

- c. Best practices guide
 - d. Upcoming ASHRAE Meetings
 - i. Montreal, June 2011
 - ii. Chicago, January 2012
 - iii. San Antonio, June 2012
5. Particle Party Announcement (Phil Winters):
- a. Where/When: The Buffet in the Hilton, 7pm tonight
6. Approval of Last Meeting Minutes (Albuquerque, June 2010): (Don Thornburg)
- a. **Moved by Barney Burroughs, 2nd by Charlie Kern**
 - b. **Vote to approve: 17-0-0-1-18 (Yes-No-Abstain-Absent-Tot)**
7. MBO goals and priority setting (Jim Hanley)
- a. Table needs to be updated and reworked as it is not working as it currently is. This should be a copy of the subcommittees work and not infringe on their work. It should not be counterproductive or redundant and may not be needed for TC2.4.
 - b. Discussion
 - i. Is this really needed?
 - ii. Should it be a 3-5 year plan or focus for the subcommittees?
 - iii. Do we need a Planning Subcommittee?
 - iv. Does it have any value?
 - v. Use it to be a list to identify trends and directions instead of a todo list?
 - c. Group to help Jim rework and republish in a more usable format
 - i. B. McDonald, A. Veeck, C. Sun, B. Burroughs, B. Burkhead, P. Winters, D. Thornburg
 - ii. Would it be good to have a Planning Subcommittee to handle this and set meetings on Mondays from 8-10am – more than 20 people would attend
 - iii. **Motion to add to a Planning Subcommittee within TC 2.4 and to schedule a meeting on Monday from 8-10am for future meetings starting in Montreal in June 2011**
 - 1. **Moved by Monroe Britt, 2nd by Bob Burkhead**
 - 2. **Vote 15-0-0-3-18 (Yes-No-Abstain-Absent-Tot)**
8. Subcommittee Reports:
- a. **Membership Subcommittee Report** (Tom Justice)
 - i. 17 current voting members, 1 International, 48 Corresponding Members
 - ii. New category Non quorum members
 - iii. After next meeting:
 - 1. Chair: Jim Hanley
 - 2. Vice Chair: Don Thornburg
 - 3. Secretary:
 - 4. Research Chair: Mark Renn
 - 5. Vice Research Chair: Jeff Siegel
 - 6. Standards Subcommittee Chair: Bruce McDonald
 - 7. Handbook Chair: Eric Brodsky
 - 8. Program Chair: Charlie Seyffer

- 9. International members: Paolo Tronville
 - 10. Web master:
 - 11. ALI (ASHRAE learning institute) coordinator Barney Burroughs
 - 12. Membership Chair: Tom Justice
 - 13. Publications Chair: Marilyn Listvan with Wenhao Chen as co-chair.
 - iv. There is now a “provisional corresponding member” category
 - v. Tom reviewed the TC membership rules/requirements:
 - 1. Voting Member can serve no more than 4 one year terms.
 - 2. The TC must have from 6-18 members
 - 3. Only one voting member for a given employer
 - 4. Corresponding members may serve and chair subcommittees and vote at that level.
 - 5. Secretary and vice chair do not need to be a committee member.
 - 6. Chair must have served 1 year as Vice Chair or as Secretary.
 - 7. The TC’s maximum membership would be 18 + 2 international = 20 max.
 - vi. Rolling off after next meeting
 - 1.
 - vii. Rolling on after next meeting
 - 1.
 - viii. **Motion to accept Membership Report**
 - 1. **Moved by: Paolo, 2nd Stephen**
 - 2. **Vote: 16-0-0-2-18 (Yes-No-Abstain-Absent-Tot)**
- b. **Research Subcommittee Report** (Mark Renn)
- i. See attached subcommittee minutes.
 - ii. **ADD MARKS Notes**
 - iii. **Motion to accept a 6 months no cost extension on RP-1466**
 - 1. **Moved by: Mark Renn, 2nd by Charlie Kern**
 - 2. **Vote to accept report 16-0-0-2-18 (Yes-No-Abstain-Absent-Tot)**
 - iv. **Motion to accept a 18 months no cost extension on 1360-RP**
 - 1. **Moved by: Mark Renn, 2nd by Bob Burkhead**
 - 2. **Vote to accept report 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot)**
 - a. Jim Hanley abstained since he works
 - v. **Motion to accept Research report**
 - 1. **Moved by: Barney Burroughs, 2nd by Marylin Listvan**
 - 2. **Vote to accept report 15-0-1-2-18 (Yes-No-Abstain-Absent-Tot)**
 - vi. **RESEARCH SUBCOMMITTEE MEETING MINUTES ARE ATTACHED.**
- c. **Standards Subcommittee Report** (Bruce McDonald)
- i. See attached subcommittee minutes.
 - ii. Action Items for TC 2.4 – verify from minutes
 - 1. **Letters from Chair for official Liaison status for several committees**

