



**Draft Minutes - ASHRAE MEETING – Long Beach  
TC 2.3 - Gaseous Air Contaminants/Removal Equipment  
TC Meeting**

Tuesday (6/27/17), 1:00 pm - 3:30 pm  
101B, LBCC (1)

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

Last Name	Name	Member Status	Position	Present
<b>Total Voting Members = 10 out of 11 in attendance at Voting</b>				
Agopian	Mr. Nick Agopian	VM	Member	P
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-NQ	Member	
Hingorani	Dr. Sanjeev Hingorani, PhD	VM	Secretary	P
Levasseur	Ms. Paula Levasseur	VM	Vice Chair/ Webmaster	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
Sherwood	Scott Sherwood	VM-NQ	Member	P
Zaatari	Dr. Marwa Zaatari, PhD	VM	Member	P
Middlebrooks	Mr. Matt Middlebrooks	NV	Membership Chair	P
Tronville	Dr. Paolo M. Tronville, PhD	NV	Standards Chair	P

**Summary of Motions**

#	Motion	Vote
1	Motion to approve TC2.3 minutes from Las Vegas, , Paula Levasseur 1st, Marilyn Listvan 2 <sup>nd</sup>	10-0-0-11 CNV
2	Motion to cosponsor Workshop SSPC62.1 Misapplication of IAQ Procedure. Kyung-Ju Choi 1st, Paula Levasseur 2nd	10-0-0-11 CNV
3	Motion to cosponsor 62.1 RTAR “Outdoor ozone in naturally ventilated buildings”. Nick Agopian 1st, Ashish 2nd	10-0-0-11 CNV
4	Motion to support an Unsolicited Proposal “Comparison between an Ionization and a Carbon Air Filter”. Paula Levasseur 1 <sup>st</sup> , Sanjeev Hingorani 2 <sup>nd</sup> .	9-0-1-11 CNV



5	Motion to sponsoring RTAR "Inclusion of electronic air cleaner in 145.2". Matt Middlebrook 1 <sup>st</sup> , Sanjeev Hingorani 2 <sup>nd</sup> .	10-0-0-11 CNV
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**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. Brad Stanley recognized*

*c. Introduction of guests and members.*

*Total of 43 members attended*

*d. It was determined that there was a Quorum with 10 of 11 voting members present at roll call.*

- i. *Voting Members for this meeting: Charlene Bayer, Paula Levasseur, Sanjeev Hingorani, KJ Choi, Kathleen Owen, Peter Freeman(NQM), Scott Sherwood(NQM), Chris Muller, Marwa Zaatari, Nick Agopian, Daniel Haas, Marilyn Listvan, and Ashish Mathur*

*a. 13 Voting Members*

*b. > ½ Voting Members Present (7) (Yes/No) **Yes 10/11***

*c. 8 YEA attended the meeting*

*e. Breakout for RP1720 (Closed Session for Voting Member only)*

*f. Chair's Report*

- *2018 ASHRAE Conference at Houston big push to get in conference papers. New for the Conference, ASHRAE is collaborating with ASHRAE's archival research journal, Science and Technology for the Built Environment (STBE), to advance opportunities for research publication.*
- *2019 ASHRAE Conference at Atlanta will celebrate its 125 anniversary. Looking for ideas on what has impacted our technology that resulted in a changed direction particularly interested in the period after the 1920's.*
- *ASHRAE has allowed posting of white papers on the website after they are reviewed by ASHRAE. Paula is TC2.3 Webmaster so please provide papers related to TC2.3*
- *New Presentation template available at ASHARE website*
- *Thank You Letters to Employers are available if required by participants or volunteers*
- *Looking for Nomination for awards like Hightower Technical Achievement Award, Service to ASHRAE Research award etc*
- *ASHARE wants to encourage TC's to do more of remote subcommittee meetings. Virtual workshops and forums among the cooperating TCs.*
- *ASHRAE has their master calendar on google calendar*
- *RAC Prioritizing research topics in residential sector.*

- g. Reporting from ASHRAE liaisons Pawel Wargocki: We were advised that there are 3 awards that RAC is giving - New Investigator Award for \$125,000 -Dec 2017, A grant for students working on projects of interest to ASHRAE- \$10,000 in spring of 2017, Homer Addams award*

