

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Votes: Font is Bold, Black

Task Groups: Font is Bold, Blue

Action Items: Font is Bold, Red

©2012 ASHRAE. All rights reserved. This is a draft document for review only by the cognizant ASHRAE groups and other designated reviewers and is not intended for distribution to any private interests, individuals, or third parties that are not designated as ASHRAE reviewers for this document. This document may not be distributed in whole or in part in either paper or in digital form without the express permission of the chair of the committee originating this document. The appearance of any technical data or editorial material in this draft document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, design, or the like, and ASHRAE expressly disclaims same.

- 1) Call to Order 8:00 am (5min.) - called to order at 8:05 am
 - a) Introductions – ~62 present, see sign in sheets (Attachment 1)
 - b) Roll call & quorum confirmation (current roster is shown as Attachment 2)
 - Bob Burkhead, Chair 6/14
 - Bruce McDonald, Vice Chair 6/15
 - Peter Shipp, 6/14 - not present
 - Mike Corbat, 6/14
 - Zied Driss, 6/15
 - Len Duello, 6/14 – not present
 - Tom Justice, 6/15
 - Carolyn (Gemma) Kerr, 6/15 (came in later)
 - Marianne Lane 6/14 not present
 - Dave Matier, 6/16
 - Phil Maybee, 6/16
 - Steve Nicolas, 6/16
 - Kathleen Owen, 6/16
 - John Robertson, 6/15 – not present
 - Ted Schnipper, 6/15 not present
 - Jeff Siegel, 6/13
 - Christine Sun, 6/16
- 2) Review of this agenda -- no changes to revised version. (Attachment 3)
- 3) Review of “approved” draft San Antonio 2012 minutes
 - VM here – 11 of 17 here, Gemma not present at roll call, but came in later to make 12 present.
 - Membership changes can be turned in by end of today (Saturday) if needed.
 - **Bob will submit Chairs Membership Recommendation form with all approved applicants changes by 2/15.**

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

4) Vote to accept San Antonio Minutes –

a) **Motion: Maybee, 2nd by McDonald, accept: 11-0-0-0-11**

b) Suggestion to have secretary send out minutes; Bob says yes. **Secretary will send out draft minutes within 30 days.**

5) Chair's Remarks

a) Three goal objective

- Republication in 2012 – ASHRAE 52.2-2012 came out this week, only includes the already approved changes. Official end of 52.1.
- Planned addenda focus through 2017/narrow issues – all 4 addendum we have already voted on need to go out for Public Review. Bob's summary slide is Attachment 4. General consensus to do them out separately. Needs a form (PC chairs Public review form) filled out. Form goes to committee for vote, then due by 2/15/13 to ASHRAE. Note: secretary sent form out; Bob has the verbiage we voted to accept.

1. MERV Table – Bob Burkhead, will try for 2/15

2. OPC Specs – Phil Maybee, Tom Justice & Vijay to help

3. RH change – Monroe Britt, Chris Peart will help

4. Shedding – Kathleen Owen, will try for 2/15

- Long range planning (research initiatives – 5 year plan)

1. Bob asked for ideas for what we want to do next.

a. Idea to replace MERV with PM efficiencies and various other ideas about how to use 52.2 data. (Bruce called order to get us to go back to agenda)?

b. User guide needed– discussion below.

c. ***NAFA looking into doing survey of their membership** about what would taking out MERV do to them/their business.

d. Should we move MERV discussion to another meeting?

b) SPLS Roster recommendations for 2013 – discussed during initial roll call.

6) Liaison Reports (10 min.)

a) Standards – Krisnan Gowri – says thank you to us.

- Administrative requirements:

1. Work Plan needs to be updated now – by Tues or 2/15

2. Roster – 2 members rolling off after summer (Jeff, Ted), 6 people have all their information complete, but roster request has to go in. Remember we have option of NVM (also, paperwork is only good for one year).

3. Minutes need to be on time! Draft due out within 4 weeks, include highlighted action items. Send to liaison, too.

4. Big ASHRAE item – COI problems, complaints to ASHRAE - Do not circulate committee-only items including the draft documents. If a member has violated this rule, they will be removed from committee by ASHRAE (if ASHRAE finds out, they will not be out looking).

b) SSPC 62.2 – Iain Walker - Ian not present. 62.2 will be discussed at standards.

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

7) Old Business Items/Committee Reports (20 min.)

