

ASHRAE MEETING MINUTES - Anaheim

TC 2.3 - Gaseous Air Contaminants/Removal Equipment TC Meeting

Tuesday, January 27, 2004
13:00 - 15:30
Anaheim Convention Center (Rm. 201C)

NOTICE:

These meeting minutes have been approved and are official.

- The meeting was called to order at 13:03 pm by Chairman Doug VanOsdell. The attendees that completed the meeting attendee sheet(s) were:

Name	Email address
Doug VanOsdell (Chairman)	dwv@rti.org
Gemma Kerr	gemma.kerr@inairenvironmental.ca
Brian Krafthefer	brian.krafthefer@honeywell.com
Scott Hanson	shanson@mchsi.com
Dean Tompkins	dtompki@facstaff.wisc.edu
Bob Hendry	bob.hendry@gtri.gatech.edu
Karin Foarde	kkf@rti.org
Matt Middlebrooks	mmiddlebrooks@bbafiberweb.com
Chris Muller	chris_muller@purafil.com
Phil Winters	pwinters@filtrationgroup.com
Derald Welles	dwelles@ix.netcom.com
Marilyn Listvan	listv001@umn.edu
H.E. "Barney" Burroughs	heburroughs@mindspring.com
Paolo Tronville	paolo.tronville@polito.it
Nick Agopian	nagopian@dectron.com
Charlene Bayer	charlene.bayer@gtri.gatech.edu
Christopher Flaherty	cflaherty@dectron.com
Steve Zitin	shz1@meadwestvaco.com
Erik Kuiper	erik@ashrae.org
Ron Domitrovic	rdomitrovic@atmosphericglow.com
Kyung-Ju Choi	kchoi@aafintl.com
E.C. "Chuck" Schroeter	fsifla@bellsouth.net
K.C. Hsieh	kchsieh@aol.com
Monroe Britt	mbritt@clair.com
Michael Corbat	mcorbat@filtrationgroup.com
Bill Leedy	wbleedy@meadwestvaco.com
Jeff Roseberry	jeffr@promarkassociates.com

Scott Moore	smoore@clclair.com
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Darren Sheehan	sheehads@utrc.utc.com
Jim Moulton	jmoulton@hovo.com
John Horns	jhhorns@mmm.com
Gerrit Wyberja	gw@filtrair.com
Mark Renn	mrenn@aafintl.com
Bob Culbers	ENGR.BOB@STERIL-AIR-USA
Bjarne Olesen	bwo@mek.dtu.dk
Harry Youdell	harry@pureatech.com
Chang Sohn	c-sohn@cecer.army.mil
Morton Blatt	mhblatt@earthlink.net
Kenneth Heffley	heffleyk@camfilfarr.com
Ez Khalifa	ez@ecs.syr.edu

- Attendee' self-introductions were made.
- Roster check was made. Voting members present at the TC meeting include:
 - 1) Doug VanOsdell (chair)
 - 2) Brian Krafthefer
 - 3) Paulo Tronville (international)
 - 4) Marilyn Listvan
 - 5) Gemma Kerr
 - 6) Nick Agopian
 - 7) Matt Middlebrooks
 - 8) Derald Welles
 - 9) Chuck Schroeter
 - 10) Charlene Bayer
 - 11) Chris Muller

Dr. Paul Nelson was absent. A quorum was achieved with 11 voting members present out of a total of 12.

Corresponding Members Present –	14
Voting Members present –	11
Guests –	19
Total -	44

- A motion was made and seconded to approve the meeting minutes of Kansas City. There was no discussion. **Voting on approval of the Kansas City minutes was as follows: 11, 0, 0, 1, 12 (for, against, abstain, absent, total).**

Subcommittee Reports Made:

Planning (Eric Kuiper, Chair)

- Meeting held with a few attendees; others are encouraged to attend the early morning meeting. There is the expectation that the TC will really work for their membership through their local chapter. Two new activities are underway. First, a generic TC 2.3 PowerPoint presentation (Who is TC 2.3? What does it do? Accomplishments? Technology Primer, etc.) is being drafted with the goal of giving TC 2.3 members a tool with which to communicate with local chapters. VanOsdell is to prepare first draft. Second, a long-term TC2.3 plan will be developed, with Kuiper taking the lead for the next 6 months.