2. Bob Burkhead to write a draft letter to contact the 3 companies that have abandoned Standard 52.2 MERV to use their own “rating” system. TC 2.4 to approve the letter prior to sending it out.
- iii. **Motion to accept the revisions to Guideline 26-2008 as recommended by ASHRAE Staff and already added to Guideline 26-2008 by Don Thornburg (former chair of GPC 26).**
 1. Moved by: Bruce McDonald, 2nd by Barney Burroughs
 2. Vote to accept report 16-0-0-2-18 (*Yes-No-Abstain-Absent-Tot*)
- iv. **Motion to accept Standards report**
 1. Moved by: Bruce McDonald, 2nd by Barney Burroughs
 2. Vote to accept report 16-0-0-2-18 (*Yes-No-Abstain-Absent-Tot*)
- v. STANDARDS SUBCOMMITTEE MINUTES ARE ATTACHED.
- d. **Program Subcommittee Report** (Stephen Nicholas)
 - i. We have 5 program items proposed for Montreal
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - ii. **Motion to accept Program report**
 1. Moved by: Stephen Nicholas, 2nd by Barney Burroughs
 2. Vote to accept report 15-0-1-2-18 (*Yes-No-Abstain-Absent-Tot*)
 - iii. Action Item for Phil, Jim and Stephen
 1. Find a new time slot for the Program subcommittee
 2. Potentially Monday 9-10 or 10-12?
- e. **Webmaster Report** (Al Veeck)
 - i. Call from Al for what do we want on the TC 2.4 web site?
 1. Keep three meetings back available and achieve the rest
 2. What do we want under members?
 - a. List roster of voting members
 - b. The only link to the chair alias
 3. Publications
 - a. links to the power point presentations
 - b. list of publications
 4. Research
 - a. List of completed Research
 - b. Link to how to get to free research
 5. Standards
 - a. Relevant Standards, Standard 52.2, Guideline 26-2008
 6. Program
 - a. See the committee minutes

7. Membership
 - a. How to become a member
 - b. Corresponding member form
8. SSPC 52.2
 - a. Send to bookstore
9. ISO TC 142 link
10. Photos by meeting
- ii. **Motion to accept Webmaster report**
 1. **Moved by: Charlie Kern, 2nd by Bob Burkhead**
 2. **Vote to accept report 16-0-0-2-18 (Yes-No-Abstain-Absent-Tot)**
- f. **Handbook Subcommittee Report** (Eric Brodsky)
 - i. See attached subcommittee minutes.
 - ii. **Motion to accept Handbook report**
 1. **Moved by: Eric Brodsky, 2nd by Marilyn Listvan**
 2. **Vote to accept report 16-0-0-2-18 (Yes-No-Abstain-Absent-Tot)**
 - iii. **HANDBOOK SUBCOMMITTEE MINUTES ARE ATTACHED**
- g. **Publications Report** (Marilyn Listvan)
 - i. No meeting in Las Vegas. Time slot was given to Christine Sun for her Energy meeting.
 - ii. Al Veeck article published in ASHRAE Insights
 - iii. Scanning is ... 1:50
 - iv. **Motion to accept Publications report**
 1. **Moved by: Mark Renn, 2nd by Paolo Tronville**
 2. **Vote to accept report 14-0-0-4-18 (Yes-No-Abstain-Absent-Tot)**
9. **Reports from other TC liaisons**
 - a. None
10. **Old Business**
 - a. Mini Seminar during the Main TC Meeting
 - i. Time and scheduling is the issue
 - ii. Do we want to force some time in a already full meeting for this?
 - iii. Consensus is to NOT take time away from TC 2.4 main meeting.
 - iv. Action Item for Chair: Can we put a scheduled item in the program meeting and will it be listed in the ASHRAE Program?
11. **New Business**
 - a. MTG or TG for “Energy Classification of Air Filters”
 - i. Support in forming either a TG or MTG (depending on our section head input) to start forming a TPS to form the type of committee recommended.

