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

**TC/TG/TRG NO.:** TC 9.01  
**ISSUE DATE:** September 20, 2013

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

**DATE OF MEETING:** June 25, 2013  
**LOCATION:** Denver, CO

<table>
<thead>
<tr>
<th>MEMBERS PRESENT</th>
<th>TERM END</th>
<th>MEMBERS ABSENT</th>
<th>TERM END</th>
<th>ADDITIONAL ATTENDANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelley Cramm, Chair</td>
<td>6/30/2013</td>
<td>Warren Hahn,</td>
<td>6/30/2013</td>
<td>Corresponding Members:</td>
</tr>
<tr>
<td>John L Kuempel Jr, Vice Chair</td>
<td>6/30/2014</td>
<td>Publication Liaison</td>
<td></td>
<td>Alonzo Blalock</td>
</tr>
<tr>
<td>Howie McKew, Secretary</td>
<td>6/30/2015</td>
<td>Quinn Hart, Member</td>
<td></td>
<td>Steve Nicklas</td>
</tr>
<tr>
<td>Bill Klock, Research Sub-C Chair</td>
<td>6/30/2015</td>
<td>Gene R Strehlow</td>
<td></td>
<td>R.Lee Millies, Jr.</td>
</tr>
<tr>
<td>Charlie Henck, Standards Sub-C Chair</td>
<td>6/30/2013</td>
<td>ALI/PDC Coordinator</td>
<td></td>
<td>Kasey Worthington</td>
</tr>
<tr>
<td>Steve Duda</td>
<td>6/30/2015</td>
<td>Phil Trafton, Non-Quorum Member</td>
<td>6/30/2014</td>
<td>Gareth Nelson</td>
</tr>
<tr>
<td>Mark Fly, Web Master</td>
<td>6/30/2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lynn Werman, Membership Sub-C Chair</td>
<td>6/30/2013</td>
<td></td>
<td></td>
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<tr>
<td>Doug Cochrane, Member</td>
<td>6/30/2013</td>
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<tr>
<td>Jay Eldridge, Member</td>
<td>6/30/2015</td>
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<tr>
<td>John I Vucci, Member</td>
<td>6/30/2015</td>
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</tr>
<tr>
<td>Jeff Traylor, Member</td>
<td>6/30/2016</td>
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<td></td>
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<tr>
<td>Hollace Bailey, Member</td>
<td>6/30/2013</td>
<td></td>
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<tr>
<td>Ken Gill, Member</td>
<td>6/30/2016</td>
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</tbody>
</table>

**DISTRIBUTION**

**ALL MEMBERS OF TC/TG/TRG**

**TAC COMMITTEE CHAIR:** Charles Culp  
**TAC SECTION HEAD:** Thomas M Lawerence

**LIAISONS:**

- CEC Liaison: Dennis Wessel (NP)
- Publications Liaison: Warren Hahn (NP)
- Special Pubs Liaison: Francis Mills (NP)
- Handbook (Section Head): Thomas M Lawrence (NP)
- Research Liaison: Carl Huber (NP)
- Professional Development Liaison: Don Brandt (NP)
- CTTC Liaison: Jay Cederberg (NP)
- Staff Liaison/Research/Technical Services: Michael R Vaughn (NP)
- Manager of Standards Liaison: Stephanie Reiniche (NP)
- Standards Liaison: Cecily M Grzywacz (NP)

**NP Not Present**

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ASHRAE TC/TG/TRG ACTIVITIES SHEET

ISSUE DATE: May 23, 2013

TC/TG/TRG NO.: T.C. 9.01 TC/TG/TRG TITLE: Large Building Air-Conditioning Systems

CHAIR: Kelley Cramm VICE-CHAIR: John Kuempel Jr SECRETARY: Howie McKew

TC/TG/TRG MEETING SCHEDULE

<table>
<thead>
<tr>
<th>Location - Past 48 Months</th>
<th>Date</th>
<th>Location - Planned Next 36 Months</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Las Vegas, NV</td>
<td>2.01.2011</td>
<td>Chicago, IL</td>
<td>1.24.2015</td>
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<tr>
<td>Montreal, PQ (Canada)</td>
<td>6.28.2011</td>
<td>Atlanta, GA</td>
<td>6.27.2015</td>
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<td>Dallas, TX</td>
<td>1.26.2013</td>
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<tr>
<td>Denver, CO</td>
<td>6.22.2013</td>
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TC/TG/TRG SUBCOMMITTEES

<table>
<thead>
<tr>
<th>Function</th>
<th>Subcommittee Chair</th>
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</thead>
<tbody>
<tr>
<td>ALI/PDC Coordinator</td>
<td>Gene Strehlow</td>
</tr>
<tr>
<td>Handbook</td>
<td>Howard McKew</td>
</tr>
<tr>
<td>Honors and Awards</td>
<td>Steve Duda</td>
</tr>
<tr>
<td>Membership</td>
<td>Lynn Werman</td>
</tr>
<tr>
<td>Programs</td>
<td>John Kuempel</td>
</tr>
<tr>
<td>Publications</td>
<td>Warren Hahn</td>
</tr>
<tr>
<td>Standards</td>
<td>Charlie Henck</td>
</tr>
<tr>
<td>Research</td>
<td>William Klock</td>
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<tr>
<td>Standards Issues</td>
<td>No Assignment</td>
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<tr>
<td>Webmaster</td>
<td>Mark Fly</td>
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RESEARCH PROJECTS – CURRENT

