



DRAFT Meeting Minutes - ASHRAE MEETING – Annual Conference 2026 (Austin)
TC 2.3 - Gaseous Air Contaminants/Removal Equipment
TC Main Meeting

Time: 12:00 PM – 3:30 PM CDT

Date: Tuesday, June 30th, 2026

Location: JW Marriott Austin, JW – 204 L2

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

1. Call to Order

2. 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.

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

Core Values - <https://www.ashrae.org/about/ashrae-s-core-values>

Diversity Statement - <https://www.ashrae.org/about/diversity-equity-and-inclusion-dei>

Anit Trust Guidelines - <https://www.youtube.com/watch?v=ykisOzjHyZM>

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

- i. 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.
- ii. Please also indicate if you would like/need to be added to the TC2.3 basecamp.
 - a. Tori will work to get the basecamp in order in the next couple of weeks



Voting Member Roll Call

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

9 of 14 [QUORUM ACHIEVED]

4. Section 2 Head – Diana Fislér

- i. New Section Head will be Bass Abe Shakra
- ii. New Society Calendar live July 15th visible to whole ASHRAE society
- iii. New MTG Life Cycle Carbon Buildings
- iv. FOAC Annual Meeting Restructuring implementation 2029; different rationales have been presented
 - a. TC discussion on proposed changes to the annual meeting format
 - AIHA moved to hybrid meetings and has seen a large boost in attendance but took a year to coordinate hybrid meaningfully/successfully. Committee support for hybrid if supported by ASHRAE for this format. See hybrid more favorably than virtual only.
 - Would like some clarity on the rationale for this proposal; many different reasonings have been mentioned: international member inclusion, financial, etc.

5. Handbook Liaison – Paula Hernandez – no update

6. Chair Report

- i. Future of ASHRAE Conferences (FOAC) Update
 - a. FOAC Purpose: Make a recommendation by June 2026 of a new overall Society conference strategy which specifically focuses on, but is not limited to, reformatting or eliminating the Annual Conference
 - b. ASHRAE Connect and Convene Conference: One Conference Two Phases
 - Connect: 4-day Virtual Conference free to all members “*Connect and engage with industry professionals from around the world in an enhanced virtual environment.*”

Participate in committee meetings and technical sessions without having to leave your home or office.”

- Convene: 4-day in person conference for the Board of Directors, Councils and Reporting Committee Vice Chairs (Projected Attendance: 200 -300) *“Councils and the Board of Directors convene for an in-person leadership summit with hybrid participation”*
- Winter conference would be the flagship ASHRAE conference. Earliest implementation would be 2029-2030; board of directors will be voting at this meeting
- ii. Conferences & Expositions Committee (CE) Updates
 - a. New track added for winter meeting “Application Notes in Professional Practice”
 - New options for individually submitted presentations on industry professional-focused applications of technology, design, and implementation
 - Oral presentation and submission of a 3-to-6-page brief (“Application Note”) intended to guide engineers and practitioners in future projects
 - Submission due when other program submissions are due Monday August 3rd
 - b. 2027 Annual Mini-Track Request Process
 - Group of 6 to 8 thematically aligned sessions not covered by existing tracks
 - c. Annual mini-track request process group 6-8 thematically aligned sessions not covered by existing tracks; Sunday/Monday scheduling
 - d. Annual and winter conferences survey; provide feedback to CEC on the ASHRAE Annual and Winter conferences to help improve programming
 - Reach out if you would like to be sent the QR Code
 - *Recommendation to provide the QR to the committee (Chris M; added to meeting minutes below in new business/discussion*
 - e. Program Chair Training Tuesday June 30th 11:15AM-12:00PM JW Marriott, JW 307 LS
- iii. Center for Excellence
 - a. New IEQ CE and will collaborate with the CEBD
 - b. 235P “Standard for Indoor Environmental Quality (IEQ) in Buildings” RFP issued
- iv. FG Chairs Training and Reminders
 - a. NEW ASHRAE Society Calendar, all ASHRAE events for the society year in one place for a seamless experience online and on the ASHRAE 365 application
 - b. Activity Forms: complete and send to Section Head by 7PM on Tuesday
- v. TAC Updates
 - a. ASHRAE Connect Shadowing Program
 - b. George B Hightower Technical Achievement Award (excludes Standards and Research related activities)
 - c. Our current Section Head (Diana) is becoming Training Coordinator; we will have a new Section Head – Bass Abe Shakra

