



DRAFT Meeting Minutes - ASHRAE MEETING – Winter 2026 (Las Vegas)
TC 2.3 - Gaseous Air Contaminants/Removal Equipment
TC Meeting

Time: 1:00 PM – 3:30 PM MST

Date: Tuesday, February 3rd, 2026

Location: Caesar's Palace, Octavius 15&16 (PS)

TC 2.3 website link: <https://tc0203.ashraetcs.org/>

1. Call to Order

2. ASHRAE Code of Ethics

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.

<https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>

- **ASHRAE Value Statement**

In ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and shall avoid all real or perceived conflicts of interest. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We celebrate diverse and inclusive communities, understanding that doing so fuels better, more creative and more thoughtful ideas, solutions and strategies for the Society and the communities our Society serves. We respect and welcome all.

- **Diversity Commitment**

ASHRAE is committed to providing a welcoming environment. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We proactively pursue and celebrate diverse and inclusive communities understanding that doing so fuels better, more creative, and more thoughtful ideas, solutions, and strategies for the Society and for the communities our Society serves. We respect and welcome all people regardless of age, gender, ethnicity, physical appearance, thought styles, religion, nationality, socio-economic status, belief systems, sexual orientation, or education.

NOTE: Recording (Audio, Video, Screenshots) of ASHRAE meetings, including online meetings, is strictly prohibited.

NOTE: Generative Artificial Intelligence (GAI) should not be used in creating, editing, revising, and modifying ASHRAE products.

3. Introductions

- Please mark on the sign-in sheet if you are YEA (≤ 35 years old) and/or if you are an international attendee (reside outside of US) for meeting attendance records.
- Virtual attendees – Sign into chat with your Name, Affiliation, Email, and YEA and/or International designations



4. Voting Member Roll Call

NAME	PRESENT?
Victoria Binz	YES
Kevin Kwong	YES
Christopher Vizcaino	YES
Mengjia Tang	NO
Paula Levasseur	YES
Anthony Abate	YES
Sissi Liu	YES
Henry Greist	YES
Kathleen Owen	YES
Chrystal Jolliffe	YES
James Parris	YES
Paolo Tronville	YES
Xuchen Wang	YES
Gabrielle Davis (MNQ)	NO
Marwa Zaatari (MNQ)	NO

12 of 15 [QUORUM MET]

5. Chair's Report

- i. Roster update form –
- ii. TC Activity Forms need to be completed and returned no later than Friday 2/6/2026 but PREFERABLY by Tuesday 2/3/2026
 - a. Current version if the TC activity form template can be found on Chair's basecamp site (Version v26-W1)
- iii. Discussion of TC/TG/TRG/MTG continuation; TCs are required to hold a discussion annually on continuing, merging, or disbanding –
 - a. Question was presented to the group, all nay to disband and agree on the continuation and need for the TC.
 - b. Additionally, were asked if merging TC2.3 and TC2.4 would be feasible consideration. All nay responses; scopes, although similar cover vastly different topics that would be impractical to cover together in a combined meeting.
- iv. Special Projects Subcommittee
 - a. Substantial outside funding, extensive effort required beyond typical volunteer effort, requires administrative and financial oversight
 - b. Some SPs are also ASHRAE research projects; distinction is extent of outside funding
- v. Research Advisory Panel (RAP)/ASHRAE Research (originally designed to help advise and govern the research as part of the research strategic plan)
 - a. Current funding is \$2M-\$3M per year; most valued \$100,000-\$350,000
 - b. Approximately 40-50 research projects being conducted in parallel
 - c. Research Advisory Panel (RAP) – initial focus is to develop and implement a plan for “soliciting input” from within ASHRAE and beyond goal to provide guidance to address (1) topics/subjects (2) outcomes/deliverables (3)
 - d. Provide Caitlin with the short, provided questionnaire QR code from presentation if any one is interested in providing input

