

ASHRAE MEETING MINUTES – Chicago
TC 2.4 - Particulate Contaminants/Removal Equipment
Main Committee Meeting

Tuesday, January 24, 2012 3:30 – 6:00 p.m. Palmer House Hilton – Hancock (6)

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1. Call to order (Jim Hanley, Chair)
 - a. [Agenda Review – Attachment 1](#)
2. Introduction of guests and members
 - a. ~55 total attendance at meeting

3. Roll call (Tom Justice)
 - a.

Member	Pres	Abs	Member	Pres	Abs	
Jim Hanley (Chair)	X		Robert Burkhead	X		
Mark Renn (Research)	X		KJ Choi	X		
Eric Brodsky (Handbook)		X	Christine Sun	X		
Bruce McDonald (Standards)	X		Nader Barjesteh	X		
Stephen Nicholas (Programs)	X		Tom Kuehn	X		
Al Veeck (Webmaster)	X		Mike Corbat	X		
Charlie Kern		X	Jeff Siegel	X		
Zied Driss	X		Chris Peart	X		
Barney Burroughs (ALI)	X					
Monroe Britt	X					
Totals				16	2	18

NV Members/Officers

Tom Justice (Secretary/Membership)
 Don Thornburg (Vice Chair)
 Marilyn Listvan (Publications)

Present: 16 voting members – We have a quorum
 39 Corresponding members/visitors/guests

4. Welcome and Opening Comments (Jim Hanley)
 - a. Introductions from committee members and visitors
 - b. Paperless Meeting – Minutes are sent via email to the Voting Members and Corresponding Members on record. No other papers other than the sign-up sheets.
 - c. Please initial the information on the sign-in sheets or add your information as needed. Any corrections need to be done on the ASHRAE web site by you.
 - d. This is the Main TC meeting and it is mostly a review of Subcommittee Reports, so be at those meetings for the long discussions.

- e. A quick look at the draft agenda; one addition under item #9 will be a report on ASHRAE's position paper on air filtration and air filters by Tom Kuehn.
 - f. The chair recognized the passing of Derald Welles a long time active supporter of the committee.
 - g. Some input from the TC Chairs' meeting:
 - i. Discussed the re-branding of ASHRAE; new logo and tag line.
 - ii. A reminder that committee members may not speak for the TC without approval from ASHRAE.
5. Particle Party Announcement (Marilyn Listvan):
- a. Where/When: Pizano's Restaurant, 7pm tonight
6. Approval of Last Meeting Minutes (Montreal, June 28, 2011): (Tom Justice)
- a. **Moved by Barney Burroughs, 2nd by Jeff Siegel**
 - b. **Vote to approve: 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot) Chair Not Voting (CNV)**
7. Record of Votes since last meeting (Don Thornburg)
- a. **Letter ballot for the approval of co-sponsorship with TC 2.3 of RTAR 1625 Applicability of the IAQP to Achieve Healthy, Net Zero Energy Buildings**
 - i. **Approved co-sponsorship: 17-0-0-1-18 (Yes-No-Abstain-Absent-Tot)**
 - b. **Letter Ballot for the approval of sponsorship of revised RTAR 1626 Energy Implications of Air Filtration in Commercial Buildings**
 - i. **Approved sponsorship: 18-0-0-0-18 (Yes-No-Abstain-Absent-Tot)**
 - c. **Letter ballot for the approval of co-sponsorship with TC 2.01 (Physiology and Human Requirements) of WS- 1624, Effective energy-efficient school classroom ventilation**
 - i. **Approved co-sponsorship: 10-2-4-2-18 (Yes-No-Abstain-Absent-Tot)**
8. Subcommittee Reports:
- a. **Planning Subcommittee (Don Thornburg)**
 - i. Second meeting was on Monday from 8-10am.
 - 1. 2.4 chair has asked that all subcommittee chairs make every effort to attend the planning session.
 - 2. Under new business the group discussed the need to give ASHRAE more input into the ISO process.
 - 3. One idea was to allow various MTG's, TC's, to have a direct link into the various ISO advisory groups of the US TAG.
 - ii. **Motion to accept the Planning Subcommittee report**
 - 1. **Moved by Stephen Nicholas, 2nd by Monroe Britt**
 - 2. **Vote 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot) CNV**
 - iii. **PLANNING SUBCOMMITTEE REPORT IS ATTACHED.**
 - b. **Membership Subcommittee Report (Tom Justice)**
 - i. 5 individuals will roll off as voting members after the 2012 summer meeting
 - ii. 5 new names have been submitted for approval as voting members
 - iii. The current executive committee and sub-committee chairs will remain in place through the 2012/2013 year.
 - iv. The committee currently stands at 109 members total inclusive of 18 voting members.

