



Tuesday e-Tech Alert July 25, 2006

A Two-Year e-Tech Alert Review and Index

This issue marks the two-year anniversary of NFSA's *e-Tech Alert* publication, given that the first issue was electronically published on Tuesday, July 27, 2004. Here's some Q&A on the publications itself:

Q: Have there been changes to *e-Tech Alert* over the past two years?

A: Very few. It continues to be published on Tuesdays for which no NFSA online technical seminar is offered, part of the "Technical Tuesday" continuity. One significant change was the 2006 introduction of "Best of..." issues as the first published issue each month, containing a dozen or so of the more interesting informal interpretations given by the NFSA engineering staff the previous month. In this way, NFSA members can see what other NFSA members are asking.

Q: Is an index available for past issues of *e-Tech Alert*?

A: Ken Isman is including all past *e-Tech Alert* items in a new searchable index of articles that will soon be available at the NFSA website. Copies of all past issues are available online in the "members only" section of the website, and nonmembers can purchase copies through the NFSA engineering library. You may have noticed that recent issues of *e-Tech Alert* have carried numbers in the upper right corner; all issues have been consecutively numbered to simplify the index. For your convenience, a copy of the index entries for the first 59 issues of *e-Tech Alert* has been provided at the end of this issue.

Q: Have there been any contradictions noted in the interpretations and guidance issued by the NFSA?

A: One suspected contradiction was sent in recently by a member in Illinois. He suggested that the interpretation reprinted in the June 6, 2006 issue (ET 56) relating to sprinklers in bathrooms contradicted guidance given in the March 29, 2005 edition (ET 20). The difference was that the first article dealt with omission of sprinklers in bathrooms by NFPA 13, while the second dealt with NFPA 13D bathrooms. The NFPA 13D requirements appeared more stringent, because they can be more stringent in the one case that was the subject of the interpretation.

Bathroom Definition Differences Between NFPA 13D and NFPA 13/13R

The case in which NFPA 13D differs from NFPA 13 and 13R is one in which a room contains only a sink/vanity/washbasin. The wording of NFPA 13D does not specifically permit omission of sprinklers but the wording of NFPA 13 and 13R permits the omission. This is due to different definitions of the word "bathroom". The 2002 editions of NFPA 13 (Section 3.3.3) and NFPA 13R (Section 3.3.1) define a bathroom as a room "containing a lavatory...or a water closet, or bathing capability...or any combination of facilities thereof." The 2002 edition of NFPA 13D,

however, does not separately define a bathroom, but simply allows omission of sprinklers from bathrooms. The interpretation published in June of 2006 recognizes that where NFPA standards do not define a subject, the common dictionary definition prevails. A “bathroom” is generally defined as a room containing a bathtub or shower and, usually, a sink and toilet. So, NFPA 13D would not permit the omission of sprinklers in a room containing just a lavatory whereas NFPA 13 and 13R would.

The issue is complicated somewhat by the fact that the term “lavatory” as used in NFPA 13 and 13R can also have different meanings to different people. Webster’s dictionary includes multiple definitions, the primary definition being that of a basin for washing, the secondary definition as a room with conveniences for washing and usually with one or more toilets, and the third definition being a toilet. It is not clear which meaning the NFPA committees intended, but the default is the primary definition, which allows the washbasin to be considered a lavatory, and therefore a bathroom.

Q: Have there been any glitches in the electronic publishing effort?

A: Just one - it appears that many members did not receive the December 28, 2004 issue. This became apparent when the issue’s article on FM Global’s large drop sprinkler concerns were referenced in the subsequent January 11, 2005 issue. Here are the two articles that were contained in the “missing” issue:

FM Global Raises Concerns for Large Drop Sprinkler Performance (Dec. 28, 2004)

FM Global has suspended the use of large drop sprinklers in new projects until it can sort out some conflicting test results. While the action does not affect the FM approval of existing large drop sprinkler installations, the two manufacturers of large drop sprinklers have been told to cease placing the FM approval stamp on new production.