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- vi. Upcoming Conferences (see Chair Breakfast presentation slide)
 - vii. Technical Committee Meeting Changes
 - a. Main Committee Meetings
 - For hybrid meetings, committee must provide their own meeting link
 - USB speaker/microphone available upon request; suitable in small rooms
 - b. Subcommittee Meetings
 - Must meet in advance virtually before January 30th and provide own link to be listed in the conference schedule
 - Handbook, standards, programs, and research (all subcommittees) may now be required to meet before/after the in-person meetings virtually.
 - Following the 2026 Winter Conference TC, TRG, TG, and MTG subcommittees will not be permitted to request an in-person meeting space at conferences
 - Committees expressed opinion is that the research subcommittee should be allowed to meet in person as it gives a better opportunity for non-members of TC2.3 to attend
 - Programs expressed they would prefer in person meetings because it encourages more discussion and brainstorming
 - Recommendation from Section Head to collect data to substantiate claims to hold research and other subcommittee in person by showcasing the success the TC has had in promoting research and sponsoring programs.
 - Concerns from the TC that restricting what meetings can be in-person may cause lack of attendance and attention for these areas.
 - If ASHRAE is to cut back on in-person meetings they should have a portal or program that allows for transparency for when other TCs are having meetings to avoid conflicts with groups that have similar members
 - viii. Chair Comments/Questions/Concerns
 - a. TC2.3 Standards and Handbook meet virtually prior to in-person meetings. TC2.3 Planning meetings in-person once a year during the annual meeting. Historically TC2.3 Research and Programs meet in-person during both the annual and winter meeting.
 - TC2.3 research meeting was accepted for in person in Las Vegas
 - TC2.3 program was rejected in person in Las Vegas. Virtual meeting link and date/time provided but not put on ASHRAE 365 Winter Conference schedule online
 - b. TC2.3 and TC2.4 for the first time are not scheduled in the same room; Jenni and I both completed the meeting request form with the same note as past Chair's
 - c. Chair will work with Section 2 Head to get permission to fix basecamp membership and work to use as resource for the TC2.3 more effectively.
 - Tori will coordinate base camp access, get permissions and update accordingly.

Section 2 Head – Diana Fisler

1. Capture concerns with the new restriction on in-person subcommittee meetings in the activity form and in the future share the data to potentially determine what the consequences are.
 - a. There may also be losses to YEA and International members.
 - b. Consider trying to book the subcommittee meetings as a second TC2.3 main meeting “block”

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- c. Holding subcommittee meetings virtually either prior to or after the in-person conference now requires more time needed for ASHRAE meetings, which could cause additional constraints for ability for members to attend.
 - 2. New ASHRAE DEI subcommittee
 - 3. Technical activity forms need to be submitted by Tuesday evening include:
 - a. Why the TC 2.3 is a necessary technical committee: great research, great programs and many contributions to ASHRAE including numerous materials which ASHRAE can sell and market. Members could be considered as volunteers contributing to ASHRAE.
 - b. Feedback/suggestion on a method to determine how to avoid conflicts of time. Maybe
 - 4. Idea to create a survey to share opinions on how this could affect participation within the TC 2.3.
 - a. Tori can create and share a gallop poll or a multiple-choice survey to share with the group in the future.
 - 6. **Handbook Liaison – Paula Hernandez** (update and questions via email 2/3/2026)
 - Are you considering making changes to your Chapter, which is #47? If you are making changes, would you say they are going to be Minor or Major changes?
 - o Yes, substantial changes will be made to chapter 47
 - When do you think you're going to vote for these modifications to the Chapter? Once you have approved the changes in the document, send to the Editor, elevate to the Authoring Portal, and send the following:
 - o The Final version of the Chapter.
 - o The Chapter Checklist, filled with all the data.
 - o Every document that is part of the Chapter, drawings, tables, pictures, and so.

Take into consideration that your due date to send the Final Version of the Chapter, with every attachment needed and the Checklist complete, is April 15th, 2026

7. Review and Approval of previous meeting minutes

- i. Motion: To approve TC2.3 Main Meeting Minutes from the 2025 Annual Meeting in Phoenix Arizona
 - a. Motion made by: Chris V
 - b. Motion seconded by: Paula L
 - c. Motion PASSES: 12-0-0-0-CNV For-Against-Abstain-Absent/Not Returned-Chair Voting Status)
- 8. **Summary of votes between meetings**
 - i. WS-1976 "Ozone Removal Efficiency and Generation of Byproducts on VOC Loaded Gas-Phase Air Cleaning Devices"
 - a. Passed 12-0-1-2-CNV (For-Against-Abstain-Absent/Not Returned-Chair Voting Status)
 - ii. Sponsor WS "Effect of Test Concentration and Chemical Composition on Air Cleaner Effectiveness Values in Chamber Testing"
 - a. Passed 11-0-1-3-CNV (For-Against-Abstain-Absent/Not Returned-Chair Voting Status)
 - iii. Request for 6 months no cost extension of RP-1869 "Evaluation of Indoor Air Contaminants with respect to Development of a Revised Indoor Air Quality Procedure (IAQP) Design Compound and Design Target List for Standard 62.1"
 - a. Passed 12-0-1-2-CNV (For-Against-Abstain-Absent/Not Returned-Chair Voting Status)