v. Motion to accept Membership Report

1. **Moved by Barney Burroughs, 2nd Al Veeck**
2. **Vote: 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot) CNV**

vi. MEMBERSHIP SUBCOMMITTEE REPORT IS ATTACHED.

c. Research Subcommittee Report (Mark Renn)

- i. Current Projects: RP-1360 How do filters change during life...is our active research project
 1. Kathleen Owen presented SEM, XRF and loaded filter curves. Anticipate first draft by summer meeting and project completion by September 2012.
- ii. Current Tentative Research Projects: TRP-1603 Role of HVAC Systems in the Transmission of Agents in Buildings and Intermodal Transportation.
 1. Paolo Tronville reported that TC 9.3 is scheduled to recommend a contractor during the Chicago meeting.
- iii. Current RTAR's and Proposals
 1. 1626-RTAR Energy Implications of Air Filtration in Commercial Buildings; Tronville, Thornburg and Stephens will draft WS if RTAR is approved by RAC.
 2. 1649-RTAR Impact of higher efficiency filtration on IAQ in Residential Environments with Central HVAC; waiting on RL approval.
 3. Benefits/Problems of using MERV 13 filters in LEED; Siegel, Winters, and Thornburg to have RTAR ready for submission to RAC by May 15th deadline.
 4. Survey of Existing commercial HVAC systems and potential Energy Savings Technologies; Driss, Corbat, Snider to work on RTAR.
 5. RTAR 1559; Update Britt's previous RTAR to include verification of changes made to ASHRAE 52.2, Campion, Siegel.
 6. Tronville to look into an RTAR on investigation of a different loading dust.
- iv. Co-sponsored Projects
 1. TC2.3 – 1625-RTAR Applicability of the IAQP to Achieve Healthy, Net Zero Energy Buildings
 2. TC 2.1 – 1624-WS Effective Energy Efficient School Classroom Ventilation
- v. Al Vatine *briefly discussed a reference device they have developed during the sub-committee meeting.*
- vi. *Mark Renn noted that research projects can come from any group within ASHRAE including SPC's SSPC's, TG's etc. ASHRAE is concerned about a drop off in research proposals including RTAR's, Work Statements, and TRP's. Last year this time we had 64 RP's. This year we are down to 53 RP's.*
- vii. **Motion to accept Research report**
 1. **Moved by Bob Burkhead, 2nd by Stephen Nicholas**
 2. **Vote to accept report 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot) CNV**

viii. RESEARCH SUBCOMMITTEE MEETING MINUTES ARE ATTACHED.

d. Standards Subcommittee Report (Bruce McDonald)

- i. See attached subcommittee minutes for details.
- ii. Bruce McDonald noted that SSPC 52.2 holds particular interest for this group and pointed out a number of action items and proposed changes to the current standard including;
 1. Revisions to the current MERV table.

