

ASHRAE MEETING MINUTES – Dallas

TC 2.3 - Gaseous Air Contaminants/Removal Equipment TC Meeting

Tuesday, January 30, 2007
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 Dean Tompkins. The attendees that completed the meeting attendee sheet(s) were:

Name	Email address
(Voting Members – 7)	
Mark Stutman	stutmanm@camfilfarr.com
Chris Muller	chris_muller@purafil.com
Paolo Tronville (International Member)	paolo.tronville@polito.it
Dean Tompkins	dtompki@wisc.edu
Kyung-Ju Choi	kchoi@aafintl.com
William Lull	ashrae@garrisonlull.com
Nick Agopian	nagopian@dectron.com
(Corresponding Members – 15)	
Marilyn Listvan	mlistvan@yahoo.com
Doug VanOsdell	dvw@rti.org
Eric Kuiper (International Member)	erik@mail.ashrae.org
Michael Corbat	mcorbat@filtrationgroup.com
Phil Winters	pwinters@filtrationgroup.com
K.C. Hsieh	kchsieh@aol.com
H.E. Burroughs	heburroughs@mindspring.com
Monroe Britt	mbritt@clcair.com
Terri Wytko	twytko@ari.org
Scott Hanson	shanson6758@msn.com
Dave Witham	davew@udi.com
Jensen Zhang	jszhang@syr.edu
Derald Welles	dwelles@ix.netcom.com
Thomas Kelly	thomas.j.kelly@carrier.utc.com
Steve Zitin	szitin@bioclimatic.com
(Visitors & Guests – 11)	
Shannon Schoppman	sschoppman@fiberweb.com
Bruce Duffy	b.duffy@tridim.com
Marc Newman	mnewman@fiberweb.com
Steve Hay	haysa@utrc.utc.com

Bob Culbert	enr.bob@steril-aire.com
Ken Kubitz	kkubitz@sparkstech.com
Charles Seyffer	seyffer@comfilfarr.com
Brian Monk	brian.monk@carrier.utc.com
Al Pucino	pucinoat@utrc.utc.com
Jay Field	jay.field@trane.com
Dave Chojnowski	davidc@uic.edu
(Liaisons not appearing is list above)	
None	

- Attendee’ self-introductions were made.
- Voting membership was identified.
- Liaisons were given the opportunity to give their report(s). See below for written text on the individual reports.
 - Marilyn Listvan – Electronic Communications
 - Chris Muller – 145P and 62.1
 - Bill Lull – TC 8.12
 - Paolo Tronville and Phil Winters – ISO TC 142
- Roster check was made. TC 2.03 has 13 voting members. Voting members present at the TC meeting include:

	<u>Present</u>	<u>Absent</u>
1) Paolo Tronville (International Member)	X	
2) Karin Foarde		X
3) Nick Agopian	X	
4) Chris Muller	X	
5) Ez Khalifa		X
6) Dean Tompkins (Chair)	X	
7) KJ Choi	X	
8) William Lull	X	
9) Chuck Schroeter		X
10) Gemma Kerr		X
11) Ron Domitrovic		X
12) Bob Hendry		X
13) Mark Stutman (is a voting member)	X	
	-----	-----
Totals:	7	6

Six voting members were absent including Karin Foarde, Ez Khalifa, Chuck Schroeter, Gemma Kerr, Ron Domitrovic, and Bob Hendry. Rod Domitrovic will be changed to a (non-voting) corresponding member effective as soon as the Section 2 Liaison (Gary Petteplace) and ASHRAE can make the change.

A quorum was achieved with 7 voting members present out of a total of 13. (Needed for quorum: 50% + 1 of voting members.)

- **A motion was made and seconded to approve the meeting minutes from the Quebec City (June 2006) TC 2.03 meeting.** It was noted (by Paolo Tronville) that there was some discrepancy in the total number of votes tallied for motions as presented in the meeting minutes. Chair Dean Tompkins indicated that he would make the changes necessary to clear-up the discrepancy.

