



ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers Inc.

1791 Tullie Circle, NE • Atlanta, Georgia 30329-2305 ☎ 404-636-8400 • Fax 404-321-5478

TC/TG/TRG MINUTES COVER SHEET

TC/TG/TRG NO.: TC 9.01 ISSUE DATE: Jan. 21, 2018

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

DATE OF MEETING: June 27, 2017 LOCATION: Long Beach, CA

MEMBERS PRESENT	TERM END	MEMBERS ABSENT	TERM END	ADDITIONAL ATTENDANCE
John Vucci Chair	2017	Lynn Werman	2018	<u>Corresponding Members:</u> Jay Eldridge, Sec./ Webmaster John L Kuempel Jr, Program Sub-C Chair Mark Pavol Dennis Wessel Bill Artis Andrew Welch <u>Liaisons / Staff / Ex- Officio Members:</u> Krishnan Gowri Section Head <u>Guests:</u> Anthony York Thomas Conn
Alonzo Blalock Vice-Chair	2017			
Steve Duda, Research/Honors and Awards Sub-C Chair	2016			
Charles Henck, Standards Sub-C Chair	2018			
Phil Trafton	2019			
Doug Cochrane	2018			
R.Lee Millies, Jr	2017			
Rachel Romero	2019			
Kelley Cramm	2018			
R. Lee Millies, Jr	2017			
Dennis Wessel	2020			
John Molinar	2019			

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

TAC Section Head: Dr Krishnan Gowri kgowri@mail.ashrae.org

Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards,ALI, etc.)

Mr Michael R Vaughn PE, Manager Of Research & Technical Services MORTS@ashrae.net

Mr Michael S Heinrich CTTC Chair michael.heinrich@westplainsengineering.com



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TC 9.01 Large Building Air-Conditioning Systems
Meeting Minutes

Meeting Date: June 27, 2017
Long Beach, CA

Call to Order

Chair John Vucci called the meeting to order at 1:00 PM local time,

Welcome and 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:	12 Present, 1 Absent, Quorum was achieved
Voting Non-Quorum Members:	1 Present
Corresponding Members:	6 Present
Society Liaisons:	1 Present
Staff Liaisons:	0 Present
Guests:	2 Present

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

ASHRAE Code of Ethics: The chair reviewed the Code of Ethics

In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests. (See full Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>.)

Minutes from Las Vegas 2017 meeting were reviewed

- a) Atlanta Minutes - Trafton made a motion and Romero second – 8/0/1 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)

- a) ASHRAE is looking for Peer reviewers
- b) Need to confirm John Molinar is OK for secretary? – John will have a conflict with another TC. Need change by July 8 to avoid emergency roster change.
- c) Charlie Henck agreed to cover the secretary position only, but is not interested in the office progression of vice-chair and chair. Steve Duda and Drew Welch are interested in coming on as voting members. Trafton does not need to be non-quorum. He will be at the meetings.



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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
- d. Chapter 4 - Air Handling & Distribution
- e. Chapter 5 – In Room Terminals

ASHRAE Liaison Reports

b) Section 9 Head (Gowrey) – Christian Gowrey gave a short introduction and update to the TC.

- a. Thanks to John Vucci for service as Chair. Committee is doing well.
- b. TC attendees can now request a badge for identification without registering for the conference.

Discussion: Rachel Romero asked if we should we try some webinars for the sub-committees as a start to try out meetings before we decide to do them officially? John Kuempel felt that there was a lot of benefit in the face-to-face meeting.

- i. A tentative date was selected: Programs – Research – Handbook. Oct 24, 1:00-3:00 PM EDT

c) Handbook liaison was at the handbook subcommittee meeting.

d) Society (e.g., TAC, Standards, Research, Handbook)

- a. Roster is going to online for updates instead of the Excel sheets.
- b. Email aliases are now set up for all positions. The lists are on the web site. They are automatically updated from the roster information.
- c. TC MOP (Manual of Procedures) was significantly updated. Get the new version from the web.

TC 9.01 Subcommittee Reports

a. **Programs** (Kuempel)

- i. Future Meetings: Chicago, Houston, Atlanta
- ii. Two seminars ready for Chicago – Best of Engineers Notebook II, Guideline 22 Forum. (Vucci, Kuempel moderators)
- iii. Houston – Case studies AB Blalock: High rise example, Phil Trafton: Hot humid residential designs. Duda: Co-worker can help present, Cramm: Possible KC Historical conversion to condos.
- iv. Future – Why not turn off AC when the building is occupied?

b. **Honors and awards** (Duda)

c. **Membership / Upcoming Roster Revisions** (Vucci)



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d. Standards (Henck)

