding (7 have been contracted) and 8 TRPs have been released for bid (no project on hold due to funding).

vi. ASHRAE has been averaging between $11-$13 million each year for research.

vii. In NYC RAC evaluated 6 RTARs with 3 being accepted or conditionally accepted, 2 returned and 1 rejected. There were 4 WS evaluated and 2 were accepted or conditionally accepted and the other 2 returned.

viii. There is a potential for 11 TRPs to be ready for bid in Spring 2014.

ix. There are 5 Unsolicited Research Projects under review by RAC and TCs.

x. The Grants-In-Aid program of $10k each, had 64 candidates apply for a grant and 23 were selected. Last year there were 63 applicants and 23 were selected.

xi. The Homer Adams Award to deserving graduate students had 2 applicants and one was selected. The recipient to be announced in February.

xii. The New Investigator Award had 13 researchers nominated this year. (7 were nominated last year) A winner was selected and will be announced in February.

xiii. There were no qualifying nominations for the Service to ASHRAE Award.

xiv. The new shorter RTAR form is now being used and is available online.

xv. Any WS submittals based on conditionally accepted RTARs must include descriptions of how approval conditions are met.

xvi. There was an extensive discussion on the establishment and role of the Proposal Evaluation Subcommittee as well as the contractor selection process. There is an option to pick other than the low
The best value option should show the lowest cost to ASHRAE based on the point rating system, be at least 5 points higher than the low cost proposal, 2/3 of the PES members scored the proposal higher than the low cost proposal and the PES feels justified in the selection and provides a written evaluation. Confidentiality during the evaluation period was also stressed.

e. Journal (No activities to report)

f. Standards

   Fred Lorch
   Mr. Lorch noted that updates for GPC 11 and STD 111 were related to changes in the Handbook Chapter.

   Gaylon Richardson
   Changes in Standard 111 would proceed as discussed during the previous committee discussion and at this time the update was on schedule.

   Tom Schlachter
   Mr. Schlachter reported that the first 1/3 would be released for committee review and the first 2/3 would be available for committee review by the next meeting.

   TBD
   By consensus the committee agreed that 151 should be reaffirmed after the ASHRAE update records are corrected.

g. Education

   Eli Howard
   A request to be Mr. Howard’s request to be removed from this position was noted by Mr. Hegberg.

h. Web master

   Robert Linder
   (No updates at this meeting)

7. Liaison Reports from other TCs or Organizations

   TC 1.2
   ▪ Charles Wright to be replaced by Frank Spevak
   ▪ 41.3 Standard method for Pressure Measurement went out for review and received no comments.
   ▪ The rest of the 41 series are undergoing updating

   TC 1.4
   ▪ Control accuracy for Static pressure measurement was discussed

   TC 5.3
   ▪ Chilled Beam Applications to be released for a 45 day ANSI review

   TC 6.1
   ▪ Status Quo reported

   TC 7.9
   ▪ ICC and DOE are working with TAB certification agencies on the commissioning requirements in the 2012 code and the certification requirements for those qualified to do the work
TC 9.10
Fred Lorch
• An RTAR for work on finding replacement gases for testing hoods is under development

AABC
Gaylon Richardson
• AABC is completing a new standard on Testing and Balancing

NEBB
Andy Nolfo
• Robert J. Linder (Bob) is the new NEBB President

SMACNA
Eli Howard
(No Report)

ACCA
Don Prather
• ACCA is continuing to develop test and balancing training for technicians that supports Standard 111 based measurement practices

TABB
John Hamilton
• TABB issued new certificates to 8000 technicians

8. Old Business
a. Mr. Schlachter to take the lead in developing a special session for Seattle
   i. Mr. kettler How do you read a TAB report
   ii. Mr. Hamilton on LBL Flow Hood Study

9. New Business
a. The requirement for New York City TAB in existing buildings every 10 years was discussed
b. ASHRAE members now have the option of receiving the handbook updates in an online version.
c. NEBB-ACCA-TABB-AABC should all provide information to their members on the need for material (videos, spreadsheets etc.) for use on the ASHRAE TC 7.7 web site

10. Comments:
(none recorded)

11. Adjourn
Motion to adjourn was made by Mr. Spevak, Second by Mr. Kettler and accepted by committee consensus

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NEXT MEETING: Seattle, WA  June 30, 2014 2:15 – 4:15 PM