2. Particle counter specifications.
 3. Humidity range changes.
 4. Task Group on test variability.
 5. IPA vapour conditioning.
 6. Air density calculation.
- iii. McDonald noted that there were 48 active projects associated with ISO TC 142. SSPC 52.2 had voted to allow WG 3 to use the ASHRAE standard as a basis for work towards the international standard.
- iv. **Motion to accept Standards report**
1. **Moved by Mike Corbat, 2nd by Bob Burkhead**
 2. **Vote to accept report 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot) CNV**
- v. **STANDARDS SUBCOMMITTEE MINUTES ARE ATTACHED.**
- e. **Program Subcommittee Report** (Stephen Nicholas)
- i. Proposal submitted by K.J.Choi “does indoor air quality really affect your health?” was not accepted for San Antonio.
 - ii. Proposal submitted by Phil Winters, “How air filter selection affects energy consumption” was accepted for San Antonio.
 - iii. Forum on “Energy implications of air filters” was presented in Chicago chaired by Monroe Britt and Tom Justice.
 - iv. **Motion to accept Program report**
1. **Moved by Jeff Siegel, 2nd by Christine Sun**
 2. **Vote to accept report 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot) CNV**
- f. **Webmaster Report** (Al Veeck)
- i. Chair Jim Hanley acknowledged compliment from ASHRAE that we are fully up to date on our website and thanked Al Veeck for his committee’s efforts.
 - ii. Al Veeck noted that pictures from the Particle Party are being added to the website.
 - iii. Al Veeck also noted that we are in the process of including a listing of all past research projects relating to air filtration along with a brief subject description or synopsis of each. This will include close to 50 projects, which can be downloaded by ASHRAE members.
 - iv. **Motion to accept Webmaster report**
1. **Moved by Bruce McDonald, 2nd by Christine Sun**
 2. **Vote to accept report 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot) CNV**
- g. **Handbook Subcommittee Report** (Carolyn Kerr reporting for Eric Brodsky)
- i. Final proof for Chapter 28, HVAC Systems and Equipment was submitted to ASHRAE for publication in 2012.
 - ii. A draft of Chapter 11, Fundamentals was distributed to the subcommittee for review. Members are asked to complete the review by February 28 at which time Carolyn Kerr will submit to TC 2.3 for approval at their June 2012 meeting.
 - iii. Charlie Seyffer commented that Chapter 3, Table 3 of the Applications handbook had been changed without input from TC 2.4.
 - iv. **Motion to accept Handbook report**

1. **Moved by Al Veeck, 2nd by Zied Driss**
2. **Vote to accept report 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot) CNV**

v. HANDBOOK SUBCOMMITTEE MINUTES ARE ATTACHED

h. Publications Report (Marilyn Listvan)

- i. Reviewed output for Special Publications from ASHRAE noting IAQ archive CD could be found on page 4 of handout.
- ii. Noted that previous minutes from the Publications sub-committee have been posted on the TC 2.4 website.
- iii. The decision was made to table the regular Monday Publication sub-committee meeting with full report to still be given at the main TC 2.4 meeting.

iv. Motion to accept Publications report

1. **Moved by Barney Burroughs , 2nd by Zied Driss**
2. **Vote to accept report 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot) CNV**

9. Reports from other TC liaisons

- a. Tom Kuehn reported to the committee on a position document on Air Filtration, which is being driven by ASHRAE.
 - i. **Title:** "Air Filtration and Cleaning" Position Document (PD)
 - ii. **Purpose:** To inform ASHRAE membership and the public about the effects of air cleaning technologies for health and comfort. Both packaged air cleaners and HVAC integrated air cleaning and filtration systems will be considered.
 - iii. **Scope:** Briefly characterize air cleaning technologies and their applications...
 - iv. **See outline under Attachments.**

10. Old Business

No old business to report.

11. New Business

- a. Barney Burroughs reported that ASHRAE TC-02 is asking for participants with air filtration backgrounds to serve on the committee. TG-02 is a special task group set up by ASHRAE after 9-11 in response to building security. A brief discussion was held regarding Guideline 29 on Safety and Health in Public Buildings making the committee aware that there is a section on air filtration.

Motion to adjourn at 6:00pm

Made by Al Veeck, 2nd by Stephen Nicholas

Vote Unanimous

Respectively submitted,

Tom Justice

TC 2.4 Secretary

Meeting date: January 24, 2012

Minutes submitted: April 21, 2012

ATTACHMENTS

Agenda

TC 2.4 Particulate Contaminants/Removal Equipment

Main Committee Meeting

Chicago, Tuesday January 24th, 2012

3:30-6:00p

Palmer House Hilton – Hancock (6)

1. Call to order..... Jim Hanley
2. Introductions
3. Roll call Tom Justice
4. Welcome and opening comments Jim Hanley
5. Particle Party..... Jim Hanley
6. Approval of Montreal Minutes..... Tom Justice
7. Record of votes taken since Montreal..... Tom Justice

8. Subcommittee Reports
 - a. Planning Subcommittee Report..... Don Thornburg
 - b. Membership Subcommittee Report..... Tom Justice
 - c. Research Subcommittee Report..... Mark Renn
 - d. Standards Subcommittee Report..... Bruce McDonald
 - e. Program Subcommittee Report..... Stephen Nicholas
 - f. Web Master..... Al Veeck
 - g. Handbook..... Eric Brodsky
 - h. Publications..... Marilyn Listvan