Voting on approval of the Quebec City meeting minutes was as follows:

For –	5
Against –	0
Abstain –	2 (Chair, not Voting)
<u>Absent –</u>	<u>6</u>
Total –	13

MOTION APPROVED to accept the Meeting Minutes from Quebec City with the knowledge that the requested changes discussed will be made.

- Minutes to be published within 60 days following the minutes.

Subcommittee Reports Made:

Planning (Nick Agopian, Chair, reporting)

There was no Planning meeting in Dallas and no report was given. The Planning meeting will take place in Long Beach, CA at 6:30 AM on Tuesday, June 26, 2007.

Membership (Nick Agopian, Chair, reporting)

The current TC 2.3 leadership team is:

- Chair – Dean Tompkins
- Vice Chair – Nick Agopian
- Secretary – Nick Agopian
 - Shannon Schoppman (An emergency roster change was requested immediately after the TC 2.03 meeting in Dallas to have Ms. Schoppman become the TC 2.03 Secretary.)
- 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
 - Erik Kuiper (A roster change was requested immediately after the TC 2.03 meeting in Dallas to have Erik roll-up to an International member.)
- Webmaster – Nick Agopian

- Erik Kuiper (A roster change was requested immediately after the TC 2.03 meeting in Dallas to have Erik become the TC 2.03 Webmaster.)
- Publications – Marilyn Listvan

Research (Karin Foarde, Chair; Doug VanOsdell reporting)

- There were 16 attendees at the Research Subcommittee meeting held on Sunday, Jan. 28, 2007. Doug VanOsdell held the meeting in the absence of Chair, Karin Foarde.
- The minutes from Quebec City, summer 2006, were reviewed and approved with correction of M. Listvan's email address. Thanks to Marilyn for her dash to the ASHRAE business center for copies.
- RAC Section 2 Liaison Spitler (spitler@okstate.edu) was not present. Comments from the research chairs meeting were given to VanOsdell by Eric Kuiper for follow-up subsequent to the Dallas meeting by subcommittee chair Foarde.
- **Presentations/Up-Dates on Current Research Project**
 - a. 1302-RP "Comparison of Gas Phase Air Filtration Equipment (GPAFE) Lab Tests to Field Experience. Principal Investigator – Donald H. Stedman, University of Denver [PMC- Gemma Kerr (Chair), Bill Lull, Phil Winters, Paolo 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 GPAFE designs at both accelerated (high challenge concentration) and application (very low challenge concentration) conditions within a lab setting. Don Stedman presented a brief project overview and data for several chemicals and sorbants. The most notable technical issue was the failure of the impregnated alumina test to detect substantial uptake of acetone, which Dr. Stedman and the impregnated alumina manufacturers both consider surprising. Substantial input was provided by PMC member Lull regarding presentation of the results. Paolo Tronville coordinated the PMC review in the absence of PMC chair Kerr and will communicate those discussions to Gemma. The project final report is due in March 2007. The PMC will continue to monitor this project and its technical findings closely as the project draws to a close.
- **Work statements & RTARs**

1457-WS "By-product Production from Photocatalytic Oxidation Associated with Indoor Air cleaning Devices" was conditionally accepted at Quebec City. B. Hendry (Chair), B. Krafthefer, G. Kerr, E. Kuiper were to make the required changes, which did not occur. Our liaison noted in his report at the Section 2 research meeting that this WS needed to be completed and submitted by February 17 to be considered for funding. Eric Kuiper (working with Gemma Kerr) will address all remaining comments and submit it to TC 2.3 Research Subcommittee Chair Foarde, who will transmit it to ASHRAE.
- **Research Plan**

In an attempt to minimize the stress associated with RTAR submission, time was taken to

identify new research ideas at this meeting. At the summer meeting a champion will be identified for each and the ideas will be prioritized by subcommittee attendee vote. The top 3 ideas will be determined for the champions to prepare RTARs for submission to ASHRAE. New ideas will also be added in the summer.