- a) 2012 publication Status is out and available.
- b) Liquid Paint Overspray reference in Federal register – Change apparently not possible. Take off agenda for next time.
- c) Publication Public Review –Talked about the big 4 above.
- d) “Linked In” blog and communication Status – Bob says there are issues. Vijay – something to do with reddit, Vijay posted response. Bob Burkhead promised Mack a list of what we talked about. Al Veek says we should ignore the comments.
- e) Errata addition for reference to ISO 12103 – no comments
- f) User Guide to Use of 52.2 Results (end user) – Standards referred this job to us. NAFA (Leslye Sandberg) says they would take it on. **Phil Maybee says he will take charge. If you want to help, contact Phil Maybee.** Note that we could add it or some of it into Handbook once done. **Bob will find out about whether we need to be more formal about setting this up within ASHRAE.**

8) Task Group Reports and Discussions (2 hours)

- a) **TG for Variation control – Christopher Campion** - intra-laboratory and/or inter variation. Chris will set up calls to discuss further what should be in it.
 - **Action – Gemma & Chris to update RTAR based on this discussion, then Chris will send it out for comments.**
 - Jeff Siegel – pointed out that narrow focus will more likely get funded and that subsequent RTARs can be done.
- b) **TG for Air Density calculation (Monroe Britt)** – nothing new. **Monroe to write up change as errata and submit.**
- c) TG for IPA vapor conditioning (Monroe Britt) Mike Corbat –ISO is working on this, so 52.2 will not work on it separately.

9) New Business (1 hours)

- a) Burkhead – interpretation request on LMS claims – Bob B gave background, showed email from Al Vatine (Attachment 5) and Mike’s official request (Attachment 6). Bob showed his unofficial response (Attachment 7), and told us he sent that on to Mike.
 - Publication of 52.2-2012 now makes the use of 52.2-2012 acceptable even though it wasn’t last year.
 - Al told us that he will send data to ASHRAE as part of his official response and showed slides (Attachment 8). Erik Brodsky says that if one follows the method, it is the test. If that’s the issue here, then it’s different than going outside the test.
 - Bob thinks Bruce should lead. Bruce says he has stopped working for Palas.
 - Barney B. reminds us that an interpretation becomes part of the standard.
 - Bruce – should interested parties not be allowed to vote in committee.
 - **TG to address request and whether there is anything that needs to be done to the standard: Bruce McDonald to chair; he will pick a TG from the interested people. A draft should be sent out by end of February.**
 - **Motion to form committee by Tom Justice: “Form a TG committee led by Bruce McDonald to address the response to the interpretation request with a draft response expected by March 1.” Phil Maybee seconded. 11-0-0-11 (passed)**

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

- b) Britt – New Dust Proposal – Monroe presentation (Attachment 9)
 - **TG to write RTAR: Dave Matier, Christine St, Al Vatine, Tom, Monroe, Zied**
- c) Burkhead - Resolution of “partial test” scenarios – including “IE only” - Completed: In SA we decided that we would affirm that labs should identify their test reports.
- d) Britt – Phase testing of combined pre-filter and final Filter – Monroe presenting.
 - Idea presented at 2.4 and sent back to 52.2. Idea is to test both filters at the same time.
 - Current proposal is to add this method as an informative appendix to 52.2.
 - **Motion to write an appendix to ASHRAE 52.2 using the current task group chaired by Monroe to add this issue to 52.2 with draft due to 52.2 by April 1: moved by Bruce, 2nded by Phil, 12-0-0-0-12**
 - Dave Matier showed slides on dust depth in dust loading to affirm the need for a different dust (Attachment 10)
- e) ISO 16890 status and interaction discussion (ISO’s version of 52.2 [sort of]) --
 - 16890-1 Filter Classification: Is a WD going to CD soon
 - 16890-2 Filter Test Method: Is a WD going to CD soon
 - 16890-3 Arrestance Method: Approved as a New Work Item
 - 16890-4 Conditioning: Is a WD and going to CD soon

10) Adjourn at 12:00 noon sharp

- a) Adjourned 12:27 pm. **Motion to adjourn: Yes: all voices heard.**

Attachment 1 Attendance

Attachment 2 Current Roster Mix

Attachment 3 Final Agenda

Attachment 4 ASHRAE SSPC 52.2 Addendum Topics

Attachment 5 Email from Al Vatine

Attachment 6 Mike’s official request

Attachment 7 Bob’s unofficial response

Attachment 8 Vatine’s presentation

Attachment 9 Britt’s New Dust Proposal

Attachment 10 Matier’s Dust Loading Information

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am - 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 1 Attendance

