



**MINUTES - ASHRAE MEETING – Orlando
TC 2.3 - Gaseous Air Contaminants/Removal Equipment
TC Meeting**

Tuesday (1/26/16), 1:00 pm - 3:30 pm,
(Clear Lake, Orlando Hilton)

The meeting membership attendee list is as follows:

Last Name	Name	Member Status	Position	Present
Total Voting Members = 13 out of 14 in attendance				
Bayer	Dr. Charlene W. Bayer, PhD	CM	TC Chair	P
Choi	Dr. Kyung-Ju Choi, PhD	VM	Program Chair	P
Freeman	Mr. Peter Freeman	VM	Member	P
Hingorani	Mr. Sanjeev Hingorani	VM	Member	P
Kerr	Dr. Caroline M. Kerr, PhD	VM	Member	P
Krafthefer	Mr. Brian C. Krafthefer	VM	TC Vice Chair/Hbk Chair	P
Lau	Dr. Josephine Lau, PhD	VM-NQ	Member	-
Lee	Dr. Chang-Seo Lee, PhD	VM-NQ	Member	P
Levasseur	Ms. Paula Levasseur	VM	Sec/Web Chair	P
Listvan	Dr. Marilyn Listvan	VM	Program co-chair	P
Mathur	Mr. Ashish Mathur	VM	Member	P
Muller	Mr. Christopher Muller	VM	Member	P
Owen	Ms. Kathleen Owen	VM	Research Chair	P
Schaaf	Mr. David A Schaaf, Jr	VM	Program Co-Chair	P
Middlebrooks	Mr. Matt Middlebrooks	NV	Membership Chair	-
Tronville	Dr. Paolo M. Tronville, PhD	NV	Standards Chair	-

Summary of Motions

#	Motion	Vote
1	Motion to approve TC2.3 minutes from Atlanta, Brian Krafthefer 1 st , Marilyn Listvan 2 nd .	12-0-0 -13 CNV
2	Motion to approve cosponsorship with EHC and 62.1 RTAR “Impact of Combustion Emissions from Gas-Fired Unvented Combustion Devices on Indoor Air Quality” Ashish Mathur 1 st , Chang Seo Lee 2 nd .	12-0-0 – 12 CV



Summary of Action Items

#	Action Item	Owner	Meeting Initiated	Status
1	Response to Letter to TAC regarding Position Paper	Brad Stanley Charlene Bayer	Atlanta	Completed
2	Publications Subcommittee Meeting space and time.	Brian Krafthefer	Atlanta	Open
3	Set up ExCom Meeting	Charlene Bayer	Atlanta	Completed
4	Populate TC Research Roadmap to generate research for full scope of TC 2.3	Charlene Bayer, Planning	Atlanta	Open
5	Workshop on performance rating system summary to be sent out.	Ashish Mathur	Atlanta	Open
6	Action related to ISO Classification Proposals	Matt Middlebrooks	Atlanta	Completed
7	Email to ASHRAE explaining issues and extension on WS-1579	Matt Middlebrooks	Atlanta	Completed
8	Information on Dutch Building Code for classifying CO2 concentration to be sent to Paolo Tronville.	Chris Muller	Atlanta	Completed
9	Work with TC 5.10 to draft RTAR on ozone in cooking exhaust.	Brian Krafthefer, Marwa Zaatari	Atlanta	Open
10	Send emails on what we have volunteered to do for programs and the due dates	KJ Choi	Atlanta	Completed
11	Collection of TC member bibliography papers for website posting	Marilyn Listvan	Atlanta	Open
12	Invite representatives of excluded devices to participate in SSPC145 in Orlando	Kathleen Owen	Atlanta	Completed
13	Tag TC2.3 Members and participants on completing action items	Brian Krafthefer	Atlanta	Completed
14	Develop training slide presentation on RTAR writing for Research Subcommittee	Brian Krafthefer	Atlanta	Completed
15	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	Brian Krafthefer	Atlanta	Open
16	Development of a translation into research webinar on gas phase filtrations	Ashish Mathur, KJ Choi	Atlanta	Open
17	Forward Mike Vaughn's comments on RTAR and SOW authorship to TC membership	Brian Krafthefer	Atlanta	Completed
18	Locate TC 2.3 slide for ASHRAE	Brian Krafthefer	Atlanta	Completed
19	Send email to all YEA members attending TC2.3 asking what their interest is and what can TC 2.3 do for them.	Brian Krafthefer	Orlando	Open



#	Action Item	Owner	Meeting Initiated	Status
19	Send RTAR presentation done by Brian to Paula for posting on website	Brian Krafthefer Paula Levasseur	Orlando	Open
20	Paolo has asked to change standards time slot to publication time slot on Monday 3-4 or at 2:15 on Monday	Charlene Bayer	Orlando	Open

