

SQ

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Journal of the National
Fire Sprinkler Association

Inside this issue:

- Main Drains
- NFPA 25 vs. FM 2-81
- Does the Building Official Have to Get Up at 2:00 a.m.?
- Cooperation and Communication – A Formula for Success



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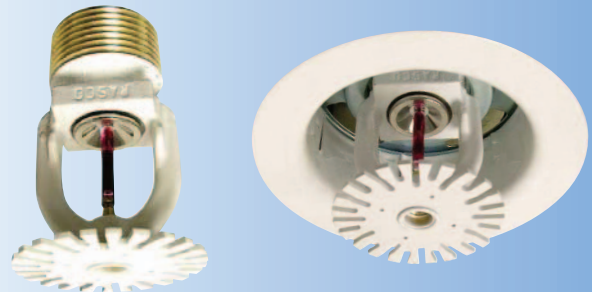
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on the cover...

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Changing of the Guard



The next meeting of the NFSA Board of Directors (which may have already taken place by the time you receive this issue of SQ) will indeed be an historic one. Two long time members of the Contractor Council and Board of Directors will be stepping aside after many years of distinguished service. Aus Marbuger, Director for the Mid-Atlantic Region and immediate two term past Chairman of the Board did not seek re-election. Barry Waterman, Director at-Large, will also be stepping aside after his second stint as an NFSA board member. Both of these men were very active on various committees and spent countless hours away from the board table at committee meetings working for all of us to make fire sprinkler a “household word.” Aus was one of three directors who urged the formation of NFSA’s “Common Voices,” or, as he affectionately refers to these wonderful ladies who have become strong sprinkler advocates, “Fire Angels.” Barry has served as Chairman of the Awards Committee and has been extraordinarily active at the local level as a member of the Northern Illinois Fire Sprinkler Advisory Board.

Kent Mezaros, of Quick Response Fire Protection, has been elected to represent the Mid- Atlantic Region. Kent previously served as Aus Marburger’s alternate from that area. He has experience as a member of the Contractor Council and is an active member of the New Jersey Fire Sprinkler Advisory Board. Fred Kroll of Alliance Fire Protection was elected Director at-Large and has also been very active on the local level. Fred has attended many meetings of the NFSA Board. We are confident that these new appointees will bring much to the table and feel very fortunate that both Aus and Barry have been succeeded by two very competent and committed contractors.

We also need to point out that Wayne Gey, present Chairman of the Board, did not seek re-election to that post. Wayne had a wonderfully successful two-year term as NFSA chair. He was the first open-shop contractor to serve as NFSA Chairman and accomplished much in 24 months. Under his watch, “Best Practices” was

launched and the Industry Advancement Fund became a reality. “Common Voices,” a fire sprinkler industry spokesperson initiative was formed. An NFSA Chapter in Tennessee was approved. A public relations firm was hired to promote the “good works” of NFSA. A strong thrust to see residential sprinklers become part of the International Residential Code was spearheaded. Last, but by no means least, additional staffing of NFSA took place. It would be impossible for me, in the space provided, to list all of the successes accomplished by Wayne in the last two years. He was committed to serving the needs of the entire industry; contractors, manufacturers and suppliers. He did so without a lot of fanfare. He spent his own money traveling around the country in support of the fire sprinkler concept. He attended chapter meetings and Burn Center golf outings to show his support for the industry. His service on the NFSA Finance and Long-Range Planning Committee helped to shape the financial future and direction of this association for years to come. Wayne appointed Alan Wiginton as his representative on the Contractors Council. Alan also contributed mightily as a member of the Manpower Recruitment Committee.

The Nominating Committee nominated the following Slate Officers to be acted on at the March Board of Directors Meeting:

Gregg Huennekens- Chairman of the Board
Dennis Coleman- Vice Chairman of the Board
Kevin Fee-Treasurer

Each of these people is readily recognizable to our industry for an extraordinary level of service at both the national and local level. It is with a strong sense of excitement that the NFSA staff looks to the future of the fire sprinkler industry, which will continue to be in very capable hands.

A handwritten signature in black ink, appearing to read "John A. Vinello". The signature is fluid and cursive, written over a light-colored background.