9. Reports from other TC liaisons
10. Old Business
11. New Business
 - a. Misc Announcements (Conferences, Awards, etc)
12. Adjournment

ATTACHMENTS

TC 2.4 Planning Subcommittee Meeting – Chicago Draft Minutes

Monday, January 23, 2012, 8:00 – 10:00 a.m., Palmer House Hilton, Spire (6)

1. Call to order, Welcome and Introductions
2. Review draft agenda
3. Objectives (a work in progress; keep it useful; a snapshot)

Subcommittee	Chair	Objectives; list main objective(s) when applicable for next 12-24 months	
Handbook	Eric Brodsky	06-2011	Complete revisions to Chapter 28 within deadline
		01-2012	Everything moving...this is a publication year...working with 2.3 as needed.
Membership	Tom Justice	06-2011	Maintain balance and an active membership
		01-2012	Maintaining balance and working to bring in some active younger members.
Program	Steve Nicholas	06-2011	
		01-2012	We have 2 programs in Chicago with a Forum and a Seminar. We are working with TC 2.3 and 2.9 on a defining a track for Dallas.
Publications	Marilyn Listvan	06-2011	Do we need a meeting? Develop chapter programs (PowerPoint presentations in conjunction with TC 2.3
		01-2012	We are going to see how it goes here in Chicago and in San Antonio with not holding a Publications meeting. We will continue to report at the Main TC 2.4 meeting.
Research	Mark Renn	06-2011	Successful conduct of ongoing research project(s). One or more new research efforts within 2 years.
		01-2012	We have 2 active RTAR's and 1 new RTAR in development. We only have 1 active project underway which should be completed in 2012.
Standards	Bruce McDonald	06-2011	Foster information exchange on US and world-wide standards
		01-2012	Normal info exchange with a ISO/ASHRAE discussion.
Website	Al Veeck	06-2011	Keep website relevant; post DRAFT TC minutes (reviewed by Chair) within ___ month of meeting; post final when approved.
		01-2012	We did get an email complimenting us on having our website up to date.
Main TC	Jim Hanley	06-2011	See above.
		01-2012	See above, but ALL Subcommittee chairs need to be at the Planning meeting.

4. New Business

- a. ISO and ASHRAE how do we work together to best serve the industry without duplicating effort or competing on Standards...
 - i. ASHRAE has a written policy called **Strategies for a Global Environment**.
 1. *This document is attached to the minutes*
 - ii. This is ASHRAE's strategies for institutional change that lead to fully engaging members globally and sharing best practices worldwide and was Board Approved June 24, 2007
 - iii. Section 4.9 covers harmonizing of ASHRAE and International Standards
 1. **ASHRAE will actively support and participate in international standard development activities.**
 2. Adoptions
 - a. Adopt an existing or proposed international standard for use in the U.S. where there is no equivalent ASHRAE standard.
 - b. Harmonize standards when ASHRAE and international standards both already exist and there is a need for harmonization.
 - c. Promote ASHRAE standards internationally and in other countries or regions where:
 - i. The ASHRAE standard is the industry's standard of first choice with global relevance, or
 - ii. There is no equivalent international, national or regional standard, or
 - iii. It is in the best interest of the HVAC&R community.
 - iv. Currently ASHRAE is the Administrator of the USA Technical Action Group (US TAG) for ANSI. ANSI holds the ISO vote for the USA, but defers the vote to ASHRAE and the US TAG.
 1. Without this support of ASHRAE the USA position would not be well represented at the ISO level
 - v. The suggestion of the Planning committee is to add an additional means of ASHRAE participation into the US TAG.
 1. The USTAG has Advisory Panels for each of the current Working Groups within ISO TC 142.
 2. The US TAG bylaws should be reviewed and modified to allow for Advisory Groups to be defined for any work item within a WG.
 - a. For example, WG 3 has a four Work Items involving 16890 Filter Test Method (-1 through -4). For each of the four parts ASHRAE SSPC 52.2 should become the Advisory Group for the US TAG WG3 Advisory Panel.
 - b. Thus, the ASHRAE roster of SSPC would be the membership of the Advisory Group, with the exception of any international members associated with 52.2
 - c. We will have to address Observer Status within the bylaws.
 3. This method could easily be expanded to TC's, GPC's, MTG's and SPC's within ASHRAE. We could even include other cognizant standard developing organizations, such as IEST to be Advisory Groups for the appropriate Advisory Panel.
- b. Should TC 2.4 or SSPC 52.2 comment to AHRI on their "lite version" of 52.2?
 - i. ASHRAE did comment on this by recommending it be rejected. *The reply to AHRI is attached to these minutes.*
- c. TC 2.4 Plan Forward – What do we need to strive for and how do we coordinate the activities of the various subcommittees to achieve it? How do we make our liaisons more effective, How can we get better visibility with the ASHRAE Program committee, Is a TC 2.4 Power Point presentation a possibility

