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NFPA Issues TIAs to Ban New Antifreeze in Dwellings

The NFPA Standards Council announced late yesterday that, after hearing arguments at its August 4th meeting, it voted on August 5th to issue Tentative Interim Amendments to NFPA standards 13, 13D and 13R to totally ban the use of antifreeze in new sprinkler systems protecting dwelling units. The effective date for the TIAs is August 25th.

At the public hearing, NFSA representatives had argued that the Council should instead issue a series of TIAs that would have only banned the use of antifreeze solutions with concentrations exceeding 50% by volume, based on the fact that both the actual field problems with antifreeze and the recent research conducted through the Fire Protection Research Foundation have shown the potential for spray ignition to be associated with the use of these higher concentrations. Two Council members voted against the full ban and a representative of the AFSA abstained from Council deliberations and voting on the issue. The NFSA representatives were joined in their position by representatives of Liberty Mutual Insurance, who had originally advocated a full ban but spoke against it in view of recent FPRF research results.

Six separate TIAs had been presented to the NFPA technical committees, three which proposed the total ban and the three alternate NFSA proposals that would only have banned the high concentration solutions while simultaneously requiring the use of factory premixed solutions. As such, one of each option were proposed to address antifreeze systems in dwellings in NFPA standards 13D, 13R and 13. The 13D and 13R TIAs were both considered by the Technical Committee on Residential Sprinkler Systems, and almost achieved the required $\frac{3}{4}$ affirmative support, although the balloting took place prior to the circulation of the FPRF draft report on the research. The NFPA 13 TIAs were voted upon by the Committee on Sprinkler Installation Criteria, and while the total ban was rejected, the ban on solutions over 50% was successfully balloted, achieving the $\frac{3}{4}$ affirmative support. Nevertheless, the Council voted to issue the total ban TIAs for all three standards.

Why did the Council depart from its own process? The Council decision states “the ballot results are of limited significance because of new technical data and information that has recently become available.” However this is questionable, since the FPRF research results show that low concentrations of antifreeze do not pose a problem. The new results actually strengthen the argument for the NFSA-proposed TIAs. In all of the FPRF research, there was never a spray ignition of a 50% glycerin solution, and the solution performed as well as pure water in UL 1626 residential fire tests. Concentrations of propylene glycol exceeding 40% were found to be capable of spray ignition, but only under only under extremely severe fire conditions.

Ultimately, it appears the Council decided to totally ban the antifreeze systems simply because it was the most conservative option available. To quote the decision:

“Considering the entire record before it, the Council has concluded that the most prudent course of action at this time must be the most conservative approach to assuring safety in new residential sprinkler installations. That course of action is to prohibit the use of antifreeze in new residential sprinkler systems unless and until the responsible technical committees, after due consideration and any correlation by the TCC, reach consensus on a different approach.”

The decision included three points that the Council specifically wanted to make. The first was that the decision is consistent with the July 6th safety alert issued by NFPA staff, which calls for the draining of all antifreeze from existing sprinkler systems on a temporary basis. The second was that NFPA 13D and 13R do not require the installation of sprinklers in unheated areas (although nothing was mentioned about the possible need to have piping pass through unheated areas). The third point was that this decision does not preclude the ultimate technical resolution of the matter.

Recognizing that the TIAs only address new systems, the decision notes that the NFPA safety alert addresses existing systems as well. It states that “relevant committees” such as the sprinkler committees and the Committee on Inspection, Testing, and Maintenance that writes NFPA 25 “should consider this question in a coordinated manner and report back to the Council no later than its October 2010 meeting with any proposed actions or recommendations.” It is surprising to note that, while the NFPA referred the antifreeze matter to a special meeting of the Technical Correlating Committee on Automatic Sprinklers in February of this year, it has yet to refer it to the NFPA 25 committee.

At the August 4th hearing the NFSA representatives had also pointed out that the issue goes beyond dwelling units, since one of the known incidents of spray ignition took place in a restaurant seating area. While the FPRF testing has shown the potential for ignition of a sprinkler spray is related to factors such as operating pressure, orifice size, and fire size and suppressibility as well as antifreeze concentration, there is nothing that would limit the problem to residential sprinklers or dwelling units. Paralleling its statement regarding existing systems, the Council decision asks relevant committees to “begin to review and consider the use of antifreeze in non-residential contexts and report back to the Council by its October 2010 meeting with any proposed actions or recommendations.”

