

**ICC Code Technology Committee**

**Balanced Fire Protection  
Roof vents study group**

**Teleconference Meeting Minutes**

**January 30, 2007**

Chair Salvaggio initiated the teleconference at approximately 2:00 pm Central on January 30, 2007.

Members present (some joining late): Baldassara (Schirmer, CTC), Beyler (Hughes, alternate to Thornberry), Salvaggio (Collier County, FL, CTC), Schulte (Schulte Assoc.), Thornberry (AAMA Smoke Vent Task Group)

Interested parties present: Doctorman (Boeing), Fleming (NFSA), Heilstedt (CTC), Isman (NFSA)

Staff present: Pfeiffer

The conference call started with a re-cap of how the group was formed, citing:

- Agenda item 9 of October 19, 2006 CTC meeting minutes
- CTC Draft Interim Report No. 1/Public Hearing announcement dated October 19<sup>th</sup>
- CTC Interim Report No. 1 dated October 19<sup>th</sup>

A discussion ensued as to whether or not this issue falls under the scope of CTC's BFP. It was noted that the scope does include issues such as travel distance trade-offs and the efficacy of smoke vents. The October 19<sup>th</sup> minutes indicated that the CTC determined that it did fall under BFP.

Roof vent activities/studies:

- Numerous technical papers over the past 40 years. Probably not worth compiling.
- Beyler/Cooper paper "Interaction of Sprinklers with Smoke and Heat Vents"
- National Fire Protection Research Foundation – NIST report
- Hughes undertaking a modeling study. Smoke in warehouse: variables being the w/ and w/o vents; and w/ and w/o sprinklers

As with any type of study, one of the key issues will be whether or not consensus can be achieved as to what the reports are actually saying due to interpretive issues.

Rich Schulte presented his draft entitled "Propose Study Outline Smoke/Heat Vent Study group" dated January 12, 2007. Bullet 2 speaks to the expected performance. It was noted that increase in visibility and decrease in smoke/ heat damage are two key considerations. Bullet 4 cites Schulte's current code changes in the 2006/2007 cycle related to the proposed deletion of the requirements for smoke/heat vents. They are: F124, F125, F126, F130, F158, and E124. There was general agreement that this outline will serve as the work plan going forward, and that it requires further review and revision.

The study group then focused on the provisions in Section 910 of the 2006 IBC/IFC, noting their views as to what is the basis for the requirements:

- 910.1 General: Questions of the justification for Exception 1 were raised. It was noted that this was probably a practical response based on acceptable risk. Exception 2 was noted as providing early sprinkler operation based on 100 or more successful ESFR tests and a possible concern that roof vent operation may adversely impact sprinkler performance. There was not a consensus as to the impact of roof vents on sprinkler operation.
- 910.2.1 Group F-1 or S-1: Questions arose as to what constitutes "undivided" area. This text is based on 1998 cycle code change 910.2. The change does not speak to the intent, the group offered that any type of full height barrier would seem to apply.
- 910.2.2 High piled combustible storage: There was considerable disagreement as to the basis/justification for these provisions and the impact the location of the draft curtains plays on the performance. Rick Thornberry will compile a matrix identifying where in the code draft curtains are required.

. The next call is planned for February 22 @ 2:00 central. The agenda will include:

- Continue review of current code requirements, noting basis for the requirements
- Finalize work plan based on Schulte outline
- Review National Fire Protection Research Foundation – NIST report

The study group noted that it would be useful if we could secure copies of UL 793 and FM 4430 as “review copies – committee use only” from the promulgators. It was also questioned if there was any ICC ES Acceptance Criteria for roof vents.

The call was adjourned at approximately 3:30 pm