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- iv. Co-sponsor RTAR 1780 Part 2 “Test Method to Evaluate Cross Contamination in Energy Recovery Wheels in Critical Spaces-Part 2”
 - a. Passed 8-0-1-6-CV (For-Against-Abstain-Absent/Not Returned-Chair Voting Status)
 - v. **Is there any way we can make the email voting process for VM easier?**
 - a. **Consensus of the VM present that although not ideal the current process for email voting is sufficient**
9. **Items to be voted on**
- i. TC2.3 Co-Sponsorship of Program Seminar for 2026 Annual Meeting “Understanding Indoor Air Quality Monitoring and Its Potential Impacts to the Built Environment”
 - a. Sponsored by TG2IAQMD; Background from Sissi/Tony?
 - b. Draft sent to TC2.3 VM on 1/15/2026 for review
 - c. **Consider asking TC 2.4 to be a co-sponsor**
 - ii. Motion made by: **Sissi L**
 - iii. Motion seconded by: **Tony A**
 - iv. **MOTION PASSES: 12-0-0-0-CNV** (For-Against-Abstain-Absent/Not Returned-Chair Voting Status)
10. **Particle Party - Keith Chesson**
- i. Blondies Bar and Grill 7:00 PM PST 3663 S Las Vegas Blvd #183, Las Vegas, NV 89109 (about a 21-minute walk from Caesars)
11. **Subcommittee Reports**
- i. Research - Subcommittee Chair – Caitlin Naske
 - a. **Did TC2.3 Research Subcommittee Chair attend TC Research Chair Training at this conference?**
 - b. **Yes, Caitlin attended the TC Research Chair Training**
 - c. **Current research funding is \$2.8MM, anticipating reaching \$4MM by next year.**
 - d. **Development of additional training on the Research process and guidance on how to use the research portal to submit new RTARs**
 - e. **Other information: Bids expire Feb 3. WS 1895 needs to be resubmitted and re-voted on. Likely will have 3 more to submit for the march deadline.**
 - ii. Handbook - Subcommittee Chair – Mengjia Tang [Caitlin]
 - a. **Updating and adding chapters on electronic air cleaners as well as other substantial changes and updates including the full set of references.**
 - iii. Membership - Subcommittee Chair – Kevin Kwong
 - a. **212 total committee members**
 - b. [4] members are rolling off on 6/30/2026 after the annual meeting in Austin, Texas
 - Henry Greist, Chrystal Jolliffe, Kathleen Owen, and Scott Parris
 - c. Voting member roll off dates need to be extended for Tori Binz (6/30/2028) and Kevin Kwong (6/30/2029) due to previous chair roll - **need to submit an update form.**
 - d. TC 2.3 Secretary Position was filled by Peter McKinney and update was made to the roster
 - e. **Committee has many repeat visitors that aren't members, encourage these individuals to officially join the committee.**
 - f. **General Discussion: Abstention votes now require providing reason for abstention.**
 - i. **Tori to reach out to the section head on the rules of voting abstentions.**
 - iv. Planning - Subcommittee Chair – Chris Vizcaino
 - v. Program - Subcommittee Chair - KJ Choi

- a. **Did TC2.3 Program Subcommittee Chair attend TC Program Chair Training at this conference?**
 - i. **Yes, K-J attended the training**
- b. Debate, Panel, Seminar, Forum, Workshop and Debate Proposals for the 2026 Annual Conference in Austin are due Wednesday, February 25, 2026
- c. Program Tracks for 2026 Annual Meeting in Austin: Fundamentals and Applications, HVAC&R Systems and Equipment, Research Summit, Workforce Development, Ground Source Heat Pumps, Hot Climate Building System Design Operation and Resilience, AI in Building Design and Construction, and Building Decarbonization
- d. 2026 Winter Program Statistics from TC Chair's Breakfast

Program	Proposals Submitted	Proposals Scheduled
Panel Sessions	19	6
Forum Sessions	9	6
Seminar Sessions	131	65
Workshop Sessions	7	4
Debate Sessions	9	4
Total	175	85
Total with Paper Sessions		121

- vi. Standards - Subcommittee Chair – Kevin Kwong
 - a. **Held a virtual meeting on January 22, 2026, only [4] attendees, made**
 - b. **Generated new list of standards updates**
 - c. **Future meetings will continue to be held virtually.**
 - i. **Jon mentioned that maybe this could take place after the ASHRAE meeting to help with updates from the main meetings.**

12. Other Updates

- i. ASHRAE Learning Institute – Marilyn Listvan - **No Updates, full day or half day courses**
- ii. Publications - Subcommittee Chair -- Marilyn Listvan - **No Updates, send in more publications to reference or also MListvan@yahoo.com**
- iii. Website - Subcommittee Chair - Caitlin Naske –**All minutes are up to date**
- iv. SSPC 145 – Committee Chair – Caitlin Naske - **Working through comments on 145.4.**
Committee is about halfway through the comments and will need to send out once complete for review. In room and byproducts will remain in the standard limonene and toluene will be required for byproduct testing.