The full text of the Council decision can be viewed at:

<http://www.nfsa.org/news/StandardsCouncilAntifreezeTIADecisionAug10.pdf>

In accordance with the NFPA Regulations, a Petition may be made to the NFPA Board of Directors following any action of the Standards Council to protest such action if it is believed Board intervention is needed to protect the integrity of the standards development process. The NFSA is sending a notice of intent to file such a petition, and the NFSA Engineering and Standards Committee will be considering the matter further at its meeting later this month.

In the meantime, the NFSA continues to encourage member contractors to follow the guidance contained in the July 13th issue of NFSA’s *e-Tech Alert* (No. 184) with regard to existing sprinkler systems containing antifreeze.

Upcoming NFSA/FSI “Best Practices Thursday” Seminar – August 19th

Topic: Information Technology Update

Instructor: John Karnatz and Paul Johnson

Date: August 19, 2010

A lot is changing in the way we process information. From server-based applications to internet-based solution providers, the landscape is rich with labor and cost saving opportunities. Join us for a 45-minute

discussion on the latest in technology applications for business and fire sprinkler contractors. One-on-one follow-up is available after the call at no additional charge.

To register or for more information, contact Michael Repko at (845) 878-4207 or e-mail to seminars@nfsa.org

Upcoming NFSA “Technical Tuesday” Seminar – August 31st

Topic: When to Use NFPA 13R

Instructor: Jeff Hugo, C.B.O., NFSA Manager of Codes

Date: August 31, 2010

NFPA 13R can only be used in certain size and types of occupancies. This presentation will discuss the different types of occupancies that can use NFPA 13R (hotels, motels, lodging and rooming houses, etc.) and the limitations on their size. Typical problems will be addressed including mixed use buildings, pedestal buildings and combination commercial/residential construction. The presentation will examine and review these situations and how the building code and the standard work together.

To register or for more information, contact Michael Repko at (845) 878-4207 or e-mail to seminars@nfsa.org

Inspection & Testing for the Sprinkler Industry (3-day course)

New Castle, DE – September 28-30, 2010

Delaware State Fire School’s Regional Center

2311 McArthur Drive, New Castle, DE 19720

For more information, contact Nicole Sprague using Sprague@nfsa.org or by calling 845-878-4200 ext. 149.

Additional In-Class Training Seminars

The NFSA training department also offers in-class training on a variety of subjects at locations across the country. Here are some seminars scheduled for 2010:

Aug 18	Glendale, CA	NFPA 13 Update 2007/2010 (1/2 day p.m.)
Aug 19	Glendale, CA	Sprinklers for Dwellings
Aug 31	Rochester Hills, MI	NFPA 13 Update 2007
Sept 1	Rochester Hills, MI	Plan Review Policies & Procedures
Sept 2	Rochester Hills, MI	Commissioning & Acceptance Testing (1/2 day a.m.)
Sept 2	Rochester Hills, MI	Introduction to Sprinklers (1/2 day p.m.)
Sept 8	Seattle, WA	Sprinklers for Dwellings
Sept 9	Seattle, WA	Plan Review Policies & Procedures
Sept 10	Seattle, WA	Commissioning & Acceptance Testing (1/2 day a.m.)
Sept 10	Seattle, WA	CPVC Piping (1/2 day p.m.)
Sept 14	Dayton, OH	Plan Review Policies & Procedures
Sept 15	Dayton, OH	Inspection, Testing & Maintenance
Sept 16	Dayton, OH	Basic Seismic Protection (1/2 day a.m.)
Sept 16	Dayton, OH	Standpipe Systems (1/2 day p.m.)
Sept 16	Concord, NH	Sprinkler Protection for General Storage
Sept 17	Concord, NH	Sprinkler Protection for Rack Storage

Sept 18	Concord, NH	Plan Review Policies & Procedures
Sept 21-22	Brea, CA	Two-day NFPA 13 Overview
Sept 23	Brea, CA	Plan Review Policies & Procedures

These seminars qualify for continuing education as required by NICET, and meet mandatory Continuing Education Requirements for Businesses and Authorities Having Jurisdiction.

To register or for more information, contact Michael Repko at (845) 878-4207 or e-mail to seminars@nfsa.org

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About the National Fire Sprinkler Association

Established in 1905, the National Fire Sprinkler Association (NFSA) is the voice of the fire sprinkler industry. NFSA leads the drive to get life-saving and property protecting fire sprinklers into all buildings; provides support and resources for its members – fire sprinkler contractors, manufacturers and suppliers; and educates authorities having jurisdiction on fire protection issues. Headquartered in Patterson, N.Y., NFSA has regional operations offices throughout the country. www.nfsa.org.