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Contractor</th>
<th>Monitoring Comm. Chairperson</th>
<th>Report Made At Mtg.</th>
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<tbody>
<tr>
<td>NONE</td>
<td></td>
<td></td>
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LONG RANGE RESEARCH PLAN

<table>
<thead>
<tr>
<th>Rank</th>
<th>Title</th>
<th>W/S Written</th>
<th>Approved</th>
<th>To RAC</th>
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<tbody>
<tr>
<td>1684</td>
<td>RTAR: Dispersion of Refrigerant to Connecting Spaces via Transfer Openings</td>
<td>Under development</td>
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</table>

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**ASHRAE TC/TG/TRG ACTIVITIES SHEET (continued)**

### HANDBOOK RESPONSIBILITIES

<table>
<thead>
<tr>
<th>Year &amp; Volume</th>
<th>Chapter Title</th>
<th>Chapter No</th>
<th>Reviser &amp; Mentor-Reviser</th>
<th>Reviewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 Systems &amp; Equip</td>
<td>HVAC System Analysis and Selection</td>
<td>1</td>
<td>Mark Fly/Kasey Worthington</td>
<td>/</td>
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<tr>
<td>2016 Systems &amp; Equip</td>
<td>Decentralized Cooling and Heating</td>
<td>2</td>
<td>Gene Strehlow/Steve Nicklas</td>
<td>John V/</td>
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<tr>
<td>2016 Systems &amp; Equip</td>
<td>Centralized Cooling and Heating</td>
<td>3</td>
<td>Steve Duda/ Dan Leath</td>
<td>/</td>
</tr>
<tr>
<td>2016 Systems &amp; Equip</td>
<td>Air-Handling and Distribution</td>
<td>4</td>
<td>Lynn Werman/ Rachel R</td>
<td>Andrew W/</td>
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<tr>
<td>2016 Systems &amp; Equip</td>
<td>In-Room Units and Distribution</td>
<td>5</td>
<td>Bill Klock/Robby Tefft</td>
<td>/</td>
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</table>

### STANDARDS ACTIVITIES - List and Describe Subjects

- **STD 15-2004 Safety Standard for Refrigeration Systems** – Continuous Maintenance, Cognizant TC is 9.01, Steve Duda is liaison.
- **Guideline 0-2005 The Commissioning Process** – TC 9.01 is co-cognizant.
- **Guideline 22—2008 Instrumentation for Monitoring Central Chilled-Water Plant Efficiency** – Cognizant TC is 9.01

### TECHNICAL PAPERS from Sponsored Research – Title, when presented (past 3 yrs. present & planned)

1. None.

### TC/TG SPONSORED TRANSACTION SESSIONS – Title, when presented (past 3 yrs. present & planned) & Chair


### TC SPONSORED SEMINARS – Title, when presented (past 3 years, present, & planned) & Chair; Speaker, Speaker, Speaker

5. When Integrated Controls Are Not Integrated (2012 Summer-San Antonio) Cramm; Rimmer, McKew, & Conlan
7. Hydraulic Modeling (2013 Winter-Dallas TX) Klock; Simmons & Stinson

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January 2014
<table>
<thead>
<tr>
<th>TC/TG SPONSORED FORUMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. None.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>JOURNAL PUBLICATIONS</th>
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</thead>
<tbody>
<tr>
<td>1. No publication articles between June 2012 and January 2013 by TC 9.01 Members</td>
</tr>
</tbody>
</table>
TC 9.01 Large Building Air-Conditioning Systems

Meeting Minutes

Meeting Date: June 25, 2013
Denver, CO

I. Call to Order

a) Chair Kelley Cramm called the meeting to order at 1:00 PM local time,

II. Introduction of Members And Guests

a) Self-introductions of members and guests were made around the table as the attendance roster was circulated. Chair welcomed all members and visitors. A quorum was verified.

<table>
<thead>
<tr>
<th>Category</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voting Members</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Voting Non-Quorum Members</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Corresponding Members</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Society Liaisons</td>
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<td></td>
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<tr>
<td>Staff Liaisons</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Guests</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

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

III. Minutes from Dallas Texas Winter Meeting 2012

a) Jeff T moved that the meeting minutes be approved and Mark F seconded.

b) Motion carried 12-0-0-0-0

Secretary’s Note: All votes recorded herein are formatted as (Aye-Nay-Abstain-Chair not voting-Absent).

IV. Agenda Comments / Updates (K. Cramm)

a) No Additions to Agenda requested.

V. Chair’s Comments and Section 9 Report (K. Cramm)

a) Kelley and John K attended section meeting.

b) Roster update has been distributed.

c) A discussion occurred about multi-disciplined technical groups

d) TAC had presentation on “talking to your local Chapter” as to what TC’s do

e) Request that Bio’s be updated on the ASHRAE web site.

f) It was recommended that TC’s have balanced skills within the group (e.g., design engineers, facility engineers, etc.)

