



180 Technology Parkway, Peachtree Corners, GA 30092
404-636-8400

TC 9.11 Clean Spaces Technical Committee Meeting Agenda – Chicago

Meeting Date: **Monday, January 22, 2024**
Meeting Location: McCormick Place West, W181A (1)
Meeting time: **2:15-5:00 pm EDT Main Technical Committee**

Here is the Webex link as found in the ASHRAE365 scheduling webpage/app:

<https://events.rdmobile.com/Asset/Download/1175519623470593994@ashrae.webex.com>

Meeting Number: 2347 059 3994

Password : ZxdNtca7p73

Call in number is 1-866-299-4153. Same access code.

The ASHRAE Code of Ethics is to be adhered to by those doing ASHRAE business whether or not they are an ASHRAE member: “Commitment to the ASHRAE 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.>)”.

Item No.	Item	By	Time (minutes)
1.0	Introduction of attendees	V. Sakraida	2
1.1	Roll call of CURRENT voting Members (as shown on current ASHRAE Roster)	P. Naughton	2
	Roland Charneux 6/30/25 Sina Yousefi 6/30/28 Vincent Sakraida 6/30/26 Kurt Montiero 6/30/28 Conor Murray 6/30/26 Phil Naughton 6/30/28 Wei Sun 6/30/28		
1.2	Confirmation of Quorum	P. Naughton	1
1.3	Confirmation of Agenda	V. Sakraida	1
2.0	Review of previous meeting minutes	V. Sakraida	4
2.1	Vote on previous minutes	V. Sakraida	2
3.0	Section Report	V. Sakraida	1
	Report from the Chair Breakfast and TAC Section Head 9		
4.0	Membership	V. Sakraida	4

	(starting July 1, 2023 through June 30, 2024)					
4.1	Status Changes (Move Up/Down)					
4.2	Voting Roster-review					
4.3	New member Applications					
	Name	Role	Voting	Name	Role	Voting
	Vince Sakraida	Chair	Yes	V. Sakraida	Yes	
	Phil Naughton	Vice Chair	Yes			
	Kurt Monteiro	Secretary	Yes			
	Phil Naughton	Research Chair	Yes	Research Chair	Research Chair	Yes
	Roland Charneux	Program Chair	Yes			
	Conor Murray	Handbook	Yes			
	Sina Yousefi	Webmaster	Yes			
5.0	Sub-Committee Reports (See attachment at end of Agenda for details)					
5.1	Research			P. Naughton	10	
	Virtual Subcommittee Meeting					
5.2	Programs			R. Charneux	10	
	Virtual Subcommittee Meeting Deadlines					
5.3	Handbook			Conor Murray	10	
5.4	Journal			V. Sakraida	2	
5.5	Web page			S. Yousefi	2	
5.6	Energy Efficiency/Decarbonization			TBD	10	
5.7	MTG ACR			P. Naughton	2	
6.0	Liaison reports:					
6.1	YEA			TBD	2	
6.2	ISO 14644			V. Sakraida	2	
6.3	IEST/ISO			Wei Sun	2	
6.4	ISPE			G. Shamshion	2	
6.5	CDC/NIOSH			K. Mead	4	
6.6	TC1.6 (Terminology)			R. Lautz	2	
6.7	TC9.6 (healthcare)			R. Lautz	2	
6.8	TC9.10 (Laboratory Systems)			TBD	2	
6.9	TC 7.1 (Integrated Building Design)			M. Swann	2	
6.10	TC7.2 (HVAC&R Construction & Design Build Technologies)			M. Swann	2	
6.11	NEBB			V. Sakraida	2	
7.0	Old Business			V. Sakraida	10	
8.0	New Business			V. Sakraida / Floor	10	
9.0	Future Meetings				2	
9.1						

Yes

VOTING MEMBER TRACKING WORKSHEET

ASHRAE TC9.11

January 22, 2024

Note: The Roster is the governing document. This Worksheet is a planning tool and does not supercede the Roster.

Note: The term is from July 1 through June 30.