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CALENDAR

EVENTS OF INTEREST TO NFSA MEMBERS

| SEMINAR | LOCATION | DATE |
|--|----------------|----------------|
| NFPA 13R Systems-Outside the Dwelling Unit | ONLINE | March 11 |
| Foam Sprinkler Systems Update | ONLINE | April 1 |
| NFSA Two-Week Technician Training | Orlando, FL | April 7-18 |
| Water Supply Systems | ONLINE | April 22 |
| Exposure Protection Systems | ONLINE | May 6 |
| Water Cooling Towers | ONLINE | May 20 |
| Standpipes, Pressures and Pumps | ONLINE | June 10 |
| The Extent of Systems | ONLINE | June 24 |
| NFSA Two-Week Technician Training | Providence, RI | August 4-15 |
| NFSA Two-Week Technician Training | Chicago, IL | October 13-24 |
| NFSA Two-Week Technician Training | Houston, TX | November 10-21 |

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Strategy to Succeed... It's Time



Nine months and counting. As 2008 rolls in, we are nine months away from the September 2008 International Residential Code (IRC) vote in Minneapolis, Minnesota. Our team is on-board and we are making plans to succeed! We need your help.

Let's not be complacent. All hands are needed on deck as we formulate a plan that will help us make homes safer. You can become involved and help us build our team, specifically focusing our efforts on those who will vote and make the decision in September.

It's Time. It's time for us to partner with our allied organizations, and work together toward the same goal. Residential Sprinklers belong in the main body of the code, and there are several proposals submitted that will place them there. Our partnerships have formed a Coalition, the IRC Fire Sprinkler Coalition, and there are ways for you to be involved.

For the latest information regarding the vote and what needs to be done, visit www.ircfiresprinkler.org and become active. Our challenge is to share resources that will educate building officials as well as fire officials and policy makers regarding the advantages of fire sprinklers. We must be innovative in our approach. Are you as a sprinkler contractor, supplier or manufacturer working to build bridges to any of the groups listed above? How about taking the local AHJ's to lunch? Include both the fire marshal and the building official and see if you as someone involved in the fire sprinkler industry can answer any questions they may have. Ask them if they plan to attend the code hearings in Minneapolis. Make sure that they know travel stipends are available through the International Association of Fire Chiefs, Fire & Life Safety Section. (www.iafc.org)

Speaking of funds, NFSA has initiated the Industry Advancement Fund (IAF). The IAF is a fund established for the advancement of the fire sprinkler industry into which any sprinkler contractor, supplier, manufacturer, individual or organization can contribute on a totally voluntary basis. The fund will provide dollars to support the IRC initiative as well as other worthy programs – all to expand support and awareness of the fire sprinkler concept. Several voluntary contribution levels are available. Look for an updated list of contributors on page 20 in this issue of SQ. To join the growing number of contributors, follow the Industry Advancement Fund link at the NFSA website at www.nfsa.org.

On another note, I am excited to report that our Common Voices coalition continues to make progress. The advocates are taking their message to Capitol Hill on Tuesday, January 29, 2008. All six advocates will be on hand to share with Senators and Congressmen their support of the Fire Sprinkler Incentive Act. To keep up with the most recent happenings of our Common Voices, make sure you visit www.fireadvocates.org and follow their success. To follow the Fire Sprinkler Incentive Act, click on the banner in the top right-hand corner of the NFSA website. This link also takes you directly to the bill's sponsors and co-sponsors and makes sending a letter to your Senators and Congressman simple. I encourage you to become involved today!

George Bernard Shaw shared this thought in *Maxims for Revolutionists*, "The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself. Therefore all progress depends on the unreasonable man."

Food for thought as we press on with our "Strategy to Succeed." Let's share with the world the fact that "It's time."

Wayne A. Gey

Delay Damages

By *Stuart Zisholtz*

In one of my recent articles, I discussed delay damages and the ability to recover where a project has been delayed through no fault of the General Contractor or subcontractor.

I also indicated that the law does not permit a subcontractor to pursue a claim directly against the owner where it does not have a contract with the owner. In addition, a subcontractor may not have a claim against the General Contractor except in limited isolated circumstances where the General Contractor caused the delay.

The problem occurs where the subcontractor is severely damaged due to the delays and such delays were not caused by the General Contractor. How does the subcontractor recover the damages it incurred if it cannot pursue a claim directly against the General Contractor or the owner?

The answer appears to be that a claim can be brought by the General Contractor

against the owner utilizing a liquidating agreement.

