

**ASHRAE Technical Committee 5.12: Ventilation Requirements & Infiltration**  
**2005 ANNUAL MEETING Draft MINUTES**

Monday, June 27, 2005, 4:15-6:30 pm  
Adam's Mark Denver, Tower Court C

*These draft minutes have not been approved and are not the official,  
approved record until approved by this committee.*

**Subcommittee Meetings:**

Handbook: Sunday, June 26, 2005, 5-6 pm, Adam's Mark Denver, Plaza Suite 3554 (5<sup>th</sup> floor)  
Program: Sunday, June 26, 2005, 6-7 pm, Adam's Mark Denver, Plaza Suite 3554 (5<sup>th</sup> floor)  
Research: Monday, June 27, 2005, 2:15-4:15 pm, Adam's Mark Denver, Tower Court C  
PMS 1167-RP, Sunday, June 26, 2005, 4-5 pm, Adam's Mark Denver, Plaza Suite 3554 (5<sup>th</sup> floor)

**Scope:** *TC 5.12 is concerned with ventilation, infiltration, airflow around buildings, and the reentry of exhausts, including their interactions with indoor air quality, HVAC system performance, and energy consumption.*

**1. Welcome & Introductions**

- Voting members sit at the table; all please sign the attendance list and include contact data
- TC web site: <http://tc512.ashraetcs.org/>
- Distribution of agenda & minutes package

**2. Attendance & Quorum Check**

Voting members for this meeting: *Carter, Emmerich, Griffiths, Medina, Modera, Reardon, Stathopoulos, Taylor, Walker, Liddament (IM), Olesen (IM) (scheduled to roll-off after 2005 Annual Meeting)*: Those attending are underlined, a quorum was established (quorum > 1/2 all VM, excl. IM; super maj. >= 2/3 VM present; simple maj. > 1/2 VM present)

**3. Approval of Orlando Meeting Minutes** (distributed at this meeting): A brief pause was taken for Voting Members to complete their quick review of these draft minutes. **Motion to approve the minutes (Emmerich/Olesen: 5-0-0-CNV) passed.**

**4. Announcements & Liaisons**

- Society liaisons
  - TAC *Int-Hout*: Certificate of appreciation for Reardon;
  - RAC *Kohloss*: *visited Research Subcommittee meeting and dropped in briefly later in this meeting to check if he was needed for anything else.*
  - Handbook
    - 2005-Conway: *visited Handbook Subcommittee meeting on Sunday afternoon*
    - 2007-Rock: *visited Handbook Subcommittee meeting on Sunday afternoon.*
  - Standards *Hogan*, *not present*
  - Program *Brambley*, *not present*
  - Education *Hydeman*: *not present*
  - CTTC *Circosta*: *not present*
  - Spec.Pubs *Ferguson*, etc.) : *not present*
- Section 5 Chairs breakfast meeting announcements (*Reardon*):
  - Three management by objective adopted in Orlando: (1) get minutes out in 60 days; (2) review current handbook for our area in other chapters and volumes; (3) get TC website updated.