7. Review and Approval of previous meeting minutes

- i. Motion: To approve TC2.3 Main Meeting Minutes from the 2026 Winter Meeting in Las Vegas Nevada
 - a. Motion made by: Scott Parris
 - b. Motion seconded by: Chrystal Jolliffe
 - c. MOTION PASSES: 8-0-1-6 (For-Against-Abstain-Absent/Not Returned)

8. Summary of votes between meetings

-
- i. Approval of 1895-TRP “Effect of penetration through particle pre-filters on the performance of gas filters”
 - a. Passed 11-0-0-4 (For-Against-Abstain-Absent/Not Returned)
 - *2 of 4 not returned votes MNQ*
 - ii. Approval of Revised 2008-WS "Evaluating the Influence of Challenge Gas Composition, Mixture Composition and Concentration on Gas-Phase Clean Air Delivery Rate Measurements in Chamber Testing of Various Air Cleaner Technologies"
 - a. Passed 10-0-1-4 (For-Against-Abstain-Absent/Not Returned)
 - *Reason for Abstention: Chair not voting*
 - *1 of 4 not returned MNQ*
 - iii. Vote to approve TC2.3 Handbook Subcommittee recommendation to approve and submit to ASHRAE for publication revisions to Chapter 47 of the HVAC Applications Handbook
 - a. Passed 13-0-0-2 (For-Against-Abstain-Absent/Not Returned)
 - *1 of 2 not returned MNQ*
 - iv. Approval of 1996-WS “Test Method to Evaluate Cross Contamination in Energy Recovery Wheels in Critical Spaces-Part 2”
 - a. Passed 10-0-1-4-CNV (For-Against-Abstain-Absent/Not Returned)
 - *Reason for Abstention: Chair not voting*
 - *1 of 4 not returned MNQ*

9. Items to be voted on

- i. Vote to approve the final report for 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” per PMS recommendation. [Jim/Gemma]
 - a. Motion made by: Chrystal Jolliffe
 - b. Motion seconded by: Gabrielle Davis
 - c. MOTION PASSES: 8-0-1-6 (For-Against-Abstain-Absent/Not Returned)
 - Reason for abstention: Chair not voting

10. Particle Party - Keith Chesson

- i. 7:30 Pelon Tex Mex 17-minute walk from JW 802 Red River Street

11. Subcommittee Reports

- i. Research - Subcommittee Chair – Caitlin Naske
 - a. Chair Update: 42 Active projects 7 new RTARS 9 WS 9 Project 4M
 - b. Active Projects:
 - 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
 - *Report from Gemma Kerr, PMS member/leader for RP. Jimm Dennoson is PI*
 - *Project is intended to support 62.1 IAQP and a revision to the list of design compounds*
 - *PMS has signed off on final report and requests TC 2.3 to sign off on recommendation.*
 - RP-1928 Combination duct and chamber test:
 - *Plans to hold a virtual interim presentation w/ all interested TCs and other*
 - *Kevin Kwong provided short update. Report finished and provided to PMS. Chrystal Jolliffe acknowledges.*

- RP-1913 Study of the Corrosion Impact on Information Technology Equipment in Data Centers Located in Coastal Regions with High Sea Salt Concentration
 - Chris Muller provided update; slide deck presented to the group
 - Literature review is complete. Project is running a bit behind on running tests – will likely begin in August/September instead of April.
- 1895-TRP(RP?) Effect of particles on loading on gas filters, with possible interest in looking at other combinations of technologies in the same air cleaner.
 - 5 proposals were received and University of Cincinnati was selected
 - Currently undergoing final negotiations with ASHRAE
 - PI requesting to use a 1x1 duct instead of a 2x2 duct as specified, likely will not be a supported change to scope
- c. Work Statements and RTARs
 - 1858-WS sVOCs including how SVOC emissions change with temperature
 - 1976-WS Ozone Removal Efficiency and Generation of Byproducts on VOC-Loaded Gas-Phase Air Cleaning Devices: in progress as a WS submitted in Dec submitted in August
 - 2008-WS Evaluating the Influence of Challenge Gas Composition, Mixture Composition and Concentration on Gas-Phase Clean Air Delivery Rate Measurements in Chamber Testing of Various Air Cleaner Technologies
 - WS-1996 Test Method to evaluate Cross Contamination in Energy Recovery Wheels in Critical Spaces – Part 2
 - TC2.3 co-sponsoring; Gemma Kerr representing TC2.3
 - 1995- RTAR (previously 1846): Real Time Small sensors/ affordable
- ii. Chair Update 42 Active projects 7 new RTARS 9 WS 9 Project 4M
- ii. Handbook - Subcommittee Chair – Mengjia Tang (Email Update from Mengjia)
 - a. Revised Chapter 47 of the HVAC Applications Handbook submitted to ASHRAE Handbook Editor. Final approval proof will be available early next year
 - b. *“Gratitude to all Handbook subcommittee members for their dedication and hard work”*
- iii. Chapter 66 discussion by-products vs byproduct; byproduct. Chapter 47 has a mix of both; Heather was contacted and can be fixed/updated in recently submitted Chapter 47

