



Tuesday e-Tech Alert October 5, 2004

Informal Interpretations of Interest

Reprinted below are a few of the recent informal interpretations provided to NFSA members through the “Engineer of the Day” program. These interpretations have not been balloted in accordance with the NFPA Regulations Governing Committee Projects and therefore should not be relied upon as official positions of the NFPA or its technical committees:

Return Bends for Raw Water Supplies

Q: Are return bends required when pendent sprinklers are attached directly to branch lines supplied from nonpotable water sources, or are they only required when pendent sprinklers are on drops?

A: NFPA 13 (Section 8.14.18 in the 2002 edition) requires return bends for all pendent sprinklers supplied from a raw water source, mill pond or open top reservoir. The concern is for sediment settling over the orifice areas of sprinklers. This can solidify, especially when the system is drained for maintenance purposes, and result in non-operation of the sprinkler in a fire condition. The standard currently contains an exception for dry pendent sprinklers as well as for deluge systems with open sprinklers.

Sprinklers Under Stage Areas

Q: Are sprinklers required in the area under a stage if the stage floor is supported by 9-inch deep composite wood joists with their tops only 18 inches above a concrete floor?

A: Yes. Section 8.14.6 specifies conditions under which sprinklers can be omitted from spaces under combustible ground floors, exterior docks and platforms. These conditions include inaccessibility of the space for storage, protection against accumulation of debris, tight flooring over the space, and no use or storage of flammable or combustible liquids, or materials that would convert to such liquids when burned. The stage or raised floor area described might appear to meet these conditions. However, Section 8.14.5.1 specifically requires sprinklers in spaces under a stage either containing combustible materials or constructed of combustible materials. Since the clear depth of the space exceeds 6 inches, it does not qualify as a combustible concealed space not requiring sprinklers in accordance with Section 8.14.1.2. The only alternative to providing sprinklers in this space would be to completely fill the space with noncombustible insulation so as to satisfy the requirements of Section 8.14.2.7.

Air Removal for Hydrostatic Testing

Q: Does all of the air in a wet pipe system need to be removed in order to properly conduct a hydrostatic test in a wet pipe system?

A: No. The requirements for conducting a hydrostatic test are found in Section 16.2.1 of the 2002 edition of NFPA 13. While it is common practice to attempt to bleed off the bulk of the air when filling the system, the standard does not specify absolutely no air can remain. Any air left in the piping will equalize with the water pressure, meaning that it too will be compressed to 200 psi during the typical hydrostatic test. For safety reasons, the amount of such air should be minimized, but variations in the location of the inspector's test connection and the number of dead end branch lines means the amount of residual air will vary between systems.

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Upcoming NFSA Technical Tuesday Online Seminars:

October 19, 2004

Subject: Differences Between NFPA and FM Installation Standards

Instructors: Victoria Valentine, P.E. with Joseph B. Hankins, Jr., P.E. of FM Global

October 26, 2004

Subject: Stocklisting

Instructor: Cecil Bilbo, NFSA Technical Consultant

Information and registration for these seminars is available at www.nfsa.org. Select "Seminars" from the left side options and then "On-line".