TC/TG/TRG MINUTES COVER SHEET

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

TC/TG/TRG NO 5.5

TC/TG/TRG TITLE Air to Air Energy Recovery

DATE July 17, 2013

DATE OF MEETING June 25, 2013 LOCATION Denver, CO

<table>
<thead>
<tr>
<th>MEMBERS PRESENT</th>
<th>Chapter Position</th>
<th>YEAR APPD</th>
<th>MEMBERS ABSENT</th>
<th>Chapter Position</th>
<th>YEAR APPTD</th>
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<tbody>
<tr>
<td>Dr. Gregory M Dobbs</td>
<td>Chair / Voting Member</td>
<td>2011</td>
<td>Michael M Ohadi, PhD</td>
<td>Member Non-Quorum</td>
<td>2010</td>
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<tr>
<td>Ronnie R Moffitt</td>
<td>Vice Chair/ Non-Voting Member</td>
<td>2012</td>
<td>Bede Wellford</td>
<td>Member Non-Quorum</td>
<td>2012</td>
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<td>Paul Pieper</td>
<td>Secretary / Voting Member</td>
<td>2012</td>
<td>Carol Marriott</td>
<td>SSPC 189.1 Liaison / Non-Voting</td>
<td>2009</td>
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<td>Dr. Prakash Damshala</td>
<td>Handbook Subc. Chm / Voting Member</td>
<td>2010</td>
<td>G.D. Mathur</td>
<td>Non-Voting Member</td>
<td>2009</td>
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<tr>
<td>Helen Davis</td>
<td>Program Subc Chair / Webmaster / Voting Member</td>
<td>2013</td>
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<tr>
<td>Dr. Bob Besant</td>
<td>Research Subc. Chm./ Voting Member</td>
<td>2009</td>
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<tr>
<td>Matthew Friedlander</td>
<td>Standards Subc. Chm/ Voting Member</td>
<td>2010</td>
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<td>John Diekmann</td>
<td>Voting Member</td>
<td>2010</td>
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<tr>
<td>Drake Erbe</td>
<td>Voting Member / SSPC 90.1 Liaison</td>
<td>2012</td>
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<tr>
<td>Klas C Haglid</td>
<td>TC 7.5 Liaison / Voting Member</td>
<td>2011</td>
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<td>Hoy Bohanon</td>
<td>SSPC 62.1 Liaison / Non-Voting Member</td>
<td>2010</td>
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<tr>
<td>Bert Phillips</td>
<td>Membership Chm./ Non-Voting Member</td>
<td>2007</td>
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</table>

See Attachment for Additional Attendees

DISTRIBUTION

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

TAC Section Head: Giustino Mastro
SH5@ashrae.net

TAC Chair: William McQuade
TACchair@ashrae.net
<table>
<thead>
<tr>
<th>All Committee Liaisons As Shown On TC/TG/TRG Rosters:</th>
<th>Name, Position</th>
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<tbody>
<tr>
<td></td>
<td>Donald Brandt, ALI/PDC</td>
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<td>Robert Laneve, CTTC</td>
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<td>Patrick Marks, Handbook Systems and Equipment</td>
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<td>Piotr Domanski, Research Liaison</td>
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<td>Francis Mills, Special Publications</td>
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<td>Rick Larson, Standards Liaison</td>
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<td>Michael Vauhn, Staff Liaison</td>
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| TC 5.5 Membership | TC0505@ashrae.net |
General

1. Call to Order / Welcome
   Gregory Dobbs calls to Order 15:33 / 3:33 pm.

2. Introduction & Sign up (Current e-Mail & updates)

3. Roll Call
   See attendee list. Attendance: 5 out of 8 voting members present, quorum achieved

4. Paul moves to approve the minutes; seconded by Drake. No discussion. 5-0-0-CNV

5. Chair’s Report (Greg Dobbs) – There is a new item under the ASHRAE Member Profile called the Employment Discipline. There are two items that members will need to update: The first is the Category (which can be Academic, Building Industry, Government Organizations, Manufacturing Industry or Other) and the second is the Discipline in that category (the selection of discipline(s) will vary depending on the category selected. Members are advised to log in and verify their biographical information and fill in their Discipline. This information will most likely be used to ensure that TCs have balanced membership representing different areas of the industry. It was also noted that upcoming meetings would be held in NYC, Seattle, Chicago and Orlando.