- i. Tom Justice has built a ppt to promote ASHRAE participation and demonstrate the ASHRAE advantages to companies currently not participating in ASHRAE activities. It was not specific to only TC 2.4, but did get some attendance by at least 1 company not normally at ASHRAE technical meetings.
 - ii. This should be further developed and our Publications Subcommittee Chair (Marilyn Listvan) has graciously volunteered to work on this with help from Stephen Nicholas
 1. If we could arrange a Distinguished Lecturer (DL) from within TC 2.4 we could greatly increase the attendance and profile of any such presentations to groups.
5. Adjourn

ATTACHMENTS

TC 2.4 Membership Report

2012 ASHRAE Winter Meeting Chicago

- The current roster has 109 total members including 18 voting members.
- Our submission will be made this evening for the roster and management team, which will be in place immediately following the 2012 summer meeting.
- We have five (5) members rolling off after the upcoming summer meeting. Included are Eric Brodsky, Bruce McDonald, Barney Burroughs, Charlie Kern and Tom Kuehn.
- Additions to the roster will be submitted.
- There will be no changes to the Executive Committee for the 2012/2013 year;

Chair	Jim Hanley
Vice Chair	Don Thornburg (cm)
Secretary	Tom Justice (cm)
Programs	Steve Nicholas
Research	Mark Renn
Standards	Bruce McDonald
Handbook	Eric Brodsky
Membership	Tom Justice
Publications	Marilyn Listvan (cm)
ALI Coordinator	Barney Burroughs
Webmaster	Al Veeck

- A very focused schedule of TC 2.4 and related activities was send out for member convenience but also to assist new committee members in sorting through various programs.

ATTACHMENTS

ASHRAE RESEARCH SUBCOMMITTEE MEETING AGENDA

Chicago

TC2.4 – Particulate Air Contaminants/Removal Equipment

Sunday, January 22, 2012

3:00 – 5:00 PM

Palmer House – Wabash (3)

All interested parties are encouraged to attend the following Project Monitoring Subcommittees (PMS) meeting.

1360-RP How do filters change through their life: pressures drop, efficiency, weight gain and dust composition.

Sunday 11:00 AM – Noon, Salon 2 (3)

Meeting was well attended by 24 persons.

1. Call to Order *Meeting called to order at 3:10PM. Previous users of room assumed they had the room until 3:15PM. Had to request that they leave.*
2. Introductions *Total of 52 attendees*
3. Review of Agenda *Altered agenda to add LMS presentation (item 9)*
4. Chair's comments *Chair expressed concern that after 1360-RP is complete, there will be a period of time to get existing RTARs to the approved project stage, and is committed to pressing forward to generating research projects with the support of the subcommittee.*
5. Current Projects
 - a. 1360-RP How do filters change through their life: pressures drop, efficiency, weight gain and dust composition.
*Principal Investigator, Kathleen Owen
PMS Chair, KJ Choi
Ms. Owen presented SEM, XRF and loaded filter curves. She anticipates getting the project complete by the Sept. 2012 due date with a first draft by the Summer Meeting for review by the PMS.*
6. Current Tentative Research Projects (TRP)
 - a. TRP-1603 Role of HVAC Systems in the Transmission of Agents in Buildings and Intermodal Transportation (TC2.4 co-sponsor with TC9.6 and EHC. TC 9.3 main committee)
Paolo Tronville reported that TC 9.3 is scheduled to recommend a contractor during the Chicago meeting. Christine Sun requested that she not be considered for the PMS due to a change in her employer.
7. Current RTARs and proposals

