

**STANDARDS COMMITTEE**

**MINUTES**

**ASHRAE Annual Meeting, Kansas City**

**June 22 and 26, 2019**

***Approved by StdC October 16, 2019***

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**Standards Committee Action Items**

**As of June 26, 2019**

**Updated Items Noted in Red**

|  |  |  |  |
| --- | --- | --- | --- |
| **June 2019 Kansas City Annual Meeting** | | | |
| **AI#** | **Action Item** | **Assigned** | **Status** |
| 1 | An action item was assigned to the SSPC 90.1, 90.2 and 189.1 committees to recommend liaisons from each committee to the new 227P SPC. | PC Liaisons & Staff | Open |
| **January 2019 Atlanta Winter Meeting** | | | |
| **AI#** | **Action Item** | **Assigned** | **Status** |
| 1 | SPLS to ensure there is a liaison from SSPC 188 on the new project committee developing the proposed standard, *Prevention of Disease and Injury Associated with Building Water Systems,* to ensure clear and frequent communication occurs between SSPC 188 for what will be ASHRAE/NSF 514.  Ongoing | SPLS | Open |
| 2 | SPLS to review the ASHRAE/NSF 514 draft publication for duplication and harmonization prior to approval for public review. SPLS to send the draft back to the consensus body to resolve any procedural concerns that are identified.  Ongoing | SPLS | Open |
| 3 | Don Brundage accepted an action item to speak with SPC 105 committee members and get their input on who should be responsible for the development of the new Zero Energy project. StdC to vote at a later date on who will be responsible for development of this standard.  Closed | Brundage | Closed |
| **September 14, 2018 Fall Meeting** | | | |
| **AI#** | **Action Item** | **Assigned** | **Status** |
| 1 | An action item was assigned to SSPC 300 modify Standard 202 TPS to clearly identify that retro-commissioning of existing buildings is outside the scope of the standard.  In progress | SSPC 300 | Open |
| 2 | An action item was assigned to SPLS to not approve a first public review of standard 230 [Commissioning Process for Existing Systems and Assemblies] if a revised Standard 202 TPS has not yet been approved for public review by the ASHRAE Board of Directors or its designee.  Ongoing | SPLS | Open |
| **June 2018 Houston Annual Meeting** | | | |
| **AI#** | **Action Item** | **Assigned** | **Status** |
| 3 | Staff to work with ANSI ISO Staff and SSPC 34 to develop a way to have one standard similar to the process used by SSPC 135.  Ongoing | Staff | Open |

# 1. Call to Order and Introductions

The Standards Committee Winter Meeting was called to order on June 22, 2019 at 8:00 AM CT in the

Marriott-East room of the Kansas City Marriott hotel.

**Introductions**

Members of the committee, staff and guests were greeted. The attendees were as follows:

|  |  |
| --- | --- |
| **Members Present**  Donald M Brundage, *Chair*  Wayne Stoppelmoor, *Vice Chair\**  Charles Barnaby  Niels Bidstrup  Robert Burkhead  Michael D. Corbat\*  Drury B. Crawley  Julie M. Ferguson  Michael W. Gallagher  Walter T. Grondzik  Susanna S. Hanson  Rick M. Heiden  Jonathan Humble  Larry Kouma  Lee Millies  Karl L. Peterman  Erick A. Phelps  David Robin  Lawrence Schoen  Dennis A. Stanke  Richard T, Swierczyna  Rusty Tharpe  Adrienne Thomle  Craig P. Wray  Lawrence Markel, ExO  **Members Not Present**  Els Baert  Roger Hedrick  Kwang Woo Kim  Mick Schwedler, CO | **Staff Present**  Susan Leblanc, *Standards Administrator*  Steve Ferguson, *Senior Manager of Standards*  Tanisha Meyers-Lisle, *Procedures Administrator*  **Guests Present**  Daric Adair  Eric Adair  Hoy Bohanon  Laura Brandt  Glenn Brinckman  Tom Cappellin  Kelley Cramm  Shannon Corcoran  Brandon Damas  David Delaquila  Don Denton  Keith Emerson  Yaap Hoeling  Jennifer Isenbeck  Darren Meyers  Bob Miller  Mike Newman  Andrea Papageorge  Andy Persily  Daniel Russell  Angelica Sherber  Michael Sherber  Frank Stanonik  Steven Sill  Wayne Thomann  Iain Walker |

\*Indicates present only on Saturday

\*\*Indicates present only on Wednesday

# 2. Adoption of the Agenda

The agenda was adopted as presented. A reference to the ASHRAE Code of Ethics was made.

# 3. Chair’s Report

StdC Chair Don Brundage provided an update on items discussed by Standards ExCom.

# 4. BOD Officials’ Report

Board ExO, Larry Markel provided an update on Board actions as shown in [Attachment A](#AttA).

# 5. SR. MOS Report

Mr. Steve Ferguson reported there were no appeals filed from the January 2019 meeting. The standard 62.2 appeal was upheld and will be addressed again during today’s meeting. The two Complaints of Action/Inaction were escalated to TechC but no procedural violations were found. A new complaint was submitted on Standard 62.1, which is being processed.

Standards Committee held a 15-minute discussion in Executive Session.

# 6. Approval of Minutes

It was moved by Dru Crawley and seconded by Susanna Hanson:

1. That the following StdC Meeting Minutes be approved by consent agenda:
2. StdC Winter Meeting 2019 Minutes
3. StdC March 13, 2019 Minutes
4. StdC April 23, 2019 Minutes

**MOTION PASSED.** 23-0-1[[1]](#footnote-1) Chair not Voting (CNV)

# 7. Review of Action Items

See the updated status of [Action Items](#actionitems) beginning on page 2.

# 8. Publication Drafts

It was moved by Dru Crawley and seconded by Mike Gallagher:

**2** That the following be approved by consent agenda for publication:

1. BSR/ASHRAE Addendum *x* to ANSI/ASHRAE Standard 34-2016*, Designation and Safety Classification of Refrigerants*
2. BSR/ASHRAE Addendum *y* to ANSI/ASHRAE Standard 34-2016*, Designation and Safety Classification of Refrigerants*
3. BSR/ASHRAE Addendum *d* to ANSI/ASHRAE Standard 90.4-2016, *Energy Standard for Data Centers*
4. BSR/ASHRAE Addendum *f* to ANSI/ASHRAE Standard 90.4-2016, *Energy Standard for Data Centers*
5. BSR/ASHRAE Addendum *g* to ANSI/ASHRAE Standard 90.4-2016, *Energy Standard for Data Centers*
6. BSR/ASHRAE Addendum *d* to ANSI/ASHRAE Standard 161-2018, *Air Quality within Commercial Aircraft*
7. BSR/ASHRAE Addendum *e* to ANSI/ASHRAE Standard 161-2018, *Air Quality within Commercial Aircraft*

**MOTION PASSED.** 24-0-0, CNV

It was moved by Dru Crawley and seconded by Mike Gallagher:

**3** That the following be approved by consent agenda for publication:

1. BSR/ASHRAE Addendum *ah* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality*
2. BSR/ASHRAE Addendum *ai* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality*
3. BSR/ASHRAE Addendum *am* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality*
4. BSR/ASHRAE Addendum *ap* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality*
5. BSR/ASHRAE Addendum *ar* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality*