- Society-wide issue of lack of the word “sustainability” in our work. The Green Bldg. Council and LEED are generating documents that they need very quickly where ASHRAE guidelines, etc. are non-existent or under very slow development – please move activities urgently that are relevant and find opportunities to demonstrate/illustrate relevance of activities to sustainability. Don’t be shy about proposing White Papers on relevant topics.
- TAC would like to encourage TCs to submit nominations for the George B. Hightower Technical Achievement Award, due September 30, 2005.
- Outgoing Program Liaison for Section 5, Mike Brambley reported that consideration is being given to a proposal to do away with the Wednesday morning sessions at future ASHRAE meetings, due to the typical reduced attendance on that last day of the semi-annual meetings. Consensus disagreed strongly with this idea as (a) it would make Tuesday the final day of the meeting and attendance would drop off on Tuesdays, and (b) the Sunday afternoon sessions were added a few years ago because there was not sufficient room for all the proposed program sessions - a glaring inconsistency with this proposed idea.
- Program Committee handout encouraged TC program submissions for Chicago to support the topic of the Public Session "Integrated Building Design".
- Another Program proposal to reduce symposium and seminar sessions to 1.5 hours to fit more sessions into the semi-annual meeting format was also unpopular because it would further limit time for discussion following presentations.
- A new book "HVAC Simplified" is in preparation within ASHRAE Special Publications (author Steve Kavanaugh, Mech.Engr. Prof., U.Alabama) for which volunteers are being solicited to serve as reviewers, as well as suggestions for which TC(s) should be assigned as cognizant.
- ALI: ASHRAE Learning Institute (*Boome*):
  - no report.
  - Name change? ASHRAE Professional Development Committee
- EHC: Environmental Health Committee (*Cardenal*):
  - Schools IAQ is a priority issue - Will find funds to undertake some research on schools to find the true ventilation value required.
  - Seminar for Chicago for environmental impact of residential attached garages (Sponsored by SSPC 62.2)
- ARTI: Air-Conditioning & Refrigeration Technology Institute (*Emmerich*)
  - a few research projects are ongoing that have been mentioned in the past,
    - *House Ventilation Systems Options: Phase I Simulation Study*
    - *Building Exhaust Air Re-entrainment: Phase II*
  - No longer access to DoE funding (for two years now) but have a small research budget.

## 5. Subcommittee Reports

### a. Research (*Walker*):

- General:
  - i. ASHRAE 2005 Strategic Plan for Research was presented at the Research Subcommittee Chairs Breakfast Meeting on Monday morning at 6:30 AM Tower Grand Ballroom (2). Consensus is that this Plan is a seriously flawed document, so we should proceed as normal – TC 5.12 issues and interests are not excluded from the Plan, as have been some other important issues and interests of other TCs. The Plan is available on-line at URL: <http://www.ashrae.org/template/PDFDetail/assetid/40420> .

- ii. RTARS can be submitted 3 times a year now, on the 15th of each August, December and May.
  - iii. Research ideas and submissions will be posted on-line for common awareness and comment.
  - iv. A new six-point rating scheme for RTARs and Work Statements was explained by Walker at the Research Subcommittee meeting, which he feels will at least make clear what aspects of a returned RTAR or WS need to be modified to improve its rating.
  - v. Research Service Award is a new proposal, that will be earned by accumulating the necessary points, much like the Distinguished Service Award, but self-nomination is not invited. Several members on TC 5.12 are probably eligible. Walker has a list of criteria and points value and it will be available on the ASHRAE website: [www.ashrae.org](http://www.ashrae.org).
  - vi. The National Center for Energy Management and Building Technologies have research funds (originating from DoE) and are inviting research proposals that may be of interest to this TC (COO John Wimer visited TC 5.12 at 2004 Annual Meeting in Nashville, [jwimer@ncembt.org](mailto:jwimer@ncembt.org)).
- Active Research:
    - “The Effect of Ganging on Pollutant Dispersion from Building Exhaust Stacks”  
1167-RP (PMS: *Chen/Kato/Ratcliff*).  
PMS report (sent by Yan Chen from Denmark in e-mail Monday 27 June to JT Reardon). “The experimental work conducted in the wind tunnel goes well. The timetable shows that the research is progressing in the right direction and the research could be completed on time. The stack ganging experimental results were shown in a few tables in the ppt file. It is less clear to the PMS if the results are acceptable and meaningful. This part of research is most important because the PMS agreed in the last meeting that most of the CFD modeling should be replaced by wind tunnel studies. The contractor continues to use LES that has many more difficulties than RANS. Perhaps the contractor should use RANS to interpret the wind tunnel data. A PMS meeting was scheduled in Denver meeting. Professor Kato said he would be there. If the contractor presented the work, Professor Kato should add any new development. Thanks. Yan 1167-RP PMS Chair”
    - “Heat Transfer During Residential Infiltration/Exfiltration”  
1169-RP (PMS: *Reardon/Griffiths/Medina*)  
PMS report. Technical paper status. Put under pressure by ASHRAE to complete this project. Report and 2 papers circulated to committee. PMS supports current documents though have not taken a vote. Substantial revisions to 1<sup>st</sup> draft have been completed and approved by PMS. Review of the technical papers is mostly complete. **Motion to approve the Final Report of 1169-RP (Walker/Reardon: 5-0-1-CNV) passed.** Walker to report to MORTS with explanation of abstention.
    - “Indoor Environmental Effects on the Performance of School Work by Children”,  
1257-TRP (PMS: *Sipes/Reardon/Federspiel/Simmonds*)  
PMS report at TC2.1 Research Subcommittee Meeting Sunday, 26 June 2005, 3:00-5:00PM. Question about how PI responded to challenges in Orlando that adult CO<sub>2</sub> production rates were not appropriate for school children. Emmerich asked if Pawel Wargocki was aware of Andy Persily’s substantial writings on caveats when attempting to use CO<sub>2</sub> levels to determine ventilation rates. Reardon will pass along recommendation to Pawel Wargocki. Cliff Federspiel resigned from PMS, replaced by Peter Simmonds appointed by TC 2.1 Chair.

