



**DRAFT MINUTES - ASHRAE MEETING - Houston  
TC 2.3 - Gaseous Air Contaminants/Removal Equipment  
TC Meeting**

Tuesday (6/26/18), 1:00 pm - 3:30 pm George  
Brown Convention Center – Room 372CF

**Meeting membership attendee list is as follows:**

Last Name	Name	Member Status	Position	Present
Total Voting Members = 12 out of 16 in attendance at Voting				
Agopian	Mr. Nick Agopian	VM	Member	P
Bayer	Dr. Charlene W. Bayer, PhD	VM	Member	-
Choi	Dr. Kyung-Ju Choi, PhD	NV	Program Chair	P
Freeman	Mr. Peter Freeman	VM-NQ	Member	-
Haas	Mr. Daniel Haas	VM	Member	P
Hingorani	Dr. Sanjeev Hingorani, PhD	VM	Vice Chair	P
Krafthefer	Mr. Brian Krafthefer	VM	Handbook Chair	P
Kwong	Mr. Kevin Kwong	VM	Member	P
Lee	Dr. Chang Seo Lee	VM-NQ	Member	-
Levasseur	Ms. Paula Levasseur	VM	Chair/Webmaster	P
Listvan	Dr. Marilyn Listvan	VM	Member	P
Mathur	Mr. Ashish Mathur	VM	Member	P
Middlebrooks	Mr. Matt Middlebrooks	NV	Membership Chair	P
Muller	Mr. Christopher Muller	VM	Member	-
Owen	Ms. Kathleen Owen	VM	Research Chair	P
Sherwood	Scott Sherwood	VM	Member	P
Tronville	Dr. Paolo M. Tronville, PhD	VM	Standards Chair	P
Zaatari	Dr. Marwa Zaatari, PhD	VM	Secretary	P

**Summary of Motions**

#	Motion	Vote (For-Against-Abstain-Absent-Chair Voting Status)
1	Motion to approve TC 2.3 minutes from Chicago. Kathleen Owen 1st, Sanjeev Hingorani 2nd	11-0-0-4-CNV
2	Motion to sponsor RTAR: Evaluation of HVAC Ventilation Effectiveness in reducing Semi-Volatile organic compounds (SVOC'S) in indoor spaces. Brian Krafthefer 1st, Kathleen Owen 2nd	10-0-0-5-CNV
3	Motion to accept the Handbook Subcommittee recommendation to forward to ASHRAE Chapter 46 titled "Air Cleaners for Gaseous Contaminants" found in the HVAC Applications volume. Brian Krafthefer 1st, Ashish Mathur 2nd	10-0-0-5-CNV
4	Motion to co-sponsor the TC 2.9 Joint Seminar on Cannabis. Marilyn Listvan 1st, Brian Krafthefer 2nd	11-0-0-5-CV

**1) Meeting was called to order by Chair @ 1:00pm**

- a) ASHRAE Code of Ethics
  - i) The ASHRAE Code of Ethics is to be adhered to by those doing ASHRAE business whether or not they are an ASHRAE member. The Code of Ethics can be reviewed at the below link.
  - ii) <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>
  
- b) Members and guests were introduced. It was determined that there was a Quorum with 12 of 16 voting members present at roll call.
  - i) Voting Members for this meeting: Charlene Bayer, Paula Levasseur, Sanjeev Hingorani, Kathleen Owen, Peter Freeman(NQM), Scott Sherwood, Chris Muller, Marwa Zaatari, Nick Agopian, Daniel Haas, Marilyn Listvan, Ashish Mathur, Brian Krafthefer, Paolo Tronville, Kevin Kwong, Chang Seo Lee (NQM)
  - ii) 14 Voting Members and 2 NQM
  - iii) > ½ Voting Members Present (8) (Yes - 12/16)
  
- c) Chair's Report
  - i) Review title & Scope of TC
  - ii) Improper use of ASHRAE Letterhead
  - iii) Posting of Technical Bulletins (white papers) on Website
    - TC must vote to approve TAC is responsible for review prior to posting
    - Only presentations given at ASHRAE conferences with approval by the speaker(s) may be posted on the website
  - iv) New TC MOP – can be located on the ASHRAE Website [www.ashrae.org/TCs](http://www.ashrae.org/TCs)
  - v) Updated ATC presentation template for use with local chapter presentations available at the same link above.
  