Membership (Paul Nelson, Chair, Report made by Doug VanOsdell)

- Three current voting members will be rolling off - Marilyn Listvan, Doug VanOsdell, and Charlene Bayer. Eric Kuiper, Bob Hendry, Karin Foarde, and Ez Khalifa will be rolling on as voting members after the Nashville (June 2004) ASHRAE meeting. Currently there are 6 corresponding members that need to be rolled up. The TC 2.3 leadership team after Nashville meeting will be:
 - Chair – Eric Kuiper
 - Vice Chair – Dean Tompkins
 - Secretary – Matt Middlebrooks
 - Research – Karin Foarde
 - Planning – Dean Tompkins
 - Membership – Paul Nelson
 - Standards – Brian Krafthefer
 - Program – Dean Tompkins
 - ALI (ASHRAE Learning Institute) – Doug VanOsdell
 - Handbook – Gemma Kerr
 - International – Paulo Tronville, Eric Kuiper
 - Website – Nick Agopian
 - Publications – Marilyn Listvan

Meeting attendees desiring to become corresponding members were asked to indicate this on the meeting attendee sheet(s). Doug VanOsdell submitted these names to ASHRAE for consideration as corresponding members.

Program (Dean Tompkins, Chair)

- **Programs presented in Anaheim, CA (Jan. 24 – Jan. 28, 2004):**

FORUM 2: Post 9/11 Impact on HVAC (co-sponsor TRG2 BCBR; Chair: Dean Tompkins)

FORUM 3: Filtration/IAQ Needs for ... Hotels (co-sponsor TC 2.4; Chair: Marilyn Listvan)

SEMINAR 43: Ventilation and Air Cleaning for Bars, Restaurants and Casinos (co-chairs: Chris Muller, Paul Nelson)

- **Program items for future meetings were prioritized through votes of attendees as follows:**

Nashville, TN (June 26-30, 2004)

FORUM: Filtration/IAQ Needs for ... Hospitals (co-sponsor -TC 2.4; Chair: Bob Burkhead)

FORUM: What Work needs to be done to properly apply UVC lights? (co-sponsor -TC 2.4; Chair: Mort Blatt)

FORUM: Measurements of Gas Phase Contaminants: Who's kidding whom? (Chair: William Lull)

Orlando, FL (February 5-9, 2005)

SYMPOSIUM: Applications of UV Photocatalysis for Gaseous Contaminants (Chair: Marilyn Listvan)

SYMPOSIUM: IAQ - Filtration (co-sponsor -TC 2.4; Chair: KJ Choi)

SEMINAR: AMC Standards for Clean Rooms (co-sponsor TC 9.11; Chair: Matt Middlebrooks)

SEMINAR: Filtration for Improved Indoor Air for Hospitals (co-sponsor with TCs 2.4 and 9.8; Chair: Chuck Schroeter, Chris Muller)

FORUM: Filtration/IAQ Needs for ... Marine Environments and Cruise Ships (co-sponsor with TC 2.4; Chair: Charlie Seyffer)

Denver, CO (June 25-29, 2005)

SYMPOSIUM: VOC Emission / Adsorption & IAQ (co-sponsor with TC 4.10; Chair: Gemma Kerr)

FORUM: Review/Update on Odor (Chair: Brian Krafthefer)

FORUM: Development of Worldwide IAQ Standards (co-sponsor TC 2.4; Chair: Paulo Tronville)

- **A motion was made and seconded with no discussion to approve the Programs as presented above. The voting results are: 11, 0, 0, 1, 12 (for, against, abstain, absent, total).**

Handbook (Gemma Kerr, Chair)

- TC 2.3 is responsible for 3 Handbook chapters. Two chapters – Ch. 12 and 13 (Odors) in Fundamentals (2005) Handbook. Fundamental changes are in Chapter 13 as well as Chapter 12. A letter ballot will be sent out on Ch. 13 for voting prior to the Nashville meeting. Ch. 12 is a more significant review; one will likely get a month to review Ch. 12 changes. May 24, 2004 is the deadline for approval for Ch. 12 and 13.
- Chapter 44 (Applications) will be coming up next year.
- The paper version of the Handbook is presently considered as the official ASHRAE document. Handbooks will no longer be free to members.
- Animated presentations will be in the 4-volume CD.