A liquidating agreement permits a General Contractor, in effect, to confess liability to an owner and the General Contractor pursues the claim on behalf of the subcontractor to recover the damages incurred. Once the funds are recovered from the owner, they pass through the General Contractor to the subcontractor.

A liquidating agreement has three basic elements. One: the imposition of liability upon a party for a third party's increased costs, thereby providing the first party with a basis for legal action against the party at fault. Two: a liquidation of liability in the amount of the first party's recovery against the party at fault. Three: a provision for the pass through of that recovery to the third party.

New York and certain other jurisdictions recognize liquidating agreements as a valid mechanism for bridging the privity gap between the owner and subcontractors who sustain the damages. Certain other states

do not recognize liquidating agreements.


Before a subcontractor enters into a liquidating agreement, he must thoroughly and extensively review the agreement and understand that he will not be able to recover any funds until such time as the General Contractor recovers the funds from the owner. It is imperative, therefore, that you understand the ramifications of signing a liquidated agreement and what your responsibilities may be.

Never let your lien time run out!

For a free copy of a pamphlet pertaining to mechanic's liens and payment-bond claims, contact Stuart Zisholtz at Zisholtz & Zisholtz, L.L.P., 170 Old Country Road, Suite 300, Mineola, NY 11501. Phone: 516.741.2200.

EOD Top Ten

We have selected the following questions as the latest "Best Questions" answered by the engineering staff as part of the NFSA's EOD member assistance program:

| | |
|--|--|
| <p>Equity Investment Strategies:</p> <p><i>Small Cap Value</i></p> <p><i>Large Cap Value</i></p> <p><i>Midcap Value</i></p> <p><i>Large Cap Growth</i></p> <p>Fixed Income Investment Strategy:</p> <p><i>Fixed Income</i></p> | <p>Ark Asset Management Co., Inc.</p> <p><i>Investment Management Services For Institutional Investors.</i></p> <p>Offering five investment strategies which may be used in combination to satisfy a fund's varying investment needs.</p>  <p>Client Servicing Is Our Priority</p> <p>Robert W. Norton, Managing Director 1.800.622.1103 rwnorton@the-ark.com</p> |
|--|--|

CONTINUED FROM PAGE 10

QUESTION 1 – Valves and Sprinklers in Paint Spray Rooms

If I have a control valve isolating a 2,000 sq ft spray room do the spray booths also need their own isolation valves? The spray room has a density of 0.40 gpm per sq ft over 2,000 sq ft. I also would like to know if the sprinklers inside each paint booth, providing densities of 0.40 gpm/sq ft with protection areas of 90 sq ft, need to be minimum 11.2 K-factor due to the high density.

ANSWER: NFPA 13 is misleading on this subject due to an error in the preparation of the 2007 edition. The applicable standard is NFPA 33, and the relevant requirement is extracted from NFPA 33 to also appear as Section 21.4.1.5 of the 2007 edition of NFPA 13:

The sprinkler system for each spray area and mixing room shall be controlled by a separate, listed indicating valve(s), operable from the floor.

A review of the editions of standards referenced in NFPA 13 suggests that this wording appears as Section 9.4.5 of the 2007 edition of NFPA 33, but in reality the wording of the section was changed during the development of the 2007 edition of NFPA 33 such that it now reads as follows:

The sprinkler system shall be controlled by a separate listed indicating valve(s), operable from floor level.

The substantiation for the change, which was unanimously approved by the committee, was that “As presently written, the requirement could require too many valves for small systems. The revised wording requires a single valve for each system. Also, the revision defines ‘accessible.’” Given the recent documentation of this change, it is clear the committee did not intend to require a multitude of valves protecting each spray booth within a spray room, and intends that but that a single valve is sufficient.

You have also asked if the sprinklers inside of paint spray booths need to be at least K-11.2 due to the density of 0.4 gpm per sq ft. The answer is no. The requirement for larger orifice sprinklers based on density is found within Section 12.6 of NFPA 13 and is applicable only to storage applications.

QUESTION 2 – Omitting Trapeze Hangers in Extra Wide Bays

Our company has installed a gridded wet pipe sprinkler system within a warehouse with 58-ft bays, 6 lines per bay. System line piping is supported from the building bar joists with a hanger on each starter pipe attached to the bar joist immediately adjacent to either side of the cross main. The hangers on the cross main are located at each building beam with intermediate trapeze hangers, but two trapeze hangers are being omitted in accordance with NFPA 13 (2002 edition) Section 9.2.4.4. While we feel this arrangement is acceptable per NFPA 13 the structural engineer is insisting additional trapeze hangers must be installed between branch lines. Are we correct in stating that our installation is in accordance with the requirements of NFPA 13?