		Start Term	End Term	July1 2024 thru June 30 2025	July1 2025 thru June 30 2026	July1 2026 thru June 30 2027	July1 2027 thru June 30 2028	July1 2028 thru June 30 2029	July1 2029 thru June 30 2030
Roland Charneux	Voting	7/1/2022	6/30/2026	1	1				
Vince Sakraida	Voting	7/1/2022	6/30/2026	1	1				
Conor Murray	Voting	7/1/2022	6/30/2026	1	1				
Phil Naughton	Voting	1/22/2024	6/30/2028	1	1	1	1		
Wei Sun	Voting	1/22/2024	6/30/2028	1	1	1	1		
Sina Yousefi	Voting	1/22/2024	6/30/2028	1	1	1	1		
Kurt Monteiro	Voting	1/22/2024	6/30/2028	1	1	1	1		
Mitch Swann	Proposed	7/1/2026	6/30/2030			1	1	1	1
Yusuf Bhetasiwala	Proposed	7/1/2026	6/30/2030			1	1	1	1
Ivan Thomas	Proposed	7/1/2026	6/30/2030			1	1	1	1
Kishor Khankari	Proposed	7/1/2023	6/30/2027			1	1	1	1
Voting Member Count				7	7	8	8	4	4

Subcommittee Reports:

1. Energy Efficiency Subcommittee did not meet since Toronto. Old Business was submission of Programs for Tampa and Chicago. Program SC to provide detail
2. Research Update incomplete RTAR
 - a. Ventilation Effectiveness. Overlap with MTG ACR RTAR 1936 Evaluating the relationship of air change rate and ventilation performance for indoor spaces including Cleanrooms, Healthcare, and Laboratories. Recommendation: Work with MTG ACR RTAR Authors else need author to update RTAR
 - b. Cleanroom Energy Survey. RTAR needs to be updated for submission to RAC. RTAR Author (P. Naughton) recommends changing scope of RTAR to Energy Model. New RTAR to be written
3. Standards
 - a. Proposal for creation of Cleanroom Energy Efficiency Guideline. Start with Design Guide sections 8 Cleanroom Basic Requirements and 9 General Indoor Design Conditions and Considerations
 - b. Leverage work in ISO 14644-16, Energy efficiency in cleanrooms and clean air devices
4. Programs
 - a. Kishor Khankari published ASHRAE Journal article on **CFD Analysis for Design Optimization of a Pharmaceutical Cleanroom**. The article was published in the August 2023 journal.

TC-9.11 Sub-committee Program meeting January 13th 2023

Attendees: Roland Charneux, Russ Bailey, Yusuf Bhetasi, Kapil Mehrotra, Wei Sun

Planning for Tampa (Sessions planned for Atlanta would be resubmitted)

- 1- **Forum** Moving away from using ACR in Cleanroom Design Criteria. Can we do this ?
Moderator Phil

Connor to help to prepare the points of discussion for the Forum. Good science needed

- 2- **Seminar:** Cleanroom Energy Optimization Fundamentals. Chair: Phil

Potential speakers: Phil, Yussuf, Keith Beattie:

- 3- **Seminar:** Emerging technologies on cleanroom Energy Conservations-Applying New ISO 14644 part 4 and part 16 Standards. **Chair: Wei Sun**

Potential speakers: Connor, Keith, Wei

Planning for Chicago

- 1- Dry cleanrooms (Low RH cleanrooms)
 - a. Potentially Connor could develop this topic.
- 2- Design, construction, start-up of cleanroom
 - a. Wei will start to find speakers

- 3- How to dehumanize cleanrooms (Removing humans from cleanrooms to reduce contamination)
 - a. Yusuf will start to find speakers and themes

Important dates

Monday, February 27, 2023 | Debate, Panel, Seminar Form, Workshop Proposals Due

- **Friday, September 30, 2022** | Final Technical Papers Due
- **Wednesday, November 30, 2022** | Conference Paper Abstracts, Technical Papers, and Paper Session Requests Due
- **Wednesday, December 21, 2022** | Conference Paper Abstract Accept/Reject Notifications
- **Friday, January 6, 2023** | Website opens for Seminar, Workshop, Panel, Debates and Forums
- **Friday, February 24, 2023** | Technical Paper Final Accept/Reject Notifications
- **Monday, February 27, 2023** | Debate, Panel, Seminar Form, Workshop Proposals Due
- **Wednesday, March 29, 2023** | Extended Abstract Paper Due and Conference Papers Due (submitted for review)
- **Friday, April 14, 2023** | Debate, Panel, Seminar, Forum Workshop Accept / Reject Notifications
- **Wednesday, April 26, 2023** | Conference Paper Abstract Accept / Revise / Reject Notification
- **Wednesday, May 10, 2023** | Revised Conference Papers, Technical Papers Due
- **Sunday, May 21, 2023** | Conference Paper Accept / Reject Notifications

The following are the program tracks for Tampa:

1. HVAC&R Systems and Equipment.
2. Fundamentals and Applications.
3. Research Summit.
4. Decarbonization and Net Zero Pathways.
5. Future Proofing.
6. Building Automation and Control Systems.
7. Professional Developments and Education