Subcommittee Reports

1. Handbook (Prakash Damshala / GD Mathur)
   The chapter for the 2016 Handbook needs to be revised and will need to be voted on in 1.5 years (Chicago). An email will be sent out to the committee with the chapter for comments and revisions within a month after the meeting. The handbook subcommittee and corresponding members with expertise will contribute. References in the chapter, can and will be updated as current references are a little old and out of date.

2. Standard 84 (Matt Friedlander)
   The Standard was about to be published, but Addendum A has gone through public review with no comments and should be processed for publication at this meeting; subsequently the Standard should be ready to be published in July. SSPC members met in the morning on a Pro Forma basis and reviewed the recommendations of TC 5.5 given at the last meeting. The members have decided to follow the recommendations of the committee and will disband. ASHRAE is in the processed of dismantling the SSPC.

   It should be noted that Matt did an exceptional job on the SSPC with the great work and support of additional members on that committee.

3. Website (Helen Davis)
   There has been no major activity on the website. We are looking for members that could step in and update the website. Helen has fallen into the position due to the commitments of her predecessor at AHRI. Mike Vaughn is in charge of TCs and Website. In the interim, John Diekmann has volunteered to help support Helen and Gregory will send out an email to the membership to look for a permanent replacement in Website. A corresponding member with computer expertise could easily support this key role on the committee.

4. Program (Helen Davis)
   Paul provided updates on the ALI Short Course: The course has been well received and expanded from a single 3-hour short course to two (2) 3-hour short courses that covers the fundamentals and best practices of AAERV and design. One or both of the courses has been
featured at each bi-annual ASHRAE meeting and during the Fall and Spring online courses. Attendance has typically been high and the course(s) have some of the highest scores out of all the ALI short courses being presented. The course has also been presented at ASHRAE DL events and for Florida, Light and Power (whom sponsored a one week 3-city tour in Southern Florida)

Paul is looking to do a major update to the Short Course and looking to add additional information (more information on controls are often requested). However, before beginning this work, and due to the evolution of course since inception, Paul will email the two revised short courses to the voting members for review and comments.

Helen reminded the committee of the Program (Pressure Drop Considerations in Air-to-Air Energy Recovery) and Forum (What Are the Challenges for Using Air-to-Air Energy Recovery for Commercial Kitchen Ventilation (CKV) and 90.1 Compliance?) that TC 5.5 is sponsoring and co-sponsoring respectively.

Helen provided details from the subcommittee meeting with potential topics. After a brief discussion, Gregory Dobbs indicated that a successful procedure used in the past by other committees was to use interim online meetings at prescheduled dates (between in-person meetings). This would allow the Program sub-committee to work more effectively and recommend following this procedure moving forward.

Helen will meet with the education committee of SSPC 62.1 on Laboratory Exhaust to develop a future program and will provide an interim report.

Mike Scofield from TC 9.9 Mission Critical is looking for co-sponsorship on “Novel New Heat Rejection Technologies for Data Centers”. Helen is looking for a detailed description and will provide one to voting members and members of the subcommittee, but in the meantime, Paul moves to cosponsor; Helen seconded.

Programs are getting selected; tracks are already published. Helen will direct Program to one of the tracks in the future before the August 12th deadline. Helen will call an online sub-committee meeting immediately following this meeting to select the Program. The sub-committee meeting to be held on July 3rd at 10AM; to clarify the Program sub-committee is Drake, Ronnie, John D., Paul P. and Hoy B.