- i. **Guideline 22:** Now will include other chiller types and power sources. Instrumentation is much different now than 10-years ago. 2020 rough schedule.
- ii. Looking for a case study. Kent Peterson?
- iii. Will also have a forum in Chicago to gather more input from the members.
- iv. ASHRAE Standard 16-2014 Reaffirmation or update – Completed vote at last meeting

e. Handbook Subcommittee (McKew): (Need to vote by Jan 2019)

- i. Chapter 1 to 5 for completion publication 2019 – Reviewers Primary / Secondary
 - Chap 1 – HVAC Analysis & Selection McKew / Trafton / Bill Artis
 - Chap 2 – Decentralized Heat & Cool Charlie Henck / John Kuempel
 - Chap 3 – Central Heat & Cool Plants Jay Eldridge / Dennis Wessel
 - Chap 4 - Air Handling & Distribution Steve Duda/ Doug Cochran
 - Chap 5 – In Room Terminals Co-written by FC TC / Phil Trafton

f. Reviewers & Comments from Howie McKew email on 6/24

- i. Thomas Conn – offered Reviewer for Chapter 1
 - ii. Additions for VRF to chapter 2?
 - iii. Chapter 3 – See Howie’s comments (6/24 email)
 - iv. Chapter 4 – AHU’s – Can be ready for Jan 2018 review? Add single zone VAV.
 - v. Trafton – Get 3 reviewers by the winter meeting. Re-flow (1,2,3 vs A,B,C, etc) Add chilled beams? Consult TC 5.3 (Room air conditioning)
- g. John Vucci agreed to help Howie with the handbook details in the TC since Harris cannot continue.

2. Research Subcommittee Breakfast Report. (Duda)

- a. Steve will send report
- b. Previously Standard 15 was going to research adjoining spaces and refrigerant leaks. The standard voted it down. Standard 15 is vague on what constitutes an opening. There is rumored to be more research coming from the industry side. The new refrigerant research may also address this?

3. Professional Development Committee (Henck)

- a. New class - Consulting engineer essentials – Wessel put it together

4. Publications

- i. Air Conditioning Design Manual –updates to the 2007 edition – (Wessel)
- ii. Howard McKew is interested and Walter G. may assist.



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iii. Straw vote passed – 9/0 CV

5. Website (Eldridge)

- a. There is not a member's only page option on the web page. Base camp is the best way to cover those items.

Notes from Chair's Breakfast (Vucci):

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

Old Business: None

New Business: None

TC/PC Liaison Reports

- TC 4.03 – Ventilation & Filtration (S. Duda)
 - RP 1635- Separation of inlet and discharge openings.
 - RP 1450 Transport of contaminants in garages.
- Standard 202 Commissioning Process for Buildings and Systems (Blalock) Will be changing to SSPC-300 and it will be the highest committee for all commissioning documents. Standard will still have the 202 number. Agent and authority will change to CxP. Modification to standard 189 – CG amendment – It substantially changes the language for the commissioning person to ensure independence of the staff.
- TC 5.1 – Fans (Eldridge) - 90.1 has requested the 90.1 Mechanical Sub-committee recommend a better way for measuring and regulating fan efficiency. A working group has been put together to look at wire to air measurements.
- TC 5.06 – Control & Smoke (P Trafton) - Had a couple of seminars
- TC 7.01 Integrated Building Design (Romero) – Looking for members. Monday AM meeting time. Working on programs. No contractors on the committees
- TC 7.09 – Building Commissioning (Blalock) - A number of certification groups have now created their certification programs to be in compliance with the DOE requirements.
- TC 8.07 - Variable Refrigerant Flow (Artis) – Program and ALI sessions. Are looking to in to service life research.
- TC 9.06 – Healthcare (Blaylock) Two presentations in the TC – 1) A study of the literature that supports standard 170. Only about ½ of the requirements have support. 2) CFD of air movement for operating rooms. (Displacement ventilation) Price is also putting on free webinars to show OR room air movement. Wessel: Tall buildings is looking in to what to do in tall building in the event of a fire. (Mike Mateyere from TC 9.06)
- TC 9.08 – Large Building Applications (Kuempel / Molnar) – Changing name to Specialty Building Applications. Meet on Mondays 9-noon.



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- TC 9.09 Mission Critical (Pavol) - Data Centers. Sent ambassador to the Chinese meetings. On-going battle between 90.1 and 90.4. They feel it hurts innovation. There is not coordination between the standards. 1) ICC did not pass 90.4, but it passed ASHRAE. Putting together a group to try and resolve the differences.
- TC 9.10 – Laboratory Systems (Kuempel/Duda) - They agreed to co-sponsor 9.1 seminar on engineers notebook.
- TC 9.12 – Tall Buildings (Wessel) Changed meeting time to Sunday 12:15 – 2. Have a track in Chicago. Looking at stack effect Dennis is chairing it.
- SSPC 15 Mechanical Refrigeration Safety (Vucci / Johnson) - Looking at new refrigerants. Looking at spaces above for leaks. Ammonia will be removed.
- SPC 188 Legionella in HVAC (Milles)

For the Good and Well Being...