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January 2014
VI. ASHRAE Liaison Reports

a) None Present

TC 9.01 Subcommittee Reports

a) Membership (Werman): Lynn could not attend the meeting so Kelley C noted there are 17 voting members and 1 non-quorum member with Rodney Lewis retiring as an ASHRAE participant. Kelley sent out an email to all corresponding members asking if they want to continue to be a corresponding member and if “no response” the name(s) would be removed from the roster. Effective July 1st, 2013, the TC 9.1 Members and Corresponding Members are as follows:

- 7-rolling off to Corresponding Members: K. Cramm, W. Klock, C. Henck, W. Hahn, L Werman, M. Fly, H. Bailey, & D. Cochrane,
- Joining as Voting Members: R.L. Millies & A. Blalock
- Steve Nicklas will become secretary July 1st

b) Handbook (McKew): 2016 Systems and Equipment Handbook revision has started and all 5-chapters have Revisers. Howie to schedule a conference call with the 5-Revisers before the winter conference.

Standards (Henck): Guideline 16 had been approved

c) Research (Klock):

- There is money available for research projects
- RTAR-1684 - “Dispersion of Refrigerant Releases to Connecting Spaces via Transfer Openings” update was provided by Steve D. and noted that TC 9.1 is the lead sponsor for the research.

d) Program (Kuempel): Jay Eldridge is taking over the Program Subcommittee Chair from John Kuempel.

- TC should consider proposing a seminar for New York City “How to Certify a Building” and the title was Moved by John K and seconded by Ken G. Motion carried 14-0-0-0-3.
- Seminars should be considered for Seattle annual meeting

e) Professional Development (G. Strehlow): Gene was not available to attend so Kelly provided an update

- Lots of courses are available with 6-full day courses and 16 half day courses

f) Honors & Awards (Duda):

g) Honors & Awards report was issued addressing each award, due date, and latest candidates. Publications (Hahn): Warren was not available to attend

h) Website Report (M. Fly):

- Steve Nicklas to take over web site
- Kelley to send the latest roster to Steve to post.

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January 2014
VII. TC/PC Liaison Reports

a) TC 1.12 – Moisture Management (H. Bailey) No new news. Very limited activities
b) TC 4.03 – Ventilation & Filtration (S. Duda) will report back after TC 4.03 meets
c) TC 5.06 – Control & Smoke (P Trafton) No new news.
d) TC 6.01 – Hydronic and Steam Heating Equipment and Systems (K. Cramm) There is a proposed code change for hydronic systems.
e) TC 6.02 - District Energy ( ) No news.
f) TC 7.05 – Smart Building Systems (G. Strehlow) No new news.
g) TC 7.07 - Testing & Balancing (H. Brickman) No new news.
h) TC 7.09 – Building Commissioning (J. Traylor) Standard 202 Standard for Commissioning is now an official document. Federal standards want commissioning and so those referencing federal standards will require commissioning.
i) TC 8.07 - Variable Refrigerant Flow (S. Duda) Addressed by Steve D earlier.
j) TC 9.06 – Healthcare (J. Traylor) No new news.
k) TC 9.08 – Large Building Applications (S Nicklas) Possible forum to determine any missing applications.
m) TC 9.10 – Laboratory Systems (K. Cramm) TC is addressing certifying ASHRAE 110 with agent tracer gas being phased out
n) TC 9.12 – Tall Buildings (L. Werman) Tall Building design guide is being revised.
o) SSPC 62- Indoor Air Quality (Open) No report
p) SSPC 15 Mechanical Refrigeration Safety (Duda) TC is looking to rewrite SSPC 15 without changing the technical content.
q) TG-2- HVAC Security (McKew) No new news.
r) TRG-7 Under-Floor Air (D.Wessel) A new design guide is in the ASHRAE library.

VIII. Old Business

a) Group should consider having subcommittee meetings via conference calls before the next meeting. The ASHRAE point-person to coordinate conference calls is Mike Vaughn.

IX. New Business

a) TC e-meeting can be helpful for smaller TC’s.
X. Adjournment

a) Next Meeting: Tuesday, January 21, 2014 at 1:00 pm EST in New York City, NY
b) Meeting adjourned at 3:30 PM. Moved by John Kuempel and seconded by Jeff Traylor.

XI. Attachments:
   a) TC 9.01 Honors & Award Report
   b) ASHRAE Notes

End of Minutes

Respectfully submitted by:

Howard McKew, Secretary
SUMMARY OF MOTIONS:

Secretary’s Note: All votes recorded herein are formatted as Aye-Nay-Abstain-Chair Not Voting-Absent.

Motion: Jeff Traylor
Second: Mark Fly
Text: Approve the Dallas Meeting Minutes.
Vote: Motion Carried 12-0-0-0-0

Motion: John Kuempel
Second: Ken Gill
Text: Proposed Seminar for NYC: How to Certify a Building
Vote: Motion carried 14-0-0-0-0.