**MOTION PASSED.** 23-0-1[[2]](#footnote-2), CNV

It was moved by Dru Crawley and seconded by Mike Gallagher:

**4** That the following be approved by consent agenda for publication:

1. BSR/ASHRAE Addendum *c* to ANSI/ASHRAE Standard 62.2-2016, *Ventilation and Acceptable Indoor Air Quality in Residential Buildings*
2. BSR/ASHRAE Addendum *t* to ANSI/ASHRAE Standard 62.2-2016, *Ventilation and Acceptable Indoor Air Quality in Residential Buildings*

**MOTION PASSED.** 24-0-0, CNV

It was moved by Dru Crawley and seconded by Mike Gallagher:

**5** That the following be approved by consent agenda for publication:

1. BSR/ASHRAE/IES Addendum *y* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
2. BSR/ASHRAE/IES Addendum *al* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
3. BSR/ASHRAE/IES Addendum *ba* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
4. BSR/ASHRAE/IES Addendum *bd* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
5. BSR/ASHRAE/IES Addendum *bh* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
6. BSR/ASHRAE/IES Addendum *bi* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
7. BSR/ASHRAE/IES Addendum *bj* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
8. BSR/ASHRAE/IES Addendum *bk* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
9. BSR/ASHRAE/IES Addendum *bl* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
10. BSR/ASHRAE/IES Addendum *bq* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
11. BSR/ASHRAE/IES Addendum *bt* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
12. BSR/ASHRAE/IES Addendum *bx* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
13. BSR/ASHRAE/IES Addendum *bz* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
14. BSR/ASHRAE/IES Addendum *ca* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
15. BSR/ASHRAE/IES Addendum *cc* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
16. BSR/ASHRAE/IES Addendum *ce* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
17. BSR/ASHRAE/IES Addendum *cg* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
18. BSR/ASHRAE/IES Addendum *ch* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
19. BSR/ASHRAE/IES Addendum *ci* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
20. BSR/ASHRAE/IES Addendum *cj* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
21. BSR/ASHRAE/IES Addendum *cn* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
22. BSR/ASHRAE/IES Addendum *co* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

**MOTION PASSED.** 21-0-4[[3]](#footnote-3), CV

It was moved by Dru Crawley and seconded by Mike Gallagher:

**6** That the following be approved by consent agenda for publication.

It was moved by Dru Crawley and seconded by Craig Wray:

1. BSR/ASHRAE/USGBC/IES Addendum *c* to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*
2. BSR/ASHRAE/USGBC/IES Addendum *d* to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*
3. BSR/ASHRAE/USGBC/IES Addendum *e* to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*
4. BSR/ASHRAE/USGBC/IES Addendum *f* to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*
5. BSR/ASHRAE/USGBC/IES Addendum *g* to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*
6. BSR/ASHRAE/USGBC/IES Addendum *h* to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*
7. BSR/ASHRAE/USGBC/IES Addendum *l* to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*
8. BSR/ASHRAE/USGBC/IES Addendum *v* to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*

**MOTION PASSED.** 19-0-5[[4]](#footnote-4), CV

It was moved by Dru Crawley and seconded by Mike Gallagher:

**7** That BSR/ASHRAE Addendum *t* to ANSI/ASHRAE Standard 34-2019, *Designation and Safety Classification of Refrigerants,* be approvedfor publication.

**MOTION PASSED.** 24-0-0, CNV

It was moved by Dru Crawley and seconded by Mike Gallagher:

**8** That BSR/ASHRAE Addendum *i* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality,* be approved for publication.

**MOTION PASSED.** 23-0-1[[5]](#footnote-5), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**9** That BSR/ASHRAE Addendum *n* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality,* be approved for publication.

**MOTION PASSED.** 23-0-1[[6]](#footnote-6), CNV

It was moved by Dru Crawley and seconded by Mike Gallagher:

**10** That BSR/ASHRAE Addendum *s* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality,* be approved for publication.

**MOTION PASSED.** 23-0-1[[7]](#footnote-7), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**11** That BSR/ASHRAE Addendum *ab* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality,* be approved for publication.

**MOTION FAILED.** 5-17[[8]](#footnote-8)-2[[9]](#footnote-9), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**12** That BSR/ASHRAE Addendum *aj* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality,* be approved for publication.

**MOTION PASSED.** 22-0-1[[10]](#footnote-10), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**13** That BSR/ASHRAE Addendum *aq* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality,* be approved for publication.

**MOTION PASSED.** 22-0-1[[11]](#footnote-11), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**15** That BSR/ASHRAE/IES Addendum *t* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 21-0-3[[12]](#footnote-12), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**16** That BSR/ASHRAE/IES Addendum *v* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 21-0-3[[13]](#footnote-13), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**17** That BSR/ASHRAE/IES Addendum *an* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 21-0-3[[14]](#footnote-14), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**18** That BSR/ASHRAE/IES Addendum *ao* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 16-3[[15]](#footnote-15)-5[[16]](#footnote-16), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**19** That BSR/ASHRAE/IES Addendum *at* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 19-0-4[[17]](#footnote-17), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**20** That BSR/ASHRAE/IES Addendum *aw* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 21-1[[18]](#footnote-18)-3[[19]](#footnote-19), CNV

It was moved by Dru Crawley and seconded by Craig Wray:

**21** That BSR/ASHRAE/IES Addendum *ay* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 19-0-4[[20]](#footnote-20), CNV

It was moved by Dru Crawley and seconded by Julie Ferguson:

**22** That BSR/ASHRAE/IES Addendum *bb* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 21-0-3[[21]](#footnote-21), CNV

It was moved by Dru Crawley and seconded by Julie Ferguson:

**23** That BSR/ASHRAE/IES Addendum *bf* to ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 19-0-4[[22]](#footnote-22), CNV

It was moved by Dru Crawley and seconded by Walter Grondzik:

**24** That BSR/ASHRAE/USGBC/IES Addendum *i* to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 18-0-5[[23]](#footnote-23), CNV

It was moved by Dru Crawley and seconded by Walter Grondzik:

**25** That BSR/ASHRAE/USGBC/IES Addendum *bm* to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings,* be approved for publication.

**MOTION PASSED.** 18-0-5[[24]](#footnote-24), CNV

# 9. ILS/ISAS Report

The ILS/ISAS Report was presented by ILS/ISAS Chair, Michael Corbat. For more information regarding this report please see [Attachment B](#AttB).

It was moved by Michael Corbat:

**27** That Standards Committee amend the Standards Committee MOP Reference manual as follows:

**8.10.1. Request for Travel Reimbursement.**

A qualified ASHRAE representative shall be nominated to attend or request to attend an ISO meeting and may request transportation reimbursement by contacting the AMOS-I, the International Standards Coordinator, or [standards.section@ashrae.org](mailto:standards.section@ashrae.org). Upon receipt of such a nomination or request, the following information shall be requested by ASHRAE Staff:

1. A detailed statement explaining why the meeting is of interest to ASHRAE.
2. An explanation of technical issue within the scope of a US TAG(s) to the ISO Committee holding the meeting, and identifying the relevant US TAG(s) if applicable.
3. An estimate of travel costs for hotel for each night of the meeting, and six week advance airfare.