The current TC 2.3 2006-2007 Research Plan was presented from the Quebec City meeting as follows:

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

Two additional topics were presented for addition to this working list of projects.

Proposed Research Topic	Person Presenting Topic	Priority
Ozone Removal Effectiveness by Gaseous Contaminant Air Cleaners. (Topic supports technical requirements of ASHRAE 62.1, which is now including ozone removal in non-attainment areas.)	Chris Muller	not ranked
Experience-based comparison of the indoor air quality achieved by the ventilation rate procedure and indoor air quality procedures. (It was noted during discussion that Scott Hanson's concept of comparing non-identical existing building would be technically challenging due to building differences and weather effects.	Marilyn Listvan (on behalf of Scott Hanson's presentation at TC 2.4 Research)	not ranked

Program (Dean Tompkins, Chair, reporting)

- Program(s) presented in Dallas, TX (January 27-31, 2007):

<u>Name</u>	<u>Title</u>	<u>Co-Sponsor</u>	<u>Chair</u>
SEMINAR 17	Innovative Gas Cleaning Technologies	None	KJ Choi

The contents of this seminar will be made available by ASHRAE on the ASHRAE web-site in the near future.

- Program items for the next (Annual) summer meeting in Long Beach, CA were prioritized through votes of attendees as follows:

LONG BEACH, CA (June 23-27, 2007)

<u>Name</u>	<u>Title</u>	<u>Co-Sponsor</u>	<u>Chair</u>	<u>Priority</u>
SYMPOSIUM	VOC Emission / Adsorption & IAQ	TC 4.10	Mo Hosni	
FORUM	Measurement of Gas-Phase Contaminants: Input for GPC 27	None	Bill Lull	1 (<u>in Dallas</u>)
SEMINAR	Natural Ventilation for Schools: Trick or Treat	2.4	Chris Muller	2 (<u>in Dallas</u>)
FORUM	Development of World-Wide IAQ & Filtration Standards	2.4	Paolo Tronville	3 (<u>in Dallas</u>)
FORUM	Filtration IAQ & Energy Efficiency for LEED/Green/ Sustainable Buildings	2.4	Marilyn Listvan	4 (<u>in Dallas</u>)
FORUM	Filtration/IAQ Needs for ... Marine Environments and Cruise Ships	2.4	Charlie Seyffer	5 (<u>in Dallas</u>)

A motion was made by Bill Lull and seconded by Nick Agopian to pass the motion to approve of the Long Beach program above. The voting results as follows:

For –	6
Against –	0
Abstain –	1 (Chair, Dean Tompkins not voting)
<u>Absent –</u>	<u>6</u>
Total –	13

MOTION APPROVED to accept the Program as presented at the meeting and listed above.

Handbook (Gemma Kerr, Chair; Dean Tompkins reporting)

- The meeting was chaired by Dean Tompkins (Chair, TC 2.3) for Gemma Kerr (Handbook Chair for TC 2.3) who was absent from the Dallas meeting due to rehabilitation from an injury.
- There were five individuals attending the Handbook Subcommittee meeting at 4:15 pm on Monday, January 29, 2007.
- TC 2.03 is responsible for Applications Chapter 45 and Fundamentals Chapters 12 and 13.
- Dean reported that **Chapter 45 (“Control of Gaseous Air Contaminants,” Applications Handbook) has been approved by ASHRAE** per information provided to TC 2.3 members by Brian Rock, Section 2 Handbook liaison. [FYI – While Brian Rock was not at the TC 2.3 Handbook subcommittee meeting due to numerous scheduling conflicts, Brian was at the TC 2.3 Publications subcommittee meeting where information regarding Ch. 45 approval was provided to those in attendance.]
- RE: Ch. 13 “Odors” in the Fundamentals Handbook the following remark(s) were made:

- Doug mentioned that TC 2.3 should proceed with great caution regarding any changes to Ch. 13 based on experiences with individuals that have had past experience with updating and editing the contents of this chapter.
- It was note that Joe Pedelty did a nice job on the 2001 update of this chapter.
- RE: Ch. 12 “Air Contaminants” in the Fundamentals Handbook the following remark(s) were made:
 - The Ottawa Valley chapter and Gemma provided a list of desired edits to the Ch. 12. This list was discussed at the meeting and is reproduced here along with the individual(s) that will be responsible for providing the desired information
 - **(Doug VanOsdell)** - Under definitions, the abbreviations nm and lm are used without stating what they are abbreviations of, no definitions are given for microscopic and sub-microscopic particle sizes, and ultrafine particle mode is used in Figure 4, but not mentioned earlier where the coarse and fine particle modes are discussed.
 - **(Doug VanOsdell)** - Table 5 lists a large number of families of gaseous contaminants with examples. However it is not clear that all of the listed chemicals are relevant to engineers or IAQ specialists, and no other information about the chemicals is given. Consider combining this table with Table 6 (which gives some basic characteristics of selected gaseous contaminants) or Table 13 (which gives source information).
 - **(Doug VanOsdell)** - Add a reference to Fundamentals Chapter 39 which contains similar information to Table 6.
 - **(Dean Tompkins and Bill Lull)** - Tables 7 and 8, which cover methods for measuring gaseous contaminants, are confusingly laid out, and do not include some recent technologies. They should be revised and updated.
 - **(Karin Foarde)** - Molds can produce two types of chemicals, mycotoxins and MVOCs. The difference between these and how people are exposed to each is not made clear.
 - **(Doug VanOsdell and Nick Agopian)** - Table 11, which gives typical outdoor concentrations for selected gaseous contaminants, needs to be updated. The source publications are all more than 15 years old and concentrations shown may not reflect current urban levels of these contaminants.
 - **(Gemma)** - Table 13, which gives source and concentration information for gaseous contaminants found indoors, could be improved by presenting typical indoor levels rather than maximums. It also comes from an old source and could usefully be updated. **(There is some confusion on this matter; it may be that there is some overlap between Table 13 in this Chapter and very similar data presented in Ch. 45 (Applications Handbook).)**
 - **(Gemma)** - It would be useful to add some information on material emissions to the section on non-industrial contaminants. Standard 62 now requires HVAC design to take building emissions as well as occupant needs into account. **(It was noted that Gemma may have something to say/state on this matter, as she (likely) had a research project(s) that relate to the very information desired. Also, it was noted that Charlene Bayer’s project may likely have data on this issue.)**

Standards (Paolo Tronville, Chair, reporting.)

Reviewed minutes of Quebec City meeting; accepted (5 yes, 2 abstain – not present at previous meeting)

1. Report on the status of ASHRAE TC 2.3 related Standards activities:

- a. GPC 27P “Procedures for measurement of gases in indoor environments” - Bill Lull

- i. Meeting minutes issued last Wednesday
 - ii. Industrial contaminants added to consideration of procedures under development
 - iii. Items from Quebec City still undone
 - iv. Scope of GPC will be revised to drop "and vapors"
- b. SPC 145.1 - Chris Muller (absent), Mark Stutman reports
 - i. If appendices are completed by mid February to Chris Muller then draft will be put out to public comments
- c. SPC 145.2 - Doug VanOsdell (absent), Bill Lull reports
 - i. People are to provide comments on draft 145.2 by end of February to Doug Van Osdell, so interested committee members can proceed up work
 - ii. Interested participants plan to schedule a half day long meeting to work on 145.2 in Long Beach on Saturday afternoon (1 pm – 3 pm)
 - iii. Report to TC 2.3 "145.2 chair is looking for feedback plus action on 2005 draft"
- d. SPC 145.3 - Bob Hendry (absent), no report