- ii. Motion to start work on forming a TPS to form the type of committee report**
 1. Moved by: Bob Burkhead, 2nd by Stephen Nicholas
 2. Vote to accept report 14-0-2-2-18 (*Yes-No-Abstain-Absent-Tot*)
 - a. Paolo abstained needs to be better defined
 - b. EHC Position Document – Air Filter and Cleaning
 - i. Liaison to committee
 - ii. Motion to recommend** Barney Burroughs as the liaison for this committee
 1. Moved by: Bruce McDonald, 2nd by Paolo Tronville
 2. Vote to accept report 15-0-1-2-18 (*Yes-No-Abstain-Absent-Tot*)
 - a. Barney abstained since it was him
 - c. Miscellaneous Announcements
 - i. 2:13 on TAPE**
 - ii. INDA is not moving their meetings from Philadelphia/Chicago rotation
 - iii. AFS is looking for papers
12. **Adjournment at 6:00pm**
- a. **Motion to adjourn**
 - b. **Made by: Bob Burkhead, 2nd by Paolo Tronville**
 - c. **Vote: 0-0-0-0-2-18 (*Yes-No-Abstain-Absent-Tot*)**

Respectively submitted,

Don Thornburg

TC 2.4 Secretary

Meeting date: February 01, 2011

Minutes submitted: February 01, 2011

ATTACHMENTS

Agenda

TC 2.4 Particulate Contaminants/Removal Equipment

Main Committee Meeting

Las Vegas, NV, Tuesday February 1st, 2011

3:30-6:00p

Las Vegas Convention Center – N255

1. Call to order..... Phil Winters
2. Introductions
3. Roll call Don Thornburg
4. Welcome and opening comments Phil Winters
5. Particle Party..... Phil Winters
6. Approval of Albuquerque Minutes..... Don Thornburg
7. MBO goals and prioritization Jim Hanley
8. Subcommittee Reports
 - a. Membership Subcommittee Report..... Tom Justice
 - b. Research Subcommittee Report..... Mark Renn
 - c. Standards Subcommittee Report..... Bruce McDonald
 - d. Program Subcommittee Report..... Stephen Nicholas
 - e. Web Master..... Al Veeck
 - f. Handbook..... Eric Brodsky
 - g. Publications..... Marilyn Listvan
9. Reports from other TC liaisons
10. Old Business
 - a. Revisit having a mini-seminar during the Main TC meeting
11. New Business
 - a. MTG or TG for “Energy Classification of Air Filters”
 - b. EHC position Document Air Filtration and Cleaning
 - i. Discuss and vote on Liaison to Committee
 - c. Misc Announcements (Conferences, Awards, etc)
12. Adjournment

ATTACHMENTS

RESEARCH SUBCOMMITTEE MEETING REPORT

Las Vegas, NV

TC2.4 – Particulate Air Contaminants/Removal Equipment

Held: Sunday, January 30, 2011

3:00 – 5:00 PM

Las Vegas Hilton, Pavilion 4

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

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

Sunday 11:00 AM – Noon, Las Vegas CC N237

1466-RP Development of a Calibration Reference for Use with Test Standard ANSI/ASHRAE 52.2-2007. **Sunday Noon – 1:00 PM, Las Vegas CC N237**