The action is the result of some disappointing fire tests conducted as part of the calibration of FM Global’s new fire test facility in West Glocester, Rhode Island. An attempt to repeat the performance of full-scale testing conducted at the older fire test facility was unsuccessful.

The sprinklers remain UL listed at this time. However, Underwriters Laboratories has advised that they will be conducting their own full-scale testing in January of 2005. Since the large drop sprinklers were developed prior to the construction of UL’s fire test building, UL previously relied upon FM fire test data, the same data that is now under review.

NFSA will provide additional information as the two product approval organizations release the results of their investigations.

Missing Sprig Guidance for Large Drops on 2-inch Pipe (December 28, 2004)

While on the subject of large drop sprinklers it should be pointed out that the conversion of exceptions to text in the 2002 edition of NFPA 13 resulted in a void with regard to guidance on sprigs-up for large drop sprinklers on 2-inch piping. Within Section 8.11.5.2.2, subsection (1) allows sprinklers to be directly connected to branch lines less than 2 inches in diameter, and

subsection (3) requires a sprig-up to elevate the deflector at least 13 inches above the centerline of 2-1/2-inch piping. What about 2-inch branch lines?

The answer can be found in older editions of NFPA 13, which clearly required the sprig-ups only for branch lines larger than 2 inches in diameter.

Upcoming NFSA “Technical Tuesday” Online Seminar

Topic: Where Codes Override Installation Standards

Instructor: Kevin J. Kelly, P.E, NFSA Manager of Codes

Date: August 1, 2006

This seminar will discuss sections in the model codes that override the requirements of the installation standards, or are not specifically covered in the installation standards. The *International Building Code*, NFPA 5000 *Building Construction and Safety Code* and NFPA 101 *Life Safety Code* all have requirements for fire protection systems that are in addition to NFPA 13, 13R or 14. Some of the specific topics will include: sprinkler zones, sprinklers on balconies, sprinklers in chutes, atriums, closets, standpipes, concealed spaces, the storage of fuel for generators, and requirements for high rise buildings.

Information and registration for this seminar is available at www.nfsa.org or by calling Dawn Fitzmaurice at 845-878-4200 ext. 133.

Upcoming NFSA “Business Thursday” Online Seminar

Topic: Change Orders

Instructor: Michael J. Freidman, P.E.

Date: August 10, 2006

Change orders are an inevitable part of construction projects. The ability to manage the process by which these changes are initiated, executed and paid for is essential for the contractor in order to maintain the gross profit margin on the project. The course will present the key factors in identifying directed and constructive changes. Methods of obtaining concurrent payments with the work performed on changes will be explored and identified through use the AIA standard construction agreement and conditions. In other words, “get paid for what you do – when you do it.”

Information and registration for this seminar is available at www.nfsa.org or by calling Dawn Fitzmaurice at 845-878-4200 ext. 133.

2006 Basic and Advanced Technician Training, NICET Inspection Seminars

The NFSA is the only organization that offers two-week basic technician training seminars, 3-day advanced technician training seminars, and NICET-oriented inspection and testing review

seminars at various locations across the United States. The 2006 schedule still has the following dates and locations:

2-week Basic Technician Training

August 14-25, 2006 – Seattle, WA
October 16-27, 2006 – Philadelphia, PA

3-day Advanced Technician Training

October 3-5, 2006 – Minneapolis, MN

3-day NICET Inspection and Testing Certification Review

September 6-8, 2006 – Dallas, TX
November 14-16, 2006 – Anchorage, AK

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

NFSA In-Class Training Opportunities

NFSA also offers in-class training on a variety of subjects at locations across the country. Here are some upcoming seminars:

Sprinkler Protection for General Storage	Centerville, OH	July 25
Sprinkler Protection for Rack Storage (PPD from 5/11)	Colorado Springs, CO	July 26
Sprinkler Protection for Rack Storage	Centerville, OH	July 26
Plan Review Procedures & Policies (1/2 day)	Colorado Springs, CO	July 27
Sprinkler Protection for Special Storage	Centerville, OH	July 27
Sprinkler Protection for Special Storage	Indianapolis, IN	Aug 8
Basic Seismic Protection (1/2 day) AM	Indianapolis, IN	Aug 9
Advanced Seismic Protection (1/2 day) PM	Indianapolis, IN	Aug 9
Inspection, Testing & Maintenance	Indianapolis, IN	Aug 10
Inspection, Testing & Maintenance	Rogers, AR	Aug 15
Inspection, Testing & Maintenance	Temecula, CA	Aug 15
Sprinkler Protection for General Storage	Rogers, AR	Aug 16
Residential: Homes to High-Rise	Temecula, CA	Aug 16
Underground Piping (1/2 day) (AM)	Rogers, AR	Aug 17
Underground Piping (1/2 day)	Temecula, CA	Aug 17
Standpipe Systems (1/2 day) (PM)	Rogers, AR	Aug 17
Inspection, Testing & Maintenance	Pharr, TX	Aug 22
Residential Sprinklers for Single Family Homes	Pharr, TX	Aug 23
Pumps for Fire Protection	Pharr, TX	Aug 24
Two-day NFPA 13 Overview & Intro to Plan Review	Carol Stream, IL	Aug 30-31
Hydraulics for Fire Protection	Carol Stream, IL	Sept 1
Two-day NFPA 13 Overview & Intro to Plan Review	Eugene, OR	Sept 11-12
Hydraulics for Fire Protection	Eugene, OR	Sept 13

Basic Seismic Protection (1/2 day)(AM)	Eugene, OR	Sept 14
Underground Piping (1/2 day) (PM)	Eugene, OR	Sept 14
Introduction to Sprinkler Systems (1/2 day) (AM)	Dublin, OH	Sept 19
Basic Seismic Protection (1/2 day) (PM)	Dublin, OH	Sept 19
Two-day NFPA 13 Overview & Intro to Plan Review	Dublin, OH	Sept 20-21
Standpipe Systems (1/2 day) AM	Kansas City, MO	Sept 26
Underground Piping (1/2 day) PM	Kansas City, MO	Sept 26
Two-day NFPA 13 Overview & Intro to Plan Review	Seattle, WA	Sept 26-27
Pumps for Fire Protection	Kansas City, MO	Sept 27
Inspection, Testing & Maintenance	Kansas City, MO	Sept 28
Hydraulics for Fire Protection	Seattle, WA	Sept 28
Inspection, Testing & Maintenance	North Las Vegas, NV	Oct 3
Residential: Homes to High-Rise	North Las Vegas, NV	Oct 4
Standpipe Systems (1/2 day) (AM)	North Las Vegas, NV	Oct 5
Underground Piping (1/2 day) (PM)	North Las Vegas, NV	Oct 5

For more information or to register, visit www.nfsa.org or call Mike Repko at 845-878-4207.

NFSA Tuesday e-Tech Alert is c. 2006 National Fire Sprinkler Association, and is distributed to NFSA members on Tuesdays for which no NFSA Technical Tuesday Online Seminar is scheduled. Statements and conclusions are based on the best judgment of the NFSA Engineering staff, and are not the official position of the NFPA or its technical committees or those of other organizations except as noted. Opinions expressed herein are not intended, and should not be relied upon, to provide professional consultation or services. Please send comments to Russell P. Fleming, P.E. (fleming@nfsa.org).