ANSWER: We agree that the omission of two non-adjacent intermediate hangers for the main in the extra wide bay meets the intent of NFPA 13. NFPA 13 presumes that the structural members will have the capacity to support this load arrangement. If there are special concerns about the ability of this particular structure to support the loads then additional trapeze hangers can be added beyond those required by NFPA 13. However, it is important that the structural engineer correctly understands the intent of NFPA 13. The NFPA 13 specification of a point load of 250 lb. plus the weight of the water-filled pipe at each point of hanging is sometimes misinterpreted as a cumulative loading for the piping system.

QUESTION 3 – Using Rack Protection Criteria for Palletized Storage

It seems to me there is a paragraph in NFPA 13 that indicates that if a commodity can be protected in racks with a particular density that the same criteria can be used for protection of the commodity in palletized storage as well. Is this correct?

ANSWER: You're probably thinking about Section 15.2.6 in the 2007 edition, which allows the use of the Chapter 17 rack storage protection criteria for plastics in place of the palletized criteria for the same storage height and clearance. That was based

on the recognition that the rack criteria was developed based on larger orifice sprinklers, which are now mandated for the higher densities. We're not aware of any parallel section in Chapter 14 that would allow the use of Chapter 16 criteria for Class I thru IV commodities, but this could be allowed by the AHJ on the basis of equivalency. It is widely recognized that rack storage presents a more severe protection challenge due to the availability of combustion air in rack configurations.

QUESTION 4 – Testing of Preaction Systems

NFPA 13 (2007 editions) sections 8.17.4.4.3 and 8.17.4.4.4 state that a test connection is required for a double interlock preaction system over 750 gal. However, the only difference between them is that 8.17.4.4.4 requires this at the remote location on the system. Why? Was one of these sections intended to address a different type of preaction system to justify the difference?

ANSWER: The intent was to mirror Section 8.17.4.3 on dry-pipe systems. The first section requires the connection and the second section tells you that the connection needs to be on the most remote portion of the system. The NFPA likes it to be this way so that each section contains only a single requirement. We agree that the language is awkward and needs to be evaluated since double-interlock systems that are less than 750 gal in size need to have a test connection as well, and that test connection needs to be at the most remote point since Section 7.3.2.3 eliminated the 750 gal alternative to the time limit. We need to know the water delivery time to the most remote portion of all double-interlock systems, so sections 8.17.4.4.3 and 8.17.4.4.4 both need to apply to all double-interlock systems, not just those over 750 gal in size. NFSA will attempt to convince the NFPA Sprinkler Committee to address this issue in the next edition of NFPA 13.

QUESTION 5 – Protection of PODS (Portable On Demand Storage)

I had a question on the PODS system last week and thought I recalled an NFSA article on the subject but couldn't find any-

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thing. My research shows that 47 states have a PODS storage unit in them, and I can't really see the AHJs and contractors all hiring fire protection engineers to develop special protection criteria. How are they being classified for purposes of sprinkler protection?

ANSWER: The NFSA has not published any articles on the protection of PODS, but the NFPA 13 Committee just discussed this subject at its November 2007 meeting. The committee noted that there are some people that would protect this as a Class IV commodity given that we generally consider the fire starting on the outside of the commodity and the storage units that the PODS company uses are mostly wood and metal with a little plastic (less than 25%). However, the NFPA 13 committee took the position that there are no set criteria. The owner (PODS) needs to hire a professional engineer to examine the situation and come up with specifications. Then, it is up to the owner (PODS) to police their customers and make sure that they do not violate the assumptions about what will be stored in the units.

QUESTION 6 – Hydrostatic Testing of Sprinkler Drops

A question that has come up with a few different local sprinkler contractors is whether hydrostatic testing is to be performed with or without the sprinklers installed. I think that it is a requirement of 13 that the sprinklers be installed but some contractors have argued otherwise. Who is correct?

