

ASHRAE MEETING MINUTES – Quebec City

TC 2.3 - Gaseous Air Contaminants/Removal Equipment TC Meeting

Tuesday, June 27, 2006
13:00 - 15:30

NOTICE:

These meeting minutes have been approved and are official.

- The meeting was called to order at 13:08 pm by Chairman Erik Kuiper. The attendees that completed the meeting attendee sheet(s) were:

Name	Email address
(Voting Members)	
Karin Foarde	kkf@rti.org
Gemma Kerr	gemma.kerr@inairenvironmental.ca
Ez Khalifa	ez@ecs.syr.edu
Eric Kuiper (Chairman, International)	erik@mail.ashrae.org
Chris Muller	chris_muller@purafil.com
E.C. “Chuck” Schroeter	fsifla@bellsouth.net
Paolo Tronville (International Member)	paolo.tronville@polito.it
Derald Welles	dwelles@ix.netcom.com
Dean Tompkins	dtompki@wisc.edu
Kyung-Ju Choi	kchoi@aafintl.com
William Lull	TC23@garrisonlull.com
(Corresponding Members and Guests)	
Marilyn Listvan	listv001@umn.edu
Bernice Valantinat	bernicer@promarkassociates.com
Harry Elinsky Jr.	harrye@filtechinc.com
Jeff Roseberry	jeffr@promarkassociates.com
Kathleen Ower	mkoarti.org
Monroe Britt	mbritt@clair.com
Alain Ginestet	alain.ginestet@celiat.com
Bob Burkhead	bobburkhead@blueheavenky.com
Rick Larson	rlarson@trane.com
Jensen Zhang	jszhang@syr.edu
Mark Renn	mrenn@aafintl.com
Charles Seyffer	cseyffer@nycap.rr.com
Bob Baker	rbaker@bbjenviro.com
Phil Winters	pwinters@filtrationgroup.com
Terri Wytko	twytko@ari.org

Mark Stutman	stutmanm@camfilfarr.com
Dave Chojnowski	davidc@uic.edu
Vinoo Sharma	vsharma@kcc.com
(Liaisons)	

- Attendee' self-introductions were made.
- Voting Membership
- Liaisons were given the opportunity to give their report(s). See below for written text on the individual reports.
- Minutes to be published within 60 days following the minutes.
- Roster check was made. Voting members present at the TC meeting include:
 - 1) Erik Kuiper (Chair and International Member)
 - 2) Karin Foarde
 - 3) Derald Welles
 - 4) Chris Muller
 - 5) Ez Khalifa
 - 6) Dean Tompkins
 - 7) KJ Choi
 - 8) William Lull
 - 9) Chuck Schroeter (absent at start of meeting)
 - 10) Mark Stutman

Two voting members were absent including Ron Domitrovic and Bob Hendry.

A quorum was achieved with 10 voting members present out of a total of 12.

Voting Members present – 10

Volunteers are requested to help out Solar design.

Announcement of two symposiums/conferences – WellBeings Indoors; IAQ 2007

Password-protected link to 2006-2007 will be e-mailed to all members (corresponding and full) of the tthomas@ashrae.org. (Dean will inquire with everyone to determine if they received their e-mail.)

Nominations for the Hightower Award are due in October of 2006.

If you want a thank-you letter, there is a form that is available to be filled out.

There is a new Strategic Plan for Research.

Web-site will be updated on the July 1.

Software (freeware) for wireless meeting will be available at ASHRAE's web-site. A \$29 transmitter can/will purchased.

Membership database will be updated in October. It will be a great improvement over what is done now. Due this in November (Halloween).

April 16, 2007 is the next satellite conference - see the ASHRAE web-site.

A motion was made and seconded to approve the meeting minutes of . There was no discussion. Voting on approval of the Chicago minutes was as follows: Voting Results: 9, 0, 1 (Chair Not Voting), 3, 13 (For, Against, Abstain, Absent, Total).

For –	8
Against –	0
Abstain –	1 (Chair, not Voting)
<u>Absent –</u>	<u>3</u>
Total –	12

MOTION APPROVED.