Requests for travel reimbursement received less than six weeks in advance of the meeting shall not be considered for approval.

**8.10.2. Travel Reimbursement Approval if ASHRAE is the US TAG Administrator**

If ASHRAE is the TAG Administrator for a travel reimbursement request, reimbursement not greater than the amount identified in 8.10.1(c) require approval by the Chair of the US TAG, Chair of ILS/ISAS, and Chair of Standards Committee.

**8.10.2.1 Alternate Reimbursement Approval Requirements**

If an individual requesting reimbursement is also the Chair of the US TAG, Chair of ILS/ISAS or Chair of Standards Committee, that individual shall not be asked to approve the request and approval shall be required by the Chair of Technology Council.

**8.10.3. Travel Reimbursement Approval if ASHRAE is not the US TAG Administrator**

If ASHRAE is not the TAG Administrator for a travel reimbursement request, reimbursement not greater than the amount identified in 8.10.1(c) require approval by the Chair of ILS/ISAS, Chair of Standards Committee, and the Chair of Technology Council.

**8.10.3.1 Alternate Reimbursement Approval Requirements**

If an individual requesting reimbursement is also the Chair of ILS/ISAS, Chair of Standards Committee, or Chair of Technology Council that individual shall not be asked to approve the request and approval shall be required by the Chair of Technology Council’s designee or the Vice-Chair of Technology Council’s designee if the request come from the Chair of Technology Council.

**MOTION PASSED.**  23-0-0 CNV

# 10. SPLS Report

SPLS Chair, Dru Crawley, presented the SPLS report. For more information, please see [Attachment C](#AttC).

It was moved by Dru Crawley:

**28** That the proposed TPS changes for the following committees be approved by consent agenda:

1. GPC 22, *Instrumentation for Monitoring Chilled-Water Plant Efficiency*
2. SPC 64*, Methods of Laboratory Testing Remote Mechanical-Draft Evaporative Refrigerant Condensers*
3. SPC 118.1, *Method of Testing for Rating Commercial Gas, Electric, and Oil Service Water Heating Equipment*
4. SPC 207, *Laboratory Method of Test of Fault Detection and Diagnostics for Air-side Economizers*

**MOTION PASSED.**  23-0-0, CNV

It was moved by Dru Crawley:

**29** That the proposed TPS changes for SPC 105, *Standard Methods of Determining, Expressing and Comparing Building Energy Performance and Greenhouse Gas Emissions,* be approved as presented.

**MOTION PASSED.**  22-0-3[[25]](#footnote-25), CV

It was moved by Dru Crawley:

**30** That the following revision to the membership roster for SSPC 62.1, *Ventilation for Acceptable Indoor Air Quality,* be approved:

1. Appointment of Jennifer Isenbeck as Chair and reappointment as PCVM-Owner/Operator/Occupant for a three-year term beginning July 1, 2019 and ending June 30, 2022.

**MOTION PASSED.** 24-0-0, CNV

It was moved by Dru Crawley:

**31** That the following revision to the membership roster for SSPC 90.1, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* be approved:

1. Reappointment of Drake Erbe as Chair, PCVM-Industry for a term of 4 months, beginning February 9, 2020 and ending June 30, 2020.

**MOTION PASSED.** 21-0-3[[26]](#footnote-26), CNV

It was moved by Dru Crawley:

**32** That the following revision to the membership roster for SSPC 90.2, *Energy Efficient Design of Low-Rise Residential Buildings,* be approved:

1. Change of Status for David Goldstein from Vice-Chair, PCVM-General on the Lighting Subcommittee to Chair, PCVM-General, for a two-year term, beginning July 1, 2019 and ending June 30, 2021.

**MOTION PASSED.** 22-0-2[[27]](#footnote-27), CNV

It was moved by Dru Crawley:

**33** That the following revision to the membership roster for SSPC 161*, Air Quality Within Commercial Aircraft,* be approved:

1. Change of Status for Catherine Thibaud from Vice Chair and PCVM-Manufacturer to Chair and PCVM-Manufacturer for the remainder of her current term beginning July 1, 2019 and ending June 30, 2021.

**MOTION PASSED.** 24-0-0, CNV

It was moved by Dru Crawley:

**34** That the following revision to the membership roster for SSPC 188, *Legionellosis: Risk Management for Building Water Systems***,** be approved:

1. Reappointment of Paul Lindahl as Chair and PCVM-Manufacturer for a two-year term beginning July 1, 2019 and ending June 30, 2021.

**MOTION PASSED.** 23-0-1[[28]](#footnote-28), CNV

It was moved by Dru Crawley:

**35** That the following revision to the membership roster for SPC 514, *Minimizing Risk of Injury and Disease in Building Water Systems,* be approved:

1. Appointment of Thomas E. Watson as Chair and PCVM-Industry.

**MOTION PASSED.** 24-0-0, CNV

It was moved by Dru Crawley:

**36** That Guideline 41, *Design, Installation and Commissioning of Variable Refrigerant Flow Systems,* be placed on continuous maintenance upon publication, with GPC 41 acting as the project committee until the SGPC has been established.

**MOTION PASSED.** 24-0-0, CNV

It was moved by Dru Crawley:

**37** That the SSPC 300 request to place the following guidelines on continuous maintenance (CM) upon republication, be approved:

1. Guideline 0.2-2015R, *Commissioning Process for Existing Systems and Assemblies*
2. Guideline 1.1-2007R, *HVAC&R Technical Requirements for the Commissioning Process*
3. Guideline 1.2-2019, *Technical Requirements for the Commissioning Process for Existing HVAC&R Systems and Assemblies*
4. Guideline 1.3-2018, *Building Operation and Maintenance Training for the HVAC&R Commissioning Process*
5. Guideline 1.4-2014R, *Procedures for Preparing Facility Systems Manuals*
6. Guideline 1.5-2017, *The Commissioning Process for Smoke Control Systems*

**MOTION PASSED.** 23-0-1[[29]](#footnote-29), CNV

It was moved by Dru Crawley:

**38** That the development of a Standard 62.1-2019 User’s Manual as described in the attached work statement, for a maximum of $35K (100% of the $35k estimated budget) for the FY 2020-21 budget be approved.

**MOTION PASSED.** 23-0-1[[30]](#footnote-30), CNV

# 11. PPIS Report

PPIS Chair, Jonathan Humble, presented remaining motions from the PPIS June 21, 2019 report. For more information please see [Attachment D](#AttD).

It was moved by Jonathan Humble:

**39** That PPIS recommends to SPLS that the 227P SPC not begin work until a different chair can be found. The chair should be a person whose qualities are of greater neutrality in affiliation to the passive house organizations and whose experience and education as an administrator are a primary quality for the start of this SPC.

**MOTION FAILED.** 8-14[[31]](#footnote-31)-2[[32]](#footnote-32), CNV

It was moved by Jonathan Humble:

**40** That StdC assign an action item to the SSPC 90.1, 90.2 and 189.1 committees to recommend liaisons from each committee to the new 227P SPC.  The goal of the liaison will serve as a communication arm with the SSPC’s on 227P SPC activities and development in order to prevent duplication between standards and to encourage harmonization between the standards.