*for the student who performs outstandingly \$ 5,000-Dec 2017. RP1720 is for bid and WS1579 is still not approved and will be discussed this week at RAC. Write more RTAR and you can bid on those projects too. RAC is looking for volunteers – contact Pawel Wargocki or RAC Chair if you are interested in joining RAC.*

**2. Review and Approval of previous meeting minutes from Las Vegas.**

**3. Review of Action Items from Last Meeting**

#	Action Item	Owner	Meeting Initiated	Update at Last Meeting	Status
4	Populate TC Research Roadmap to generate research for full scope of TC 2.3	Paula Levasseur	St. Louis	Paula has posted and set it out.	Complete
5	Workshop on performance rating system summary to be sent out.	Ashish Mathur	Atlanta	No update	Open
9	Work with TC 5.10 to draft RTAR on ozone in cooking exhaust. (1614)	Brian Krafthefer, Marwa Zaatari	Atlanta	TC 5.10 took out us out of the draft PMS	Complete
11	Collection of TC member bibliography papers for website posting	Marilyn Listvan	Atlanta	3 years LinkedIn page ASHRAE TC2.3 outreach. Still collecting bibliography for TC2.3 website. Please send to Marilyn. Work in progress.	Ongoing
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	Paula Levasseur /Brian Krafthefer	Atlanta	Brian to send presentation TC2.4 as an example. No Update	Open
21	Marwa Zaatari wants to be a Liaison of TC2.3 to Impact of ASHRAE Standards and Technology on Energy Savings/Performance. Send an email to Chair of the MTG	Charlene Bayer	Las Vegas	Muller is the liaison and we can only have one member	Complete
22	Start an email discussion between TC	Paula Levasseur	Las Vegas	Include 62.1 & EHC along with TC2.9	Open



#	Action Item	Owner	Meeting Initiated	Update at Last Meeting	Status
	2.3, TC 2.4 TC 2.9 & SSPC 145 Regarding starting an MTG to see how to use/test devices				
23	Setup BaseCamp site for TC2.3 Research	Charlene Bayer	Las Vegas	Continue using it	Open
24	Sanjeev to send out WS 1579 with track changes to Charlene to decide if it needs to be voted again	Sanjeev Hingorani	Las Vegas	No Voting required	Closed

#### 4. Subcommittee Reports

*a. Handbook - Subcommittee Chair -- Brian Krafthefer*

*Revision to Chapter 46 is due June, 2018 for 2019 release. Had one telecon in April and will have two one in August and Oct 2017*

*b. Membership - Subcommittee Chair -- Matt Middlebrooks*

*We have 13 voting members, 84 corresponding members out of which 13 are here. To join the TC2.3 go to the ASHRAE Website [Link to Join TC](#). We will have one person rolling off and 4 rolling on the roster after July 1<sup>st</sup> 2017 making 16 voting members going forward*

*c. Planning - Subcommittee Chair -- Paula Levasseur*

*Goals for TC2.3 for the next year discussed. Training seminar to be developed on TC2.3. Purpose of the seminar is for people in various chapters go out and will talk about TC2.3 its standards, background on gas phase to develop Interest in TC2.3 our standards and get more members participate. Need for more RTAR's were discussed generating some new ideas. Research roadmap is out and will be published on the TC2.3 website. Marwa Zaatari volunteered for being our Twitter account master. We need to push doing remote meeting*

*d. Professional Development Coordinator -- Barney Burroughs*

*No Update*

*e. Program - Subcommittee Chair -- KJ Choi*

*We had proposed 4 programs for Long beach out of which 2 got accepted. For Chicago we are proposing 2 seminars, 1 panel discussion and 1 workshop. Motion for cosponsoring workshop "Misapplication of IAQ Procedure" was done. CEC wants to emphasis the program needs to be interest to a wider audience to get accepted (can be achieved by having more co-sponsorship).*