Subcommittee Reports Made:

Planning (Dean Tompkins, Chair)

- Presentations to be finalized for the ASHRAE Chapters so we can promote ourselves.
- Finalize the survey form which has been under development for a couple of years.
- Suggest a forum for Program of why we don't practice Good IAQ air-cleaning.
- Make use of a Canadian study in which the IAQ impacts productivity.
- Check California Education with regard to Air Quality and school attendance.
- The intent is to put the information into PLANNING and then into the TC 2.3 Website.
- Get Stacia's and Mort's information on the school attendance issues into PLANNING.

Membership (Nick Agopian, Chair, not present; Erik Kuiper reporting)

The current TC 2.3 leadership team is:

- Chair – Dean Tompkins
- Vice Chair – Nick Agopian
- Secretary – Nick Agopian
- Research – Karin Foarde
- Planning – Nick Agopian
- Membership – Nick Agopian
- Standards – Paolo Tronville
- Program – Dean Tompkins

- ALI Coordinator (ASHRAE Learning Institute) – Doug VanOsdell
- Handbook – Gemma Kerr
- International – Paulo Tronville
- Website – Nick Agopian
- Publications – Marilyn Listvan

Brian Rock (Handbook Liaison) and Mark Stutman were not placed onto the Roster. The problem is being corrected.

There is a new individual (Steven Emmerich; steven.emmerich@nist.gov) desiring to be a corresponding member.

Research (Karin Foarde, Chair, reporting)

- ASHRAE Research Project 1243-RP Final Report was approved.

A motion was made to approve ASHRAE Research Project 1243-RP Final Report and seconded. There was no discussion. Voting Results:

For –	9
Against –	0
Abstain –	1 (Chair, not Voting)
<u>Absent –</u>	<u>3</u>
Total –	13

MOTION APPROVED.

The voting results were submitted on Tuesday January 24, 2006 after the TC2.3 meeting.

Reported by Gemma

1302-TRP “Comparison of Gas Phase Air Filtration Equipment (GPAPE) Lab Tests to Field Experience.” Principal Investigator – Donald H. Stedman, University of Denver [PMC – **Gemma Kerr (Chair)**, William Lull, Phil Winters, Paulo Tronville, and Nick Agopian] The objective of this project is to provide directly comparable performance data and or methods (i.e., correlate approaches) to make comparisons for various media used in GPAPE designs at both accelerated (high challenge concentration) and application (very low challenge concentration) conditions within a laboratory setting. Ed Wolfrum (NREL) gave the presentation. The University of Denver has set up the laboratory. They have 3 different VOCs (hexane, toluene, tetrachloroethylene) that they are testing. They are down in data analysis and that a lot of useful data was not collected. The presentation did not provide what the PMC desired to hear. They looked at 2 physical and 1 chemical absorbents (permanganate and impregnated alumina). However there is an issue with respect to the type of gases not being appropriate to the chemical absorbents.

- **Work Statements**

- a. Work-Statement 1457-WS - “By-product Production from Photocatalytic Oxidation Associated with Indoor Air Cleaning Devices” has been accepted. Bob addressed the comments, everyone voted and has been conditionally accepted. Bob needs to respond to

TC 2.3 2005-2006 Research Plan

Projects	Person Responsible	Priority
Determining/evaluating remaining life of filter-bed material	William Lull, Gemma Kerr, Nick Agopian	3
Evaluation of combined particulate and gaseous filters (combi-filters): What happens to gas phase contaminant levels with particulate loading.	Paolo Tronville	2
Real environment lab test for comparison tests of PCO vs. carbon filter (flow, pressure drop, RH, temperature, multiple VOCs, etc.)	Dean Tompkins	1

Need to get the RTARs written and into Karin by mid July in order to get them into ASHRAE on time. The RTARs needed to address the Research and ASHRAE Strategic Plan; these need to be placed into the RTAR form. Karin will e-mail the new RTAR forms to Bill, Dean, and Paolo. This is the new 5 year plan. There appear to be some restrictions on the individual leading the RTAR authorship and whether they can compete/bid on a research project. There was a presentation that was made on research liaison meeting (in Chicago). There was much discussion on the matter of avoiding the conflict of interest.

A motion was made and seconded to approve the RESEARCH PLAN as described above. No Discussion. Voting Results:

For – 9
Against – 0
Abstain – 1 (Chair Erik Kuiper, not Voting)
Absent – 2
Total – 12

MOTION APPROVED.

