

DRAFT Minutes
TC 2.3 - Gaseous Contaminants/Removal Equipment
Research Subcommittee Meeting
Monday, June, 24th 2024, 4:30PM – 6:30 EST
J W Marriott Indy, White River IJ (1)

- 1 Call to order 4:35
- 2 Introductions and Recording Attendees 5 Min
- 3 Review of Minutes from Summer Meeting: 5 min
- 4 Chair comments
 - a. 3 RTARS -2 accepted with comments 1 returned
 - b. 7 WS 4 conditionally accepted 3 returned
 - c. 1 WSP – Conditionally accepted
 - Service to ASHRAE Research Award – need nominations: Sheet can be found on the Research section of the ASHRAE website
 - New requirement- for those who have never been on a PMS, need to take a course (PowerPoint presentation, ~15 min)
 - Beta testing of new online RTAR portal. Need 3 volunteers/ 3 TCs.
 - Caitlin Naske to take over as Research Subcommittee Chair July 1. Chris V will be Vice Chair.
- 5 RAC report (Liaison TC2.3- Chris Gray) 5-10 min
Chris did not attend meeting.
- 6 Active Projects:
 - a. **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.
Champion: Gemma Kerr. WG: James Dennison, Dean Tompkins, Marwa Zaatari, Hoy Bohanon, Wayne Thomann
Gemma- started in March, PMS has had two online meetings, Task 1, setting database parameters and is approved by PMS.
Short presentation reviewing the project. Several questions were answered around how is “normal building” defined, data collected will be the location information, data collected will go back 10-15 yrs., what is the design limit, commercial vs. residential (will look at home much information without residential).
 - b. **RP-1928:** Combination duct and chamber test. Chrystal Jolliffe champion, Gemma, Cheng-Seo, and Joe Pessa. This is sponsored by 2.9, with 2.4 and 2.3 co-sponsors. Work statement submitted for last deadline with minor changes.
Awarded to LMS, PI Kevin and Kathleen. One initial meeting, beginning stages. Just got a request from 9.6 to add Linda L.to PMS.
- 7 Work statements and RTARs

- a. ~~1867-RTAR: Development and validation of a model for assessing the corrosion risk of Datacom equipment under different pollution and thermal environmental conditions. TC 9.9~~
Update from Chris Muller
- b. **1846-RTAR: Real Time Small sensors/ affordable:** Christopher Vizcaino (will be the new champion), Brian K., Fuoad Parvin, Thad Ptak, Jeff Roseberry, Sanjeev H., Jensen Zhang, Jordan Clark. Members interested Tony Abate, Sanjeev
There is still interest, Chris V. working on draft (need to get something submitted or will be dropped)
- c. **1858-RTAR: sVOCs including how SVOC emissions change with temperature - Sanjeev*,** Jianshun Zhang, Kevin Kwong, Kathleen Owen ~~Ying Xu, Brent Stephens, Chang Seo Lee, Jim Rosenthal, Gabrielle Davis.~~ Work statement was re-written; comments came back and need to be resolved.
Sanjeev has the WS needs help with the cost/ budgeting, then it will be ready to submit. (this will be dropped if not action) Plan is to submit before August TC 2.3 and TC 2.4 will need to vote
- d. **1895-WS Effect of particles on loading on gas filters, with possible interest in looking at other combinations of technologies in the same air cleaner (Matt, Brian, Paula, VJ).** TC 2.4 and GPC 35 co-sponsored.
WS voted on in 2.3, 2.4 letter ballot was sent out. After this meeting comments were addressed from RAC once GPC 35. RAC Approved Saturday with minor comments to be sent to Chris Gray our Liaison and he will get to RAC to go out to bid. (need to get the minor questions from Chris to address) PMS- Brian, Paula, Paolo T. (need one more person, Brian will contact VJ)
- e. **1935-RTAR Effects of increased use of surface disinfectants and hand sanitizers on indoor air quality.** Chang Seo, Kathleen, Jensen, Marilyn, Paula Submitted RTAR, it was received on August 17th. Need status from Chang-Seo it appears work statement and RAC comments are not yet completed for submission.
Last status- Email from Bill saying RTAR approved with conditions, did not receive RAC comments: Have not heard from Chang Seo/ Need another champion
They were able to find the RTAR- Chris said he will Email the draft and have champion resubmit the RTAR.
- f. **1931-RTAR Determination of the CO2 and Aerosol Generation and Metabolic Rates of Occupants for Selected Indoor Activities (from TC 2.1)** TC 2.3 co-sponsor comments addressed and co-sponsors revoted to be sent to RAC by March 15th deadline (no update, status unknown)
- g. **1913 WS Study of the Corrosion Impact on Information Technology Equipment in Data Centers Located in Coastal Regions with High Sea Salt Concentration:** TC 9.9 is the lead – TC 2.3 is cosponsor. This was submitted to RAC December 15 2023
Chris Muller contact, was approved and is now going out for bid. Chris will be on PMS. Need an update

