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June 24, 2011

Standards Council
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169-7471

Re: Standards Council Appeal
NFPA 204

Ladies and Gentlemen:

NITMAM 204-1 which requested that the Smoke Management Committee's Technical Report on NFPA 204 be returned to the Committee for further study was discussed at the NFPA's Technical Meeting on June 15, 2011. The motion failed. Schulte & Associates would like to request that the Association's action on NITMAM 204-1 be reviewed by the Standards Council and it is requested that the Association's action at the Technical Meeting be reversed.

It is Schulte & Associates' opinion that the Smoke Management Committee's Technical Report on NFPA 204 should be returned to Committee for further study based upon the following:

1. **Conflict Between NFPA 13 and NFPA 204.** The substantiation statement for the roof vent provisions included in the 2010 edition of NFPA 13 specifically states that "*the intent of the standard is that roof vents and draft curtains should not be used in conjunction with storage protection.*" The Smoke Management Committee's proposed Chapter 11 does not acknowledge the intent of the NFPA 13 provisions addressing the installation of roof vents/draft curtains and implies that the use of roof vents/draft curtains in sprinklered buildings is accepted engineering practice.

See Schulte & Associates' critique of Annex F.3 in NFPA 204 (attached) for further information addressing the conflicts between NFPA 13 and NFPA 204.

2. **Sprinkler System Design Criteria.** Annex F.3 in NFPA 204 includes sprinkler system design criteria (with respect to sprinkler locations in relation to draft curtains). Sprinkler design criteria should be determined by the NFPA 13 committee, not the Smoke Management Committee.

See Schulte & Associates' critique of Annex F.3 in NFPA 204 (attached) for further information addressing this issue.

3. **Fire Fighter Safety.** The National Institute for Occupational Safety and Health (NIOSH) has issued two NIOSH Alerts which address the issue of fire fighter safety. These two NIOSH Alerts, **NIOSH 2005-132** and **NIOSH 2010-153**, recommend changes to the standard structural fire fighting tactics which impact the use of roof vents/draft curtains in both sprinklered and unsprinklered buildings. Neither the 2007 edition of NFPA 204, nor the proposed changes for the next edition of NFPA 204, make reference to the changes in fire fighting strategies recommended by NIOSH.

Electronic copies of NIOSH 2005-132 and NIOSH 2010-153 are attached.

4. **Engineering Analysis.** Section 11.1 in the Smoke Management Committee's proposed Chapter 11 requires that an "*engineering analysis*" be utilized in the design of roof vent/draft curtain systems in buildings provided with sprinkler protection. This section further makes reference to Annex F.3.

The Smoke Management Committee's proposed Chapter 11 (including Annex F.3 text) does not acknowledge that the tools necessary to perform the required "*engineering analysis*" do not presently exist. Hence, the required analysis cannot actually be actually performed.

This point was addressed in a comment by a member of the Smoke Management Committee, Michael Dillon, in December 2009. Mr. Dillon's comment is as follows:

"The document prematurely and improperly requires and relies upon unproven methods of calculation for the effectiveness of smoke and heat vents in the presence of automatic water-based sprinkler protection systems. It also relies on calculations of questionable accuracy to determine activation times for the vents and the sprinklers." 204-1 Log #5 (December 2009)

The Smoke Management Committee has yet to address Mr. Dillon's comment.

This same point was also made in testimony by Messrs. O'Connor and Balassarra at the NFPA Technical Meeting held in Las Vegas in June 2010.

Additional commentary on the lack of tools to perform the required "*engineering analysis*" is attached.

Also attached is a research study titled "*Analysis of the Performance Ganged Operation of Smoke and Heat Vents with Sprinklers and Draft Curtains*" dated February 18, 2008. The report was authored by Hughes Associates, Inc. This report attempts to perform the "*engineering analysis*" which will be required by NFPA 204. The report has been discredited and Hughes Associates, Inc.'s client, the AAMA Smoke Vent Task Group (SVTG), considers the research to be "*worthless*". (See page 128 of the American Architectural Manufacturers Association's 2009 AAMA 72nd Annual Conference Minutes (attached) for the minutes of the SVTG teleconference held on March 24, 2009.)

If Hughes Associates, Inc. cannot properly perform the "*engineering analysis*" required by NFPA 204, then it is unlikely that other engineers will be able to properly perform the required analysis.

It is Schulte & Associates' opinion that the concept of the "ganged" opening of roof vents does not comply with the intent of the roof vent provisions contained in the 2010 edition of NFPA 13. Schulte & Associates is in the process of requesting both a formal and informal interpretation of the roof vent provisions contained in NFPA 13. It is expected that the informal interpretation will be rendered prior to the Standards Council meeting in August. The formal interpretation of NFPA 13 may not be available prior to the Standards Council meeting.

Thank you for your consideration of the above request. I plan on attending the Standards Council meeting in August to present the case for returning the Technical Report on NFPA 204 to the Smoke Management Committee.

Yours Very Truly,

Richard Schulte
Schulte & Associates

cc: T. Golinveaux, Smoke Management Committee Staff Liaison
R. Solomon, NFPA

attach.

ATTACHMENT LIST

1. 13-325 Log #CP43 AUT-SSD
2. Annex F.3 Critique, Schulte & Associates
3. **NIOSH 2005-132**, National Institute for Occupational Safety and Health
4. **NIOSH 2010-153**, National Institute for Occupational Safety and Health
5. Engineering Analysis Commentary, Schulte & Associates
6. *“Analysis of the Performance Ganged Operation of Smoke and Heat Vents with Sprinklers and Draft Curtains”*, Hughes Associates, Inc., February 18, 2008
7. 2009 AAMA 72nd Conference Minutes

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