**MOTION PASSED.**  23-0-1[[33]](#footnote-33), CNV

*An action item was assigned to the SSPC 90.1, 90.2 and 189.1 committees to recommend liaisons from each committee to the new 227P SPC.*

**12. SRS**

SRS Chair, Wayne Stoppelmoor presented the SRS Report dated March 15, 2019. For more information please see [Attachment E](#AttD).

It was moved by Wayne Stoppelmoor:

**41** That ANSI/ASHRAE Standard 33-2016, *Methods of Testing Forced-Circulation Air-Cooling and Air-Heating Coils*, be approved for revision and a revision project committee be formed.

**MOTION PASSED.**  24-0-0, CNV

# 13. CIS Report

CIS Chair, Dennis Stanke, provided a brief update on the CIS Report as shown in [Attachment F](#AttF). There were no motions for StdC approval.

# 14. Publication

It was moved by Dru Crawley and seconded by Walter Grondzik:

**26** That BSR/ASHRAE Addendum *aa* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality,* be approved for publication.

*Secretary’s note: The following unresolved objectors requested time and addressed Standards Committee related to their concerns. The Chair of SSPC 62.1 was also present and summarized the position of SSPC 62.1: Andy Persily, Dennis Stanke, Robert Miller, Brandon Damas, Michael Sherber, Larry Sunshine, Kelly Kramm, and Glenn Brinckman.*

It was moved by Larry Schoen and seconded by Dru Crawley:

**26a** That the motion to approve BSR/ASHRAE Addendum *aa* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality* for publication be tabled until the Wednesday meeting.

**MOTION PASSED.** 14-9-0, CNV

*Secretary’s note: this item was moved to the end of the meeting to provide an opportunity for unresolved commenters to address the StdC regarding their opposition to publication.*

It was moved by Craig Wray and seconded by Susanna Hanson:

**14** That BSR/ASHRAE Addendum *a* to ANSI/ASHRAE Standard 62.2-2016, *Ventilation and Acceptable Indoor Air Quality in Residential Buildings,* be approved for publication.

The following unresolved objectors requested time and addressed Standards Committee related to their concerns. The Chair of SSPC 62.2 was also present and summarized the position of SSPC 62.2.

Darren Meyers, David Delaquila, Frank Stanonik, Don Denton.

**MOTION PASSED.** 19-2[[34]](#footnote-34)-1[[35]](#footnote-35), CNV

**15. Recess**

Standards Committee recessed at approximately 1:00 pm ET until Wednesday, June 26, 2019.

**16. Call to Order**

The meeting of Standards Committee reconvened and was called to order by StdC Chair Don Brundage on Wednesday, June 26, 2019 at 7:30 am CT in the Marriott-East room of the Kansas City Marriott hotel.

Members of the committee, staff and guests were greeted. The attendees were as noted above.

# 17. Publication

Tabled motion returned to the floor by the StdC Chair:

**26** That BSR/ASHRAE Addendum *aa* to ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality,* be approved for publication.

**MOTION FAILED:** 0-18[[36]](#footnote-36)-3[[37]](#footnote-37) CNV

# 18. SPLS Report

The June 25, 2019 SPLS report was presented by Mr. Dru Crawley. There were no motions for StdC approval. For more information regarding this report, please see [Attachment G](#AttH).

# 19. PPIS Report

PPIS Chair, Jonathan Humble, presented the PPIS May 29, 2019 report ([Attachment H](#AttI)).

It was moved by Jonathan Humble and seconded by Craig Wray:

**25** That that a motion to reconsider adding the term “net” to the Title, Purpose and Scope of Standard 228, *Standard Method of Evaluating Zero Energy Building Performance*, be approved.

**MOTION PASSED.** 13-4[[38]](#footnote-38)-2[[39]](#footnote-39), CNV

It was moved by Jonathan Humble:

**25** That that the Title, Purpose and Scope of Standard 228, *Standard Method of Evaluating Zero Energy Building Performance*, be modified as shown below:

**Title:** Standard Method of Evaluating Net-Zero Energy Building Performance

**Purpose:** This standard sets requirements for evaluating whether a building or group of buildings meets a definition of “net-zero energy”. It provides a consistent method of expressing qualifications for net-zero energy buildings associated with the design of new buildings and the operation of existing buildings.

**Scope:**

2.1 This standard covers:

1. existing buildings, new buildings, groups of buildings, or portions of buildings;
2. determination, including calculation methodology, and expression of the building(s) net-zero energy status using performance metrics defined in ASHRAE Standard 105, “Standard Methods of Determining, Expressing, and Comparing Building Energy Performance and Greenhouse Gas Emissions” or by the authority having jurisdiction;
3. transportation within the net-zero energy building or group of buildings; and
4. plug loads for electric vehicles.

2.2 The provisions of this standard do not apply to:

1. Establishment of building energy performance goals or limits
2. Design guidance or design requirements
3. Embodied energy of building materials and systems, and
4. Transportation to and from a building such as services and business travel.

**MOTION PASSED.** 12-8[[40]](#footnote-40)-1, CNV

It was moved by Jonathan Humble:

**28** That the Scope of Standard 228, *Standard Method of Evaluating Zero Energy Building Performance*, be modified as shown below:

**Scope:**

2.1 This standard covers:

1. existing buildings, new buildings, groups of buildings, or portions of buildings;
2. determination, including calculation methodology, ~~or methodologies~~ and expression of the building(s) net-zero energy status ~~using performance metrics defined in ASHRAE Standard 105, “Standard Methods of Determining, Expressing, and Comparing Building Energy Performance and Greenhouse Gas Emissions” or by the authority having jurisdiction;~~
3. transportation within the net-zero energy building or group of buildings; and
4. plug loads for electric vehicles.

2.2 The provisions of this standard do not apply to:

1. Establishment of building energy performance goals or limits
2. Design guidance or design requirements
3. Embodied energy of building materials and systems, and
4. Transportation to and from a building such as services and business travel.

**MOTION PASSED.** 20-0-1[[41]](#footnote-41), CNV

# 20. Next Meeting/Closing Items

* Conference call July 22. 11:00 am – 1:00 pm ET
* Fall Meeting TBD, Sept./Oct. 2019

# 21. Adjournment

The Standards Committee meeting adjourned at approximately 8:30 am CT.