Standards (Brian Krafthefer, Chair)

- List of Standards was developed and revised.
- Chris Muller gave an update on Standard 145 (145.1, 145.2). Chris mentioned that an article appeared in print without the proper marks, disclaimers, copyright, etc. on it. That draft Standard 145 article was picked-up by the National Renewable Energy Laboratory and improperly mentioned. There are several participating laboratories involved in round-robin testing. Section 5 of the Standard 145.1 was worked on during the meeting. An efficiency end-point (the 50% breakthrough) was proposed for inclusion in the standard. Other Sections will go out for letter ballot. Several

- SPC 161 – Air Quality within Commercial Aircraft: The SPC met twice over the meeting. The SPC has strong consensus after the national (ASHRAE) meeting. Good progress is being made. There is consensus on the temperature level and air flow changes.
- TC 2.3 has representation through Chris Muller in Standard 62. Standard 62 has been re-organized into (1) Education, and (2) Research.
- Draft outline for method of monitoring gas-phase contaminants is under development. It is expected that voting on this issue will occur at the next ASHRAE meeting in June.

Research (Karin Foarde, Chair)

- ASHRAE has reorganized its funding. Funding for Chem/Bio is going into extraordinary events funding.
- FINAL technical papers are allowed to be published in the HVAC&R Journal as well as the Transactions.
- Re: 1098 RP – “Field Test Methods to Measure Contaminant Removal Effectiveness Of Gas Phase Air Filtration Equipment - Phase II Field Study.” The PI is Charlene Bayer (Georgia Tech Research Institute) and the PMC Chair is Gemma Kerr. Gemma Kerr and Charlene Bayer are finalizing modification to the conclusions to make them more useful for ASHRAE members. The PMC recommends, that upon completion of the requested changes by the PI, to accept the FINAL report. TC 2.3 voted to accept the final report on 1098-RP: **A motion was made to accept the final report; the motion was seconded and discussed. The voting results are as follows: 10, 0, 1, 1, 12 (for, against, abstain, absent, total). Note: The abstention was by the GTRI project leader, who is also a TC 2.3 member.]**
- Re: 1243-RP – “Detection And Measurement Of Gaseous Byproducts Of Fungal Growth That Affect Indoor Environments - Phase II.” The PI is AQS (Don Cortez has left under good conditions; Elliot Horner is now the PI) and the PMC Chair is Karin Foarde. The PMC indicated that Dr. Horner gave a full and extensive report.
- Three RTARs were submitted –
 - 1) *How Would Gas Phase/Particulate Filtration Equipment Protect Against an External/Internal Release of Threat Agents.* Nick Agopian will revise his RTAR. Three comments came back. Nick discussed the comments from the reviewers: Not enough is known in the public domain. Nick’s re-write is due August 1, 2004.
 - 2) *Inter-Laboratory Evaluation of Test Method for Gas-Phase Air Cleaning Media in Support of Approval of ASHRAE SPC 145.1;* authors: Chris Muller and Paulo Tronville. The RTAR was accepted by R&T. A work statement is being prepared.
 - 3) By-product production from photocatalytic oxidation associated with indoor air cleaning devices; Bob Hendry is author and this has been accepted.; 2nd Deadline date is forthcoming.

Work Statement WS-1302, “Comparison GPAFE Lab-Tests to Field Experience”, was approved conditionally by RAC. The work statement’s prime author is Matt Middlebrooks. Comments from the reviewers and the responses follow:

- 1) *Reconcile budget and level of effort. Then satisfy R&T that level of effort is reasonable.*
The RAC concerns were discussed with a RAC member. Although considerable thought was put into the original cost estimate, additional discussion with researchers who do similar work suggested that an increase was warranted. TC 2.3 approved an increase in the expected cost to \$160K.
- 2) *Make the relationship between this project and SPC-145P clear. Specifically, does SPC-145P depend on this project being successfully completed, or does this project depend on SPC-145P being finalized?*
Text was added to the “Advancement to the State-of-the-Art” section explaining that neither is dependent upon the other. SPC-145.1 is not waiting on this research to go forward. This research refers to SPC-145.1 as one possible setup and method that could be used to conduct the tests, so we don’t have to wait until the standard is published. (SPC-145P has 3 parts - SPC145.1, .2, .3; loose media, full filter, and field tests respectively).
- 3) *RAC thinks it would be appropriate to state that the PMS should review and approve the test plan prior to the contractor performing the work. Please add language to that effect.*
Section 2e states that the statistical validity and basis of the proposed trial design will be used as criteria in selecting the bidder. Additional text added as #2 in the Scope.

