



Issue Number: 198

Issued: December 28, 2010

How Many Inspection Forms?

A major e-mail discussion topic this last week of 2010 for the NFSA Contractors Council involved the question of how many inspection forms are required when inspecting a property with multiple sprinkler systems. A variety of responses have come in from around the country, reflecting differences in local practice as well as differences in the format of the inspection forms used:

- *We complete one report per building regardless of the number of systems.*
- *We complete one separate set of forms for each riser, with no exceptions.*
- *We would do one inspection form for the building - our forms have sections for multiple systems and even multiple water supplies.*
- *We do one report which details the separate risers and systems within it.*
- *We complete a form for each lead-in into the building. If the lead-in has multiple systems or sectional control valves they are listed on that form according to that lead-in. Some buildings have multiple lead-ins, so they would have multiple inspection forms.*
- *Our common practice is to have one report for each water supply. For example, if an inspection site has (5) buildings, each with a separate water supply, we will have (5) reports.*

As implied above, there is no correct answer. Although “sample” Report of Inspection forms were included in the annex of NFPA 25 until the 2008 edition (they became too bulky, especially when it was proposed that NFPA’s own forms be added to the mix), the standard does not contain an official form. Similarly, it does not specify whether the information to be collected for a building with multiple systems should be collected on a single form or using multiple forms. It is only important that all the necessary information be collected.

Section 4.3 of the current 2011 edition of NFPA 25 addresses records, and is not specific as to whether a record shall be made for each system riser or a property as a whole. The first two subsections simply state basic requirements:

4.3.1 Records shall be made for all inspections, tests and maintenance of the system and its components and shall be made available to the authority having jurisdiction upon request.

4.3.2 Records shall indicate the procedure performed (e.g. inspection, test, or maintenance), the organization that performed the work, the results, and the date.

Obviously the form must be sufficient for the manner in which it is used. For example, a form with room to capture the trip test information for a single dry valve would not be sufficient for building with two dry pipe systems. The forms available for purchase through the NFSA are based on the use of one form per system in this manner.

During the course of the inspection form survey, the issue came up as to whether nonsprinklered areas of a building should be reported as a deficiency. On this subject there is clear guidance in NFPA 25, and the answer is “no”. Although NFPA 13 continues to state (Section 8.1.1(1) in the current 2010 edition) that sprinkler protection “installed throughout the premises” is a basic principle, NFPA 25 does not address this or other design issues.

Since the first published edition of NFPA 25 in 1992, the standard has limited the responsibilities associated with an inspection of a system, including through the definition of an inspection in Section 1-5:

Inspection. A visual examination of a water-based fire protection system or a portion thereof to verify that it appears to be in operating condition and is free of physical damage.

The areas from which sprinklers can be omitted at the time of construction vary with the standard used and the edition of the standard. In addition there can be exemptions based on building or fire codes, or specific legally approved variances. The NFPA 25 Committee recognizes that the system inspector cannot be expected to be fully familiar with the entire history and design basis of the system, and for that reason makes no expectations with regard to a design review. The standard separately addresses the possibility of a “hazard evaluation” by a competent party, which would include an evaluation of whether the system’s protection capability is adequate for the hazard of the occupancy. A sample “Fire Sprinkler System Hazard Evaluation” form was added as an Annex F to NFPA 25 in the 2011 edition, and A.4.1.6 clarifies that “A hazard evaluation is not part of a system inspection.” Within the form, Section 3 calls for an evaluation of unsprinklered areas. So, while an area from which sprinklers are missing can be flagged in connection with a system inspection, with a recommendation for a separate hazard analysis, it should be clear that this is not part of the system inspection and that there has been no comprehensive review of the adequacy of design.

2011 Technical Tuesday Onlines Announced

The NFSA has released its schedule of “Technical Tuesday” online seminars for the first half of 2011. As in the past, a 30% discount is available by signing up for all ten seminars in the series.

January 18, 2011- Antifreeze Systems – Russell P. Fleming, P.E.

Antifreeze systems generated more controversy than any other fire sprinkler topic during 2010. With the dust settled, this seminar will discuss the current requirements relative to both new and existing systems. It will explore design alternatives, including the status of dry residential sprinkler systems and new candidate antifreeze solutions. It will also address contractor obligations with regard to the evaluation of existing systems.

February 1, 2011 - FM Data Sheets – Kenneth E. Isman, P.E.

In March of 2010, the Factory Mutual Insurance Company (FM) released a new set of data sheets regarding how they would like their clients to design and install fire sprinkler systems in the properties they insure. These new data sheets represent a significant change in philosophy for FM. Rather than follow the format of NFPA standards, showing the text of the NFPA standards and then showing where they have different requirements, FM has written their own criteria from scratch, which sometimes contradicts the NFPA standards. The seminar will review the major differences between the FM standards and the NFPA standards and discuss strategies for dealing with the use of FM standards when NFPA standards are referenced by law.

February 15, 2011 - Paint Spray Booths (NFPA 33) – Victoria B. Valentine, P.E.