ASHRAE Meetings

ASHRAE SSPC 52.2-2007 - Method of Testing General Ventilation		
Saturday January 26, 2013 8:00am-12:00am - Dallas, Dallas		
By including your phone number and e-mail address below, you are agreeing that both can be		
	Name	Company/Address
1	Kathleen Owan	RTI
2	Bob Buckman	BLUE HEAVEN TECH
3	Christine Sun	Donaldson
4	Zied Driss	Camfil Farr
5	Peter Hoekstra	IBR Laboratories
6	Tom Justice	Zene, LLC
7	DAVID MATIER	FREUDENBERG
8	PAOLO TRONVILLE	POLITECNICO DI TORINO - DENERG
9	STEPHEN NICHOLAS	AIR INDUSTRIES, INC.
10	LESLYE SANDBERG	PERMATRON/NAFA
11	Al Voeck	NAFA
12	Al Vattini	AMS Technologies
13	Michael Corbat	Filtration Group
14	Bruce McDonald	Retired
15	Jeff Siegel	University of Toronto
	THAD PIK	CI

Genma Kerr - Retired

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am - 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 1 Attendance (continued)

ASHRAE Meetings

ASHRAE SSPC 52.2-2007 - Method of Testing General Ventilation		
Saturday January 26, 2013 8:00am-12:00am - Dallas, Dallas		
By including your phone number and e-mail address below, you are agreeing that both can be		
	Name	Company/Address
1	PHIL MAYRSE	THE FILTER MAN LTD
2	Chris Part	HOK
3	Daniel Chutzy	HOK
4	Joel Davis	Flanders Filters
5	SATISH DINAKARAN	FLANDERS FILTERS
6	Nathaniel Nove	AAF
7	Eric Brodsky	RESEARCH PRODUCTS
8	PAUL BEYANT	GE AIR FILTRATION
9	DON THORNBURG	CAMPIL FARR
10	Tim Johnson	TSI
11	Roug Pfeiffer	BLUE HEAVEN TECH
12	Bruce Duffy	TriDim Filter Corp.
13	Jay Baxter	Kimberly-Clark
14	Nancy Zimmerman	Kimberly-Clark Corp.
15	Geoff Crosby	LYDALL

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am - 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 1 Attendance (continued)

ASHRAE Meetings

ASHRAE SSPC 52.2-2007 - Method of Testing General Ventilation		
Saturday January 26, 2013 8:00am-12:00am - Dallas, Dallas		
By including your phone number and e-mail address below, you are agreeing that both can be		
	Name	Company/Address
1	Mark Renn	AAE
2	NATE Barjesteh	3M
3	Mick Flom	self
4	Andreas Seeberger	IREMA
5	Ken Snider	3M
6	Mike Harriman	Aeolus
7	MONROE A. BRITT	GREEN LEAF
8	KEITH CHESSON	CLARCOR AIR FILTRATION
9	DAN HAAS	CLARCOR AIR FILTRATION
10	N. L. BAKER, BIRDAUGH BUILDING WORKS	
11	JAMES HANLEY	RTI
12	TIM ALAN	CLEAN & SCIENCE Co., LTD
13	MAM KWI LEE	CLEAN & SCIENCE Co., LTD.
14	Kyung-Ju Choi	Clean & Science Co., Ltd.
15	DANIEL VANGILDER	CAMPIL FARR APC

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am - 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 1 Attendance (continued)

ASHRAE Meetings

ASHRAE SSPC 52.2-2007 - Method of Testing General Ventilator		
Saturday January 26, 2013 8:00am-12:00am - Dallas, Dallas		
By including your phone number and e-mail address below, you are agreeing that both can be		
	Name	Company/Address
1	Jack Clements	SEAF, FOR CAMFIL FARR
2	Tim Hudson	CAMFIL FARR APC
3	Brian Burgess	PGI
4	Mike McCarthy	PGI NONWOVENS
5	VOLKER HAENDLER	FREUDENBERG HOPKINSVILLE, KY
6	MELVINA NYOTO SETIADI	FREUDENBERG FILTRATION TECHNOLOGIES/ HOPKINSVILLE, KY
7	KARTIK POTUKUCHI	FREUDENBERG FILTRATION TECHNOLOGIES LP
8	CHRISTINE STANFEL	FREUDENBERG FILTRATION TECHNOLOGIES
9	CHRISTOPHER CAMPION	Hollingsworth & Vose Co.
10	DONNA KASPER	HOLLINGSWORTH & VOSE CO.
11	R. VIJAYAKUMAR	AERFIL
12	Todd McBreath	Glas Gloss
13	Connie Burkhead	Blue Heaven Technologies
14	Andy Solenson	Danaher Company Inc.
15	Krishna Gowri	PNWL