- “Multiple Space Effects on Ventilation System Efficiency in Standard 62”  
1276-WS (PMS: *Taylor/Wray/Reardon/Emmerich/Walker*)  
PMS met Sunday evening. PI has arranged access to an excellent test site, and was very happy with constructive feedback provided by PMS to their research plan that was distributed to the PMS a week or more before this meeting. Yuill described verbally the research plan, which includes separate tests to evaluate  $E_r$  to pursue a correlation to help provide numerical guidance to designers. Access to earlier data collected by Les Christiansen in RP-687 is not possible, despite diligent efforts expended by the PI. Emmerich asked to be dropped from PMS. Walker will replace Emmerich from the current active PMS roster.
- Long-Range Research Plan (LRRP) revision for submission August 15, 2005: **Motion to approve (Walker/Carter: 5-0-0-CNV) passed.**
  - 1) “Minimum Acceptable Dilution of Commercial Kitchen Exhaust” with TC 5.10 (*Carter/Cardenal/Ratcliff/Wyon*): RTAR revision. WS status update. (*RTAR was revised as requested and was resubmitted with this Long Range Research Plan as TC 5.12’s 1<sup>st</sup> priority (RTAR 2005-40) – returned by RAC RTAR-04-0512-01377 in October 2004.*) John Carter had prepared a draft WS which was submitted along with the revised RTAR, but returned with same comments, possibly having left the draft WS unread. John Carter will revise the RTAR to include the extra detail that he felt belonged in the WS rather than the RTAR in time for resubmission for the August deadline. He will collect endorsement statements from the Research Subcommittee chairs of the co-sponsoring TC(s).
  - 2) “Fan noise” (*Yuill*). Gren Yuill had prepared a draft RTAR, and has solicited comments from SSPC 62.2, but has not taken it to TC 5.1 or 5.10. The draft that Gren presented to Iain Walker will stand for submission in August. Steve Emmerich asked if the committee had seen the revised version. A copy will be provided to the members via e-mail by Gren Yuill.
  - 3) “Characterization of Infiltration and Ventilation in Mid- and High-Rise Multifamily Buildings” (*Emmerich/Reardon/Hill*) RTAR and WS status update. Steve Emmerich has done nothing further since he provided a draft RTAR to Iain Walker, and Iain will check whether it was submitted to ASHRAE MORTS last year. Steve Emmerich will e-mail the RTAR to Iain again.
  - 4) “Simplified Procedure for Calculating Exhaust/Intake Separation Distances” (*Wilson/Taylor/Carter/Petersen*). RTAR and WS status update. (*RTAR approved and assigned Priority status by RAC in October 2001.*) Fred Kohloss indicated that we need to deal with this by August deadline or it will be dropped from the official ASHRAE Research Plan. Standard 62.1 currently includes a procedure recommended several years ago by David Wilson to improve upon the 10 ft code-required separation. Emmerich reminded us about an ongoing ARTI research project which is aiming to improve that procedure. Carter will not be able to revise this WS in time for August submission. Taylor will prepare a first draft and Carter will provide edits, aiming for an August 1<sup>st</sup> distribution for Letter Ballot by the TC.
  - 5) “Ventilation requirements for refrigerating machinery rooms” Taylor proposed a new draft RTAR that he provided to the Research Subcommittee. It will attempt to update an issue published in the 1930s. Ventilation rates required for refrigeration/chiller equipment rooms – needs to understand what types of leaks are realistic that may pose a health hazard. This is relevant to SSPC 15 which, except for the ammonia lobby, is in