Chapter No	Volume	Title	TC	Files Due to HQ
11	Fundamentals	Air Contaminants	02.03	5/28/2028
47	HVAC Applications	Air Cleaners for Gaseous Contaminants	02.03	4/15/2026

- iv. Membership - Subcommittee Chair – Kevin Kwong
 - 219 members
 - 7 new members since Las Vegas meeting
 - 40 YEA members
 - 50 international members
 - 15 voting members (13 VM and 2 VMNQ)
 - 4 rolling off on 6/30/2026 (Henry Greist, Chrystal Joliffe, Kathleen Owen, Scott Parris)
 - 3 rolling on 7/1/2026 (Peter McKinney, Lexuan Zhong, Chris Muller)

v. Planning - Subcommittee Chair – Chris Vizcaino

- a. Coordinate with Chris to set up a virtual meeting in the next 4-6 weeks. May also consider setting aside some time during the Winter meeting in Chicago

vi. Program - Subcommittee Chair - KJ Choi (update given after Section Head report)

Program	Proposals Submitted	Proposals Scheduled
Panel Sessions	20	12
Forum Sessions	8	2
Seminar Sessions	103	64
Workshops Sessions	10	7
Debate Sessions	1	0
<u>Total</u>	142	85
<u>Total with Paper Sessions</u>	162	105

- a. 2027 Winter Meeting Chicago January 23-27, 2027, Programs Tracks: Fundamentals and Applications, HVAC&R System and Equipment, Refrigeration and Refrigerants, Research Summit, Research Summit, Residential HVAC Research and Demonstration, Thermal Network Systems and Energy Storage, Nexus of Real and Artificial Intelligence, Decarbonization Retrofits, ***Application Notes in Professional Practice (new)***
- b. Debate, Panel, Seminar, Forum, Workshop, and Application Note Proposals Submissions Due Monday, August 3, 2026
- c. Debate, Panel, Seminar, Forum, Workshop Scheduling Notifications Friday, October 2, 2026
- d. TC2.3 Programs 2026 Annual Conference
 - a. Seminar 51: Eek! That Smell Might Kill Me! How Do I Know If My Air Cleaner Will Get Rid of It?
 - i. Wednesday July 1, 2026, 8:00AM-9:30AM CDT, JW Marriot Austin (HQ Hotel), Lonestar Ballroom H
- e. [2] Seminars are being submitted for Chicago
 - a. Will ePTFE (expanded polytetrafluoroethylene) membrane be able to withstand PFAS and remain the leading filtration material for the next 30 years? (K-J)
 - b. Air cleaning and indoor air quality control (Jensen)
- f. Potentially new topic for a Seminar: UL4848 replacement for 867 ozone portions as well as replace 2998 -> recommended for New Orleans (Randy)
- g. IAQ Track will be an official in New Orleans

vii. Standards - Subcommittee Chair – Kevin Kwong

- a. Will hold a virtual meeting sometime in July
- b. Kevin to let TC2.4 know how holding the Standards subcommittee meeting after the annual conference works out for TC2.3



TC	Active PC	Std/Gdl
TC 2.3	GPC 27	Gdl 27-2019R
TC 2.3	SSPC 145	Std 145.1-2024 [CM]
TC 2.3	SSPC 145	Std 145.2-2025 [CM]
TC 2.3	SSPC 145	Std 145.5P