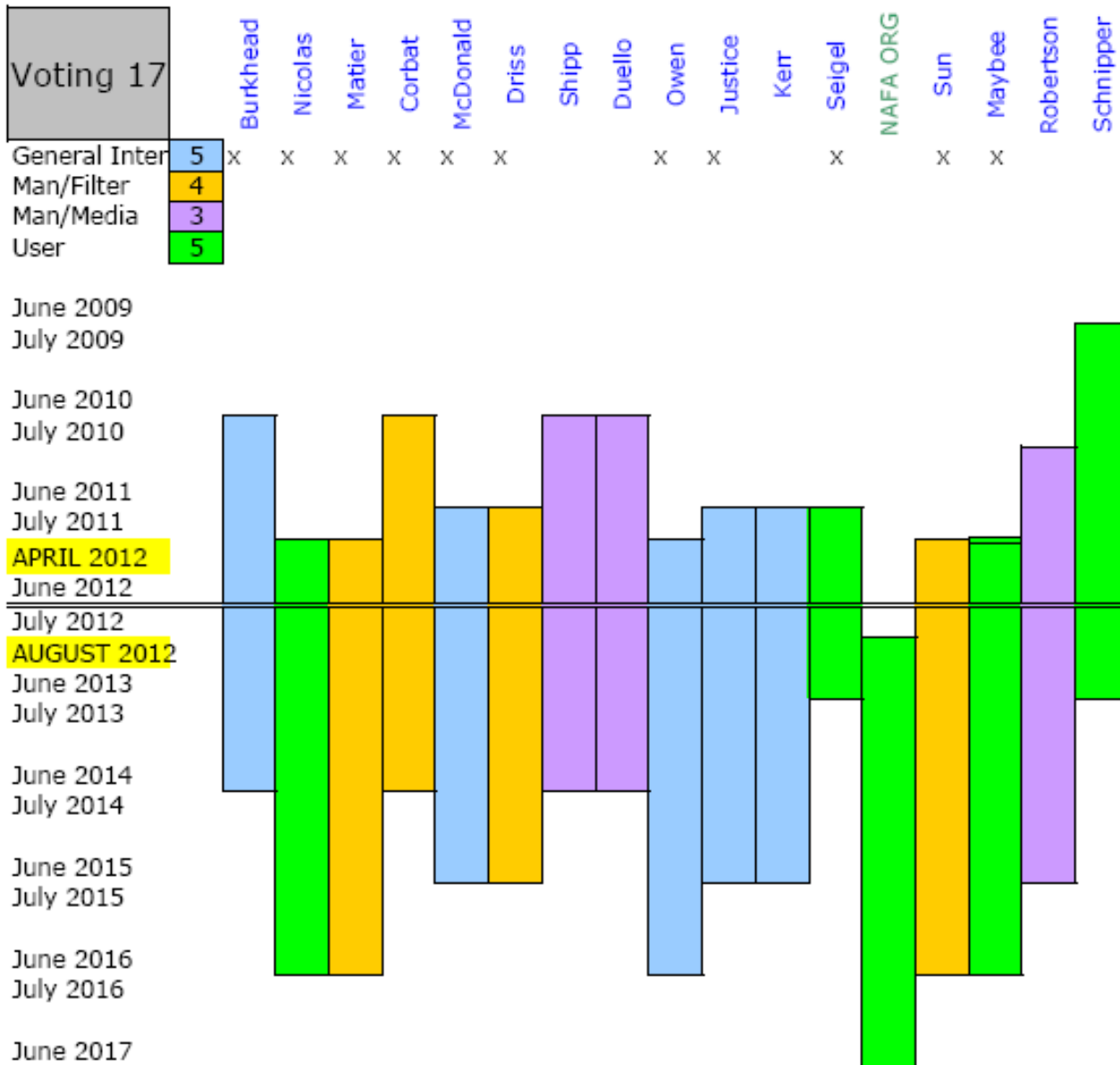
FINAL Meeting Minutes ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size
Saturday, 26 January 2013, 8:00 am – 12:00 pm
Dallas, Texas

These minutes have been approved by this committee.