- a. 1626-RTAR Energy Implications of Air Filtration in Commercial Buildings (RAC to review comment in Chicago) **Brent Stephens, Phil Winters, Don Thornburg and Paolo Tronville agreed to help draft a WS if this RTAR is approved by RAC.**
- b. 1649-RTAR Impact of higher efficiency filtration on IAQ in Residential Environments with Central HVAC (waiting on RL approval) **Chair will work with RL to get this submitted prior to the Summer Meeting in San Antonio.**
- c. Benefits/Problems of using MERV 13 filters in LEED – Champion: Jeff Siegel
Jeff Siegel, with the help Phil Winters and Don Thornburg will target getting a RTAR ready for submission to RAC by the May 15 deadline.
- d. Topics without champions
 - i. Survey of Existing commercial HVAC systems and potential Energy Savings Technologies.
Ziedd Driss, with the assistance of Mike Corbat and Ken Snider will work on generating this into an RTAR.
 - ii. Modeling of Energy Implications of particle removal using various techniques – Residential and Commercial - Tom Justice

e. others

Update Monroe's previous RTAR 1559 with one deliverable being a process for doing a round robin to verify the changes made to ASHRAE 52.2 –Chris Campion and Jeff Siegel

Paolo Tronville requested that the subcommittee look at the need for a different loading dust for ASHRAE 52.2 instead of the ASHRAE dust specified. The objective is to get a dust that better reflects efficiency of "fine" particles. This started a lively discussion. The Chair recommended that Paolo generate a RTAR if he wishes to pursue this project.

8. Cosponsored Projects

TC2.3 – 1625-RTAR Applicability of the IAQP to Achieve Healthy, Net Zero Energy Buildings

TC 2.1 – 1624-WS Effective Energy Efficient School Classroom Ventilation

9. Other Business.

Al Vatine presentation (5 minutes + 5 minutes Q&A, 10 min total)

LMS briefly discussed a reference device they have developed. Chair asked any questions be addressed directly with LMS outside of the meeting.

10. Research Topics (break out in groups to advance the cause)

Ran out of time to do this.

11. Liaison Report (whenever Bill McCoy arrives)

RL did not attend.

12. Adjournment

Adjourned at 4:55 PM

ATTACHMENTS

MEETING NOTES / REPORT TO TC 2.4

TC 2.4 STANDARDS SUBCOMMITTEE

Monday, 23 January 2012

4:15 p.m. – 6:00 p.m.

Palmer House Hilton, Salon 2 (3)

Chicago, IL

Introductions

Chairs comments

1) Update on standards within scope of TC 2.4:

- a) **SSPC 52.2 M.o.T. Air Cleaners for Particle Size Efficiency** – Bob Burkhead
- Goal: re-publish with changes in 2012
 - Changes approved at this meeting (These changes require mail ballot of SSPC: then public review):
 - Changes to MERV table previously approved plus minor editorial changes
 - Changes proposed by OPC task group
 - Change RH range to 30 to 50% in duct, < 50% exiting aerosol generator
 - Continuing work in several areas e.g. variability, IPA vapor, flow equations and ΔP corrections, etc.
 - SSPC 52.2 supported use of 52.2 at ISO.

Dropped; lack of support from TC2.4 or SSPC52.2

2) ASHRAE Liaisons:

- a) **TC 2.3 – Gaseous Filtration – Kathleen Owen** See also SPC 145
 RP1557 small-scale gas phase testing got started and will have its first presentation on Sunday. RP1457 has been restarted with its first presentation under the new PI on Sunday.
- b) **TC 2.9 – UV Air & Surface Treatment – Matt Middlebrooks** See also SPC 185
- c) **TC 5.4 – Industrial Air Cleaning – Bruce McDonald** See also SPC 199
 RTAR to develop test method for mist collectors approved. Start Work Statement.
- d) **TC 9.6 – Health Care Facilities – Zied Driss** See also SPC 170
 Energy subcommittee is emphasizing verification and measurement. Looking to cosponsor research
 Zied asked for volunteer to make presentation about filtration to 9.6 and SPC 170. Al Veeck volunteered.
- e) **SSPC 62.1 – Commercial Ventilation – Charlie Seyffer**
 A move that would make the IAQ procedure more difficult was defeated.
 Charlie noted that it would be helpful for gas phase filter manufacturers to add ozone removal capability to the product label.
- f) **SSPC 62.2 – Residential Ventilation – Tom Justice** –
 There is a push for MERV 10 minimum
- g) **SSPC 90.1 Energy Eff. Design of New Bldg – Christine Sun**
- h) **SSPC 90.2 Energy Eff. Design of New Low Rise Res. Bldg –**
- i) **SSPC 145P Test Methods for Assessing Performance of Gas Phase Air Clean. Equip –**
 SSPC 145 will have had its first meeting by the time of 2.4 standards. They are getting set up as a brand new standing committee and are working on the revisions to 145.1 2008
- j) **SSPC 161 – Air Quality in Commercial Aircraft –**
- k) **SPC 170 – Ventilation of Healthcare Facilities – Zied Driss**
- l) **SSPC 180 – Inspection & Maintenance of HVAC Systems – Charlie Seyffer**