- Bill Lull remarked that at the TC 8.12 (formerly TC 3.5) – sorbents and desiccants – there are some research projects that need to be considered for co-sponsorship by TC 2.3 including:
 - 1) Odor Retention and Release from Heat Recovery and Desiccant Wheels. [Seeking co-sponsorship - Steve Slazak, Doug Kosar, and Bill Lull. This project involves the use of sorbent materials and technology as air cleaners. It is a take-off from ASHRAE 475-RP (University of Missouri).]
 - 2) Odor retention and release.
 - 3) Silica gel capability to remove VOCs.
 Karin will likely be informed/contacted by someone from TC 8.12 regarding these issues.

Program (Dean Tompkins, Chair, reporting)

- Program(s) presented in Quebec City (June 24-28, 2006):

<u>Name</u>	<u>Title</u>	<u>Co-Sponsor</u>	<u>Chair</u>
SEMINAR 44	Gas-Phase Air Filtration, Case Studies (Part 1)	None	Chris Muller
SEMINAR 64	Gas-Phase Air Filtration, Case Studies (Part 2)	None	Chris Muller
TRANSACTIONS 14	Evaluating and Measuring Performance of Air Cleaning Devices		Fariborz Haghighat

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

DALLAS, TX (Jan 27-31, 2007)

<u>Name</u>	<u>Title</u>	<u>Co-Sponsor</u>	<u>Chair</u>	<u>Priority</u>
SEMINAR	Efficient HVAC Design for Energy Efficiency - IAQ for Schools: A Texas Approach	2.4	Chris Muller	<u>1 (in Quebec City)</u>
FORUM	Development of World-Wide IAQ & Filtration Standards	2.4	Paolo Tronville	<u>2 (in Quebec City)</u>
SEMINAR 17	Innovative Gas-Phase Cleaning Technologies	None	KJ Choi	<u>3 (in Quebec City)</u>
FORUM	Filtration IAQ & Energy Efficiency for LEED/Green/ Sustainable Buildings	2.4	Marilyn Listvan	<u>4 (in Quebec City)</u>
SEMINAR	Proper Application of UVC Lights	2.4	Mort Blatt	<u>5 (in Quebec City)</u>

A motion was made and seconded to approve the program and seconded in the TC to accept the list above, ranked in order shown above, for Dallas. No Discussion Voting Results:

For –	9
Against –	0
Abstain –	1 (Chair, Erik Kuiper not voting)
<u>Absent –</u>	<u>2</u>
Total –	12

MOTION APPROVED.

Handbook (Gemma Kerr, Chair, reporting)

- TC 2.3 is responsible for three Handbook Chapters. Gemma Kerr reported that Handbook chapter activity is on-track.

TC 2.3 is responsible for 3 chapters.

Chapter 45 (Applications) – Gas Contaminant Removal Equipment (Van Osdell, Stutman, Agopian, Krafthefer)

Gemma desired to recognize the LARGE effort on these individuals, in particular, Voting on acceptance of the Handbook Chapter was

For –	8
Against –	1
Abstain –	0
<u>Absent –</u>	<u>2</u>
Total –	12

2009 Fundamentals –
Chapter 11 – Air Contaminants
Chapter 12 - Odors

Standards (Paolo Tronville, Chair, reporting.)

At the subcommittee meeting there was discussion to move the time-slot.

- GPC 27 - “Measurement Procedure for Gaseous Contaminants in Indoor Environments.” – Four official members were present; 3 will be added for a total of 7 members for its 1st official meeting in Quebec City. Desire to get 2 incursions on the outline. If interested in joining then you are encouraged to join and become active. The meeting is held from 15:00-17:00 on Sunday.
- 145.1 (Media Method of Test): An off-site meeting was held on the 21st/22nd of March 2006 on the NIST campus (Gaithersburg, MA). A letter ballot will be put out for acceptance of this standard.
- 145.2 (Test Duct Method) – A draft of 145.2 has been submitted for review by folks. Doug VanOsdell strongly urges individuals from end-users (manufacturers, customers, etc.) to provide input regarding concentrations, species, . (William Lull suggested that 145.2 be allowed/worded/ to allow desiccant wheels to be fitted for a 2-ft x 2-ft rectangular test duct.)