Attachment 2 Current Roster Mix

Current Membership 52.2 - Dallas



FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size
Saturday, 26 January 2013, 8:00 am – 12:00 pm
Dallas, Texas

These minutes have been approved by this committee.

Attachment 3 Final Agenda

Meeting Agenda ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size
Saturday, 26 January 2013, 8:00 am – 12:00 pm
Dallas Sheraton Hotel , San Antonio Ballroom B (CC3)
Dallas, Texas

- 1) Call to Order 8:00 am (5min.)
 - a) Introductions
 - b) Roll call & quorum confirmation
- 2) Review of this agenda – amend and append as suggested (5 min.)
- 3) Review of “approved” San Antonio 2012 minutes (5 min.)
- 4) Vote to approve San Antonio Minutes (5 min.)
- 5) Chair’s Remarks (15 min.)
 - a) Three goal objective
 - Republication in 2012
 - Planned addenda focus through 2017/narrow issues
 - Long range planning (research initiatives – 5 year plan)
 - b) SPLS Roster recommendations for 2013 – current voting status
- 6) Liaison Reports (10 min.)
 - a) Standards – Krisnan Gowri
 - b) SSPC 62.2 – Ian Walker
- 7) Old Business Items/Committee Reports (20 min.)
 - a) 2012 publication Status
 - b) Liquid Paint Overspray reference in Federal register
 - c) Publication Public Review – KEY focus now! – Task Groups progress.
 - d) “Linked In” blog and communication Status
 - e) Errata addition for reference to ISO 12301
 - f) User Guide
- 8) Task Group Reports and Discussions (2 hours)
 - a) TG for Variation control – Christopher Campion (RTAR)
 - b) TG for Air Density calculation (Monroe Britt)
 - c) TG for IPA vapor conditioning (Monroe Britt) Mike Corbat – Round Robin
- 9) New Business (1 hours)
 - a) Burkhead – interpretation request on LMS claims
 - b) Britt – New Dust Proposal
 - c) Burkhead - Resolution of “partial test” scenarios – including “IE only”
 - d) Britt – Phase testing of combined pre-filter and final Filter
 - e) ISO 16890 status and interaction discussion
- 10) Adjourn at 12:00 noon sharp

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 4 ASHRAE SSPC 52.2 Addendum Topics

ASHRAE SSPC 52.2 Addendum Topics – Dallas 2013

The Big Four for next addendum submittal.

1. The MERV Table Changes – approved voting on twice at committee level - Bob B.- 15 Feb
2. OPC Specification Changes – Jim Hanley proposed and voted to approve – Phil Maybee
Tom Justice to help – Vijay as well -
3. RH change from 20%/65% to 45% +/- 10% (35% to 55%) – approved last meeting –
Monroe Britt – Chris Peart to help
4. Shedding issue changes –“release rate” amendment – approved three years ago -
Kathleen Owen

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 5 email from Al Vatine

From: Al Vatine [mailto:alvatine@lmstechnology.com]

Sent: Monday, October 22, 2012 3:44 PM

To: Al Vatine

Subject: New 52.2-2012 test

☐

YOUR FILTER TEST PERFORMANCE CAN BE INCREASED BY UP TO FOUR (4) MERV NUMBERS

☐

LMS Technologies, Inc. now utilizes Aerosol Particle Sizers (APS), costing over \$100,000 for each instrument, which can measure high concentration of challenge particles of KCl or other liquids. This new capability is fully accredited based on the ASHRAE 52.2 standard with instrument made by TSI company. Filter test results show that filtration test performance can be increased by up to four (4) MERV numbers.

Do not fall behind, as you could have the first MERV 12 high loft poly ring panel or first MERV 11 high loft glass filter. This is an opportunity every manufacturer has been waiting for.

The cost of a full ASHRAE 52.2 using this new APS is \$4,000 per test but, for a limited time, we are offering this amazing test for \$2,500 per test for prepaid order. This test will be noted as **ASHRAE52.2-2012**. **This test is not offered for residential filters at this point.**

Please be advised that this is a different test than what we run with regular single particle counter which costs \$1,250 per test. The new test will be differentiated as **ASHRAE 52.2-2012 instead of 52.2 Test**.