# 22. Attachments

Attachment A



Attachment B



Attachment C



Attachment D



Attachment E



Attachment F



Attachment G



Attachment H



1. Niels Bidstrup abstained because he did not participate in the meeting. [↑](#footnote-ref-1)
2. Dennis Stanke abstained because he is a member of the SSPC. [↑](#footnote-ref-2)
3. Humble, Stoppelmoor, Wray, and Brundage abstained because they are members of the SSPC. [↑](#footnote-ref-3)
4. Crawley, Humble, Schoen, Stanke, Stoppelmoor abstained because they are members of the SSPC. [↑](#footnote-ref-4)
5. Dennis Stanke abstained because he is a member of the SSPC. [↑](#footnote-ref-5)
6. Dennis Stanke abstained because he is a member of the SSPC. [↑](#footnote-ref-6)
7. Dennis Stanke abstained because he is a member of the SSPC. [↑](#footnote-ref-7)
8. The following StdC voted no with reason: Niels Bidstrup, “I voted no to accept BSR/ASHRAE Addendum ab to ANSI/ASHRAE Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality. Based on the discussion at the meeting I believe that process was not followed.” Chip Barnaby, “I was convinced by Andy Persily's characterization of handling of negative comments as inadequate. In this case, he was not consulted on the proposed correction via informative note and did not have the opportunity to assess whether the correction was sufficient to resolve his comment.” Bob Burkhead. “I found the general discussions from all contributors to be sufficiently convincing that the addendum was not fully vetted and dealt with per ASHRAE protocol. Specifically, testimony by Andy Persily was compelling and fairly stated. Therefore, I voted no on accepting the motion to approve publication of this addendum.” Michael Corbat, “My reason for voting no, was that my belief that the threshold for good faith effort to resolve negative comments was not achieved in an effort to expedite.” Susanna Hanson, “I voted no on ab because the originator of the CMP that led to the addendum was dissatisfied with communication from the committee and their failure to correct errors in the addendum despite multiple opportunities to do so.” Rick Heiden, “Unresolved commenter presented evidence that SSPC provided inadequate responses to his comments and potentially technically incorrect requirements to be published in an ASHRAE standard. To address the commenter, the SSPC decided to add an informative “editorial note” but did not convey the specifics of that note to the commenter to attempt to resolve his concern. This is an inadequate response. And as a result the informative note could result in a user of the addenda being required by mandatory language to use a technically incorrect table.” Jonathan Humble, “I am voting negative on this motion as I believe the unresolved comments accurately notify the SSPC 62.1 of relevant issues within Addendum “ab” that the ANSI/ASRHAE PASA requires it be resolved. Observation #1: The SSPC 62.1 “Analysis Sheet” fails to cite the unresolved comment from Mr. Persily in part #11 entitled “Summary of Unresolved Comments and Negative PC Votes”. This is important as these submissions to ASHRAE for processing are used to evaluate the ASHRAE process by a third party (e.g. ANSI) to ensure that the ANSI essential requirements and the ASHRAE PASA are being followed. By leaving said information out of any submission compromises the ASHRAE consensus process. Observation #2: The SSPC 62.1 proposes that this Addendum “ab” be developed as a “Normative Appendix” which according to ASHRAE PASA and the PASA Guide requires the following:

   “ANNEX A: DEFINITIONS, ABBREVIATIONS AND ACRONYMS, AND CLASSIFICATIONS

   A1 DEFINITIONS

   code language document: A document that presents a set of requirements related to the design, application, or use of HVAC&R and related technologies where all or portions of the document may be enacted as mandatory enforceable requirements by a political jurisdiction. Portions intended to be enforced (normative) are written in mandatory, enforceable language. Portions not intended to be enforced are identified as informative and are to be located in informative notes, in informative annexes (appendices) or in other advisory documents. See annex, informative annex, informative notes and normative annex.”

   When examining the public comment by Mr. Brandon Burley against the galley version of “ab” it is clear that the observation that Section D1.2.3 contains language that is not mandatory and enforceable is correct. The purpose of mandatory language is to establish a mechanism for effective regulation of building construction. When codes are adopted by units of government, they provide the legal framework for the regulation of public health, safety and welfare in construction. A standard represents an authoritative resource on a specific subject cited by the adopted code.

   Addendum “ab” Section D1.2.3 states the following:

   “D1.2.3 Body Mass. Values of body mass shall be obtained from Table D1.2.3 by calculating based on expected occupancy of males and females using Table D1.2.4 and Table D1.2.5. Table D1.2.3 shows a table of body weight data for males and females combined from the USEPA Exposure Factors Handbook D-5. Tables D1.2.4 and 1.2.5 show bodyweight data for males and females.

   Note: Body mass from Table D1.2.3 is used as a check value for the combined values computed from Tables D1.2.4 and D1.2.5.”

   It is my observation that this Section does not comply with the ANSI/ASRHAE PASA.

   • Notice that the first sentence directs the user to use three tables, however t is not clear is the relevance of Table D1.2.3 to Tables D1.2.4 and D1.2.5 when performing the evaluation. This creates a conflict for the user, and a problem of enforcement, which may yield unintended consequences in the regulatory environment.

   • Sentence two represents commentary that informs the user of the source of the values in the tables and fails to provide a direction for the user in the evaluation process as inferred in sentence number one.

   • The informative note merely restates the contents of the first sentence of Sentence D1.2.3 which is not the purpose of an informative note. It is also written as a requirement and not an information note. Informative notes are to be designed to provide additional information that further explains the basis of the provision, history, or directs the user to additional sources of information.

   Observation #3: The galley copy illustrates other informative notes in a form that suggests the notes are actually enforceable regulatory provisions rather than as informational commentary. The Guide to PASA specifically states:

   “Drafting the SCD (ROB 1.201.004.5)

   The primary function of the PC is to draft the standard or guideline it is responsible for developing. The ASHRAE Board of Directors requires that all standards be written in mandatory language and that those that are to be referenced by code to also be written in code-intended language. Standards can include material written in non-mandatory language in informative notes or informative annexes or appendices. Guidelines are written in non-mandatory language.”

   Examples of informative notes not complying with the above include the following:

   Section D1.1 informative note states:

   “Informative Notes:

   1. For this equation to be valid, the indoor CO2 concentration must have achieved steady state.

   2. All quantities on the right side of Equation D1.1-1 must be constant, and the indoor CO2 concentration of the space being considered must be characterized by a single value, i.e., there is no significant concentration variation in the space.

   3. Because this is a single-zone equation, CO2 transport from adjoining spaces is being ignored, and therefore the equation will not be valid if air flows into the space from adjoining spaces at different CO2 concentrations.

   4. To convert cfm to L/s, multiply by 0.5.”

   The Section D1.1 informative note represents placing mandatory requirements into an informative note. This is not consistent with the intent of informative notes.

   Section D1.2 informative note states:

   “Informative Note: The estimation of CO2 generation rate from building occupants is described in detail in Persily and de JongeD-2 as well as in ASTM D6245 D-1.”

   Section D1.2 informative note implies that there remain further details about the procedure for estimating that are not shown in Standard 62.2. Informative notes are not to be designed to be describing further regulation elsewhere outside the standard. Instead the reference to a relevant procedure should be incorporated into the regulation.

   Section D2 informative note states:

   “Informative Note: Because the following are single-zone equations, CO2 transport from adjoining spaces is being ignored, and therefore the equation will not be valid if air flows into the space from adjoining spaces at different CO2 concentrations.”

   Section D2 informative note is not written clearly and contains a requirement concerning adjoining spaces that should be in regulation and not an informative note.

   Larry Kouma, “Negative vote due to process concern … insufficient efforts to work with commenter to understand and resolve concerns; insufficient efforts to communicate with submitter.” Erick Phelps, “I am voting against addendum ab due to an inadequate response from the committee to the unresolved commenter. The use of tables as described in the addendum is confusing.”