5. Research (Bob Besant)
Bob is not present, but no there has been no significant movement on research. Blake Erb and Tom Rice have volunteered to be on the research sub-committee. Program and Research will review the Forum notes to drive future activities. Mat feels that it would be useful to ensure that someone with significant experience in research on a professional basis should be involved. Cary Simonson is a good potential candidate and Blake Erb will follow-up with him.

John D. presented updates on 1565-RP Development of the ASHRAE Design Guide for Dedicated Outdoor-Air Systems; Paul read the following statement from the Project Monitoring Subcommittee (PMS) Status Report, which was prepared for the co-sponsoring TCs (1.12, 5.5 and 8.12):

- The project officially began in September 2012.
- The PMS approved a proposed table of contents in January 2013.
- Drafts of two chapters were distributed for PMS review on 22 February 2013, and another two chapters were distributed for review on 19 April 2013.
- During these reviews, PMS members expressed concern about whether the contractor (University of Nebraska) would actually be capable of completing this book to the level required by the work statement.
• On 8 May 2013, two members of the PMS shared these specific concerns with the contractor during a conference call. After discussion with her team, the contractor called the PMS chair on 14 May 2003 to outline her plan for corrective action.  
• On 16 May 2013, the PMS met via conference call to discuss members’ concerns and review the corrective action plan proposed by the contractor. After discussion, the PMS voted unanimously (8-0-0-1-CV) to terminate the contract with University of Nebraska.  
• Via e-mail ballot (dated 20 May 2013), the cognizant TC 8.10 unanimously approved (9-0-0-0-CV) the PMS’ recommendation to terminate the contract, and a letter of termination was mailed by ASHRAE HQ staff on 22 May 2013.

Next steps:  
• The PMS has requested that RAC release this project for bid again in the Fall of 2013  
• On 18 June 2013, the PMS met via conference call to review and clarify the work statement, with the goal of increasing the likelihood of a successful re-bid.

6. Membership (Bert Phillips)  
No Updates.

Liaison Reports
1. SSPC 189.1 (Carol Marriott)  
189.1 is not touching ERV at this point, but there is some activity on 90.1

2. SSPC 90.1 (Drake Erbe)  
Updates on Addendum BT + CY: BT is the extension of 10% OA to the Table 6.5.6.1 and removing the 5000-cfm requirement for the Pacific Northwest. There was one (1) commenter that was unresolved and concerned with applications that are greater than 8000 hours, to which addendum CY has addressed, creating additional tables (i.e. Tables 6.5.6.1 a and 6.5.6.1 b). These changes are all cost-justified with energy recovery as low as 10% O/A and up to 8000 hours.

Both addenda will go in the 2013 standard, and subsequently to the IECC and should be approved quickly. Additional work will be done on the energy recovery section (i.e. energy recovery with VAV, etc) and looking to creating a Working Group in the mechanical subcommittee (with Mat and Ronnie) to address Fan Power Limitations and Applications.

Also, Drake has recently been appointed Chair of ISO TC 86. Looking to a holistic approach to the building and guideline V is being used by a systems workgroup. Looking at the best approach to position ourselves in the market with respect to applications and best practices.

3. Standard 62.1 (Hoy Bohannon)  
The 2013 publication will have updates incorporating recirculation for wheels in laboratories for laboratory exhaust (i.e. Addendum K). The class of air for the laboratory exhaust hood “shall be class 4 unless determined otherwise by the responsible Environmental Health and Safety Department Professional.” This puts the onus on managing through administrative controls; the professional would be responsible for any cross-contamination and would need to do a risk assessment on a case-by-case basis.

Additionally, 62.2 are looking to TC 5.5 for a representative to help with the increased ventilation rates.
4. **TC 7.8 (Klas Haglid)**  
   Nothing to report.

**Other Old Business**

TAC says we should have objectives; waiting for new strategic plan and ASHRAE is looking for reviewers with committee participation (looking to cognizant TCs for reviewers).

**New Business**

No New Business

Drake moves to adjourn with Mat F seconds. **5-0-0-CNV**.