Paolo provided a description of the ISO organization using a flip-chart visual aid. There are more than 160 members (as technical committees – countries) in ISO. e.g., the U.S. member of ISO is ANSI (American National Standards Institute), the French ISO member is AFNOR, and the Canadian ISO member is SCC. Membership is designated as P (member; voting member), O (observing member; non-voting). The purpose of ISO is to develop documents. The documents have a certain order, as follows: WD (Working Document), CD (Committee Draft), DIS (Draft International Standard), FDIS (Final Draft International Standard), IS (International Standard).

A significant discussion was put forth to have ASHRAE become a participating member of ISO, sort of.

A motion was made (by Chris Muller and Paolo Tronville), and seconded that TC 2.3 put forth a formal request:

It is moved that TC 2.3 present a formal request to ASHRAE Standards Committee that they begin discussions with the Institute of Environmental Science and Technology (IEST) to take over the role (from IEST) as Administrator (Secretariat) of the U.S. Technical Advisory Group (TAG) to ISO/TC 142: Cleaning Equipment for Air and Other Gases.

No discussion; discussion was earlier. Voting Results:

For – 9
Against – 0
Abstain – 1 (Chair, Erik Kuiper not voting)
Absent – 2
Total – 12

MOTION APPROVED.

If that motion does not appear to be a real possibility in the near-term or the proposal is rejected by either ASHRAE or IEST, a second motion was made and seconded to approve. [This (second) motion is conditional upon non-acceptance of the first vote.]

It is moved that if ASHRAE is not successful in taking over as Administrator (Secretariat) of the U.S. Technical Advisory Group (TAG) to ISO/TC 142 or chooses not to, that TC 2.3 requests ASHRAE to apply as a voting member to the U.S. TAG for ISO/TC 142 and pay the appropriate required fees for membership.

No Discussion. Voting Results:

For – 9
Against – 0
Abstain – 1 (Chair, Erik Kuiper not voting)
Absent – 2
Total – 12

MOTION APPROVED.

Comment (made by Derald Welles) – An amendment at the Standards Subcommittee Meeting was made that only one member from one company have one vote. The desire is to have this criteria extended to government individuals.

Publications (Marilyn Listvan, Chair, reporting)

The (joint 2.3, 2.4) Publications Meeting was held 6/26 and had 10 members present. (see at end)

- IAQ Proceedings CD: ASHRAE publications is expecting our document available for the IAQ 2007 conference (market) so scan need to be COMPLETE by winter meeting (or sooner) to give to Special Pubs.

1. '86 – Managing Indoor Air Health and Energy Conservation (blue cover) **--- C. Seyffer scanned!**
2. '87 – Practical Control of Indoor Air Problems (cream) **--- C. Seyffer scanned!**
3. '88 – Engineering Solutions to Indoor Air Problems (small red) **---B. Krafthefer**
4. '89 – The Human Equation for Health and Comfort (orange) **---Vino Shorma (KCC) Scanned!**
5. no '90
6. '91 – Healthy Buildings (& post-conference proceedings) (turquoise/white) **---Mark Stutman**
7. '92 – Environments for People (grey) **--- M. Listvan**
8. '93 Operating & Maintaining Bldgs for Health, Comfort & Productivity (green) **--- C. Seyffer**
9. '94 – Engineering Indoor Environments (turquoise) **--- Jean Girard (had trouble, gave to C. Seyffer)**
10. '95 – Practical Engineering for IAQ (orange) **--- to M. Listvan**

11. '96 – Paths to Better Building Environments (burgundy) --- Jim Moulton (~ 1/3 done)
12. '97(?) – Design, Construction & Operation of Healthy Buildings; --- Scott Hanson
Solutions to Global

AUGUST 30, 2006 deadline for scanned files back to Marilyn so she can bookmark, etc.

Action item : detailed scanning instructions to all: PDF format, Scan from within Acrobat (open New.....). They need to be scanned with optical character recognition OCR (with 600 dpi) use Acrobat 7.0 OCR settings. We can use bookmarks to identify papers.