   Rusty Tharp, “My reasons for voting negative during StdC 6/22 are as follows: it does not appear to me that SSPC 62.1 has fully vetted and responded to commenters on this particular addendum.  What sealed my negative vote is the fact that the negative commenter who was in the room had not been contacted by the committee in regard to changes the committee had made relative to his comment (the editorial changes).  the StdC member who commented that it appears that SSPC 62.1 Chair and committee seem to be more interested in “pumping out addendum” than fully communicating with commenters, vetting all responses and documenting such efforts. SSPC 62.1 has a lot of contentious issues and should not lightly practice compliance with ANSI and/or ASHRAE standards development requirements.  SSPC 62.1 (as well as other SSPCs) should practice ANSI requirements to the fullest extent possible to avoid any appearance of improper actions in standards development.” Adrienne Thomle, “I voted no because I did not believe the process was followed to work with the commenter for resolution of the comment. The committee comment that the design engineers can figure it out is not acceptable for a standard, especially one that is so important to ASHRAE. The committee needs to take the time to resolve the comments by contacting the commenters to attempt to come to a solution that is beneficial to all parties.” Wayne Stoppelmoor, “The reason for my NO vote on the subject Addendum is because procedural violations occurred.  First, the project committee admitted that there was an error in the addendum by their failed attempt to correct the error with an editorial revision to the language.  That editorial revision failed because it did not correct the error.  The committee attempted to solve the error with an editorial revision because they did not want to send the addendum out for another public review.  An additional procedural violation occurred when the committee stated that the error in the addendum is not a big deal because designers could figure out what they meant and do the correct thing.  Finally, the committee did not sufficiently interact with the commenter to resolve his concerns (it sounds like if the committee had interacted with the commenter, the error could’ve been easily corrected).” Richard Swierczyna, “Chair’s response not procedurally correct when responding to a commenter by trying to editorially modify language that was a substantive change without sending the document out for Public Review.” Mike Woodford, “PR response comments not addressed sufficiently to the procedures.” Craig Wray, “I voted no because I do not believe that there was a good faith effort to resolve comments, based on the evidence presented during the meeting today.” [↑](#footnote-ref-8)
9. Larry Schoen abstained stating, “The processing of this addendum was problematic, and this resulted in errors in the content. Response to commenters on the substance of their concerns was inadequate. Chair must clearly and succinctly express to StdC how the committee process responded substantively to commenters. The failure in process resulted in errors that could have been avoided, for example: 1-reference to another standard that is confusing at best and 2-incorrectly invokes 1100 ppm co2 that is not supported by cognizant authorities.” Dennis Stanke abstained because he is a member of the SSPC. [↑](#footnote-ref-9)
10. Dennis Stanke abstained because he is a member of the SSPC. [↑](#footnote-ref-10)
11. Dennis Stanke abstained because he is a member of the SSPC. [↑](#footnote-ref-11)
12. Jonathan Humble, Wayne Stoppelmoor and Craig Wray abstained because they are members of the SSPC. [↑](#footnote-ref-12)
13. Jonathan Humble, Wayne Stoppelmoor and Craig Wray abstained because they are members of the SSPC. [↑](#footnote-ref-13)
14. Jonathan Humble, Wayne Stoppelmoor and Craig Wray abstained because they are members of the SSPC. [↑](#footnote-ref-14)
15. Larry Kouma voted no stating, “Negative vote due to insufficient effort to resolve comment/advice of TC 5.1 working group/subcommittee, the technical committee responsible for technical expertise on fans. Response from the committee confirm there are “some deficiencies that should be rectified”. I have process concern about committee proposing publication of a minimum efficiency standard intended to be adopted as enforceable code after ignoring the advice of responsible technical committee on the subject and further admitting there are deficiencies that should be rectified. While a three-page response was submitted to the negative commenter, it lacks evidence of good faith effort to resolve the commenter, while agreeing with the commenter that the change introduces deficiencies. The committee should work to resolve rather than publishing a change that all agree will need to be revised to address deficiencies. Dennis Stanke voted no stating, “I was convinced by Craig Wray’s reasoning.” Larry Schoen voted no stating: “Despite the length of the PC response to the unresolved commenter, I am convinced by the discussion during the StdC meeting that this response did not adequately meet the procedural requirement because it did not address all of the technical objections raised in the comment. I do not know, one way or the other, if some of the comments that were resolved by virtue of no response by deadline were due to the US Federal government furlough. ASHRAE needs to clarify a process for this issue generally, since another furlough is possible in the near future.” [↑](#footnote-ref-15)
16. Jonathan Humble, Wayne Stoppelmoor and Craig Wray abstained because they are members of the SSPC. Karl Peterman and Lee Millies abstained without reason. [↑](#footnote-ref-16)
17. Jonathan Humble, Craig Wray and Wayne Stoppelmoor abstained because they are members of the SSPC. Rick Heiden abstained because he felt the topic should be handled by another committee. [↑](#footnote-ref-17)
18. Dennis Stanke voted no stating, “The speedy description of the addendum seems to imply that the addendum includes normative references to informative sources. If this is the case, it is procedurally incorrect.” [↑](#footnote-ref-18)
19. Jonathan Humble, Wayne Stoppelmoor and Craig Wray abstained because they are members of the SSPC. [↑](#footnote-ref-19)
20. Jonathan Humble, Dennis Stanke, Wayne Stoppelmoor and Craig Wray abstained because they are members of the SSPC. [↑](#footnote-ref-20)
21. Jonathan Humble, Wayne Stoppelmoor and Craig Wray abstained because they are members of the SSPC. [↑](#footnote-ref-21)
22. Jonathan Humble, Wayne Stoppelmoor and Craig Wray abstained because they are members of the SSPC. Larry Schoen abstained without reason. [↑](#footnote-ref-22)
23. Dru Crawley, Jonathan Humble, Larry Schoen, Dennis Stanke and Wayne Stoppelmoor abstained because they are members of the SSPC. [↑](#footnote-ref-23)
24. Dru Crawley, Jonathan Humble, Larry Schoen, Dennis Stanke and Wayne Stoppelmoor abstained because they are members of the SSPC. [↑](#footnote-ref-24)
25. Dru Crawley and Don Brundage abstained because they are members of the SPC, Dennis Stanke abstained without reason. [↑](#footnote-ref-25)
26. Jonathan Humble, Wayne Stoppelmoor and Craig Wray abstained because they are members of the SSPC. [↑](#footnote-ref-26)
27. Jonathan Humble and Wayne Stoppelmoor abstained because they are members of the SSPC. [↑](#footnote-ref-27)
28. Lee Millies abstained because he is a member of the SSPC. [↑](#footnote-ref-28)
29. Walter Grondzik abstained because he is a member of the SSPC. [↑](#footnote-ref-29)
30. Dennis Stanke abstained because he is a member of the SSPC. [↑](#footnote-ref-30)
31. Voters not recorded. [↑](#footnote-ref-31)
32. Walter Grondzik abstained because he is a proposed member of the SPC. Dennis Stanke abstained without stating a reason. [↑](#footnote-ref-32)
33. Walter Grondzik abstained because he is a proposed member of the SPC. [↑](#footnote-ref-33)
34. Susanna Hanson voted no stating, “My reason for no vote on 62.2-a from Saturday at Standards has not changed from the last time we were asked to vote on this addendum. While I believe that more documentation of emails was done this time around, I still believe there was a lack of good faith effort to resolve comments. The 2nd public review prior to the successful appeal simply removed the requirement for additional ventilation when non-vented gas appliances were used, and straight-out outlawed instead. Since the committee knew there was no common ground, and the expected outcome was to overrule unresolved objections, I question why the committee did not leave the additional ventilation option and vote that version out with knowledge of unresolved objections. The commenters’ not requesting to have the table added back is not evidence that they were intransigent, rather that they did not want to be forced to endorse the approach that they originally objected to. Leave the offending procedure from the first public review, if it were technically defensible, and then vote to publish with knowledge of unresolved objections. I also object to Standards committee not allowing time enough time to discuss prior to the vote.” Mike Woodford voted no stating, “Unresolved comments not adequately addressed in accordance with appeals decision.” [↑](#footnote-ref-34)
35. Larry Schoen abstained because he is a member of the SSPC. [↑](#footnote-ref-35)
36. The following StdC members voted no:

    Chip Barnaby - It is not clear to me that procedures were fully followed. The best path is to delay publication and allow the SSPC to resolve outstanding objections.