Charlie rolled off. to Phil Maybe is on committee.

- m) **SPC 185.1P Elimination of Microbial Contaminants in Air – Matt Middlebrooks**
- n) **185.2 Elimination of Microbial Contaminants on surface (need title):** essentially complete
- o) **SPC 189.1 ASHRAE/USGBC/IESNA Standard for the Design of High-Performance Green Buildings except Low-Rise Residential Buildings (?inclusion of IAQ) – David Matier**
- p) **SPC 189.2 Design, Construction and Operation of High-Performance Green Healthcare Facilities (?inclusion of IAQ) –**
- q) **SPC 199 – MOT for Rating the Performance of Industrial Pulse Cleaned Dust Collectors**
New draft document based on RP-1284 was introduced and discussed.
- r) **SGPC-10P Achieving Acceptable Indoor Environment – David Matier**
- s) **GPC 33P Guideline for Documenting Indoor Airflow and Contaminant Transport –**
- t) **ISO TC142 US TAG – Mark Renn** See also TC 142 below in Information Exchange.



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- u) **MTG Life Cycle Cost and the Energy Rating for Air Filters – Christine Sun**
Member from SSPC 90.1 has joined MTG. A web conference meet tomorrow.
- v) **GPC 23 Guideline for the Design/Application of HVAC Equip. for Rail Passenger Vehicles**
TC 2.4 Stds sub-committee is looking for filtration person to attend and report.

3) Old Business

- a) Progress on committee formation for
 - i) MoT for Filtration Efficiency on particles below 300nm – Kathleen Owen
Kathleen has collected enough info convince the 2 holdouts on moving forward with this. However, she did not get it compiled in time for this meeting, so she hopes to have news on that front for the June meeting.
 - ii) Activity at ISO TC 142/WG 4 regarding nano particle testing –
CEN has research money.
- b) Environmental Health Committee asked for TC 2.4 input on TPS for 2 initiatives:
 - i) Developing a position document regarding “Environmental Health in Green Building Programs”
 - ii) Developing a position document regarding “Air Filtration and Cleaning”)

4) New Business

Relationship between ISO TC 142/WG 3 and ASHRAE from the perspective of TC 2.4. Within ASHRAE the topic affects several groups: SSPC 52.2, TC 2.4 (Standards Subcommittee), the US TAG to TC 142, and the US Advisory Panel for WG 3. Don Thornburg. See planning subcommittee report.

5) **Information Exchange:**

- a) AFS – KJ Choi
Annual Conference, 25th anniversary: 4 - 7 June 2012, Boca Raton, FL
Fall topical conference: 15 - 18 October, 2012, Philadelphia PA
- b) AHRI – Eric Chen
- c) CEN/TC 195 – Air Filters for General Air Cleaning – Paolo Tronville



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- d) Eurovent – Paolo Tronville
- e) Drop from list. They fixed filter related errors in their document. IEST – Institute of Environmental Sciences and Technology – Phil Winters
Working group is addressing all 4 filter related RPs: 1,7,21,34 Approximately six conference calls have been held in the past 5 months to resolve specific issues (e.g. leak scanning with particle counters, alternative classification system and testing requirements for PTFE media filters). The next face-to-face meeting is scheduled for the ESTECH meeting April 30th through May 3rd.
- f) INDA – International Nonwovens Development Association – Emily Moore
Filtration 2012: Philadelphia. 13 – 15 November 2012
- g) ISO TC 142 – Cleaning Equipment for Air and Other Gases – Paolo Tronville



ISOTC142_Projects_
21jan2012.xls

48 work items, NWI, PWI etc.