A motion was made and seconded to increase the funding level presented in this work statement project to \$160,000. There was discussion by members as to the level of increased funding for this work statement. The motion to approve the WS as modified and the cost estimate increase was: 11, 0, 0, 1, 12 (for, against, abstain, absent, total).

- List of projects for 2004-2005 research projects will be discussed at the June (Nashville) meeting.

Publications (Marilyn Listvan, Chair)

- The Publications Meeting was held and had 12 members present.
- There are some special publications being developed:
 - ETS Design Guide – Nick Agopian has been working on this guide with other committee members. A contractor is in place that will develop the Design Guide. The guide is designed to determine how to apply different filtration mechanisms for filtering ETS. Though the Design Guide appears to be developing favorably, a criticism of the Design Guide includes arguments that an acceptable environment will be achieved without very large CFMs of make-up air. The Design Guideline does address using filtration with gas and particle phase removal equipment in addition to make-up air. This is not a standard, rather a guideline.
 - TC 1.12 (Moisture Control) is developing mold prevention publications. A motion was made that TC 2.3 request the opportunity that someone(s) be involved with TC 1.12 on the mold control publication. A motion was made,

- Several volunteers came forward to present papers. Examples include the cigarette smoking guideline (Nick Agopian) and sterilization (Ron Domitrovic). It was mentioned that a template of a good paper is provided by Moyer et al. (AFS Proceedings) paper.
- Funding has been approved to develop a User's Guide by this time next year for 62.1 and 62.2.

Website (Nick Agopian, Chair)

- Request was made that new members make the effort to get on-line (Internet) and go into the (TC 2.3) web-site (at <http://www.iccss.org/tc23/members.htm>) and check the spelling of their respective e-mail address. In cases where an incorrect e-mail address is listed, send an e-mail to Nick (at nagopian@dectron.com) and inform him of the change requested.
- As a notice to new voting members of the TC: It is necessary that voting members provide authorization to place your e-mail address and other contact information (phone and fax) on the TC website.

TC Liaison Work:

- The ASHRAE ad-hoc committee on extraordinary events and homeland security issues germane to the HVAC industry are involved in a nationwide satellite broadcast on April 14, 2004. The broadcast will include a keynote address by the former director of a federal government office created to protect the public from acts of bioterrorism and other health emergencies. Donald Henderson, M.D., will focus on the risks of biological agents being used as biological weapons. More information on this broadcast is available at <http://membership.ashrae.org/template/AssetDetail/assetid/32181>.
- The Indoor Air 2004 conference is in Tampa, FL during March 15-17, 2004: "Critical operations supporting the Healing Environment ..."

New Business:

- TAC Master Example: TCs are encouraged to place examples and models in the Handbook chapters. These efforts are proposed in order to develop a usable design guideline. TAC is available now through the ASHRAE web-site.
- Art McGivor, a corresponding member, has died since the last meeting.
- Since the main TC 2.3 meeting in Anaheim, the TC received notice from Regina Stafford (ASHRAE Research and Technical Services) that the following action was taken by ASHRAE:

At the Board meeting on January 25 in Anaheim, the Board passed the following motion:

“That the following statement be placed on the cover of the minutes of the Board, councils, standing committees, technical committees and standard project committees that are distributed prior to being approved:

These draft minutes have not been approved and are not the official, approved record until approved by this (council/committee).

Please include this statement on the cover of all minutes that are distributed prior to being approved. Thank you.”

This action has been taken as noted on the cover of these minutes.

A motion was made to adjourn the meeting, seconded. The voting results: 11, 0, 0, 1, 12 (for, against, abstain, absent, total).

Meeting adjourned at 14:49.