12. Other Updates

- i. ASHRAE Learning Institute – Marilyn Listvan –
 - a. TC2.3/2.4 currently do not have any ALI courses listed where we are the cognizant authority. TC2.9 has “Fundamentals of Ultraviolet Germicidal Irradiation (UVGI) for Air & Surface Disinfection” which seems to be the only air cleaning related ALI course
 - b. Chris Muller suggests putting together a few one-hour or two-hour courses; plenty of information and resources available to complete this task
 - Barney B has been considering the development of a 1-day course for many years
- ii. Publications - Subcommittee Chair - Marilyn Listvan –
 - a. Send articles (read or written) to Marilyn to add to bibliography/database on website
- iii. Website - Subcommittee Chair - Caitlin Naske
 - a. Website was updated to include dates, details, and documents for the Austin Annual meeting
 - b. Position Document link is currently non-functional due to ASHRAE moving its location on the website; will be corrected
 - c. Active research project information has been added to the website
- iv. SSPC 145 – Committee Chair – Caitlin Naske
 - a. Attention on 145.4P development: 156 comments were reviewed and are working to incorporate responses to the comments into the standard.
- v. Guideline 27 (Gemma) – complete with revisions, next steps is renumbering and organizing, how to get it noticed by the right people. Add information about Guideline 27 to TC2.3 website to help drive awareness

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
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



#	Action Item	Owner	Meeting Initiated	Update	Status
3	Title/purpose /Scope for MTG or GPC on how to implement combined filtration systems	Brian Krafthefer	Houston	No Update	In progress

Report from TC liaisons

Henry Greist– TC 2.9 (UV Air and Surface Treatment)

- Adopted a similar 2 meeting schedule as TC2.3; 2 main meetings
 - second meeting overlapped with 241 SSPC
- 185s working on minor change to 185.1 test method
- Material degradation recent UL update and UVA/C/B and testing material degradation

Tori - 62.1 (Ventilation and Acceptable IAQ – Commercial)

- Simplified Indoor Air Quality Procedure
- IAQ Procedure Roadmap
- Proposed Addendum L
 - Ozone Emitting Devices and implementing test method ASTM D8625-25 to determine the ozone generation rate
- Completion of RP-1869

Marwa Zaatari– EHC (Environmental Health Committee) no update

Randy – 62.2 (Ventilation and Acceptable IAQ – Residential)

- Published their IAQP in 2025 which may need some educational materials created
- No current projects related to chemical/gas phase at this time

Nick Agopian – TC 5.5 (Air-to-Air Energy Recovery)

- No update, nothing of note for TC2.3

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

- Report given in tandem with 62.1 above

Kathleen Owen - TG2.RAST (Reactive Air and Surface Treatment) no update

Carl – TG2.IAQMD (Indoor Air Quality Monitoring Devices)

- Modifying TPS possibly by winter
- Task group formation/deliverables
- 62.1 calibration requirements
- Co-sponsored seminar about air quality sensors in schools
- Considering becoming a TC might lend itself more to an SPC

Carl – TC 4.3 (Ventilation Requirements and Infiltration)

- Possible RTAR for IAQP studies implementation and case

Jenni – TC 2.4 (Particulates)

- Main Meeting will be held after TC2.3 (in a better room than we are in)

Gemma –ISO/TC 142 (Cleaning Equipment for Air and Other Gases)

- Working group 8 is of most relevance to this group ISO 10121-1 and -2 145.1/145.2 ISO10121-3 outside air and rating for filtration 10121-4 in preparation for IAQ

Brian Krafthefer – TC 4.10 (Indoor Environmental Modeling)

Meng Kong - TC 2.1 (Physiology and Human Environment)

- RTAR how natural ventilation health and wellbeing,
- They are back in business as a TC after a few years of little activity and looking to get more involved

Marilyn Listvan - TC 9.7 (Educational Facilities)

- Working on a new Design Guidance for Educational Facilities: Prioritization for Advanced Indoor Air Quality
 - Very expanded scope for the next version of the guide. Current version is V2, V3 was started but likely will be abandoned in pursuit of a new version 4
- Center of Excellence IEQ 235P

Marilyn Listvan – TC 9.13 (SPACE)

- New guideline being developed “Acceptable Indoor Air Quality for Crewed Spacecraft and Habitants - encourage TC2.3 involvement
- Working on a few RTARS and looking for volunteers

Chris Muller - TC 9.9 (Mission Critical Facilities, Data Centers, Technology Spaces, and Electronic Equipment)

14. New Business/Discussion

- i. AHAM and ASHRAE MOU on air cleaners and IEQ [Randy Cooper]
 - a. Discussion on establishing a joint working group to look at collaboration/harmonization
 - b. Presented graphic outline of the AHAM/ASHRAE MOU
 - c. Gathered names of members interested in being part of the steering committee, particularly related to test methods, definitions, and programs. He will continue to be the lead coordinator of this effort.
- ii. QR Code to provide feedback to the CEC on the ASHRAE Annual and Winter conferences



15. Meeting Adjourned at 2:19