13. Review of Action Items from Last Meeting

#	Action Item	Owner	Meeting Initiated	Update	Status
1	Collection of TC member bibliography papers for website posting	Marilyn Listvan	Atlanta	On going	In progress

#	Action Item	Owner	Meeting Initiated	Update	Status
2	Development of a course on gas phase filtration to be part of ASHRAE supported classes and send to chapters	Paula Levasseur	Atlanta	Sent in presentation to Marilyn to include in chapters,	In progress
3	Title/purpose /Scope for MTG or GPC on how to implement combined filtration systems	Brian Krafthefer	Houston	No Update	In progress
4	Review of old ASHRAE Special Publication "Application Guide: Indoor Air Quality Standards of Performance" [Product of RP-853 (2000)]	Kevin Kwong	Orlando	Will be removed	Complete

14. Report from TC liaisons

Henry Greist– TC 2.9 (UV Air and Surface Treatment) **No Update**

Marwa Zaatari - 62.1 (Ventilation and Acceptable IAQ – Commercial)

- End of Useful Life Efficiency; addendum aa to ASHRAE 62.1-2022 and adopted into 62.1-2025
- RP-1869 "Evaluation of Indoor Air Contaminants with respect to Development of a Revised Indoor Air Quality Procedure (IAQP) Design Compound and Design Target Lists for Standard 62.1".
- Simplified Indoor Air Quality Procedure Development; looks at a shorter list of contaminants (formaldehyde, PM2.5 and ozone)
- User's Manual Update/Revision
 - Most current version of the user's manual is for 62.1-2019 and significant changes have been made in the 2019 and 2022 versions of the standard since its release including the IAQP
 - WG is considering what the best path forward would be: special publications path (volunteer based/work done by the SSPC) or special project (ASHRAE funded)
- Guideline 42 Enhanced Indoor Air Quality

Marwa Zaatari– EHC (Environmental Health Committee) **New IAQ lots of work on position docs, emerging issue briefs and other practices, PFAS in indoor, free chlorine, and lithium standards**

Nick Agopian – 62.2 (Ventilation and Acceptable IAQ – Residential) **Making 62.2 more relevant, 10 ft duct work on standard will be modified. Discussed wood burning stoves and fire hazards.**

Nick Agopian – TC 5.5 (Air-to-Air Energy Recovery) **No Update**

Tori Binz – TRG4.IAQP (Indoor Air Quality Procedure)

Kathleen Owen - TG2.RAST (Reactive Air and Surface Treatment) **Voted to form a TC 2.11, SPC 234 formerly 185.5 microbial contaminants. TPS change also voted.**

Tony Abate – TG2.IAQMD (Indoor Air Quality Monitoring Devices) **Proposing a seminar voted to co-sponsor TC 9.7 to help schools on the IAQ sensor placement and use.**

Tony Abate – TC 4.3 (Ventilation Requirements and Infiltration) **Similar discussion regarding transition to virtual subcommittee meetings, engineer discussion: do you use VRP or IAQ method?**



Jon Rajala – TC 2.4 (Particulates)

Michael Corbat –ISO/TC 142 (Cleaning Equipment for Air and Other Gases) – **Very wide scope includes many things, if interested 21-4 to address gas phase contaminant from outdoor air. Next plenary will be in Shanghai in September.**

Brian Krafthefer – TC 4.10 (Indoor Environmental Modeling) **No Update**

Brian Krafthefer – TC 2.1 (Physiology and Human Environment) **No Update**

Marilyn Listvan - TC 9.7 (Educational Facilities) **Design guide doc. Rev 3 being created and will be posted on ASHRAE for free access recognizing that schools may not be able to pay for these guidelines.**

[?] – TC 9.13 (Extraterrestrial and Deep Space Environmental Control Systems) **Helping to write an RTAR on IAQ habitable facilities with no ventilation, best practices for cleaning and circulating the air.**

Chris Muller TC 9.9 – corrosion in data centers in coastal areas SO₂ and KCl salts more updates will be shared at the Research meetings

15. **New Business**

16. **Adjourn** – **Meeting adjourned 3:15 PM**