support of this research moving forward, and want to co-sponsor this research. Accident scenario and calculation equations need to be developed. Steve guesses \$75K will do the job. Standard 15 already lists concentrations limits for approximately 30 common refrigerants.

- 6) "Transport of pollutant between houses and attached garages" (Yuill/Emmerich) Previous work has been done, and SSPC 62.2 IAQ's Subcommittee (Emmerich and Terry Brennan) is very interested in looking at solutions to this concern. Emmerich will get Brennan to prepare the draft RTAR. Walker is also interested in helping on this.
  - 7) "Dilution and Normalized Concentration Design Criteria for Laboratory Exhaust" (Petersen/Carter) RTAR update. (RTAR submitted with the 2003-2004 Long Range Research Plan August 1 2002, approved by RAC in October 2002.). There are additional data available from: ANSI/AIHA Z9.5 - American National Standard for Laboratory Ventilation; that makes this research project unnecessary and it will be dropped from the TC 5.12 research plan.
- Other research ideas: Carter to get update from Walker
    - Work Statements are requested on SARS from TCs 2.4, 5.12, 9.6 & 9.12 by Tech Council's Ad Hoc committee of Hermans, Halstrom, Persily No action proposed.
    - Tech Council has referred to TC 5.12 the Regions Council motion that ASHRAE contract for research on effectiveness of reduced classroom ventilation rates based on the North Carolina Building Code's claimed lack of problems at 7.5 cfm per person. Jim Reardon received in mid-May 2005 a copy of a letter addressed to Dennis Stanke, Chair of SSPC 62.1, from James McClure, president of an engineering firm in Texas, that reiterated the North Carolina State Board of Education request to consider reducing the ventilation rate required in school classrooms to 7.5 cfm/person. Fred Kohloss recommends that the TC 5.12 Chair reply in writing to MORTS, etc. that 1257-RP is ongoing, and that we feel that no additional research is required at this time, since the most recent edition of Std 62.1 has reduced the required ventilation rates. Fred also mentioned that Alison Kwok a few years ago tested 10 schools in Hawaii, 5 had A/C and 5 had none – his recollection of its gist was that thermal satisfaction was no different between the two groups.
    - The California Air Resources Board (CARB) announced Nov 10, 2004 the release of RFP 04-310, titled "Ventilation and Indoor Air Quality in New Homes", Bob Aldrich.
    - Wray attended TC 4.4, they have over 100 ideas, boiled down to a smaller number, from recent brainstorming session, one of which concerns the evaluation of ventilation of residential roofs. There is also an idea concerning airflow within wall assemblies. Joe Lstiburek feels that these ideas are not the concern of TC 5.12, but it seems that we should be consulted and involved. Wray has encouraged Section 4 TCs that these be posted on the new Section 4 website for on-line sharing of ideas and topics. Walker will contact the TC 4.4 Research Subcommittee Chair to investigate shared research issues.
    - Carter offered a longer-term new idea – plume rise equations are based currently on fully developed velocity profile at the stack exit. New stack designs are too short to provide fully developed exit velocity profiles. He won't have much time to work on this for several months. TC 9.10 has done some work on entrained exhausts. A topic for a future RTAR.