1. Call to Order **Meeting called to order at 3:00 PM**
2. Introductions **54 Persons in attendance**
3. Review of Agenda
4. Chair's comments **Chair reported that project report for 1287-RP is now available on line to ASHRAE members. Jim Hanley was PI.**
5. Current Projects
 - a. 1466-RP Development of a Calibration Reference for Use with Test Standard ANSI/ASHRAE 52.2-2007.
Principal Investigator, Thomas Kuehn
PMS Chair, Jim Kubokawa
PMS meeting was attended by 29 persons. PI as submitted the draft final report. PMS has conditionally accepted the draft final report pending addressing some questions by the PMS. PI is reissue final report after addressing question. Target date is March 15. Since the project is technically late (due October 2010), the Chair will ask TC for a 6 month no cost extension retroactive to last October.
 - b. 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
PMS meeting was attended by 23 person. PI is having major issues with getting persons to follow through with commitments for spent filters and is having finding a 4th city to have filters used in. The PI reported at the subcommittee meeting that a fourth either has been secured. Even so, going forward a project extension will be requested. The project currently expires at the end of April 2011. The city portion of the test requires a minimum of 12 months once filters are installed. The Chair will request an 18 month no cost project extension.

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 TC9.3)
Per Iain Walker, this project is going out to bid this Spring. Chair to contact Mike Vaughn so that TC2.4 gets a set at the table for this project.
7. Current RTARs
 - a. 1626-RTAR Energy Implications of Air Filtration in Commercial Buildings
RTAR was returned from RAC with comments. RTAR review team, headed by Christine Sun, will address issue for resubmission in time to resubmit by May 15 deadline.
 - b. Impact of higher efficiency filtration on IAQ in Residential Environments with Central HVAC - First draft of RTAR complete – Tom Justice champion
Tom Justice presented RTAR concept with notes from previous phone meeting with other subcommittee members. Near end of meeting subcommittee members with interest met to generate RTAR.
 - c. Proposed RTAR preliminary data presentation – Energy Implications of Filters – Tom Justice
Tom Justice also presented general outline for another potential RTAR along with preliminary data presented by Monroe Britt. Near end of meeting subcommittee members with interest met to generate RTAR.
8. Research Topics (break out in groups to advance the cause)
 - a. Typical particle size distribution and composition of PM-1, PM-2.5 and PM-10 and its affect on sustainability.
RTAR volunteers: Bruce McDonald/Monroe Britt/Don Thornburg
Bruce McDonald asked that this potential research project be withdrawn.
 - b. Filter loading dust ASHRAE, ISO Fine and JIS
Championed by Monroe Britt (with assistance by Nathaniel Nance and Todd McGrath)
Topic to be dropped to lack of interest.
 - c. Others?
Three potential research topics were presented but with so significant enthusiasm, topics were tabled.
9. Other Business **None.**
10. Liaison Report (whenever Iain Walker arrives) **Iain reported that Disposition of Research document has not been received on 1281-RP, 1287-RP and 1299-RP, even though the PMS chairs of each of these claim they have been submitted. Problem might have been that the disposition was directed to someone other than Mike Vaughn (MORTS). Chair will try to get this clarified before Summer Meeting in Montreal.**
11. Adjournment **Adjourned at 5 PM.**

**Respectfully submitted,
Mark Renn
TC2.4 Research Subcommittee Chair
February 1, 2011**

ATTACHMENTS

Standards Subcommittee

TC 2.4 STANDARDS SUBCOMMITTEE

Monday, 31 January 2011
4:15 p.m. – 6:00 p.m.

Las Vegas Convention Center, Room N211
Las Vegas, NV

Introductions

Chairs comments: “Official Liaisons”

Liaisons that would like their status to be official, TC 2.4 will provide a letter stating the TC’s request for you to be an official liaison.