- Action Item for Marilyn: Verify with ASHRAE for a release to allow for a copy write release letter

Article topics and Authors were asked for (continued from 2/7/05 & 6/05 meetings) :

- K. Foarde will attempt to convert an ARTI report into an ASHRAE Journal article on UV light effects (**Did talk to Fred Turner, trail date: 6/07**)
- G. Kerr may produce (1) a second (and third) manuscript for ASHRAE TRANSACTIONS based on work for RP-961, and (2)an ASHRAE (IAQ Applications) Journal article on “How to investigate Odor Problems in Real Buildings.”
- D. Tompkins – There will be two Symposium papers (Denver) from RP-1098.** or 1139 (done??)
- Art Hallstrom in 2/05 mentioned the need for article(s) on impact of 90.1 on filtration selection – filter drop issues, dirty filters. (KJ was to work with Art.) ***Brian Krafthefer & Tom Justice interested.
- Charlie Seyffer from Camfil Farr to work on a filter pressure drop article. (combine with previous?)
 - KJ Choi and Charlie Seyffer (Camfil Farr) – HVAC overview: Where’s the filter? Residential vs. commercial. Used to rooftop units ... how many ...where to put it? (before the coil). Art Hallstrom needs to provide KJ with some info from his company.
- **Scheduled for 1/07!:** Paolo Tronville and Dick Rivers have refined an article on International standards. The desire is that this publication may be used to produce an article for “Pubs credit”—is in Manuscript Central for review.

Action Item for Marilyn: Please contact Fred Turner to make sure that the article moves forward . **is moving !

- Last time there was extended discussion on: Are there ISO standards for filtration? (ISO TC 142 ... Met in 1986): Paolo Tronville gave some background.

This has been voted on by the ISO committee to re-activate the committee. The committee will be working on standard for general ventilation, standard on HEPA and ULPA filters as well as Gas Phase and gas turbine intake filters and electrostatic filters.

*** Action: It was suggested that Phil Winters keep notes on working with the ISO process and write an article on that experience. (Next ISO meeting is 10/06 in Milan....check with Phil W. on his progress)

- Paulo will put together a small summary for the ISO standard (ISO TC 142....?). Maybe we can put something into Insights.
- Action Item to KJ/CS for the HVAC overview outline before ~~August 15th 2005~~ (revised to 10/ 2006).
- Action Item to Marilyn to contact KJ/CS for the HVAC overview before ~~August 15th 2005~~(also to 10/06).

- Action: “Use of Filtration in Process Applications.” Nick Agopian has info for two applications (Outdoor air for Semiconductors; Pulp & paper). **Nick not at Quebec, ML check on status.**
- Need status: Jim Hanley has a paper drafted on 52.2 round robin (tech paper). Action Item: See if there is an interest in Jim H. (**and/or Jim Kubokawa as PMC chair?**) to prepare a paper on this for Insights or Journal. Jim H. does have an executive summary already prepared. This executive summary can be used for the ASHRAE Insights or if too big...used for the Journal.
- ASHRAE news releases. TC 9.5 did (Residential & small building applications): Allergies solutions: It’s your money. We need to do some of these for ASHRAE (Contact: [Jodi Dunlop](#) Phone: 678-539-1140
Action Item for Marilyn: work with 9.5 members—next possible joint News release: Who is MERV anyway??
“Who is MERV?” Al Veeck & Barney Burroughs to provide information to Marilyn & Jim Hanley & Eric Kuiper will help review information. (**ML went to 9.5 on 6/26 p.m., they are working Sustainability & Residential issues more now**)
- MVOC Res. Project article is in prep. (Elliot Horner, AQS to write)
- Energy Conservation using IAQ procedure article (IAQ in Schools issue?) received several detailed/ critical comments back to Fred Turner – possible response needed (Chris Muller/ Brad Stanley will do...9/06 timeframe)
- FTC needs to crack down on false claims by filter devices – should this be a FORUM? seminar? (Tom Justice? Ask Jeff Seigel/ Richard Corsi if they want to do an article.) note Calif. Has legated twice the “snake Ions” vendor(s).
- 52.1 “how to retire it” was discussed –Jim Moulton to explore doing AC Refrigeration News article from a USER standpoint (ASAP C. Seyffer will work with Jim M./ and Monroe Britt – now is the time to write this since Maintenance Std. 180 is going out for public review)

Website (www.ashrae.org) (Nick Agopian, Chair, absent. No Report was made)

- No update on TC website. The Chair will be in touch with Nick Agopian.

TC Liaison Work:

- No reports given.

New Business:

- **No new business discussed.**

Agenda Items for Dallas

- **No new business discussed.**

Meeting adjourned at 15:10.