- Chimney backdrafting is an issue that is arising again, so we can pursue this later in cooperation with TC 6.3, TC 6.6 and SSPC 62.2. David Yuill is a CM of TC 6.6 Service Water Heating, with whom we should collaborate. The California Energy Commission is also raising an interest in this topic. CAN/CGSB-5171 standard exists but cannot be applied on a windy day, and takes a single “snap-shot”. Iain Walker will approach Jim Lutz at LBNL to encourage some interest.
- A draft RTAR provided by TC 1.2 was circulated by Walker for consideration. It is RTAR-04-0102-01350 “Measurements of Air Change Rates in Occupied Homes” – accepted by RAC, Oct 2004. Walker raised the concern that this illustrates a gap in ASHRAE procedures that fails to identify conflicts in areas of expertise. Walker recommends that this TC correspond with RAC objecting to this RTAR’s acceptance without it being consulted. Walker, Gren Yuill and Emmerich will collaborate to prepare two letters, one from TC 5.12 and one from SSPC 62.2. Wray will bring up this failure in communication at Wednesday morning’s TAC meeting.
- Wray suggested that the Research Subcommittee Chair assign members of the subcommittee to review/monitor the research plans and submissions by sections, as soon as the on-line posting is implemented by MORTS on www.ashrae.org. Volunteers are: Emmerich-1&3, Shekar-2, Wray-4, Walker-5, D Yuill-6, Taylor-7, Reardon-8, Carter-9, G Yuill-10.
- Relevant research of other TCs:
  - TC 1.2, RTAR-04-0102-01350 “Measurements of Air Change Rates in Occupied Homes” – accepted by RAC, Oct 2004. Jan Sundell delivered at end of RSC meeting Walker to circulate it to the rest of the committee.
  - TC 5.2, RTAR-04-0502-01369 “Snow Penetration at Louvers” – returned by RAC, Oct 2004. *No further word on its status within TC 5.2.*
  - TC 5.3, RTAR-04-0503-01373 “Air-change Effectiveness with Stratified Air Distribution Systems” – accepted by RAC, Oct 2004. *No update.*
  - TC 2.2, Jianshun Zhang, CM serving as TC 5.12 liaison and representative on PES/PMS for 1301-TRP “Quantification of Ventilation Effectiveness for Air Quality Control in Plant and Animal Environment“: (Jianshun Zhang)  
Zhang reported that 5 bids were received, and PES recommended a contractor and this recommendation was endorsed by TC 2.2 by official motion. RAC returned it because too few Voting Members of TC 2.2 voted on that motion because many VMs were also bidders and excused themselves for the vote to approve the recommendation. **Motion for TC 5.12 to accept the recommendation of the PES for a contractor for TRP-1301 and to recommend its approval to MORTS** [Of the five bidders the PES had recommended the 2<sup>nd</sup> lowest bidder because their score was the highest of all five bidders. The lowest bidder failed to propose measuring airborne particulate concentrations which is a prime concern in all agricultural settings, and was deemed to be unqualified.] **(Walker/Olesen: 6-0-0-CNV) passed.** JTR to report this vote to MORTS. (JTR submitted report to MORTS in his HQ mailbox at 7:15 PM on Monday 27 June 2005, after reviewing with Zhang a detailed PES report.)

b. Program (*Griffiths*):

- Denver
  - Denver, Forum 9 “Should Standards 119,136 and 129 Be Adopted into Codes?” (*Blatt*)  
Sunday 26 June 2005 11:15-12:05 AM:

- Emmerich reported maybe 10 in attendance- none think they should be adopted into codes.*
- Denver, Forum 13 “Can You Design an Exhaust Stack Using the Building Air Intake and Exhaust Design Chapter of the HVAC Applications Handbook?” Sunday 26 June 2005 2:00-2:50 AM (*Carter*):  
*Reported very small attendance - no new information gained.*
  - Denver, Forum 32 (SSPC 62.2 co-sponsor) “*What Should Be in the 62.2 Companion Guideline?*”, Wednesday 29 June 2005 11:15-12:05 PM  
(*Emmerich*): *offered to buy donuts for all attendees Wednesday morning.*
  - Proposed or planned program elements for:
    - Chicago – January 14-18, 2006: **Moved that the three seminars proposed for Chicago be assigned the priorities as listed below (Reardon/Emmerich: 6-0-0-CNV) Passed.** Reardon to submit report of this prioritization, on behalf of Griffiths. Reardon reported to DMG and PL5@ashrae.net.
      - i. Seminar “New Developments in Modeling Hazardous Pollutants near Buildings” (*Carter*) to prod authors for his symposium planned for Quebec City.
      - ii. Seminar “IAQ issues related to residential attached garages” (*Cardenal, with help from Emmerich*). Co-sponsored by EHC and Standard 62.2.
      - iii. Seminar “Mixed-mode ventilation in commercial buildings” (*Taylor*) Possible speakers: Emmerich; Phil Haves, LBL on EnergyPlus simulations San Francisco Federal bldg.; Europe/UK authors where natural/passive ventilation is more common; two possibly relevant papers are currently in review at Manuscript Central – one by Paul Linden, at UCSanDiego; and another by Peter Simmonds at IBE.
    - Quebec City – June 24-28, 2006
      - i. Symposium “Design for ETS in Hospitality Facilities” (*Wray*) Two abstracts in hand, another expected soon, and a possible fourth or fifth possible paper.
      - ii. Symposium “Innovation and Advances in Integrated Building Design” (*Haghighat*) Unclear that this has anything to do with ventilation. Suggested that Reardon communicate suggestion to TC 7.1, done by e-mail to [tc0701@ashrae.net](mailto:tc0701@ashrae.net) alias.
      - iii. Seminar “Duct Leakage in Apartments, Hotels and Hospitals” (Emmerich/Modera)
      - iv. Symposium “Air Leakage Performance for Non-Residential Buildings” (Parekh) call for papers to be issued and papers due in for review September 2005 contact SSPC 90.1 for co-sponsorship and to invite submission of papers.
      - v. Symposium “Evaluation of CFD for Modeling External and Internal Flows” (*Carter*). Three authors committed to submitting manuscripts in September.
    - Dallas – February 10-14, 2007
      - i. Symposium “Ventilation in Hot and Humid Climates” (Griffiths) Sehkar has a paper to contribute.
      - ii. Symposium (Taylor) “Technical Issues Related to 62.1” should contact John Murphy (TC 4.1) for paper.
    - Long Beach – June 23-27, 2007
      - i. Suggested that this might be a better target for the symposium “Air Leakage Performance for Non-Residential Buildings” proposed by Anil Parekh for Quebec City due to (a) tight deadlines for submissions considering that a Call

for Papers hasn't been issued yet, and (b) US citizens may require passports to enter Canada by the time they would be traveling to Quebec City, a possible discouragement to speakers.

ii. This is the contingency plan for the symposium on ETS in hospitality facilities if papers are delayed in review.