1) Update on standards within scope of TC 2.4:

a) **SSPC 52.2 M.o.T. Air Cleaners for Particle Size Efficiency – Jim Hanley**



SSPC_52-2_meeting
Report.doc

Bob Burkhead observed that 3 major US corporations have abandoned / don’t use MERV. He raised the question of how we should react. Three options were listed:

- ignore
- Try to understand why – officially ask the corporations
- Tell the corporations that we are ignoring them

The option to understand had nearly unanimous support (one vote to ignore). Bob is to follow up.

b)

2) ASHRAE Official Liaisons:

a) **TC 2.3 – Gaseous Filtration – Kathleen Owen**

1557-WS Evaluation Lab Comparison of Relative Performance of Gas Phase Filtration Media at High and Low Challenge Concentrations. Will go out for bid in the Spring (after a long wait for funding to be available).

b) **TC 2.9 – UV Air & Surface Treatment – Matt Middlebrooks**

Research on the effect of UV on air handling system components has been completed. It will result in 3 papers.

c) **TC 5.4 – Industrial Air Cleaning – Bruce McDonald**

RTAR to study test methods for mist collectors was rejected with comments. Will address comments. See SPC 199.

d) **TC 9.6 – Health Care Facilities – Zied Driss**

e) **SSPC 62.1 – Commercial Ventilation – Charlie Seyffer**

Reconsidering ventilation rate requirements. Current wording implies that IAQ method (filtering re-circulated air) doesn’t work. There will be a public review. TC 2.4 members are urged to respond.

f) **SSPC 62.2 – Residential Ventilation – Tom Justice –**

g) **SSPC 90.1 Energy Eff. Design of New Bldg – Christine Sun**

Published in 2010. Committee requested energy rating method for air filters from us. Christine held meeting to address need.

h) **SSPC 90.2 Energy Eff. Design of New Low Rise Res. Bldg –**

- i) **SPC 145P Test Methods for Assessing Performance of Gas Phase Air Clean. Equip –**
145.1 ready for 3-year review
Part 2 testing filters went out for public review received one comment. It was positive. So will be published. SPC 145 is considering becoming a standing committee.
- j) **SSPC 161 – Air Quality in Commercial Aircraft – Erik Kuiper**
- k) **SPC 170 – Ventilation of Healthcare Facilities – Zied Driss**
- l) **SSPC 180 – Inspection & Maintenance of HVAC Systems – Charlie Seyffer**
- m) **SPC 185.1P Elimination of Microbial Contaminants in Air – Matt Middlebrooks**
Back from public review. Comments have been addressed. One is substantive.
- n) **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**
- o) **SPC 189.2 Design, Construction and Operation of High-Performance Green Healthcare Facilities (?inclusion of IAQ) –**
- p) **SPC 199 – MOT for Rating the Performance of Industrial Pulse Cleaned Dust Collectors –**
SPC 199 has achieved a balanced committee and has started drafting a standard MoT based on **1284RP**.
- q) **GPC-10P Interrelated factors for Acceptable Indoor Environment –**
Guideline GPC-10 has been approved for publication and will available shortly after the winter meeting.
- r) **GPC 33P Guideline for Documenting Indoor Airflow and Contaminant Transport –**
- s) **ISO TC142 US TAG – Mark Renn**



US TAG to ISO
142.ppt

No members were found for WG 7 durability of pulse cleaned media to corrosive gasses. Request was made to Bob Burkhead to take the call for member to INDA.

