

**TC 5.10 Kitchen Ventilation**  
**Main Committee Meeting Draft Minutes**  
*4:00pm - 5:30pm Sunday, 22 January 2006*  
*Palmer House Hilton*  
*Chicago, IL*

**Attendees:**

Randy Urness	Steve Brown	John Clark
Greg DuChane	Don Fisher	Doug Horton
Ken Hutchinson	Rick Bagwell	Jay Parikh
Derek Schrock	Tony Spata	Rich Swierczyna
Bob Utech	Vern Smith	David Wolbrink
George Zawacki	Frank Kohout	Tim Farrell
Dwayne Sloan	Paul Sobiski	David Briedt
Bill Hickey	Joe Profenna	Mike Morgan
Bob Ajemian	Brian Ward	Brent Fullerton

**Call to Order**

Chairman Richard Swierczyna called the meeting to order at 4:10 pm.

**Quorum Call**

The Chairman requested a quorum call, 10 of 12 voting members were present.

**Approval of Last Minutes**

Motion by Horton to accept the minutes from the Denver meeting, second by Brown, vote unanimous.

**Liaison Report**

None present.

**Handbook Subcommittee Report**

Handbook subcommittee chairman Rich Swierczyna reported that the Handbook Subcommittee had reviewed the revisions to the Handbook and had finalized any additional revisions. Motion by Smith to approve the Handbook with edits, second by Schrock, vote unanimous. Handbook is due May 10<sup>th</sup> to ASHRAE.

**Research Subcommittee Report**

Research subcommittee chairman Derek Schrock reported on the activities of Research Subcommittee. Two project bids were reviewed and voted on.

Bagwell made a motion to approve the bid for TRP-1375 Grease Effluent Characterization from Additional Cooking Appliances, second by Hutchinson. Vote was 10 for, 0 against, 2 abstain (abstentions - 2 voting members were absent)

Zawacki made a motion to approve the bid for TRP-1362 Revised Heat Gain and Capture and Containment Exhaust Rates from Typical Commercial Cooking Appliances, second by Kohout. Vote was 8 for, 0 against, 4 abstain. (abstentions - 2 voting members were absent and 2 were bidding on project)

**Status of High Priority Items:**

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

TC Priority	Description	Author(s)	RTAR Submitted (Y/N)	WS Submitted (Y/N)	Status
1	Evaluating Field Test Method for CKV Performance	Steve Brown	Y – approved #1376	N	Planning to submit in March 2006, after getting feedback from TC's 7.7 and 7.9
2	Thermal Comfort in Commercial Kitchens	Derek Schrock	N	N	TC 2.1 has distributed this for review. Recommend we wait till September, 2006 to submit to RAC.
3	Minimum Acceptable Dilution of Commercial Kitchen Exhaust	John Carter from TC 5.12	Y – approved #1377	N	Following up with John to determine status.

The Research Committee recommended approving the WS for 1376. Fisher moved we accept the WS and it was approved unanimously.

**Long-Term Research Plan**

Priority #	Name	Description	Lead Author(s)
4	<b>Make-Up Air Impacts on Hood Performance and IEQ</b>	This project will look at the effects of makeup air introduction on C&C at different supply conditions. How do humidity and temperature affect the thermal comfort in the kitchen.	Derek Schrock, Steve Brown, Frank Kohout
5	<b>Analysis of Island Hoods</b>	Evaluation of the C&C performance, heat gain to space, energy consumption, and sensitivity to cross-drafts of island style hoods. How does hood length affect performance? V-bank hoods vs. single island canopy. Can we look at plume development from the appliances in this project?	Derek Schrock, Rich Swierczyna
6	<b>Thermal Plume Development and CFD Simulation of Hood Performance</b>	Use CFD to model the plume development from appliances and incorporate these into hood models. This would compare the C&C results obtained with CFD analysis to live Schlieren thermal imaging with the goal of determining if CFD can be used as a replacement for actual laboratory testing.	Andrey Livchak, Rich Swierczyna Can we get a CFD vendor more active in this?
7	<b>Dishwasher CFM requirements</b>	This could include sinks and agitating sinks. IMC has some amendments on the subject. This could include CFM, overhangs, placement and location of. Quantify sensible and latent loads to the space. Distinguish between load and high-temp dishwashers. Design guideline for dishwashers. Idle versus fully operational. [Heat gain from dishwashers should be included as part of TRP-1362].	Don Fisher
8	<b>MOT to Determine Whether Type I Hood is required</b>	RTAR was completed January, 2001. The major item to consider is grease emissions. That requires this work to be done after the grease MOT is finalized and adopted as a standard.	Don Fisher, Derek Schrock
9	<b>Enhanced Kitchen Load Calculation Manual</b>	This would follow the IAQ in Commercial Kitchens project. To include MUA unit set points and RTU size. To help engineers. To update ASHRAE books, handbook, and software.	Don Fisher
Seminar Topic	<b>Analysis of Short-Cycle Hoods</b>	This project will look at the true C&C performance, heat gain to space, energy consumption, and thermal comfort of short-circuit hoods as a function of the amount of MUA introduced into the hood at a variety of temperature and humidity conditions.	Derek Schrock
	<b>Variable Flow and Savings Potential</b>	This would build upon 1033-RP (500 fpm duct velocity). Evaluation of performance and payback in real-world applications for specifying and consulting engineers.	Don Fisher

## **Program Subcommittee Report**

Program Subcommittee Chairman Don Fisher announced the current and upcoming Program schedule.