1. **The meeting was called to order at 1:03pm.** Agendas and copies of the Atlanta minutes were passed out.
 - a. The Chair welcomed everyone and reminded them to please review the ASHRAE code of Ethics.
 - b. Guests and members were introduced.
 - c. Roll call was taken and it was determined that there was a quorum with 13 of 14 voting members present. Voting Members present for this meeting: Charlene Bayer, Brian Krafthefer, Paula Levasseur, KJ Choi, Kathleen Owen, Josephine Lau (NQ), Chang Seo Lee (NQ), Sanjeev Hingorani, Gemma Kerr, Marilyn Listvan, Ashish Mathur, Chris Muller, and Dave Schaaf. Peter Freeman arrived at 1:20 to make it 14 of 14.
 - d. No ASHRAE liaisons were present.
 - e. Chair's Report
 - i. There was 1 seminar at 8:00 AM. The chair encouraged all to try to attend seminars sponsored by TC 2.3
 - ii. The next meeting will be held in St. Louis with following winter meeting in Las Vegas : We wish to be a sustainable group – please look at the web site or bring a computer to follow the minutes, we would like to be paperless.
 - iii. We are putting together a roadmap of research and educational ideas. This will be updated regularly and posted on the website. We are currently looking for people to write up presentations to present to chapters to expand the range of TC2.3.
2. **Review and Approval of previous meeting minutes from Atlanta. Brian Krafthefer moved to approve Atlanta minutes seconded by Marilyn approved 12-0-0-CNV**
3. **Review of Action Items from Last Meeting and September ExCOM Meeting**
 - a. Response to Letter to TAC regarding Position Paper – Brad Stanley & Charlene Bayer
 - i. completed
 - b. Publications Subcommittee Meeting space and time – Brian Krafthefer
 - i. Set it up but ASHRAE did not have the form so it did not go through this time.
 - c. Setting up ExCOM Meeting to held in September among Officers and Subcommittee Chairs – Charlene Bayer : Completed easy to set up just call Mike Vaughn.
 - d. Populate the TC Research Roadmap with ideas on how to generate research for full scope of TC2.3 – Planning Committee, Subcommittee Chairs, and Charlene Bayer. This is a work in progress.
 - e. Workshop on the performance rating system summary to be sent out – Ashish Mathur: not completed
 - f. Action related to ISO Classification Proposals – Matt Middlebrooks : Completed
 - g. Email to be sent to ASHRAE explaining issues and extension on WS-1579 – Matt Middlebrooks
ASHRAE did extend for a year– comments from Pawel were extensive so it was unable to be completed for submission by this deadline.

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- h. Information on Dutch Building Code for classifying schools based on CO₂ concentration to be sent to Paolo Tronville – Chris Muller : Chris sent to Paolo – he was not able to understand the code. This needs more work.
 - i. Working with TC5.10 to draft RTAR on ozone in cooking exhaust – Marwa Zaatari and Brian Krafthefer. They will meet again to try to finalize a draft.
 - j. Email on volunteered programs and due dates – KJ Choi: Current and completed
 - k. Collection of TC member's bibliography papers – Marilyn Listvan
Charlene sent to Marilyn she is currently compiling them – they are not yet on the website. Trying to see if we need approval for power point or if we can just add to the site without approval from ASHRAE.
 - l. Invite representatives of excluded devices to participate in the SSPC 145 meeting in Orlando – Kathleen Owen: Several were supposed to come but unable to make it due to weather conditions preventing them from attending the Orlando meeting.
 - m. "Tag" everyone TC2.3 members and participants on completing their action items prior to Orlando meeting – Brian Krafthefer: Brian did send reminders to all with action items
 - n. Development of Training slide presentation on RTAR writing for Orlando Research Subcommittee meeting – Brian Krafthefer: Brian did this presentation at the research subcommittee meeting.
 - o. Development of course(s) on gas phase filtration to be part of ASHRAE supported classes and sent to chapters. Brian to send out a copy of the TC2.4 presentation that currently is sent to chapters – Brian Krafthefer is going to complete this.
 - p. Development of a translation into research webinar on gas phase filtration – KJ Choi and Ashish Mathur. Not completed.
 - q. Forward Mike Vaughn's comments on RTAR and SOW authorship to TC membership – Brian Krafthefer: Completed
 - r. Locate TC2.3 slide for ASHRAE – Brian Krafthefer : Completed

4. Status of Votes Between Meetings

- a. Co-Sponsorship of RTAR "Test to evaluation cross contamination efficiency of heat recovery wheels" with TC9.10 – 13-0-0-14 CNV
- b. Work Statement 1720 –12-0-0-14 CNV

5. Subcommittee Reports

- a. Handbook - Subcommittee Chair -- Brian Krafthefer (see full handbook committee minutes)
 - i. TC 2.3 is responsible for Chapter 11 Applications and Chapter 46. We went a looked through the comments from a conference call in September – responsibilities for updating tables and figures were assigned and they will be ready for TC review in June. Once TC approves it will go to ASHRAE Brian would like some of the YEA members to come to the subcommittee meetings.
- b. Membership - Subcommittee Chair -- Matt Middlebrooks: 4 people rotate off –All membership information is on the TC 2.3 website. To become a member go the the TC 2.3 website under the membership tab and click the link that says JOIN TC2.3 . Lu Liu has volunteered to be co chair of the membership subcommittee.
- c. Planning Subcommittee Chair – Brian Krafthefer: (See separate Planning Subcommittee minutes)
- d. Professional Development Coordinator- Barney Burroughs: Nothing to report.