- t) **Indoor Air Quality Design Guide. – Published. Barney: Strongly recommended reading.**

3) **Information Exchange:**

- a) AFS – KJ Choi
Annual conference: 9-12 May, St Louis. Paper deadline extended.
Fall conference: “New Energy Era” 17-20 Oct. Houston.
- b) AHRI – Eric Chen
- c) CEN/TC 195 – Air Filters for General Air Cleaning – Paolo Tronville



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- d) Eurovent – Paolo Tronville



2011-01 Eurovent
4-11 Energy Efficiency

- e) IESO (IAQA is parent org.) – Phil Winters
References to MERV levels has been removed from the draft Standard (Field Evaluation Standard for Portable HEPA-Equipped Air Filtration Devices). The group has been quite thankful for ASHRAE’s involvement, since few of them have filter experience. We’ve resolved some key issues and things seem smooth from here out, at least regarding filters.
- f) IEST – Institute of Environmental Sciences and Technology – Phil Winters
There will be a 2-hour joint Working Group meeting for the filter-related RPs (001, 007, 021 & 034) at the upcoming ESTECH Conference in May. This will be a kick-off for these RPs to be reviewed/revised/updated. Separate WG meetings will likely be held at the IEST Fall Technical Conference to push this work forward.

- g) INDA – International Nonwovens Development Association – Bob Burkhead
- h) ISO TC 142 – Cleaning Equipment for Air and Other Gases – Paolo Tronville



ISOTC142_Projects_
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ISOTC142_Projects_
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- i) CEN TC 144 – Environmental Air quality for Agricultural Cabs – Paolo Tronville
Current standard contains serious errors regarding filter test methods.
- j) NAFA – Al Veeck
- k) SAE Air Cleaner Test Code Standards Comm. – Bruce McDonald
- l) ISO TC 22/SC 7/WG 3 & WG 11 – ?Paolo Tronville or Bruce McDonald
Std 5011 (engine intake air filter MoT) in review. Std 12103-1 test dust will start revision shortly.
Instrumentation required in standard is obsolete. Working on a possible 12103-3 for a soot aerosol for testing air filters.
- m) UL 900 – Phil Winters
The elimination of the Class 1 / Class 2 distinction is still set for May 31st, 2012. At present, the Canadian UL Standard will not change and will continue to distinguish between Class 1 and Class 2. How (or if) UL intends to reconcile this is unknown. That and other implementation questions remain open.
- n) REHVA HVAC air filtration guidebook –

4) Old Business

- a) Progress on TPS for:
 - i) Interpretative Guideline for People to use the Data from a ASHRAE 52.2-2007(b) test – Peter Shipp
 - ii) Calculation of the Life Cycle Cost and the Energy Rating for Air Filters – now at ISO TC 142 but with work continuing at ASHRAE – Christine Sun
- b) Progress on committee formation for
 - i) MoT for Filtration Efficiency on particles below 300nm – Kathleen Owen
 - ii) Activity at ISO TC 142/WG 4 regarding nano particle testing –
ISO/TC 142 and CEN/TC 195 have been invited by the chairman of CEN/TC 352 "Nanotechnologies" and ISO/TC 229 "Nanotechnologies" to participate in the standardisation activities regarding nanotechnologies and nanomaterials, to be developed under the European Commission Mandate M/461. As specified in his letter (see Annex 1), ISO/TC 142 is invited to develop a technical specification regarding: "Methodology to Determine effectiveness of Filtration Media against Nanomaterials"
There was an informational meeting held following the US TAG meeting.
- c) Environmental Health Committee asked for TC 2.4 input on TPS for 2 initiatives:
!!!!!!!!!!!!!! Action required.
We did not get to this at the standards subcommittee meeting. The Environmental Health Committee is seeking a TC 2.4 person to be a member of their standing committee.
 - i) Developing a position document regarding “Environmental Health in Green Building Programs”
 - ii) Developing a position document regarding “Air Filtration and Cleaning”)

5) New Business

- a) **Required 3 year review of ASHRAE Guideline 26-2008, Guideline for Field Testing of General Ventilation Devices and Systems for Removal Efficiency In-Situ by Particle Size and Resistance to Flow**
In accordance with the requirements of Normative Appendix N2 of the Standards Committee Manual of Procedures (MOP –10/3/2008), TC 2.4 (the cognizant Technical Committee) is asked to vote to recommend to the Standing Reaffirmation Subcommittee (SRS) of the Standards Committee whether the subject standard should be:
Revised, Unanimous support for revision to include updating references. Don Thornburg has completed

the work and will submit to ASHRAE Standards.

