TC/TG/TRG MINUTES COVER SHEET

TC/TG/TRG NO.: TC 9.01 ISSUE DATE: June 26, 2016

TC/TG/TRG TITLE: Large Building Air-Conditioning Systems

DATE OF MEETING: January 16, 2016 LOCATION: Orlando, FL

<table>
<thead>
<tr>
<th>MEMBERS PRESENT</th>
<th>TERM END</th>
<th>MEMBERS ABSENT</th>
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<th>ADDITIONAL ATTENDANCE</th>
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<tbody>
<tr>
<td>John Vucci</td>
<td>2017</td>
<td>Jeff Traylor</td>
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<td>Chair</td>
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<td>Kelley Cramm</td>
<td>2018</td>
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<td>Alonzo Blalock</td>
<td>2017</td>
<td>Ken Gill</td>
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<td>Vice-Chair</td>
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<td>John Molinar</td>
<td>2019</td>
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<td>Steve Duda, Research/Honors and Awards Sub-C Chair</td>
<td>2016</td>
<td>Steve Nicklas</td>
<td>2018</td>
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<td>Charles Henck, Standards Sub-C Chair</td>
<td>2018</td>
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<td>Phil Trafton</td>
<td>2019</td>
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<td>Doug Cochrane</td>
<td>2018</td>
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<td>R.Lee Millies, Jr</td>
<td>2017</td>
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<td>Rachel Romero</td>
<td>2019</td>
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<td>Lynn Werman</td>
<td>2018</td>
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<td>Corresponding Members:</td>
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<td>Jay Eldridge, Sec./</td>
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<td>Webmaster</td>
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<td>John L Kuempel Jr,</td>
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<td>Program Sub-C Chair</td>
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<td>Philip Johnson</td>
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<td>Mark Pavol</td>
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<td>Harris Sheinman</td>
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<td>Dennis Wessel</td>
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<td>Liaisons / Staff / Ex-Officio Members:</td>
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<td>Krishnan Gowri</td>
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<td>Section Head</td>
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<td>Guests:</td>
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<td>Bill Artis</td>
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DISTRIBUTION

ALL MEMBERS OF TC/TG/TRG

TAC COMMITTEE CHAIR: Thomas M Lawrence (NP) TAC SECTION HEAD: Dr. Krishnan Gowri (NP)

LIAISONS:

Handbook: Nicolas Lemire (NP) Research Liaison: Jeff Gatlin (NP)
ALI/Professional Development Liaison: Cameron Labunski (NP) CTTC Liaison: Michael Heinrich (NP)
Research: Jeff Gatlin (NP) Standards Liaison: Niles Bidstrup (NP)
Staff Liaison /Technical Services: Michael Vaughn (NP)

** NP Not Present
Call to Order
Chair John Vucci called the meeting to order at 1:00 PM local time,

Introduction of Members And Guests
Self-introductions of members and guests were made around the room as the attendance roster was circulated. The Chair welcomed all members and visitors. A quorum was achieved.

Voting Members: 9 Present, 5 Absent, Quorum was achieved
Voting Non-Quorum Members: 1 Present
Corresponding Members: 6 Present
Society Liaisons: 1 Present
Staff Liaisons: 0 Present
Guests: 1 Present

Note: Voting Non-Quorum members are voting members if present, but do not count against quorum if absent.

Minutes from Chicago were reviewed
a. Atlanta Minutes - Millies made a motion and Duda second – 7/0/0 CNV motion passed
b. Agenda for the meeting was reviewed on a projection screen

Agenda Comments / Updates (Vucci)
No Additions to Agenda requested.

Chair’s Comments and Section 9 Report (Vucci)
John Vucci reviewed the TC 9.01 mission statement and the ASHRAE code of Ethics.

b) TC 9.1 is the cognizant or co-cognizant committee for Guidelines and Standards;
   a. Guideline 0 – The Commissioning Process
   b. Guideline 16 – Selecting Outdoor, Return and Relief Dampers for Air-side Economizer Systems
   c. Guideline 22 – Instrumentation for monitoring central chilled water Plant Efficiency

c) TC 9.1 is the responsible committee for the development of Handbook Chapters;
   a. Chapter 1 – HVAC Analysis & Selection
   b. Chapter 2 – Decentralized Heating & Cooling
   c. Chapter 3 – Central Heating & Cooling Plants
ASHRAE Liaison Reports

d) Section 9 Head (Gowrey) – Christian Gowrey gave a short introduction and update to the TC.
e) Handbook liaison was at the handbook subcommittee meeting.