2. Update of Filtration related Standards

- a. ISO/TC142/WG8 – Paolo Tronville
 - i. Keith Morris, UK chairman nominees more made by US TAG (technical advisory group) committee for gas-phase experts
- b. ISO/TC22/SC7/WG3 – Paolo Tronville
 - i. Proposed Technical Specification (TS) 11155-2:2002 to become standard
- c. ISO/TC23/SC2/JWG4 – Paolo Tronville
 - i. Some working documents about cabin air filters + air quality, inside cabin (pesticides). Personal protection equipment is no longer sufficient in Europe
- d. IRTI (Taiwan) – Chris Muller (not present)
 - i. No report

3. Update of IAQ-related Standards

- a. SSPC 62.1 – Chris Muller (not present), Nick Agopian reported
 - i. Committee voted to amend 62.1 DA-13 to include NAAQS for PM2.5 (MERV11 filters) and ozone (40%). Requirements will be triggered by 8 – hour ozone concentrations. Exemptions/exceptions for ozone removal were deleted from addendum 62.1 DA-13. This will go out for public comment.
- b. SSPC 62.2 – To be determined
 - i. No report
- c. SPC161P – Erik Kuiper
 - i. Voted out for publication without any gas phase filtration. But ASHRAE Guideline 28 discussed ozone control.
- d. EPA IAQ update – To be determined
 - i. EPA has given ASHRAE \$500K grant for advanced IAQ guideline. Does the IAQ standard actually improve IAQ?
- e. ISO/TC209/WG8 – To be determined
 - i. No report
- f. IEST WG0035 – Phil Winters (with Mark Stutman adding comments)

- i. After the last IEST Meeting in November 2006, WG-0035 Chair Vijay (last name?) in fact sent out an email to interested parties stating that those present at the November 2006 meeting decided to polish the current draft and offer it as a 'Guide', leaving the option to expand it to a 'Recommended Practice' should interested parties become available to do the required work.
- g. Asian standards – Nick Agopian
 - i. Some researches are using ASHRAE 52.1 test rigs (like 145.2P) with 10% breakthrough. Testing for H₂S/ sewage treatment plants
- h. Canada – Gemma Kerr (not present)
 - i. No report
- i. Australia – Nick Agopian
 - i. No report
- j. South America – Paolo Tronville
 - i. Paolo met with Brazilian individuals (members of ABRAVA) in August 2007. They use EN779 plus EN1822, they don't follow any gas phase standards.

4. Old Business:

- a. Template for inclusions of IAQ Standards into a table is still needed. What compounds are of interest for 145.2?
- b. Phil Winters reported on this with regards to the US Tag and ASHRAE membership will be with TC 2.4. Charlie is the designated person. We have now decided that the second motion has passed.

Publications (Marilyn Listvan, Chair, reporting)

The joint TC 2.03 and 2.04 Publications Meeting was held on January 29, 2007 in Dallas and had 5 members present.

- **It is URGED that members update their e-mails / member information on the ASHRAE website.** This site is the official, central, and only location for contact information.
- **IAQ Proceedings CD:** ASHRAE publications is expecting our document available for the IAQ 2007 conference (market) so scan need to be COMPLETE by Feb 07 to give to Special Pubs. The remaining efforts include:

1.	'88 – Engineering Solutions to Indoor Air Problems (small red)	<u>---B. Krafthefer</u>
	<u>?? ML take</u>	
2.	'96 – Paths to Better Building Environments (burgundy)	<u>--- Jim Moulton (~ 1/3 done)</u>
	<u>?? ML ?</u>	
3.	'97(?) – Design, Construction & Operation of Healthy Buildings; Solutions to Global	<u>--- Scott Hanson ?? C.</u>
	<u>Sevffer take?</u>	

******Feb.15, 2007 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. ASHRAE wants each paper a separate file, then bookmarks

****Action Item: Marilyn: Verify with ASHRAE for a release to allow for a copywrite release letter---is OK, complete**

Article topics and Authors were asked for (continued from past meetings) :

- K. Foarde will attempt to convert an ARTI report into an ASHRAE Journal article on UV light effects (**Did talk to Fred Turner, trial 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”—Complete

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.