Adjournment at **3:30 PM**

I. Attachments:

- a) TC 9.01 Honors & Award Report

End of Minutes

Respectfully submitted by:
Jay Eldridge, Secretary



TC 9.01 Honors & Awards Report

2017 Annual Meeting, Long Beach

Deadlines that occur before the next meeting (January 2018 Chicago) are listed as action items in red below.

George B. Hightower Award:

- *Recognizes excellence in volunteer service in the area of Technical Committee, Technical Group, and Technical Research Group activities, excluding Research & Standards (which have separate awards).*
- TC 9.01's nominee last year was John Kuempel. The award is competitive, meaning only one is chosen among all nominees. TAC chose a different candidate from among the nominees this year, so our selected nominee did not win.
- Past winners from TC 9.01: Stephen Duda (2015); Howard McKew (2008).
- **ACTION ITEM:** Nominations for the next award cycle are due September 1 each year. Desirable qualities include include Seminar and Conference Paper programs, Handbook & Program subcommittee work including officer positions, and service as TC officer.

Service to ASHRAE Research Award:

- *Recognizes excellence in volunteer service in the area of Society research.* Desirable qualities include authorship of RTARs and Work Statements, participation or chairing of multiple PMS and PES, and Research subcommittee work including Research Subcommittee Chair. This award is for a volunteer in support of Research, not a paid researcher and not a donor to ASHRAE Research.
- TC 9.01 did not have a nominee last year.
- **ACTION ITEM:** Nominations are due September 1 each year. Please help me identify a qualified candidate.

ASHRAE Fellow:

- *Recognizes distinction in the arts relating to the sciences of heating, refrigeration, air conditioning or ventilation, or the allied arts and sciences, or in the teaching of major courses in said arts and sciences, or who by reason of invention, research, teaching, design, original work, or as an engineering executive on projects of unusual or important scope, has made substantial contribution to said arts and sciences, and has been in good standing as a full grade Member for at least ten (10) years is eligible for election to the grade of Fellow.*
- **On behalf of TC 9.01, I formally nominated one of our TC 9.01 Members for this honor this year, and that nomination is pending.** If selected, the award is presented at the Plenary of the 2018 Winter Conference in Chicago.
- **ACTION ITEM:** New nominations are due December 1 of each year. Please help me identify suitable candidates from this TC, including yourself if you feel you are eligible.



Distinguished Service Award:

- Recognizes members who have served ASHRAE faithfully as a member of committees or otherwise giving freely of his/her time and talent on behalf of the Society. Lifetime cumulative points-based system with a minimum of 15 points required.
- Recipient from TC 9.01 this year: **Congratulations to Sarah Maston!** She receives her award at the Saturday Plenary of this Conference.
- In addition, the following receive their Distinguished 50-Year Member Award at this Conference: **Warren Hahn** and **Rodney Lewis. Congratulations!**
- The points tally sheet is available on the ASHRAE website or directly from me.
- New nominations are due May 1 of each year. Self-nominations are permitted. Please help me identify additional suitable candidates from this TC, including yourself if you feel you are eligible and have not yet received this award. There is no quantity limit for nominees nor honorees.

Exceptional Service Award:

- Recognizes members who have served the Society faithfully and with exemplary effort, far in excess of that required for the Distinguished Service Award. Lifetime cumulative points-based system with a minimum of 45 points required.
- The points tally sheet is available on the ASHRAE website or directly from me.
- New nominations are due May 1 of each year. Self-nominations are permitted. Please help me identify additional suitable candidates from this TC, including yourself if you feel you are eligible and have not yet received this award.

Other Awards on my Radar: Send any suggested nominations for the following to Steve Duda.

- Standards Achievement Award. *Recognizes excellence in volunteer service for developing ASHRAE Standards and/or Guidelines.*
- Andrew T. Boggs Service Award. *Recognizes a past Exceptional Service Awardee for continued, unselfish, dedicated and distinguished service to the Society.*
- Louise & Bill Holladay Distinguished Fellow Award. *Recognizes a Fellow of the Society who continues preeminence in engineering or research.*
- F. Paul Anderson Award. *Honors a member for notable achievement, outstanding work or service in any field of the Society. This is ASHRAE's highest honor.*

Respectfully submitted by:

A handwritten signature in blue ink that reads "Stephen W. Duda".

Stephen W. Duda, PE

TC 9.01 Honors & Awards Chair

June 19, 2017