• Other:

- Symposia: "Airflow Around Buildings", "Infiltration Heat Recovery"
- Seminars: "What Should be in the 62.2P Companion Guideline?", "Residential Ventilation Design", coordinate with TC 5.10 Commercial Kitchen Exhaust, and the hospital area, "Effect of Air Cleaning Equipment in Ventilation Requirements" (Zhang)
- Forums: "62.1 Issues", "62.2 Issues", "What should be in 62.2 Users Guide?"
- Additional program ideas: "Effect of Air Cleaning on Ventilation Requirements – Std 62.1 and 62.2 have different requirements" Eli Howard has suggested 3 session titles/ideas from SSPC 62.1 Education committee, Reardon to put Dianne Griffiths in touch with Ehoward@smacna.org.

c. Handbook (Carter):

- Society-wide Handbook series rewrite - update
- 2005 Fundamentals Special Review - update
- Building Air Intake and Exhaust Design (AHRN-43), 2007 Applications (Carter) status. draft to be circulated by e-mail for vote at next meeting (Chicago). Rock liaison.
- Airflow Around Buildings (AHRN-70), 2009 Fundamentals status. Bill Coad new liaison.
- Ventilation and Infiltration (AHRN-80), 2009 Fundamentals status. no update

d. Standards (Emmerich):

- TC 5.12 is the cognizant TC for:
  - 62.1-2004/SSPC 62.1, Ventilation for Acceptable IAQ (in Commercial, Institutional, and High-Rise Residential Buildings):
    - Schoen reported: *Users Manual was voted for acceptance by SSPC 62.1 in Denver. PMS had already voted acceptance. New title, purpose & scope for 62.1 being discussed/floated as an information item at this meeting, for circulation. Committee is drafting a code-specific extract of 62.1 because International Mechanical Code rejected all proposed inclusions of 62.1.*
    - Modera - *Gil Avery brought complaint to SPLS on Friday, was found non-persuasive. Another petition is likely to be forthcoming.*
  - 62.2-2004/SSPC 62.2, Ventilation and Acceptable IAQ in Low-Rise Residential Buildings
    - *making progress on companion guideline; users manual underway report progress on preparing user guideline & manual, and a few addenda out for Public Review. **Moved (Emmerich/Modera) recommend to SPLS that SSPC 62.2 be assigned the responsibility for maintaining Standards 119 and 136. Max Sherman recommended against including 119 in this motion / recommended action. Mark Modera suggested 119 better fits w/ 90.2. **Friendly amendment to drop 119 from motion. (5-0-0-CNV) Passed.** Standards Subcommittee Chair to communicate this motion to SPLS.***

- 119-1988 (RA05), Air Leakage Performance for Detached Single-Family Residential Buildings:
  - *no activity to report, reaffirmed in 2005.*
- 136-1993 (RA01), A Method of Determining Air Change Rates in Detached Dwellings: 119 and 136:
  - *due for action in 2006.*
  - *See 62.2 above.*
- SPC 161P (CoC, TC 9.3 is Lead), Air Quality Within Commercial Aircraft;
  - *Modera is SPLS liaison: voted at SPLS and STDS to go to public review, companion guideline TPS was voted to public review unanimously on SPLS and Standards.*
- Others of interest:
  - 129-1997 (TC 5.3), Measuring Air Change Effectiveness
    - *no update*
  - SPC 152 (TC 6.3), MOT ... Residential Thermal Distribution Systems
    - *no update*
  - ETS Design Guide – update (*Persily PMS Chair/Rock PI*):
    - update by Persily: the PMS reviewed draft 4.1, and unanimously approved this draft **and** recommended that it be published by another publisher than ASHRAE (probably McGraw-Hill), ASHRAE would retain the copyright, and the author/PI would be paid. Persily believes that TC 5.12 no longer has responsibility to approve the technical content of this guide. Rock has a couple of hard copies of this final draft for anyone's perusal/inspection at this meeting (he must retain the copies). Issue is closed.
- New standards ideas:
  - Society Ballot vote to create a separate air quality standard for hospitality industry - in favor 1692, opposed 4398, motion defeated.
  - ASHRAE Standard on Evaluating Energy Efficient Buildings – inaugural meeting in Orlando, chaired by Gerald Kettler (Chair TC 7.9).
  - Proposed new standards policy being deliberated in SAC involves Standards 62 explicitly.
  - EHC has recommended to Standards Council a special project to conduct a literature review for scientific bases for setting ventilation rates (especially in schools). This may result in a special publication, identify research needs, etc.