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- e. Program Subcommittee Chair: KJ Choi (see separate Program Minutes)
KJ requested people come 1 hour early for the TC meeting so they can participate in programs.
Deadline for Las Vegas Conference papers – single reviewer 8 pages due by March 14th technical paper due by April 18 must have 2 reviewers
Forums are not recorded – presentations are available virtually if you paid for registration.
 - f. Publications - Subcommittee Chair -- Marilyn Listvan: We have had a slot on Mondays 3-4 discussing papers to write. We are trying to use that time slot for a workshop or a forum. We need to add to our bibliography. EHC has and Indoor Air Quality in the Journal – 1 per month 1500 words not a technical paper general interest article. Consider writing an article notify Andy Persily. Jake Scott is the new editor send material 1 month in advance. Please send references useful to T.C. 2.3
 - g. Research - Subcommittee Chair -- Kathleen Owen (See separate research minutes)

Update from research breakfast – there is no Feb 15th deadline for RTAR first one is May. Any committee co-sponsoring should have had someone help write the RTAR. That is being questioned we do not yet have an answer.

1. Nick Agopian reported on the RTAR Unvented Combustion Devices in residences. They are in need of help to get data to make an educated decision on the standard TC 2.3 should get involved. He has recommended that T.C. 2.3 send an email out to other committees to let them know what we do. David Delaquila mentioned that 189.1 working group 8 is considering stopping the use of unvented devices. Charlene Bayer noted that 62.1 and EHC have agreed. We must vote now on the RTAR without any changes or we will lose the opportunity to cosponsor if we say no.
 - a. A vote was taken to cosponsor the RTAR Ashish so Moved – Chang Seo second 12-0-0 CV.
 2. Chris Muller noted that 1715 went out for bid and contractor was chosen and Chris will be serving on the PMS.
- h. Standards - Subcommittee Chair -- Paolo Tronville (See separate standards minutes)
 - i. Paolo would like to change time slot 2:15 pubs 3:00 – 4:00 standards on Monday. Charlene to make the request for the next meeting.
 - i. Website - Subcommittee Chair -- Paula Levasseur reported that the website was migrated to the new ASHRAE template as of November 30th. It is easier to update but lacks a little bit of the versatility. ASHRAE is populating more of the website especially meeting data.

6. Report from TC liaisons.

Pawel Worgocki – Research Liaison for RAC – he communicates with the research subcommittee chair. He is our voice at RAC so he needs to understand why we have chosen this research project. Once you have RTAR please include him in the process so he can provide supportive comments so it is easily understood by other RAC members as they are from different disciplines'. It must match the ASHRAE strategic Plan- Don't forget about residential applications. May 15th is the next deadline. Homer Adams – graduate student involved in ASHRAE funded project they receive a \$5000 grant. 8 scholarships for students deadline is February 2017. URP –these have been on hold. PES and PMS members must read and follow guidelines. The PMS guidelines are under revision. Send any questions to Pawel before 7:00am Wednesday January 27th. Question was asked if RAC meetings are open- he was not sure. Fund distribution to investigators does not match what is on the website and it needs to be changed to match what has been written in the work statement. Pawel will address the new rules and will request that old work statements written prior to rule change not be rejected because they do not meet the new



standard. Paolo is suggested that RTARS and work statements be done on a confidential site so writers and reviewers can see and answer comments and all old comments can then be seen by new reviewers.

Chris Muller – 62.1 under continuous maintenance. Update and /or modify standard every 3 years. 4 subcommittees' are tasked with various aspects of the standard. The new technical committee is being tasked with developing a new IAQP with TRG4.IAQP procedure which is easier to use. Coordinate with 189 – they want to rewrite appendix C. They would like this done within a year.

TG2 – responsibility for updating guideline 29 the chembio : they want more members from TC 2.3 and 2.4.

TRG4IAQP – has a new chairman Dean Thompkins and was heavily active and again there is a strong plea for more members without much of a history. He has done a tremendous amount of work on his own. He needs generation rates on contaminants. Sunday at 10:30-12

EHC : Charlene reported that they are continuing a rewrite of the *Indoor Air Quality* position document.

GPC35: Brad Stanley – would like to get the presentation on the presentation from VJ

TC9.9 Chris reported that they are putting an emphasis on particulate and gaseous. They have been putting updates on emissions in data center and they wish to update the handbook with methodologies of removal.

7. New Business: Air Quality in Swimming Pools New MTG

Occupant behavior and indoor Air Quality

8. Agenda suggestions for the Winter Meeting in St. Louis. None presented.

9. Adjournment: Gemma moved to adjourn Chris seconded at 3:05