NFPA 33 notes that paint spray booths should be treated as an extra hazard group 2 occupancy for their fire sprinkler protection. However, there are many additional requirements that get pulled into the layout of the system and the hydraulic calculations because of the hazard classification. Different arrangements for paint spray booths will be reviewed for application of the extra hazard occupancy. In addition, the water supply demand for these booths will be discussed.

March 1, 2011 - IRC/NFPA 13D Prescriptive Pipe Sizing (P2904) – Jeff Hugo, CBO

This seminar will discuss the alternative to designing residential sprinklers according to the criteria listed in Section P2904 of the 2009 IRC and Section 8.4.10 of the 2010 NFPA 13D. The prescriptive method of designing versus the traditional methods used and the familiarity of this method may decrease design time and training hours for new personnel. Other critical sections of the IRC pertinent to the sprinkler designer and contractor will be highlighted and discussed. Residential fire sprinkler mandates are on the rise throughout the country, and attending this seminar

will give your company the newest in sprinkler design and enable flexibility in relaying this information to your local AHJ.

March 22, 2011- Plastic Pallets – Karl Wiegand, E.I.T.

Plastic pallets are used in many storage facilities. The presence of plastic pallets in these facilities can greatly affect the design requirements for the sprinkler systems that protect them. NFPA 13 provides all of these requirements. However, they are separated throughout the standard. This seminar will bring together the different protection requirements of plastic pallets in NFPA 13 to assist in the proper use of the regulations.

April 12, 2011 - The New NFPA 25 – Russell P. Fleming, P.E.

The 2011 edition of NFPA 25 includes some changes intended to enhance enforcement of the standard and others aimed at making system maintenance more economical. New recognition that not all deficiencies are equal will permit AHJs to implement a multi-colored tagging system following system inspections. The new standard continues the trend of separating owner responsibilities from those of the inspecting party, and the criteria for the 5-year internal inspections have been reworked.

April 26, 2011 - Pipe Stands – Victoria B. Valentine, P.E.

Pipe stands can be used to support water-based fire protection system piping where it cannot be hung. Some criteria have been in NFPA 15 for the past few editions. The guidelines have been modified for the next edition. These rules can also be applied to sprinkler system piping where it may need to be supported from the floor.

May 10, 2011 - What Happens During Plan Review? – Jeff Hugo, CBO

You just dropped off your shop drawings at City Hall. Questions arise in your mind: Who scrutinizes my plans? What will this do for me? Why is this necessary? When will they be done? Where can I learn more to avoid correction letters and costly delays? This seminar will answer what should be done on the plans prior to their delivery to City Hall and discuss the fire sprinkler plan review process performed by the AHJ. This program outlines NFSA's newest "Plan Review Guide" and the associated check lists to provide the necessary information to cut your review time down and the project moving. Contractors, layout technicians, architects, building and fire officials, and plan reviewers should attend.

May 24, 2011 - Storage Occupancies: Ceiling Slopes and Clearances – Kenneth E. Isman, P.E.

Storage occupancies represent much more difficult and challenging fires for sprinklers to control or suppress. These challenging fire situations become even more difficult to control or suppress when the ceiling is sloped or there is a vast vertical distance between the top of the storage array and the sprinklers at the ceiling. Criteria in NFPA 13 has evolved over the last 10 years to place more stringent rules on how the sprinkler system needs to be designed to protect these occupancies. The seminar will begin with a review of fire dynamics and will then cover the rules of NFPA 13 and potential scenarios for meeting those rules.

June 7, 2011 - High Velocity Low Speed (HVLS) Fans – Karl Wiegand, E.I.T.

HVLS fans first came to market in 1995 and since that time have become popular for ventilating large warehouse facilities. In 2007 XL Gaps did a full scale fire test to see how these fans affected sprinkler operation. The test had poor results and a multiphase full-scale testing plan was implemented. Phase 1 of the testing was completed in 2008 and 2009. Phase 2 of the testing was completed in 2010. This seminar will address the test results of the phase 2 testing as well as strategies for installing HVLS fans in a manner in which they will not greatly affect the sprinkler system performance.

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 on any of the above seminars, click [HERE](#) or contact Michael Repko at (845) 878-4207 or e-mail to seminars@nfsa.org.

Upcoming 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 2011:

Feb 1	Poughkeepsie, NY	Sprinkler Protection for Special Storage
Feb 1	Howland Township, OH	Inspection, Testing & Maintenance
Feb 2	Poughkeepsie, NY	Sprinklers for Dwellings
Feb 2	Howland Township, OH	Sprinkler Protection for General Storage
Feb 3	Poughkeepsie, NY	Residential Sprinklers: Homes to High-Rise
Feb 3	Howland Township, OH	Underground Piping (1/2 day a.m.)
Feb 3	Howland Township, OH	Fire Pump Layout & Sizing (1/2 day p.m.)

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

To register for these in-class seminars, click [HERE](#). Or contact Michael Repko at (845) 878-4207 or e-mail to seminars@nfsa.org for more information.

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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.