8 Proposed RTARS and other work:

- a. **Ozone Removal Efficiency and Generation of Byproducts on VOC-Loaded Gas-Phase Air Cleaning Devices.** Menjia Tang – Champion. This RTAR has been approved by TC2.3. TC2.4 will vote this meeting. Chris Grey already approved. It should be finalized and submitted to RAC after this meeting. Volunteers to work with Menjia on WS. Jensen
- b. **The Effects of Filtration and Air Cleaning on Health & Safety.** Caitlin Naske Champion. Nick Agopian, Lexuan Zhong, Kathleen, Sanjeev, Paula, Brent S.
Caitlin- No work has been done since last meeting, will try and revive for next meeting.

- c. Acceptable VOC types and concentrations for inclusion in multi contaminant test gases Ashish to Gemma champion, Kathleen, Ashish and Paula, Chang Seo.
 - i. Goal to modify 145.2 to include a multi gas and what it should be (Ashish). What concentrations can we do (reactions take place) and what mixes work.
 - ii. Ashish will do an initial review of literature to see what is currently available
 - iii. Gas mixture vs individual gas results, how to interpret data with competition
 - iv. NIOSH may have helpful information
 - v. Initially only look at sorbent based
 - vi. Old RP at RTI had mixtures
- d. Brian- adsorption and emission from particulates in filters, Brian had done a lit search long ago with only a few, maybe newer studies/ research. Caitlin willing to champion after getting the health and filtration RTAR finished. Masih will help
- e. Possibly Investigate MVOCs?
- f. “Impact of Age on Air Cleaning Devices” Cleaning secondary products from the air- John Randtke*, Marwa, Jianshun, Brian K, and Jeff Roseberry interested in helping **ON HOLD for 185.5 will need a test method**. John is looking to submit a draft to Chris soon as 185.5 is getting ready for first PPR.
- g. New Ideas
 - i. PFAS is it a particle or a gas, is carbon effective in removing it in air, technology is already used in water, used in a lot of pan and cookware emerging contaminant, will give a presentation on some of the information he has on the topic
Chris V has a presentation
Cooling towers? Need to find out if there is gas phase
Quick search- there is some research showing that it can be in the air (CA), electrospinning of nano fibers could be a source
Next step: Brian will champion- lit search Chris V. and Paula can help (if you find an article send to Brian) to compile information for lit search RTAR
 - ii. What’s better in-room air cleaners or in system filters? Literature search into what is out there. Where is the best place to put in filtration? Put it out as a forum with TC 2.4 move to Programs.
62.2 does not allow portable air cleaners, they will be discussing pros and cons. They aren’t part of the building. Understanding the short term/ periodic benefit of these portable air cleaners.
Is there research/ data on how long portable air cleaners are used vs. stop use, replace, etc.
Masih Champion- Could look at how in duct filter vs. in room air cleaner- which one is more effective