e. Honors (Cardenal):

- Membership upgrades (associate member to member, fellow, life, etc.)
  - i. David Grimsrud, Jianshun Zhang and George Walton elevated to fellow.
  - ii. Max Sherman Awarded Exceptional Service Award at this meeting
- Distinguished Service Award (15 pts.), Exceptional Service Award (45 pts.)
- Other honors & awards
  - TAC is requesting a serious effort be made to submit nominations for the George Hightower award - Reardon to forward criteria to Cardenal. Done by Reardon following the meeting

**6. Old Business**

- Technical Bulletins/FAQs (*Reardon*):
  - Current batch of FAQs assigned to TC 5.12 (the most FAQs to any TC) were sent to the Chair by TAC Section 5 Head.

- Taylor volunteered to be the FAQ subcommittee chair: Jim Reardon to forward to Steve Taylor the FAQs sent by TAC recently. Done by Reardon following this meeting.

## 7. New Business

- 2005-2006 Roster Changes: rollovers, new members, subcommittee assignments, etc. as proposed and submitted to the TAC Section 5 Head by the Chair earlier this spring:

Position	Name
<b>Chair</b>	Steven J Emmerich
<b>Vice Chair</b>	John J Carter
<b>Secretary</b>	Xudong Yang
<b>Research Subcommittee Chair</b>	Iain S Walker
<b>Standards Subcommittee Chair</b>	Steven J Emmerich
<b>Program Subcommittee Chair</b>	Dianne M Griffiths
<b>Handbook Subcommittee Chair</b>	John J Carter
<b>International Member</b>	Bjarne W Olesen, PhD
<b>International Member</b>	Martin W Liddament
<b>Webmaster</b>	Steven J Emmerich
<b>ALI Coordinator</b>	Alexander J Boome
<b>Honours</b>	Bernardo Cardenal, PE

- Voting Members for 2005-2006 Society year: Carter, Emmerich, Griffiths, Liddament, Medina, Modera, Olesen, Schoen, Stathopoulos, Walker, Yang, Yuill, Zhang.
- Established a new Membership Subcommittee to help the Chair with the annual task of preparing the rollover roster – Gren Yuill volunteered to serve as Subcommittee Chair.
- Mark Modera volunteered to take over as Standards Subcommittee Chair, from Steve Emmerich.
- Reardon to submit “emergency roster change” forms to indicate these new positions and their appointees. Done by Reardon, by e-mail and hardcopy submitted to TAC Section 5 Head in mailbox folder outside Headquarters Room.

## 8. Adjourn

- **Motion to Adjourn (Walker/Emmerich: 6-0-0-CV) at 18:40.**
- Next meeting: 23 January 2006, at ASHRAE 2006 Winter Meeting in Chicago, IL.

**ASHRAE 2005 WINTER MEETING  
TC 5.12 VENTILATION REQUIREMENTS AND INFILTRATION  
MAIN COMMITTEE MEETING 4:15-6:30 ATTENDANCE LIST  
MONDAY 27 JUNE 2005, DENVER, CO**

<b>Name</b>	<b>Affiliation</b>	<b>E-mail address</b>
<a href="#">John Carter</a>	CPP, Inc.	<a href="mailto:jcarter@cppwind.com">jcarter@cppwind.com</a>
<a href="#">Iain Walker</a>	Lawrence Berkeley National Laboratory	<a href="mailto:iswalker@lbl.gov">iswalker@lbl.gov</a>
<a href="#">Tor Malmström</a>	KTH	<a href="mailto:Tor-goran.malmstrom@byu.kth.se">Tor-goran.malmstrom@byu.kth.se</a>
<a href="#">Craig Wray</a>	Lawrence Berkeley National Laboratory	<a href="mailto:cpwray@lbl.gov">cpwray@lbl.gov</a>
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