- h) CEN TC 144 – Environmental Air quality for Agricultural Cabs – Paolo Tronville
- i) NAFA – Al Veeck
April 19 -21 Scottsdale
- j) SAE Air Cleaner Test Code Standards Comm. – Bruce McDonald See ISO TC 22/SC 7 below.
- k) ISO TC 22/SC 7/WG 3 & WG 11 – Paolo Tronville or Bruce McDonald
Updating ISO 5011. Working on revision of ISO 12103-1 (dust) to accommodate new measurement instrumentation. The numbers in the size distribution describing the standard dusts will change slightly due to instrumentation. The dust will be the same.
- l) UL 900 – Phil Winters
– The withdrawal of the Class 1 and Class 2 designations is nearing completion. All manufacturers should be stamping filters as just “Classified” per UL Standard 900 by May 31st of this year. UL Canada has not changed.
– There are early stage discussions with UL about the test-to-test variation with UL Standard 900. There has been a request to UL that they adopt some changes to the way filters are tested and compared against the threshold pass/fail criteria.
- m) REHVA HVAC air filtration guidebook –

6) **Adjourn – 6:00 pm**



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ATTACHMENTS

ASHRAE MEETING MINUTES – Chicago TC 2.4 - Particulate Contaminants/Removal Equipment

Handbook Subcommittee Meeting

Sat. Jan. 21, 2012 1:00 – 2:30

1. Call to order 1 pm Eric Brodsky, Chair
2. Introductions
3. Attendees Bob Burkhead, Zied Driss, Elliott Horner, Michael Corbat, Phil Winters, Gemma Kerr, Norman Thomas, Thad Ptak, Mick Flom, Phil Maybee, Kyung-Ju Choi, Charlie Seyffer, Eric Brodsky
3. Chapter 29, HVAC Systems and Equipment
The final proof for Air Cleaners for Particulate Contaminants was submitted to ASHRAE for Publication in 2012.
4. Chapter 11, Fundamentals
A draft of the section Air Contaminants was distributed for review to the 2.4 Handbook subcommittee. The plan is to complete the review with comments by Feb 28. The chapter will be submitted by Gemma to TC 2.3 for approval at the June 2012 meeting.
5. Other Business
Charlie Seyffer commented that the Applications Handbook, Chapter 3, Table 3 has been changed without input from TC 2.4. The table concerns filtration in hospitals. This raises questions about how TC 2.4 should interact with other TCs, if there is not agreement on filtration needs.
7. Adjournment about 1:45 pm

Prepared by Eric Brodsky,
Draft Minutes submitted: 1/24/2012
thornburgd@camfilfarr.com,

ATTACHMENTS

Title: “Air Filtration and Cleaning “Position Document (PD) (Tom Kuehn reporting)

Purpose: To inform ASHRAE membership and the public about the effects of air cleaning technologies for health and comfort. Both packaged air cleaners and HVAC integrated air cleaning and filtration systems will be considered.

Scope:

The scope of the proposed Position document is as follows:

1. Briefly characterize air cleaning technologies and their applications (outdoor and/or indoor air), and the associated health-relevant performance:
 - a. Clarify what is meant by air filter, cleanable media, gaseous or gas-phase filter, air cleaner, “air purifier”, ionizing air treatment, photo catalytic air cleaner, microbial deactivation, UVGI, ozone generator, electrets, plants and other terms;
 - b. Discuss technologies available to the commercial or residential consumers, the technologies employed and their potential health and comfort effects.
2. Reference health and comfort effects documented in published, peer reviewed journals, associated with the various technologies.
3. Describe the role and health implications of optimal use of air cleaners, maintenance and changing of air cleaning media.
4. Describe to which extent using air cleaning and filtration technologies can offset ventilation for acceptable IAQ.
5. Based on the authoritative health-relevant literature, state consensus information about the relative merits of various techniques..
6. State the consensus information about the development of the technology in this subject area.
7. Stay away from any product commercialism and/or endorsement or disparaging words about specific products and manufacturers.

You may include all of this or edit as you wish. The members of TC 2.4 who have agreed to serve are:

Barney Burroughs, Al Veeck, Jeff Siegel and me (Tom Kuehn).