

# Tuesday e-Tech Alert

## October 18, 2005



### **Ceiling Spaces Below Sprinklered Attic Spaces**

The NFPA 13 rules relating to sprinkler requirements for combustible concealed spaces are fairly complicated, with fifteen sets of conditions spelled out in Section 8.14.1.2 of the 2002 edition relative to when sprinklers are not required. One of the newer sections, 8.14.1.2.13, first appeared in the 1999 edition of the standard, and deals with combustible concealed spaces below sprinklered attic spaces:

“Concealed spaces below insulation that is laid directly on top of or within the ceiling joists in an otherwise sprinklered attic shall not require sprinkler protection.”

This section was originally proposed by the NFSA with broader wording: “Sprinklers shall not be required in the space below the insulation in a sprinklered attic.” The NFPA 13 Committee accepted the NFSA proposal in principle but reworded it to exempt only spaces below insulation laid on top of ceiling joists. The Committee noted it had “reworded to clarify acceptable configuration” but did not explain the limitations it intended. During the public comment period the NFSA was successful in convincing the Committee to add the words “or within” to clarify that the insulation needn’t be on top of the joists. The Committee accepted the NFSA substantiation that “The concept is valid for spaces where the insulation is within combustible ceiling joists and there is an otherwise noncombustible space between the insulation and the ceiling”.

In the current revision cycle leading to the adoption of a 2007 edition of NFPA 13, another NFSA proposal has gained acceptance in principle. The NFSA proposal sought to add a parallel section clarifying that sprinklers are not required in concealed spaces between ceilings suspended below solid wood joists or the bottom chord of wood trusses when sprinklers are present within the trusses and insulation fills the gaps between the joists or trusses. The proposed Committee wording is as follows:

“Sprinklers shall not be required in concealed spaces between ceilings suspended below the bottom chord of wood trusses when insulation fills all of the gaps between the trusses and when sprinklers are present within the trusses.”

An accompanying Committee statement clarifies that wood joists are already addressed, confirming that the existing sections in the 1999 and 2002 editions deal with the situation in which a ceiling is suspended below the insulation placed between wood joists. But the Committee action also indicates that their intent in the 1999 edition was to deal only with solid wood joists, not the lower chords of trusses.

Questions have come to NFSA lately dealing with the situations under which the existing and proposed exemptions would apply. Can the suspended ceiling be combustible? Can the insulation have a combustible facing? On either side? Can a plastic vapor barrier be placed below or above the insulation? Does use of this exemption always invoke the minimum 3000 sq. ft. design area?

The NFSA will be encouraging the Committee to address these issues during the public comment period. However, the underlying concept that should not be lost by the Committee is the one contained in the initial

substantiation of the NFSA comment: in order to avoid additional sprinklers in the space between the insulation and the suspended ceiling, such space should essentially be noncombustible. In other words, except for the presence of the combustible joists or truss chords, the above-ceiling space should qualify for omission of sprinklers under one of the other sections within 8.14.1.2.

### **Accessing NFPA TIAs and Errata**

Tentative Interim Amendments (TIAs) to NFPA codes and standards are considered emergency amendments and must be followed. Official errata correct printing errors within the documents and are likewise important to the proper use of the NFPA codes and standards. Every user of NFPA documents is obligated to keep up to date in these areas by accessing the NFPA website at [www.nfpa.org](http://www.nfpa.org) and checking under the headings of Codes and Standards / Code Development Process / TIAs and Errata. TIAs and errata are listed by document. There were two TIAs issued on the 1999 edition of NFPA 13 and three on the 2002 edition, including significant changes relative to the earthquake protection criteria. There were three series of errata issued on the 1999 edition of NFPA 13 and one each for the 2002 editions of NFPA 13, 13D and 13R.

### **Upcoming NFSA Technical Tuesday Online Seminar**

**Topic: Pitching and Draining of Sprinkler Systems**

**Instructor: Cecil Bilbo, NFSA Director of Technical Services**

**Date: November 8, 2005**

This seminar will discuss the requirements for the proper pitching and draining of automatic fire sprinkler systems. The seminar will focus on the design, installation and testing requirements from NFPA 13 and NFPA 25. The requirements for material selection from NFPA 13 will also be covered.

**NOTE: The online seminar “Hose Streams and Hose Stations,” originally scheduled for October 25, 2005, has been postponed until December 20, 2005.**

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