



Deer Ridge Consulting, Inc.

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To: Clients of Deer Ridge Consulting, Inc.

Re: Unvented Attic Fire Testing based on Oxygen Depletion

As a Professional Engineer and Registered Roof Consultant, I am obligated to conduct myself and my business in a manner that, among other things, holds paramount the safety, health and welfare of the public. Additionally, I am obligated to advise my clients and appropriate building authorities when, in my opinion and best professional judgement, actions may endanger life or property.

It is with this commitment that I am advising all of my clients in the Spray Polyurethane Foam Industry of an unnamed attic fire test protocol that, in my opinion and best professional judgement, poses a danger to life and property.

The protocol in question is a proprietary and non-consensus procedure, the details of which have not been publicly revealed. However, from information that I have been able to garner from a variety of sources, it is apparent that the protocol employs a simulated unvented attic test module and that the primary mode of fire suppression is oxygen depletion.

The problems with relying on data generated from this protocol are many but include:

1. The protocol has not been publicly vetted, discussed or developed through any consensus process;
2. The protocol remains under development and procedures apparently vary from test to test;
3. The protocol does not measure the fire resistance of any foam plastic product but instead measures the ability of the geometric configuration of an unvented attic to suppress the spread of fire through oxygen depletion;
4. Unvented attic fires suppressed by oxygen depletion potentially leave the attic filled with combustible gasses and an active ignition source which could reignite when oxygen is reintroduced;
5. The effect on fire suppression of oxygen introduced through leaky or damaged attic ductwork is not understood;
6. The safety of attic assemblies based on the protocol assumes construction details which are not well understood by spray foam installers, building contractors or building officials; and
7. Life safety has not been considered for workers present in the attic, homeowners who might investigate an attic fire or firefighters who might vent the attic to release heat and smoke.

Based on these concerns, I am advising my clients that, in my opinion and professional judgement, unvented attic installations based on oxygen depletion fire test protocols represent a danger to life and property and, in the event of a tragedy, would not be legally defensible.

The above in no way diminishes my opinion that the test protocol based on modified NFPA 286 procedures, commonly known as Appendix X, remains a reasonable and scientifically justified method for determining the fire characteristics of SPF alternative ignition barrier assemblies in vented and unvented attics and crawl spaces and which satisfies the intent of the special and specific approval sections in the IBC and IRC.

If you have any questions on the above, I will be glad to discuss them with you.

Sincerely,

Deer Ridge Consulting, Inc.

Roger V. Morrison, PE, RRC
President