

# DRAFT Notes

## ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size  
June 25, 2022 8:00:00 AM– 12:00:00 PM EDT - Hilton, Carmichael/Jackson (C)  
<https://events.rdmobile.com/Sessions/Details/1370059>

**Task Groups: Font is Bold, Blue**  
**Action Items: Font is Bold, Red**

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- 1) Call to Order – 5 min
- 2) Chair Remarks – 10 min
  - a) Code of Ethics - “As members of ASHRAE or participants in ASHRAE activities, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct. We will avoid conflicts of interest, and behavior that is discriminatory and/or harassing.” For more, read here: <https://www.ashrae.org/about/governance/code-of-ethics>
  - b) ASHRAE Commitment to Care - The health and safety of all ASHRAE conference attendees is a top priority. Out of respect for our fellow attendees, we commit to wear masks indoors, monitor our health, seek medical attention if symptoms develop and adhere to all ASHRAE Commitment to Care protocols. We are committed to the well-being of one another.”
- 3) Roll call for voting committee members - 5 min

**At roll call: 14/19 voting members present**  
**Total (over meeting): 16/19 voting members present**
- 4) Review of this agenda – 1 min
- 5) Review of “Draft” January Las Vegas 2022 Minutes – 5 min

**January 29<sup>th</sup>, 2022 minutes approved - Move to accept: Jon R; Second: Jim R**  
**(Y-N-Abst-Absent-Tot) (13-0-0-5-19) CNV**

  - a) <http://sspc522.ashraepcs.org/> to find minutes, agendas
- 6) Membership – 10 min

**SSPC 52.2 needs more media manufacturers in order to balance the membership, including voting members**
- 7) Website – Todd McGrath – 3 min

**Website up to date, but last 8 years’ worth of minutes has disappeared. Current info: Last meeting minutes, Agenda for this meeting, Meeting time & date.**
- 8) Liaison Report – **Jerry Kettler** [gjkettler@air-engineer.com](mailto:gjkettler@air-engineer.com) – 5 m

**Not present, no report.**
- 9) 62.2 & 62.1 Liaison report – **Vijay / Wane Baker** – 5 min

**Not present, no report.**

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#### 10) Open Action Items – 63 min

##### a) Charge Durability Index (CDI) **WG: Jim, Vijay** – 34 m

**Tim J:** Presented *Optional Test Method for Establishing the Charge Durability in Electrostatically Charged Media*. The Charge Durability Index (CDI) test is a flat sheet lab test and intended to be complimentary to App J and for Informative Purpose only.

Test compares media only, not filters, and uses one standard flow rate (10.5 fpm/5.33 cm/sec, based on historical reasons). An oily aerosol (Diocetyl phthalate, DOP\*) is used to challenge the filter at a load of 200 mg. Equipment is common at most media manufacturers' facilities. A photometer is used rather than particle-counter.

Formula 1: Mass [ mg ] = Mass Conc [ mg/m<sup>3</sup> ] x Time [ min ] x Flow Rate [ m<sup>3</sup>/min ]

Formula 2: CDI = (Final Removal)/(Initial Removal x Loading/200

Presented as:  $\text{CDI}_{\text{Removal Efficient Ratio } \pm 2\sigma, \text{ ex. } ^{95}\text{CDI}_{0.8 \pm 0.02}}$  corresponds to a media with a nominal 95% efficiency with a final removal efficiency of 80±2%

*\*Fairly nasty chemical, but in the NIOSH respiratory standard. Studies indicate that oily aerosols cause a more severe charge decay, which would result in a speedy test.*

**Jim:** Pretty quick test that allows comparisons of electret media, to allow choice of best electret (lower Dp & capture of smaller particles)

**Tim:** Experience is that test takes ~30 min. (100-150 ml loaded), so pretty quick

**Bruce M:** Used this test method a lot before retirement. Suggests include examples of PAO and different oils.

**Jim:** Motion to approve the CDI as presented as an appendix to 52.2; **Marisa:** 2<sup>nd</sup>

**Don:** Asks for a chance for committee to read the document

**Committee discussion:** Data collection and presentation for review – members have large amounts of data – can Group 1 collect and share? Applicability for MERV 8-10 media? Different committee members have different views regarding speed of the test. Test has nothing to do with 52.2 – flat sheet media efficiency not necessarily linearly connected to filter efficiency, but if main message of 52.2 is not changes, ok. Draft ought to circulate to whole membership, not voting members only, should also be presented for public review. Letter ballot possible in order to time republish date?

**Jim:** Amends motion to do letter ballot; **Randy:** Seconds

**Kathleen:** Membership needs a chance to have a discussion

**Mike:** Motion to table vote until Atlanta

**Jim:** Withdraws motion

**Jenny:** Motion for members to read draft to be distributed by Todd, before follow-up discussion in on-line meeting open to all members (to be set up by Todd), before Atlanta. (Possibility of letter ballot, but was not clear.); **Jim:** Second; **(Y-N-Abst-Absent-Tot) (15-0-0-3-19) CNV**

i) Group 1 - Chrystal, Jenny W, Mike, Jonathan, Keith, Rahul, Vijay, Tim, Bob, and Jim (blind-test) – look at collecting

**Bob B** nominates **Bobby S** to lead. **Thad** offers to share some data. **Tim** offers to carry out some blind-tests within next 4 weeks before he retires (12"x12" hand-sheets).