    Crawley – no reason given

    Ferguson – no reason given

    Gallagher –

    - Reference to 145.2

    - Inadequate attempt by the committee to resolve comments on the drastic change in permissible ozone limits. When the committee decides to create massive commercial disruption to an existing industry, they need to cite relatively unassailable research to justify such drastic action, and then communicate it effectively and professionally in the course of their comment response. I am not persuaded that this was done in an adequate manner, particularly given the commercial gravity of what happens to the pertinent industry due to the ozone 50 ppb to 5 ppb change.

    Grondzik– no reason given

    Hanson

    References were used incorrectly. Deficient rebuttals in comment responses to technical items such as 3rd party support for CO2 and other contaminant levels.

    Heiden - I voted no on the subject motion for the following reason;

    Policy - 7.4.6 of PASA “Any substantive changes in the draft must be approved and voted on by the PC for publication public review.” Section 6.3.3 of the galley proof file named “62\_1\_2016\_aa\_galley\_20190606.pdf” states Gas-phase air cleaners shall report an efficiency test for the DC’s in accordance with ASHRAE Standard 145.2. ASHRAE Standard 145.2 TPS is currently undergoing a change to enable that reference and that TPS change has not completed all approval steps. Therefore it could still undergo changes which would constitute a normative change. All normative changes must go out for public review so until Standard 145.2 is approved, Standard 62.1 addendum aa cannot proceed for approval.

    Humble

    I am voting negative for the approval of Addendum “aa”. The supporting information contains numerous inconsistencies and inaccuracies, and thus represent violations of the ANSI/ASHRAE/PASA. The violations are of such an expanse that they should be returned to the SSPC 62.1 for review and reconsideration so that the proposed Addendum and actions by SSPC 62.1 are in compliance with ASRHAE PASA. My conclusion is that the SSPC should re-review all addendum “aa” activities and related responses following an education refresher course on PASA by ASHRAE and with greater oversight and guidance from ASRHRAE staff. The examples below represent support for my negative vote, but do not represent all the cases where the inconsistencies and inaccuracies that are in the package of materials, as follows:

    Observation #1 – Response to commenter

    4/19/2019 Comment 0001/002, and 0001/003 (3rd Draft)

    “SSPC Response to comment: Reject.

    Thank you for the suggestion to expand the list of by-products. We will forward the expanded list to the IAQ Guideline committee for further study and consideration in the IAQ guideline.”

    Observation - This is an inappropriate response. It should be “Deferred, Out-of-Scope (typical in ISC draft when portions are not open for comment) as by the SSPC’s own admission they will take this subject under further study.

    Observation #2 – Response to commenter

    4/19/2019 Comment 0004/001 (3rd Draft)

    “SSPC response to comment: Reject.

    Regarding the 5 ppb comment and ozone: The committee added an Informative Note to section 6.3.3.1: "A concentration difference of 5 ppb of ozone is 10 μg/m3, which is approximately 3x the detection limit of commercially available instruments." and for formaldehyde "Informative Note: A concentration difference of 5.0 ppb is 6.15 μg/m3, which is approximately 3x the detection limit attainable with methods listed in Table 6.3.4.4.1." ozone measurement specification is detailed in Table 6.3.4.4.2. for the rest of the comments: The comments submitted are for changes NOT open for review. Refer the "Note for reviewers" at the end of the Foreword. Please be advised that you may submit an amendment to revise or modify any part of the Standard once it is published.”

    Observation - The SSPC should not have rejected outright as the committee in the end incorporated some of the public comment recommendations to create an informative note. In addition, the SSPC did not respond to the “5 ppb” comment. It was incorrect to state that said value was “not open for review” since in the 3rd draft public review document the value is conspicuously underlined, thus meaning it is fair game for public comments.

    Observation #3 – Response to commenter

    Comment 0005/001 (3rd Draft)

    “SSPC response to comment: Reject.

    The comments submitted are for changes NOT open for review. Refer the "Note for reviewers" at the end of the Foreword.”

    Observation - The 3rd public review draft dated February 2019 illustrates the third sentence as being substantially modified. Therefore, the public is permitted to submit comments. The SSPC decision to reject is therefore not appropriate nor is it an accurate response.

    Observation #4 – Procedural

    16 May 2019 meeting notes stated:

    • “Andrew Persily

    • Unresolved on several comments on all 3 public reviews

    • Participated and asked questions regarding basis of some of the requirements

    • Consultant to committee with decades of IAQ experience

    • Very few answers or contacted in response to comments, PPR initiated

    • 1st PPR

    o Comment 13

    o Concerned about CO2 limit - original CO2 limit removed 20 years ago, but taking stepping back

    o Procedural problem (linking to unpublished addenda)”

    Observation - The addendum referred to in this mention of a “procedural problem” is Standard 62.1-2016 Addendum “ab”. Mr. Persily is correct that the companion addendum was not published and therefore, public commenters are placed as a disadvantage when given the opportunity to submit a public comment on something that does not officially exist. In this case the SSPC should have either combined the two directly related addenda into one addendum, or the SSPC should have approved one addendum in order for it to become part of the standard prior to issuing the second addendum. Either action would have allowed public commenters the opportunity for a fair evaluation of the proposed technical provisions.

    Observation #5 – Table notes

    Observation - Notes associated with tables shown in standards are normally reserved for further clarification to the contents of the table. Examples would include; measurement translations, references to specific related provisions, definition or acronym explanation, etc. Requirements should not be shown as notes under a table, such as shown in Table 6.2.3.1. Requirements should be shown in the shown in text form as with the other provisions since the text provisions are what dictates the use of the document. Tables and their notes and figures are designed to enhance or compliment the text provisions.

    Observation #6 – Informative notes

    Section 6.3.3.2 informative note states:

    “Informative Note: A concentration difference of 5.0 ppb is 6.15 μg/m3, which is approximately three times the detection limit attainable with methods listed in Table 6.3.4.4.1.”

    Observation - This informative note represents a regulation and is not an informative note. It sets limitations related to the provisions of Section 6.3.3.2. Therefore, it is questionable how an authority having jurisdiction is to enforce this note since it contains regulatory language labeled as informative. This type of action is inappropriate.

    Observation #7 – Non-mandatory language

    Standard 62.1-2016 Addendum “aa’ 3rd Public review, states:

    “6.3.4.4.1 Design Compounds and PM2.5 Measurement Test. The measurement equipment shall be positioned in the breathing zone. The measurement shall be conducted within 60 days of building commissioning and occupancy during normal working hours, typical occupant load, and with the HVAC system in normal operation and lowest outdoor air intake setting expected during the year. The number of measurement points shall be specified according to Table 6.3.4.4.3.”