- d) Reporting from ASHRAE liaisons
  - i) No reports

**2) Review and Approval of previous meeting minutes from Chicago.**

- a) Motion to approve minutes from Chicago by Kathleen Owen
- b) Seconded by Sanjeev Hingorani
- c) 11-0-0-4-CNV (For-Against-Abstain-Absent-Chair Voting Status)

**3) Summary of Votes between meetings**

- a) WS1780 - Test Method to evaluate cross contamination of gaseous contaminants within total energy recovery wheels.
  - i) 10 Yes - 3 No – CNV

**4) Committee Votes needed**

- a) Breakout for TRP-1579 (Closed Session for Voting Members only)
- b) Breakout for TRP-1720 (Closed Session for Voting Members only)
- c) RTAR: Evaluation of HVAC Ventilation Effectiveness in reducing Semi-Volatile organic compounds (SVOC'S) in indoor spaces
  - i) Scott Sherwood left the meeting (11 of 16 voting members present)
  - ii) Motion to sponsor RTAR by Brian Krafthefer
  - iii) Seconded by Kathleen Owen
  - iv) 10-0-0-5-CNV (For-Against-Abstain-Absent-Chair Voting Status)

### 5) Review of Action Items from Last Meeting

#	Action Item	Owner	Meeting Initiated	Update at Last Meeting	Status
1	Collection of TC member bibliography papers for website posting	Marilyn Listvan	Atlanta	Work is still in progress	Ongoing
2	Development of a course on gas phase filtration to be part of ASHRAE supported classes and sent to chapters. Send the TC 2.4 presentation as an example	Paula Levasseur /Brian Krafthefer	Atlanta	Marilyn will help coordinate this presentation	Open
3	Start an email discussion between TC 2.3, TC 2.4 TC 2.9 & SSPC 145 Regarding starting an MTG to see how to use/test devices	Ashish Mathur	Las Vegas	Completed but topic is related to discussions in New Business	Completed
6	Start Twitter account	Marwa Zaatari	Long Beach	Send relevant TC 2.3 articles/information to Marwa to Tweet	Completed
7	Abstract for ASHRAE 125th anniversary: 2019-2020	Brian Gemma Barney?		Barney, Marilyn, and Brian submitted the abstract to ASHRAE's Historical Committee	Completed

### 6) Subcommittee Reports

- a) Handbook – Subcommittee Chair – Brian Krafthefer
  - i) The subcommittee took a final review of Chapter 46 and voted unanimously to forward to ASHRAE.
    - Brian Krafthefer motioned for acceptance of the Handbook Subcommittee recommendation to forward to ASHRAE Chapter 46 titled “Air Cleaners for Gaseous Contaminants” found in the HVAC Applications volume
    - Seconded by Ashish Mathur
    - 10-0-0-5-CNV (For-Against-Abstain-Absent-Chair Voting Status)
  - ii) The subcommittee will be going into Chapter 11 at the next ASHRAE meeting.
  - iii) Online handbook reviews can be done at any time in contrast to the 4-year review period of the paper handbook.
  - iv) The next paper handbook is due in 2021.
- b) Membership – Subcommittee Chair – Matt Middlebrooks
  - i) There is strong membership on TC 2.3 with a good balance of 16 voting members.
  - ii) Voting members rotating off after June 2018 – Marilyn Listvan, Ashish Mathur, and Kathleen Owen
  - iii) Rotating on as voting members after June 2018 – Tony Abate, Gemma Kerr, and Jeff Roseberry
  - iv) Scott Sherwood is resigning as a voting member. An emergency replacement voting member will be decided on by the officers.
  - v) Subcommittee changes:

- Pete Freeman is the new Standards Chair
  - Kevin Kwong is the new Membership Vice Chair
- c) Planning – Subcommittee Chair – Sanjeev Hingorani
- i) There were 13 subcommittee meeting attendees.
  - ii) Marilyn, along with help from Nick and Kevin, will be working on a PowerPoint presentation to describe TC 2.3.
  - iii) Brian has developed a roadmap for all activities in TC 2.3.
  - iv) An MTG is forming on the topic of Health and Wellness
    - Marwa is the representative for 62.1
    - TC 2.3 has been accepted to be involved in the MTG and a representative will need to be decided upon. The Chair currently has 3 volunteers that would be willing to represent TC 2.3.
  - v) Matt has proposed a new MTG on a guideline on how to implement combined filtration technologies. This would involve TC 2.3, TC 2.4, and TC 2.9.
  - vi) It was requested that all members and guests help to publicize TC 2.3 by tweeting and/or joining the LinkedIn page.
- d) Professional Development Coordinator – Barney Burroughs
- i) Guideline 29 (Risk Management of Public Health and Safety in Buildings) has been sent for public review.
- e) Program – Subcommittee Chair – KJ Choi
- i) There were 18 subcommittee meeting attendees.
  - ii) Two seminars will be submitted for Atlanta:
    - Room air cleaner, can it improve IAQ?
    - Back to basics (Ashish chair)
  - iii) TC 2.9 is looking to submit a seminar on cannabis and is looking for co-sponsorship
    - Marilyn Listvan motioned to co-sponsor the TC 2.9 Joint Seminar on Cannabis
    - Seconded by Brian Krathefer
    - 11-0-0-5-CV (For-Against-Abstain-Absent-Chair Voting Status)
- f) Publications – Subcommittee Chair – Marilyn Listvan
- i) Marilyn requested any meeting attendees to send in publications relevant to TC 2.3.
  - ii) Marilyn is looking to compile a bibliography of committee member papers on gaseous contaminants.
- g) Research – Subcommittee Chair – Kathleen Owen
- i) At the research chair breakfast, ASHRAE representatives confirmed that ASHRAE will fund cannabis research projects. Any projects would need to go through an additional step with ASHRAE's legal department.
  - ii) The deadline for the Grant-in-Aid award program for graduate students is March 1<sup>st</sup>.
  - iii) The December deadline date for research submissions is the 3<sup>rd</sup> instead of the usual 15<sup>th</sup> because of the earlier ASHRAE Winter 2019 Atlanta meeting date.
  - iv) RAC will hold a webinar for PMS training. All PMS members are strongly encouraged to take the training.
  - v) The PMS chairs are reminded to turn in the disposition forms at the end of ASHRAE research projects.
  - vi) See Research Subcommittee minutes for updates on individual research topics.