Section 7.6: Particle Counters of the EN 779 Standard, calls for Optical Particle Counters (OPCs) only for measurement of particle size and concentration. Therefore, use of particle sizers will result in an invalid test and as such is not offered under this program.

The NESHAP 319 also requires usage of OPCs and as such this program does not cover the NESHAP 319 test.

☐

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 6 Mike Corbat's official request

**INTERPRETATION IC 52.2-2007-X OF
ANSI/ASHRAE STANDARD 52.2-2007
*Method of Testing General Ventilation Air-Cleaning Devices
for Removal Efficiency by Particle Size***

Approval Date:

Request from: Michael Corbat (mcorbat@filtrationgroup.com), Filtration Group, LLC., 912 E. Washington Street, Joliet, IL 60433. (Phone: 815-774-1285)

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 52.2-2007, Section 4.6.1, regarding particle counters.

Background: Recently received communiqué regarding the use of Aerosol Particle Sizer approved in use by ASHRAE Standard 52.2-2012.

Interpretation No.1: ASHRAE 52.2-2012 is an approved standard.

Question No.1: Is this interpretation correct?

Answer No.1:

Interpretation No.2: An Aerosol Particle Sizer meets the requirements of a Particle Counter as listed in Section 4.6 of Standard 52.2-2007.

Question No.2: Is this interpretation correct?

Answer No.2:

Comments:

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size
Saturday, 26 January 2013, 8:00 am – 12:00 pm
Dallas, Texas

These minutes have been approved by this committee.

Attachment 7 Bob showed his unofficial response

From: Robert Burkhead [rburkhead@blueheaventech.com]
Sent: Monday, October 29, 2012 4:11 PM
To: Mike Corbat
Cc: Reiniche, Stephanie; Mark Weber
Subject: Unofficial Interpretation Request for ASHRAE 52.2 -2007
Attachments: LMS communique.pdf

Hello Michael,

I received from Mr. Mark Weber, ASHRAE's Assistant Manager of Standards, a forwarded copy of an unofficial interpretation request from you concerning ASHRAE 52.2-2007. As Chairman of the SSPC 52.2, it becomes my accountability to respond to your request. Please reference my comments below in red and consider this email to be my response to you.

ASHRAE is very specific about how interpretation requests are handled. For unofficial requests like this one, committee review is not required but I have consulted with some of our committee members as well as two past chairmen of the committee (in fact, a significant portion of the response is heavily influenced by that input). It is important that you understand the context and impact of this written opinion. Toward that end, ASHRAE provides a disclaimer – please read below:

"An unofficial or personal interpretation is a written explanation of the meaning of a specific provision of a standard or guideline in response to a written request. While every effort has been made to ensure its accuracy and reliability, it is advisory and provided for informational purposes only, and in many cases represents only one person's view. It is not intended and should not be relied on as an official statement of ASHRAE."

Request from:	Name:	Michael Corbat				
	Affiliation:	Filtration Group, LLC. Voting Member SSPC 52.2				
	Address:	912 E. Washington St.				
	City:	Joliet	State:	IL	Zip:	60433
	Telephone:	815-774-1285				
	E-mail:	mcorbat@filtrationgroup.com				
Reference:	This request for interpretation refers to the requirements presented in:					
	Standard	Number and Year:	52.2			
	Page Number(s):					
	Section(s):	4.6.1				
	Table(s):					
	Relating to:	Particle Counters				
Background:	Recently received communiqué regarding the use of Aerosol Particle Sizer approved in use by ASHRAE 52.2-2012. I have obtained a copy of the document and examined the content. Copy attached to this email.					
Interpretation:	1) ASHRAE 52.2-2012 is an approved standard.					