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ET 1 07/27/04	NFPA 13 Formal Interpretation Broadens Applications of Figure 12.3.5.4.1.4	storage	face	sprinklers	in-rack
ET 2 08/10/04	Misplaced Sections in NFPA 13 Create Problems	column	protection	ESFR	standby
ET 2 08/10/04	Conflict in NFPA 13 Requirements for Ventilated Uninsulated Attics?	temperature	rating	sprinklers	ridge vent
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ET 4 08/31/04	Overlapping Sprinkler Systems	spacing	distance	pipng	interpretation
ET 4 08/31/04	Criss-Cross Obstructed Construction	structural	members	sprinkler	location
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ET 11 12/07/04	Restraint of High Pressure Pendent Sprinklers Below Ceilings	hangers	100 psi	NFPA 13	exception
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ET 13 1/4/2005	Recent Informal Interpretations by NFSA Staff on the Subject of Fire Pumps	backflow	jockey	sensing	lines
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ET 56 06/06/06	Sloped Ceilings for Storage	calculation	hydraulic	design	
ET 56 06/06/06	Alternatives to Return Bends for ESFR Sprinklers	raw	water	source	pond
ET 56 06/06/06	NFPA 13D Bathroom Exemption for Vanity Areas	sprinklers	omit	area	
ET 56 06/06/06	Requirements for Listed Concealed Space Sprinklers	combustible	interstitial	special	listed
ET 56 06/06/06	Residential Sprinklers Under Soffits	sidewall	pendent	minimum	distance
ET 56 06/06/06	Minimum Size of Private Fire Service Mains	underground	hydrants	hydraulics	
ET 56 06/06/06	Distance of Water Storage Tanks from Buildings	NFPA 22	supply	exposure	protection
ET 56 06/06/06	Strainers for Preaction Systems	raw	water	supply	pond

ET 56 06/06/06	Earthquake Protection for Existing Buildings	retrofit	seismic	NFPA 13		
ET 56 06/06/06	Definition of "Limited Combustible"	construction	wallboard	sprinklers	omit	
ET 56 06/06/06	Transfer Switch Requirements in NFPA 20	fire	pump	controller	utility	
ET 57 06/20/06	Defining Smooth Ceilings - How Smooth is Smooth?	channel	heat	extended	coverage	
ET 58 06/27/06	Sprinkler Temperature Selection Pitfalls	lights	mechanical	diffusers	attics	
ET 59 07/04/06	Indoor Miniature Golf Course Housing	obstructions	sprinkler	location	hazard class	
ET 59 07/04/06	Multiple Vertical Turbine Pumps	NFPA 20	tank	pit	distance	
ET 59 07/04/06	Pitching of Deluge Systems	NFPA 13	pipe	dry-pipe	drainage	
ET 59 07/04/06	Effective Height of Sprinklers	high	ceiling	atria	tall roof	
ET 59 07/04/06	Porches of NFPA 13 Occupancies Below NFPA 13R Occupancies	mixed use	residential	commercial	protection	
ET 59 07/04/06	Wardrobes, Cabinets and Trophy Cases	furniture	sprinklers	inside	bulkheads	
ET 59 07/04/06	Fire Flow Requirements	tanks	pumps	fire code	building code	
ET 59 07/04/06	Open Ceiling Grids	compartment	walls	density	area	
ET 59 07/04/06	Relief of Excess Pressure Through Relief Valves to Atmosphere	NFPA 20	fire pump	rating	components	
ET 59 07/04/06	Manual Fill Pipes for NFPA 22 Tanks	sizing	inlet	overflow	outlet	
ET 59 07/04/06	Residential Sprinklers for Differing Ceiling Heights	elevation	pockets	NFPA 13	NFPA 13D	
ET 59 07/04/06	Obstructions for Light Fixtures in Ordinary Hazard	NFPA 13	spacing	location	spray	

In the promotion of the fire sprinkler concept, the National Fire Sprinkler Association represents all fire sprinkler industry interests including fire sprinkler contractors, manufacturers and suppliers of fire sprinklers and related equipment and fire protection professionals. Established in 1905, the National Fire Sprinkler Association provides publications, nationally accredited seminars, representation in codes and standards-making, market development, labor relations and other services to its membership. Headquartered in Patterson, New York, the National Fire Sprinkler Association has regional operations offices throughout the country.