Reaffirmed, or

Withdrawn

In addition, the TC shall determine whether or not the standard/guideline complies with the requirement in Section 6.1.2 of PC MOP, which states that “all standards shall be written in mandatory language and all guidelines shall be written in informative language”. If the standard/guideline does not comply with this requirement, the TC shall not recommend reaffirmation, but instead shall recommend revision so the standard/guideline can be brought into compliance.

NOTE: Guideline 26 was taken to ISO TC 142 for consideration as an ISO standard. We need to include in our discussion the possibility of ASHRAE adopting the ISO document. **ISO 29462 Field testing of general ventilation filtration devices and systems for in situ removal efficiency by particle size and resistance to airflow**. Going out for DIS vote soon?

Actions requested of TC 2.4:

Chair of TC 2.4 to write letter requesting official liaison status for:

Christine Sun to SSPC 90.1

?? to ??

TC 2.4 wishes to understand why 3 US corporations that have abandoned MERV to use their own rating system.

TC 2.4 requests Bob Burkhead write to the 3 corporations seeking their input as to why they chose to do that.

TC 2.4 Unanimously supports revision of Guideline 26-2008, “Guideline for Field Testing of General Ventilation Devices and Systems for Removal Efficiency In-Situ by Particle Size and Resistance to Flow” Revision to include editorial corrections identified by ASHRAE staff and updating references. Don Thornburg has completed the work and will submit to ASHRAE Standards.

TC 2.4 needs to nominate a representative from TC 2.4 to be a member of The Environmental Health Committee standing committee

ATTACHMENTS

Handbook Subcommittee

ASHRAE MEETING MINUTES – Las Vegas TC 2.4 - Particulate Contaminants/Removal Equipment Handbook Subcommittee Meeting

Sat, Jan. 29, 2011 1:00 – 2:30

1. Call to order 1:15 pm Eric Brodsky, Chair
 2. Introductions
 3. Attendees Phil Winters, Gemma Kern, Eric Brodsky, Phil Maybee, Bob Burkhead, Zied Driss, Mick Flom, Christine Sun, Jan Fretthold, Michael Corbat, Don Thornburg

 4. Reviewed timeline
Chapter 28 Air Cleaners for Particulate Contaminants of the HVAC Systems and Equipment Handbook needs to be updated, approved by TC and submitted to Handbook by April 18, 2011 with a publication date of 2012.
 - Subcommittee members will review draft created on 1/29/2011 by 2/11/11 with comments and email to Eric Brodsky
 - Eric Brodsky will update comments into next revision and distribute by 2/18/2011
 - Subcommittee members will review final copy and comment by March 4th
 - Eric Brodsky will complete ASHRAE checklist and submit to Handbook by April 18, 2011

 5. Reviewed Chapter and made a number of changes

 6. Actions:
Handbook subcommittee approved the following motion - 11 voted in favor, 0 -opposed, 0 -abstained
Approve current 1/29/2011 version of Chapter 28 allowing for minor corrections before the submission to ASHRAE by April 18, 2011.
Request TC 2.4 to vote on above motion