The ISO committee is re-activated. 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: Phil Winters keep notes on working with the ISO process and write an article on that experience. (next ISO mtg ischeck with Phil W. on his progress.....he will write an article on the ISO “proceeds / experience”)

- 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 2/07).
 - Action Item to Marilyn to contact KJ/CS for the HVAC overview before ~~August 15th 2005~~ (also to 2/07).
 - Action: “Use of Filtration in Process Applications.” Nick Agopian has info for two applications (Outdoor air for Semiconductors; Pulp & paper). **Nick interested in moving forward with field studies paper(s).**
 - Need status: Jim Hanley has a paper drafted on 52.2 round robin (tech paper). **Waiting for a Symposium slot.*** (Action for 2.4 Program!) 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 ASHRAE Insights or for the Journal.
 - ** Action for 2.4 Program! 52.2 Round Robin results waiting for a Symposium slot.***
 - **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 62.1 Press release: perhaps wait for Press Release after public review period.
ASHRAE news releases. “Who is MERV?” Al Veeck provided information Marilyn & Jim Hanley & Eric Kuiper will help review information. (ML note...is this published??)

- Action Item for Marilyn:—next possible joint News release: Who is MERV anyway??
- MVOC Res. Project article is in prep. (Elliot Horner, AQS to write.....status?)
- 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.....status??)
- 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/ if 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)

A request for volunteer reviewers of articles was made so that good information is provided by the TC.

- Nick Agopian is to look at schools San Antonio school district paper in the ASHRAE journal. Also have a paper for process applications. This information is to be shared with Marilyn.

Website (www.ashrae.org) (Nick Agopian, Chair, reporting)

- Nick reported that TC 2.03 is requesting NAFA (National Air Filtration Association; Al Veeck) to host the TC 2.03 website because TC 2.03 will be losing its current hosting site in the near future. If this change of hosting site can be effected, then Erik Kuiper has agreed to become the webmaster for TC 2.03. (FYI – Erik is currently the web-master of TC 2.04.)

TC Liaison Work:

- Electronic Communications Committee (ECC; Marilyn Listvan reporting) – Marilyn Listvan is a member of the Electronic Communications Committee (ECC). The ECC is making efforts to consider having the ASHRAE meeting become *paperless* meetings. Software is available on the ASHRAE website to conduct a paperless meeting. You can create a host server on someone’s PC and we can freely share documents between the chair and the committee members. The chair will need to buy a \$30 hub and Dean is willing to buy the hub for the next meetings. The software can be uploaded from ASHRAE’s website.

Marilyn inquired if there was anyone interested in joining ECC. Marilyn noted that ASHRAE will pay for the airfare to/from the TC meetings. ECC is a recently formed committee and in addition to a non-trivial amount of work between the ASHRAE meetings, ECC meets typically at 11 am on Saturdays during the ASHRAE meetings. The ECC concerns itself with how ASHRAE can better improve the electronic communications between members discuss the website, member data-based, etc.

- TC 8.12 (Bill Lull reporting) – Bill had nothing to report. He will report in Long Beach.
- SSPC 62.1 (Chris Muller reporting) – Voted to require air cleaning for non attainment. Change in the ozone (O₃) to change from the 1 hour standard to the 8 hour standard. There is growing support in the fact that you can not ignore outdoor air contaminants. We have the support of the committee for research on

air cleaning studies. ETS is still in the standards and it basically states that if you have any ETS, you need air cleaning and an effective amount and that may not be enough.