**Target:** Clarify what kind of data will be collected. Collect data. Find limitations (ex. MERV levels).

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**Change intended to be non-substantive** (will be added as appendix, not added to formal test report but separate and informative) – if intent changes, membership will vote on changed intent.

**Crystal:** Might be interesting for the Handbook as a guide for media manufacturers?

**Gemma:** Being revised right now, so could theoretically be added next year.

ii) Group 2 - Roberta & NAFA – look at application to filter

Nothing done to date

#### b) Revisions to Normative Appendices – 27

**Target:** Update terminology, nomenclature, and remove inconsistencies throughout standard and in relation to other ASHRAE standards and guidelines.

**Status:** WGA had fewer recommended revisions than WGB. Based on this, WGA's recommendations will be folded into WGB's list of recommendations for a full compilation.

WGB concluded suggestions, but need a little bit more time to get approval from WGA. Heard back from Vijay, but not Jon R or Mike C.

A number of needed changes for figures have been identified. Unfortunately, figures are jpeg and needs complete reconstruction. Not enough time to revise, comment, discuss etc. before Atlanta, even though it is known what needs to be done.

i) WGA - **Vijay, Jon R, Mike C**

ii) WGB - **Gemma, Don T, Zied D, Brian K**

**Bobby S:** Questions regarding audit flags:

a) **Reference Filters (18.11):** 3 reference filters; Use 1, 2-3 as backup for ALL tests ducts or for EACH test duct?

**Gemma:** Use same 3 reference filters for all x test-ducts instead of 3\*x reference filters.

b) **App J criteria point d:** Humidity limit is 55%, while also stated as needing to be below 50% at all times.

**Kathleen:** Needs fixed – RH was changed, but not consistently. App J at lower humidity really helps.

c) Youtube videos. 1) Explain MERV table, 2) MERV 17-20 don't exist **WG: Zied D, Marisa J-S, - 9m**

**Zied:** 99% done: Video is completed, ~14-19 min long. Voiceover needs redone. Working on additional videos.

**Marisa:** 2<sup>nd</sup> series of videos goes more into details. 2 very short videos, ~4 min each. Videos aimed at end-user rather than scientists. Language: English & Spanish. Might be completed during the next 2 weeks. How to proceed: Go through the committee, go up for vote?

**Zied:** Public review needed? What channel to post in?

**Todd:** Send out to voting members for comments – SSPC 52.2 or TC 2.4?

**Kathleen:** ASHRAE permission, since ASHRAE logo is used. Ask Jerry and/or Mark Webber hot to proceed.

**Prue:** ASHRAE has a channel with subscribers & posted videos.

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**Todd:** a) Reach out to Jerry/Mark Webber to ask how to proceed. b) Send out video/s to committee for review.

#### 11) New Business – 32 min

##### a) Space Distance on U-Shaped Duct

**Todd:** University has asked for permission to go larger (longer?) in U-duct bend in order to get accessibility between duct. Standard currently states that “all dimensions in standard are mandatory”. Can we change this dimension?

*General discussion where many seemed to agree to change standard to allow a larger distance. Option to change draft to include and voted on in Atlanta. Public review after Atlanta, resolution at ASHRAE Summer meeting-23, publish mid-2023.*

**Bruce:** Is it really ok to just change the standard? What happens if user builds test duct based on 52.2 guidelines and cannot pass the qualification test? We have no idea where the limits are.

**Todd:** Contact University to better understand what they really want. Right now: “To be able to walk in-between”

##### b) Todd McGrath – Discussion of Special Convening Authority

**Gemma:** ASHRAE STD 145 specifically refers to the 52.2 test rig, where test method calls out for chamber and 52.2 rig in a loop. Should SSPC 52.2 do the same for particulate filters? Kathleen is VC for TG2 RAST. Should 52.2 go to 52.3? Should 52.2 be involved in any other test method which uses the 52.2 test rig?

**Don:** SSPC 52.2 started when SSPC 52.1 was still active, but 52.2 would not have a say in forming 52.3; TC 2.4 would.

If interested, contact **Kathleen** and she will add interested parties to the list. 1928 Matt Middlebrooks. TC 2.9 coming up for RACK. AHAM only does residential. Still waiting on results on where proposal will go – where and how?

**Todd:** Gemma hands over to Todd.

##### c) Particle Party, Tuesday evening. Location tbd. 2 interested participants.

#### 12) Adjourn 52.2 Main meeting

Jim R moves to Adjourn Main Meeting, Roberta M Seconds

#### 13) SSPC 52.2 Research – Jon R – 27 min

##### a) IPA Vapor changes – impact on different fibers. RTAR **Champion: Chrystal Jolliffe with Phil Winters, Jon Rajala, Marquita Beard, Keith.**

Jenny B Steps out of meeting. Todd M takes over.

#### 14) PMS update on 1784-RP Adjourn Research

Research Adjourned