 6. Adjournment at 2:30 pm
- Prepared by Eric Brodsky,
Draft Minutes submitted: 2/1/11

ATTACHMENTS

Publications Subcommittee

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4D-EHC-Appendix EH-A

Request Form for an ASHRAE Position Document

TO: TECHNOLOGY COUNCIL

Originator: ENVIRONMENTAL HEALTH COMMITTEE

DATE: 2010-10-07

Topic: Air Filtration and Cleaning

Describe the issue

Air cleaning techniques are being increasingly applied worldwide with the goal of improving indoor air quality. Air cleaning can be a very attractive alternative or supplement to ventilation because it generally requires less energy to achieve acceptable indoor air quality. There is a wide range of air cleaning devices on the market that employ variety of air cleaning techniques and have a wide range of effectiveness and/or clean air delivery rates. Device performance parameters are generally determined by measuring removal efficiencies for single air pollutants, occasionally for mixtures of a small number of components, primarily in controlled laboratory environments. Little is known how this performance translates to installed performance and the subsequent effects on occupant health and comfort. Nevertheless, there is a mass of information in popular literature, and marketing materials produced for consumers regarding beneficial impacts of air cleaners. No science-based, comprehensive documentation exists discussing the performance and application of air cleaning technologies in contrast to standard ventilation. Gaps include a description of relative human safety of air cleaning technologies pertaining to pollutants produced as artifacts of their application, and human health-relevant impacts of different air cleaning technologies. Comparison of different air cleaning technologies based on their effectiveness under different circumstances is also needed. Given the prominence of filtration and air cleaning in ASHRAE Standards (e.g., 189.1-2009, 62.1-2010) and other documents (e.g., *Fundamentals Handbook*, *IAQ Guide*), there is a need for a clearer statement from ASHRAE regarding the issues outlined above. The Position Document on filtration and air cleaning is proposed to inform ASHRAE membership and the public about the potential beneficial, benign and deleterious effects of air cleaning technologies for health and comfort. Both packaged air cleaners and HVAC integrated air cleaning and filtration systems will be considered.

What governmental action or involvement has occurred (or is anticipated) on this topic? (Attach a summary of regulatory or legislative measures.)

- U.S. EPA, "Ozone generators that are sold as air cleaners: an assessment of effectiveness and health consequences", 2000.
- Canadian Mortgage Housing Association, Influence of an Electronic Air Cleaner on Indoor Ozone, 2003.
- U.S. EPA, "Guide to Air Cleaners in the Home", U.S. EPA/OAR/ORIA/Indoor Environments Division (MC-6609J) EPA 402-F-08-004, 2008.
- U.S. EPA, "Residential Air Cleaners (Second Edition): A Summary of Available Information, U.S. Environmental Protection Agency, Office of Air and Radiation, Indoor Environments Division, 2009.
- Heath Canada, "Air cleaning", 2009

- California EPA “AB 2276 Air Cleaner Regulation, California Environmental Protection Agency, Air Resources Board, 2010.
- Health Canada, “Air Cleaners Designed to Intentionally Generate Ozone (Ozone Generators)”, 2010.

If the Society develops a position document, what specific items should be addressed?

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, photocatalytic air cleaner, microbial deactivation, UVGI, ozone generator, electret, plants and other terms;
 - b. discuss technologies marketed 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, both beneficial and deleterious, 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 ASHRAE’s position about the relative merits of various techniques indicating which techniques should be recommended and which discouraged, providing reasons for the assessment.
6. State ASHRAE’s position about research, standards and product development priorities in this area.

Who within the Society are most knowledgeable on the technical aspects of the issue and which members are most familiar with governmental actions (actual or anticipated)?

The EHC together with the following ASHRAE Committees TC 2.1 Physiology and human environment, TC 2.3 Gaseous air contaminants and gas contaminant removal equipment, TC 2.4 Particulate air contaminants and particulate contaminant removal equipment, TC 2.9 Ultraviolet Air and Surface Treatment, GPC 27 P Measurement Procedures for Gaseous Contaminants in Commercial Buildings and SPC 145.2 P Laboratory test method for assessing the performance of gas phase air cleaning systems: Air cleaning Devices. Other committees which may be relevant in the context of the proposed PD include: TC 4.10 Indoor Environmental Modeling, TC 9.6 Health care facilities, SSPC 62.1 Ventilation and Acceptable Indoor Air Quality in Commercial, Institutional and High-Rise Residential Buildings, SSPC 62.2 Ventilation and Acceptable IAQ in Low-Rise Residential Buildings. The representatives from these committees will be invited to form the PD Committee with the invited experts in this topic.

What is the time frame for use of the final document?

It will take 18 months to develop the Position Document following the formation of PD committee.