- h) Standards – Subcommittee Chair – OPEN
  - i) Pete Freeman is the new subcommittee Chair.
  - ii) ASTM D6646 – 03 (accelerated hydrogen sulfide test method) is in the revision process.
  - iii) Updates from Barney Burroughs:
    - TRG 4 – IAQ Procedure Development is very active and TC 2.3 should be paying attention regarding the Contaminants of Concern
    - 62.1 is developing a guideline as a companion document. The draft will be completed by the Atlanta meeting. The document will incorporate all current changes to the IAQP and anticipating changes for 2020.
- i) Website – Subcommittee Chair – Paula Levasseur
  - i) No updates
- j) SPC145 – Subcommittee Chair – Matt Middlebrooks
  - i) No updates for 145.1
  - ii) The Title/Purpose/Scope of 145.2 has been changes to remove the restriction on the testing of electronic and reactive types of devices.
  - iii) An authoring portal will be created for updating the 145.2 document.
  - iv) There remain questions about recirculation and chamber test methods. The outcome of the meeting discussions was that these test methods would not be the responsibility of 145.2. Defer to ISO Working Group 11 because they are further along in the development of a chamber test method.

## 7) Report from TC liaisons

- a) Barney Burroughs – The resilience and building security TG submitted a request to become a TC. The decision will be made at this Houston meeting.

## 8) New Business

- a) Richard Fox Co-RP
  - i) Richard spoke about his research topic at the January Research Subcommittee meeting.
  - ii) Mike Vaughn proposed moving forward with a Co-RP. If a project is already funded then ASHRAE is able to partner and provide some additional funding.
  - iii) The research consortium is led by Fraunhofer IBP and the Technical University of Denmark along with participation from Ludwig Maximilian University in Munich, Airbus, Honeywell, and the UK National Physical Laboratory.
  - iv) The subject of the study is the combined effects of CO<sub>2</sub> and VOCs at altitude on cognitive performance and comfort responses.
  - v) The total project funding is estimated to be \$990k of which \$180k is being requested from ASHRAE (\$60k each year for 3 years).
  - vi) Richard is requesting a list of TCs for co-sponsorship:
    - 62.1 has voted to co-sponsor
    - TC 5.3 voted to co-sponsor
    - TC 2.3 will submit a letter ballot
  - vii) Liaisons from each co-sponsoring committee will be on the oversight committee.
- b) Proposal from TC 1.4 for Special Publication or potential new Guideline (36)
  - i) TC 1.4 is asking TC 2.3 for interest to include molecular filtration in the Guideline.
  - ii) Send any comments to Paula and Paula will forward on to the authors.

- c) Matt – Related to Forum 4. Collaborate between 2.3, 2.4, 2.9. Conference call with 2-3 members from each.
  - i) Research ideas on combined filtration technologies are increasing being proposed.
  - ii) Matt's proposal is an MTG or GPC on how to implement combined filtration systems.
  - iii) Matt is putting together a Title/Purpose/Scope and will come back to TC 2.3 for a vote.
  
- d) Rahul – Next AFS conference in Charleston, SC Sept 11-12. Short courses on 10<sup>th</sup>. Many talks relevant to TC 2.3.
  - i) Students can attend for free if they present a poster.
  - ii) The conference website is [afsfall.societyconference.com](http://afsfall.societyconference.com)

**9) Agenda suggestions for the Winter Meeting in Atlanta**

- a) No suggestions

**10) Adjournment**

- a) Motion to adjourn the meeting at 2:50pm.
- b) Nick Agopian 1st
- c) Marilyn Listvan 2nd

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