New Business:

- Dean mentioned there is a (satellite) web cast in April 2007 on indoor environmental design that can be viewed; details of the web-cast can be found on the ASHRAE web-site (www.ashrae.org). Dean encouraged those in attendance to consider viewing the web-cast. Viewership of the past four web-casts reveals that up to 20,000 individuals have viewed a web-cast.
- **RE: New ASHRAE BOD Registration FEE Policy.**
Dean presented the following remarks: In Quebec City, the ASHRAE BOD (board of directors) approved a new registration FEE policy effective for the Annual (summer) ASHRAE meeting in LONG BEACH, CA – Seminar speakers and Forum moderators will be offered only a 1 day free registration and not an entire free registration fee for the ASHRAE conference. For example, this new registration fee policy will have the following impact on a typical 4-day (Sunday, Monday, Tuesday, Wednesday) ASHRAE conference registration fee: For an ASHRAE member (paying dues annually), this would equate to a registration fee of \$375 for 3 days (of conference registration) instead of \$500 for (all) four days of the conference. Therefore, in effect, the Seminar speakers and Forum moderators will receive a one-day free registration fee equating to \$125 for their speaking services. Additionally and potentially more contentious is that Chairs of Symposia and Seminars will no longer receive free registration for any part of an ASHRAE conference.
 - Upon Dean presenting this new ASHRAE conference registration fee, there was lively discussion by many meeting attendees and there was *strong* opposition to the policy. Several meeting attendees were not happy and made the following (noteworthy) remarks:
 - Symposium papers still get full credit for the conference.
 - TC 5.4 said they will not have a program until this changes.
 - Some of the other TC chairs were writing letters to express disappointment in the new policy. [Indeed, Chair Dean Tompkins indicated that he would write a letter on behalf of TC 2.03 to express disappointment in this new registration fee policy.]
 - There was a general vote taken of everyone in the room as to their agreement of the following statement:

Will the new registration fee policy adversely affect the performance of TC 2.03?

 Results of a straw vote of all attendees at the TC 2.03 meeting are: 28 - yes, 0 – no, 5 – abstaining, and 33 - total.
 - Additionally, a motion was made by Bill Lull and seconded by Nick Agopian to vote on the following statement:

The new registration fee policy will have an adverse effect on forums, seminars, and symposia with respect to attendance, participation, and quality of work coming from TC 2.3.

After some discussion of the content of this statement by the TC, a vote was taken in support of the statement. **Voting results as follows:**

For –	7
Against –	0
Abstain –	0
Absent –	<u>6</u>
Total –	13

MOTION APPROVED. In order to communicate this motion to the ASHRAE BOD, Chair (Dean) Tompkins will write a letter to the Section 2 Liaison (Gary Petteplace) so that the content and its sentiment be communicated to ASHRAE’s TAC (Technical Activities Committee) .

- Tom Kelly offered a comment regarding several select ASHRAE programs being offered for presentation at the EXPO site/location. These comments included that feeling that it was difficult to attend the programs because timing (around the lunch hour) made it difficult to attend. It is good for people going to the show but not for the people attending the seminars. Timing is very short to be able to attend due to logistics in mobilizing from the seminars to the EXPO.

Agenda Items for the Annual (summer) ASHRAE meeting in Long Beach, CA

- No new business discussed.
- Dean made a general invitation to all attendees to attend the Annual (summer) ASHRAE meeting in Long Beach, CA. The official ASHRAE conference hotel is the Hyatt Regency Long Beach (200 South Pine Ave; Long Beach, CA 90802). The Hyatt Regency can be contacted via (562) 491-1234. [FYI – It was noted that Long Beach, CA is Marilyn’s home town.] We look forward to seeing everyone there.
- Marilyn invited all TC 2.03 meeting attendees to attend the (traditional) *Particle Party* (TC 2.04 dinner party) tonight (Tuesday, Jan. 30, 2007) at the Spaghetti Warehouse on Market St. near the West End village in downtown Dallas.

A motion was made at 14:59 by Paolo Tronville and seconded by Nick Agopian to adjourn the TC 2.03 meeting with no discussion. **Voting results as follows:**

For –	7
Against –	0
Abstain –	0
Absent –	<u>6</u>
Total –	13

MOTION APPROVED to adjourn the meeting.