### **Chicago Programs**

Symposium Monday, January 23 Chair: Doug Horton

The Latest Findings in Kitchen Ventilation Research

- (1) A New Standard Method of Test for Determining the Grease Particulate Removal Efficiency of Filter Systems for Kitchen Ventilation – Derek Schrock
- (2) Effects of Appliance Diversity and Position on Commercial Kitchen Hood Performance – Richard Swierczyna
- (3) Effects of Range Top Diversity, Range Accessories, and Hood Dimensions on Commercial Kitchen Hood Performance – Paul Sobiski

### **Future Programs:**

#### **Quebec:**

#### **Quebec City Seminar (June 2006): -- Chair: Doug Horton**

Operating CKV Systems in Northern Climates.

- (1) Strategic Introduction of Makeup Air Systems/Heat Recovery – Don Fisher
- (2) Demand Ventilation Control In Cold Climates – Melink Rep. or Ted
- (3) Effect of Temperature on Makeup Air Design (CFD) – Derek Schrock
- (4) Grease Rich Exhaust Challenge In Cold Ductwork – Tim Ferrell

#### **Quebec City Forum (June 2006) – Chair: Steve Brown**

Energy Efficient CKV System Design: Do Government Agencies Help or Hurt Implementation?

#### **Dallas:**

#### **Dallas Transaction (Jan. 2007) – Chair: Derek Schrock**

Papers need to be submitted by March and review packages due August 4<sup>th</sup>, 2006

- (1) Field Test Experiences with Demand Ventilation – Carlos, Don, and Vern
- (2) Investigating Alternate Dining Occupancy Calculations -- Gerrit Van Straten and Steve Brown (paper ready to submit)
- (3) Dishwasher Ventilation Testing – Rich Swierczyna
- (4) Multi-Stage Filter Development – Tim Farrell (completed)

#### **Dallas Forum (Jan. 2007) - Chair: Bob Utech**

Why Are Short-Circuit Hoods Still Being Specified?

#### **Dallas Seminar (January 2007) – Chair: Randy Urness**

Alternative Solutions to Short-Circuit Hoods

#### **Long Beach Programs:**

Research Update

Field Test Data Comparison -- Steve Brown

Seminar: Ductwork – Out of Sight, Out of Mind

- (1) Kitchen Fires -- Doug Horton
- (2) Grease Ductwork - Jay Parikh
- (3) NFPA-96: Frank Kohout

Forum: New Grease Duct – Jay Parikh

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### **Membership Subcommittee Report**

Membership Subcommittee Chairman John Clark asked that people interested in becoming voting members give him their card. They would be recommended to start as after June meeting.

We are looking for more end users to be voting members.

Currently looking for 2 voting members this year, 4 members next year. These are in 4 year cycles.

### **New Officers**

Randy Urness is taking over the Secretary position from Alan Breitenfeldt.

The committee is soliciting a new Handbook Subcommittee Chairman. Interested parties should contact Rich Swierczyna.

### **Old Business**

There was no old business.

### **New Business**

Chris Rousseau, past Chairman for Standard 154, Ventilation of Commercial Cooking Processes, addressed the Committee regarding the request for revision or reconfirmation of the Standard. The deadline for the decision is September 25<sup>th</sup>. Chris recommended that we revise the Standard. Possible subjects of focus are best design practices and make up air recommendations. This will be added as an agenda item to be voted on at the June meeting in Quebec City. Everyone needs to review STD 154 by that meeting and create a list of areas that need to be worked on. If the vote is to update the standard a chair will be selected at the Quebec meeting in June.

There will be an ASTM F26 meeting at the Commercial Kitchen Ventilation Lab in Wood Dale, IL on Wednesday, January 25<sup>th</sup>. All TC5.10 were invited to attend. Topics of discussion to be F2519-2005 , Standard Test Method for Grease Particle Capture Efficiency of Commercial Kitchen Filters and Extractors, and revisions to ASTM F 2474, Standard Test Method for Heat Gain to Space Performance of Commercial Kitchen Ventilation/Appliance Systems.

There will be a UL Standards Technical Panel meeting at UL in Northbrook, IL on Thursday and Friday January 26<sup>th</sup> and 27<sup>th</sup> to discuss revisions to UL710 and UL1046.

### **Adjournment**

The meeting was adjourned at 5:45 pm. Schrock/Fisher, vote unanimous.