TC 9.01 Subcommittee Reports

Program Subcommittee (Kuempel):

a. Resubmit seminar for AHRI std1350 for AHUs for St Louis meetings – AHRI groping
b. Announced that TC 9.01 has a Design-build preso (seminar 57) today after the meeting.
c. Guideline 22 – for Las Vegas – Co-sponsor with TC 8.2
d. Al Blalock – Working on a seminar for St Louis – 23 story building
e. The committee voted to approve the above programs. Motion Millies/Duda – 8/0/CNV

Handbook Subcommittee (McKew / Sheinman):

f. Harris Sheinman presented an overview for handbook chapter revisions to the committee and reviewed the schedule requirements. The presentation slides are attached at the end of the minutes.
g. McKew already has comments for the five chapters
h. The Authors and Reviewers Guide (ARG) will be emailed out to the reviewers
i. Harris does not have all of the chapters yet, but they are not the “official” versions. Harris says that they are close.
j. The committee approved the following primary and secondary reviewers for the five chapters.
   Chapter 1 to 5 for completion publication 2019 – Reviewers Primary / Secondary
   Chapter 1 – HVAC Analysis & Selection McKew / Trafton / Bill Artis
   Chapter 2 – Decentralized Heating & Cooling Charlie Henk / John Kuempel
   Chapter 3 – Central Heating & Cooling Plants Jay Eldridge / Dennis Wessel
   Chapter 4 - Air Handling & Distribution Steve Duda / Doug Cochran
   Chapter 5 – In Room Terminals Co-written by FC TC / Phil Trafton

Standards (Henck):

k. Guideline 22 – GPC will move away from Wednesday meeting and should be able to get a two hour slot on Tuesday AM. That time was held by SPC-184

Research Subcommittee (Duda): – Report attached

Membership: No report
Honors and Awards (Duda):

Steve Duda to receive the George Hightower Award for 2016 at the Orlando 2016 meetings on January 26, 2016 in the TC 4.3 meeting.

Web Master (Eldridge):

1. New TC 9.1 Website developed (https://tc0901.ashraetcs.org) for all TC’s by ASHRAE. The new web site was demonstrated.

Notes from Chair’s Breakfast (Vucci):

m. Deadlines for St Louis - Seminars Feb 8, uploads June 6
n. CEC information is available at the CEC webpage

Old Business: None

New Business

Phil Johnson discussed the ASHRAE 2005 Equipment Service life information. Data is being updated, but certain equipment like chillers are not keeping up. Should training be given, and should more research be done?

- The data can be searched by members. Entering the data can be difficult, and the contractors and owners may not see the benefits of entering the data.
- Machines are often operating beyond typical lives with proper PM.
- Some corresponding members are with the USAF that might be interested.

TC/PC Liaison Reports

- TC 4.03 – Ventilation & Filtration (S. Duda)
  - RP 1635- Separation of inlet and discharge openings. It will look at fans, outlets, winds, speeds, etc. in order to give separation distance. It is complete and in the bookstore.
  - RP 1450 Transport of contaminants in garages. In process
- SSRC-202 Commissioning Process for Building & Systems (Blalock) – This committee will be the head for all commissioning guidelines. Sub-committees cover all of the details. DOE has released descriptions for different work activities and certifications for them. They must be certified for work on Federal projects. 2017 is the estimated date for when this will come in to play.
- TC 5.1 – Fans (Eldridge) No major changes
- TC 5.06 – Control & Smoke (P Trafton) No Report
- TC 6.01 – Hydronic and Steam Heating Equipment and Systems (K. Cramm) No report
• TC 7.01 Integrated Building Design – The TC is looking to see how much this is used. They are putting together a forum to see what the society thinks
• TC 7.09 – Building Commissioning (Blalock) - Nothing different
• TC 8.07 - Variable Refrigerant Flow (J. Vucci) - Discussing the VRF Design Guide with ASHRAE.
• TC 9.06 – Healthcare (J. Traylor) No Report
• TC 9.08 – Large Building Applications (Kuempel)
• TC 9.09 Mission Critical - Mark Pavol - Standard 90.4 is working to define what will a data center includes. It is tough based on the vastly different ASHRAE development times required vs the data center equipment life cycles. They opened up the operating ranges for temperatures and moisture levels. There are some issues with the plug connections.
• TC 9.10 – Laboratory Systems (Kuempel) working to create something similar to the BNBL (design chemical hazard level) They are deciding weather to include the ACHs
• TC 9.12 – Tall Buildings (Wessel) – Design guide is selling well. URP is developing a natural ventilation design guide.
• SSPC 15 Mechanical Refrigeration Safety (Vucci) – Had Addendum D out for public review pertaining to Class 2L refrigerants. A working group is going through public review comments by the St Louis meeting. A complete re-write of the standard is in process to make it easier to use. Expecting to have it for review by the STL meeting.
• SPC 188 Legionella in HVAC (Milles) – Lots of attention because of NYC. They have generated an ALI program that was well attended. Guideline 12 by March for STL approval

For the Good and Well Being…

Adjournment at 3:30 PM

I. Attachments:

   a) TC 9.01 Honors & Award Report
   b) Research Report

End of Minutes

Respectfully submitted by:

Jay Eldridge, Secretary