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 7 Bob showed his unofficial response (continued)

	2) An Aerosol Particle Sizer meets the requirements of a Particle Counter as listed in the current version of Standard 52.2.
Question:	Are these Interpretation correct?
Answer:	<p>1) NO - ASHRAE 52.2 – 2012 does not exist and is therefore, not an approved standard.</p> <p>2) NO (But qualified) - Section 4.6.1 of ASHRAE 52.2 –2007 does not mention Aerosol Particle Sizers specifically as permissible. It does mention Aerodynamic Particle Counters (APC's), Opticle Particle Counters (OPC's) and "other counters demonstrating good correlation ...". If no correlation exists for non OPC's, then they are not permissible.</p>
Comments:	<p>1) SSPC 52.2 has initiated the republication of the ASHRAE 52.2 – 2007 document. This will manifest in a publication of ASHRAE 52.2 – 2012 early in 2013. This document will merge the current 52.2-2007 main document along with the current effective addendum b originally published in 2008. A new addendum with three committee approved sets of changes is also currently being assembled and is expected to be published later in 2013. ASHRAE's Manager of Standards (MOS) has communicated to Mr Vatine, re-emphasizing this distinction.</p> <p>2) Section 4.6.1 is reprinted here for consideration: <i>"Permissible particle counters are optical counters (OPC's) with wide angle collection optics or other counters demonstrating good correlation in measuring particle size efficiencies, such as aerodynamic particle counters (APC's). An APC shall first be tested with KCL to establish the relationship between the aerodynamic particle size and the light-scattering particle size determined by an OPC. Calibrate the APC with PSL and use the relationship to express results as equivalent light-scattering size of KCL"</i></p> <p>While Section 4.6.1 does currently allow the use of "other counters" it does indicate that the expectation is that any counter "demonstrates good correlation in measuring particle size efficiencies". It goes further to require that APC's should be calibrated with PSL particles and to express the results as equivalent light scattering size of KCL. Furthermore – the new addendum for 2013 mentioned above will remove APC's as permissible technology and allow only OPC's – one of many efforts the committee has focused on to reduce the variability of the results.</p>

Thank you for your inquiry and efforts in further the intent and understanding of ASHRAE 52.2
Please let me know if you have further questions or need for clarification.

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 7 Bob showed his unofficial response (continued)

Best Regards.

Bob Burkhead

Blue Heaven Technologies

2820 South English Station Road

Louisville, KY 40299

 Tel: 502-357-0154

 Cell: 502-819-0204

 E-mail: wmailto:bob@blueheaventech.com

 Web site: <http://www.blueheaventech.com>



Please consider the environment before printing this e-mail!



NOTICE: This e-mail message (including any file attachment) is intended only for the use of the individual or entity to which it is addressed, and may contain information that is privileged and/or confidential. If you are not the intended recipient, any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately by reply e-mail or a collect telephone call and delete or destroy all copies of this message and any file attachment. Thank you!

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 8 Al Vatine's presentation

Use of Particle Sizers in 52.2 testing

Starting 2-3 years ago almost all testing labs except LMS and most of the manufacturer labs utilized particle sizers in testing of filters based on 52.2 and many other standards. If we study the history of 52.2 committee agenda, there always have been desire to incorporate conditioning or fully discharge step to the 52.2 Standard.

Almost all particle sizers require very high concentration of the challenge particles counts/cc rather than true particle counters which require only counts/cfm. Each cubic foot of air is 28317 cc. The proponent of condition step fast realized the effect of the high concentration which loads mechanical media to get higher efficiency number, while electrostatic media receives little help for increased efficiency numbers because the high concentration conditions the media to lose efficiency. In the case of testing the electrostatic filter with oleic oil the effect is purely similar to conditioning. But we have to remember any type of undeserved efficiency number increase is consumer fraud on any type of media.

The extended surface filters such as gas turbine filters since they have over 200 square feet of media they may be discriminated to receives lower efficiency. The reason being is that the need to have enough particles per cc usually is beyond 10% coincidence of the particle sizers and this caused the resulting data to show lower efficiencies.

LMS strongly suggests that all the testing performed using particle sizers, just because of indication of consumer fraud and market fixing not to be used. If any of the labs insinuate that the testing was performed with particle counters, then the issue of data selling will be the other side of the coin which needs to be dealt with.

The last issue of importance to LMS is the involvement of NAFA in the promotion of this type of testing through specific lab. LMS strongly object for a non-profit organization to be the marketing arm of testing lab and as such we request removal of NAFA as voting member of the 52.2 committee.

LMS feels that the extent of the discrepancy in the existing data in the market needs to be brought to the attention of few government agencies as the impartiality of the existing 52.2 committee voting members may be questionable and many of our customers also believe that this situation is beyond the authority of this committee.