    And,

    Comment 0003/003 (3rd Draft)

    “SSPC response to comment: Reject. Thank you for your comment.

    The committee changed the language from maximum to typical based on comments on the second public review stating that maximum number of people means design conditions which is unrealistic to achieve during the period of the test….”

    Observation - The use of recommendations, advisory comments, and permissive, non-mandatory terms fails to provide sufficient specific direction to all users. The term “typical” is subjective and represents non-mandatory language that is not enforceable. This is clearly articulated in the ASRHAE Guide to PASA – Mandatory Language, Table 1, under Prohibited Words and Phrases in Normative Sections. A standard must be presented so that the application and intent is clear to all readers. Further the ASHRAE Guide on Mandatory Language states what actions are necessary to deal with this subject (See Section 2.1.1 extract below).

    “2.1.1 Standard Project Committees. Each standard project committee (SPC) and standing standard project committee (SSPC) must review its draft standard or addendum to identify the use of non-mandatory language, following the steps outlined in Section 2.2.1, before submitting the draft for publication public review approval. If the SPC/SSPC is unable to make corrective revisions to eliminate non-mandatory language, the SPC/SSPC is encouraged to request assistance from ASHRAE staff to assist with the development of revisions to meet the mandatory language requirement.” (Source: ASHRAE Guide to Writing Standards- Mandatory Language)

    Kouma – no reason given

    Millies – no reason given

    Peterman - My rationale for voting negative on this motion is out of respect and at the request of the current and incoming chairs who would have liked to withdraw the motion to be able to make changes in an attempt to resolve negative objectors.

    Phelps– no reason given

    Robin - A reference to the 2016 version of 145.2 is not possible because \*that\* version does not include the required scope. A wishful reference to a future version of 145.2 that \*does\* include the scope cannot be done in a normative section. The committee can either remove and replace the reference with something else or wait until a version of 145.2 is published that covers the required scope.

    Schoen - The processing of this addendum was problematic and this resulted in errors in the content. Response to commenters on the substance of their concerns was inadequate. Chair must clearly and succinctly express to StdC how the committee process responded substantively to commenters. The failure in process resulted in errors that could have been avoided, for example:

    1-reference to another standard that is confusing at best

    2-incorrectly invokes 1100 ppm co2 that is not supported by cognizant authorities.

    Swierczyna – no reason given

    Tharp - I voted no because a) the proposed addendum had incorrect references (to ASHRAE 145.2), and b) due process was not followed by not giving full consideration and not giving proper responses to the commenters.

    Thomle –

    1. The addendum references a standard (145.2 -2016) that does not have a test procedure for EACs, PCOs and others. This is a violation of the PASA process.

    2. There are mandatory requirements in the informative appendix.

    3. Outgoing and Incoming chairs of 62.1 requested it to be voted down at this time.

    Additional comments:

    In my opinion there seems to be an issue with communication between the committee and commenters from the public reviews. This may be a chairman issue but it should not be allowed to continue to the next chairman. I disagree with commenters that the 1100 ppm for CO2 is too low. I have patents on CO2 controls for safety and have done a lot of research on harmful effects of CO2 on humans in buildings. A level of 50,000 ppm of CO2 is deadly for humans when exposed for 5 minutes. A level of 30,000 ppm of CO2 is harmful and deadly to humans when exposed for 15 minutes. In my opinion 5000 ppm will adversely affect humans in their alertness and possible long term health issues. However the Standard should site cognizant authority(s) for their sources and reasoning for the 1100 ppm level.

    In addition CA Title 24 has a requirement for ventilation for commercial buildings when the indoor air reaches the level of outdoor ppm CO2 plus 700 ppm. In most cases the outdoor CO2 level is under 500 ppm. So the requirement is 1200 ppm or less. The committee may find the source of the CA Title 24 and use the same resource as the cognizant authority.

    Woodford – no reason given [↑](#footnote-ref-36)
37. Abstentions:

    Dennis Stanke abstained during the meeting. reason provided states, I voted NO on this motion because:

    1. The SSPC recommended rejection, apparently because aa was dependent on approval of ab, which was rejected by StdC.

    2. Addendum aa improperly refers to a Std 145.2, which is incomplete in terms of the devices addressed in the Std.

    3. The Addendum improperly includes a target limit on CO2 without citing a cognizant authority for the limit on this “contaminant.”,

    Craig Wray, “I abstained on the motion to approve the subject addendum for two reasons. First, I think it’s inappropriate for the StdC Chair to instruct StdC members on how to vote. Second, even though SSPC 62.1 allegedly is withdrawing its approval of the addendum (we didn’t actually hear from the PC Chair that this is what they are doing, not that I doubt it), I think that the issues being discussed were more technical than procedural and the discontent by unresolved commenters is really a stalling tactic for what will eventually occur in Std 62. I am concerned that ASHRAE is allowing the EAC industry to exert undue influence on PC activities, in violation of ANSI essential requirements.

    Bob Burkhead abstained stating, “My reason for abstaining from this vote is that I have several real and/or perceived conflicts of interest. Specifically:

    1. I’m a member of the TRG4 that was the source of recommendations to SSPC 62.1 that are the perceived “issue” in the complaints

    2. Our company is capable of conducting the SPC 145.2 protocol – so we are gainfully employed with a referenced method in the SSPC 62.1 standard

    3. Several of the complainants are currently customers of our company.” [↑](#footnote-ref-37)
38. Susanna Hanson, Dave Robin, Rusty Tharp and Adrienne Thomle voted no because this issue had been already decided. [↑](#footnote-ref-38)
39. Dru Crawley abstained because he is on the SPC. [↑](#footnote-ref-39)
40. StdC no votes:

    Barnaby - Addition of "net" to TPS was discussed by StdC when the wording was first considered. At this point, further modification should be left to the SPC.

    Ferguson – no reason provided.

    Hanson - I voted no because I don’t think that terms net-zero energy, zero-net energy, zero net-energy or zero energy need to be decided by our group. There is a 3rd party (DOE) that has standardized on what we chose in January after lengthy debate. There were those on the committee who argued that zero energy is technically incorrect. I believe that net-zero is more technically incorrect. Energy is a quantity not a rate. Net zero is redundant.

    Peterman - I voted negative to change the language to include “net” in the scope on the basis that no new information has been presented since our previous determination on the same question. While I can be convinced that “net-zero” is better than “zero”, I recall that the same rationale was presented when this was debated before and I was convinced then to leave it as “zero” and have not been persuaded otherwise since.

    Phelps – no reason provided

    Robin – same reason given for reconsideration

    Schoen - There is no need for StdC to change its previous decision. Both terms NZEB and ZEB are in use and the future PC can clarify what they mean.

    Thomle -My reason for negative vote on motion 1 TPS change for adding "net" to zero energy is the expertise for the definition of a net zero energy or zero energy building is not in the Standards committee but in the SPC 228 committee. I do not want to see the change come back from the committee requesting the "net" be removed based on one commenter that did not agree with the TPS. [↑](#footnote-ref-40)
41. Dru Crawley abstained. [↑](#footnote-ref-41)