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- f. *Publications - Subcommittee Chair -- Marilyn Listvan*  
*Send papers and reference related to TC2.3 so they can be posted on the TC2.3 outreach website and later on TC2.3 website*
- g. *Research - Subcommittee Chair -- Kathleen Owen*  
*At research chair breakfast it was reported 7 RTARS considered: 1 accepted, 3 accepted with comment, 3 rejected, 11 WS considered, 1 accepted, 7 conditionally accepted, 3 returned. There is new PMS training module available. RAC is looking for idea's to betterment on communication of the research done at ASHARE to more people. WS is now available in word format along with PDF. Brainstormed Chamber test method. On new Idea lot of discussion on testing combined units. Would like to get chairs from different committees involved and start a discussion before we work on writing. Cosponsoring RTAR from 62.1 "Outdoor ozone in naturally ventilated buildings" was voted on. Support Unsolicited Proposal "Comparison between an Ionization and a Carbon Air Filter" was voted on.*
- h. *Standards - Subcommittee Chair -- Paolo Tronville*  
*Met on new time slot @ 2:15 on Monday. GPC27P is out for it public review and should be published this year. No change proposal active for 145.1 standards. Standard 145.2 plans to include in-duct electronics cleaners. Guideline 35 developing combination equation for particle and gas filtration. SSPC 52.2 discussed on how to adapt to ISO 16890 since it has been published.*
- i. *Website - Subcommittee Chair -- Paula Levasseur*  
*ASHRAE would not allow publishing email address so send files which do not have email addresses. Agenda's need to be on the website 60 days prior to meeting. Papers need to be provided so we can put a link on the website (abstract will be posted on the website)*
- j. *SPC145 – Committee Chair – Matt Middlebrook*  
*Scope change to take the restriction out for testing electronic air cleaner using standard 145. Separate test method should be developed for chamber and recirculating testing as 145 would remain a single pass testing protocol. Sponsoring RTAR "Inclusion of electronic air cleaner in 145.2" was voted on. Chris Muller to take this to 62.1 for cosponsoring this RTAR*

## 5. Report from TC liaisons

**Chris Muller: 62.1 still interested in cosponsoring the program which was not accepted in this meeting. Lot of interest in 145.2 for the IAQ procedure and there has been talk about change proposal to address 3rd party testing requirement for using IAQ procedure. There increase interest to change air cleaning requirement for ozone. Discussion of revising appendixes in 62.1**

**TRGP IAQP Marwa Zaatari: TRGP IAQP meets on Sunday at 10:30 AM. Work on creating Contaminants list (which are called indicator list). For 145.2 what pollutants can be used for efficiency test or can we use surrogate chemical for it. Included ozone in the contaminant list**

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**62.2 Nick Agopian: Issue on Unvented combustion is still going on. Sent out addendum A which came back with lot of comments (57). Increasing the particulate efficiency from MERV6 to MERV8 (This is primarily to protect the equipment). Currently in discussion to look at MERV 11 filter along with gas filters to protect. Multifamily are getting into balanced ventilation.**

**EHC : Charley: Position Document on Filtration and Air Cleaning is to be expire in 6 months. Will be working on the next version**

**TC 2.1: No Update**

**TC2.4" Gemma Kerr: Increase interest in combination filter.**

**TC2.9: Kathleen Owen: No Update**

**TC 9.1: No Update**

**TC 9.9: Chris Muller Research project underway where they looking at effects of gaseous contaminants and RH on corrosion of electronics. Looking for data on indoor level of pollutants like ozone etc**

**TC 189: No Update**

**SGPC10: Interactions Affecting the Achievement of Acceptable Indoor Environments. Working on minor updates**

**SGPC27: Already reported by Paolo**

**IAQ Guide: Charlene Bayer: Is being written through 62.1 to be published in summer 2018**

**USGBC: Another new lead pilot credit has been released which is based on IAQ performance on existing building. Number of contaminants/compound has been reduced however requires yearly measurement**

**Chris Muller: Chinese refrigeration& Air-conditioning association is writing a Chinese national standard for testing gas phase filtration devices and system. Chris Muller & Jenson Zhang have been invited as international consultant**

## **6. New Business**

**Remote Meeting: Paula Levasseur: Handbook and Standard will have live meeting in summer and remote meeting in winter. No meeting for Publication. Organize your meeting through Michael Vaughn. Standards plans to do the week after the ASHRAE winter meeting and should include the TC2.3 secretary.**

**ED Light Create a new MTG to look at Health effect of VOC mixture.**

## **7. Agenda suggestions for the Winter Meeting in Chicago**



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N/A

**8. Adjournment: Meeting Adjourned at 3:28 pm Nick Agopian 1<sup>st</sup>, Charlene Bayer 2<sup>nd</sup>**