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 9 Britt's New Dust Proposal

Problems with ASHRAE Dust

1. "Face Loads" on high efficiency filters
2. "Falls-off" air entering surface of filter when airflow is turned off

Proposed Solution

- Use ASHRAE type dust to load high efficiency filter

Blend new "ASHRAE Fine" dust from carbon black and silica dust, eliminate large silica particles that causes face loading

- Continue to use existing ASHRAE dust to load low efficiency (coarse) filters

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 9 Britt's New Dust Proposal (continued)

How to Define New "ASHRAE Fine" Dust

- Characterize ASHRAE dust that passes through a MERV 5, MERV 7 and MERV 8 prefilter.
- Identify percent carbon and percent silica of the three dusts.
- Determine particle size distribution of each silica dust

Verify performance

- Determine if each of the three modified ASHRAE dusts eliminates the face loading and dust fall-off problems.
- Evaluate the high efficiency filter dust loading times for a MERV 11, MERV 14 and MERV 16 filter.
- Select and prepare specifications for selected "ASHRAE Fine" test dust
- Select Lab(s) to formulate new dust and verify performance

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am – 12:00 pm

Dallas, Texas

These minutes have been approved by this committee.

Attachment 9 Britt's New Dust Proposal (continued)

Does Idea Have Potential ? (Feasibility)

- Prepare RTAR ?
- Submit RTAR through SSPC 52.2 ?

FINAL Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 26 January 2013, 8:00 am - 12:00 pm

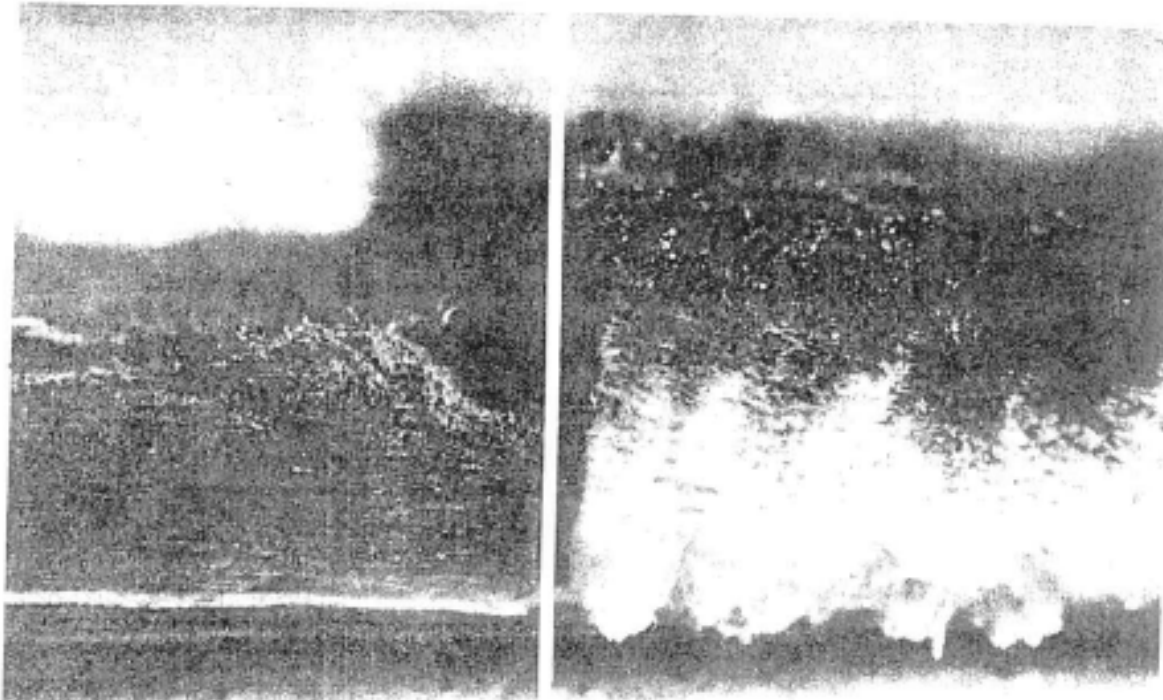
Dallas, Texas

These minutes have been approved by this committee.

Attachment 10 Matier's Dust Loading Information

BULLETIN 68

COMPARISON OF FILTER LOADED WITH ASHRAE DUST DURING
ASHRAE 52-76 TEST AND FILTER IN LIFE TEST DUST LOADED
WITH ATMOSPHERIC DUST.



Test Dust:

Atmospheric



Test Dust:

ASHRAE