ANSWER: This topic is a difficult one. Years ago the NFSA Engineering and Standards (E&S) Committee addressed this situation and established the position that the industry standard was not to perform two hydrostatic tests. The hydrostatic test was usually performed prior to the walls and ceilings being finished so that the pipe was still exposed and any potential problems could be easily identified and repaired. This meant that the sprinklers would not yet be in place because there was a concern that they might be damaged when the ceiling was being installed, so this test was conducted with plugs in the sprinkler outlet. Once the sprinkler system has passed this test, our E&S Committee believed that an additional test

with the sprinklers in place was unnecessary because each individual sprinkler undergoes a separate hydrostatic test at the factory before it is shipped to the job site. So, our position for many years was that the hydrostatic test did not need to be performed a second time after the sprinklers were placed in the system.

More recently, we have begun to rethink this question. In an era where building owners are extremely concerned about accidental discharge from sprinklers, the single hydrostatic test with plugs in the sprinkler outlets may not be enough assurance of system integrity. Even though each sprinkler is subjected to an individual hydrostatic test before it leaves the factory, there are issues of damage or other problems that could occur in the transportation or installation of that sprinkler that would affect the potential for leakage or inadvertent operation. Conducting a hydrostatic test after the sprinklers have been installed is one way to make sure that the sprinklers have been threaded correctly into their outlets and are capable of handling system pressures.

QUESTION 7 – Spacing to Walls vs. Windows

A sprinkler in the center of a small room is 9'0" off a wall. The window along the wall extends an additional 6 inches, leaving the sprinkler 9'6" from the window. Is this spacing acceptable per NFPA (assuming the room is less than 900 sq. ft.)?

ANSWER: Yes, we space to walls, not windows. This is obvious by reading the section on sprinkler spacing, where the standard specifically says that we measure the maximum allowable distance from the wall, not the window (see 8.5.3.2.1 in the 2002 edition of the standard, similar section in all previous editions). So many AHJs seem to have a problem understanding this simple concept that we had to add a section to the 2007 edition to clarify the situation. See Section 8.5.3.2.4 in the 2007 edition, which specifically states that the distance to the wall is measured to the wall (not the window) as long as the inset of the window does not create any additional floor space.

QUESTION 8 – Sprinklers in Closets with Washers and Dryers

NFPA 13, 2002 Section 8.14.8.2 states sprinklers are not required in clothes closets, linen closets, and pantries within dwelling units.....etc. What about closets containing a washer/dryer? Would this fall under this rule as well, as long as it does not exceed 24 sq ft and the least dimension does not exceed 3 ft?

ANSWER: First, be careful when using this section from NFPA 13. When you read all the way to the end of the sentence, you see that it only applies to hotel and motel rooms. Most hotel and motel rooms do not have washers and dryers in the closets.

Second, if you do have a hotel or motel room with a washer and dryer in the closet, then the closet is no longer a "clothes closet, linen closet or pantry". The closet has become a small laundry room and requires sprinkler protection. Given the high number of dryer fires in residential occupancies, it only makes sense to sprinkle these closets.

QUESTION 9 – Tank Capacities Relative to Vortex Plates

Where a pump takes suction from a tank, what dimension from the bottom of the tank is used to calculate usable water when calculating the amount of water storage in the tank?

Answer: Technically, you can't count any of the water below the anti-vortex plate. Lock in the location of your anti-vortex plate and then make sure that you have a sufficient amount of water above the plate.

QUESTION 10 – Branch Line Restraint for Grids in Earthquake Areas

Would branch line restraint be required on gridded systems when all of the branch lines are located between the mains? There really is no end of the branch line.

ANSWER: The purpose of the restraint at the end of the branch line is to keep the line from whipping around during an earthquake. Attaching the branch line to the main (as you do in a grid) and bracing that main provides more than adequate restraint of the branch line.

You will need to restrain branch lines at intervals as required in Table 9.3.6.4 of the 2007 edition.

CONTINUED FROM PAGE 12

QUESTION 11 –

Minimum Distance from Lights as Heat Sources

NFPA 13 references distances from lights to sprinklers in residential areas (NFPA 13, 2007 edition, Table 8.3.2.5c), however there isn't a reference to areas other than residential for lights as a heat source. Our current situation involves a church with a 575 watt light that is approximately 12 inches from the back of the light to our sprinkler. Are lights considered a heat source to which a high temperature sprinkler would need to be utilized?

ANSWER: Section 8.3.2.2 is intended to be a performance-based requirement that applies to all sprinklers. Table 8.3.2.5(c) is a prescriptive mechanism for meeting Section 8.3.2.2 with fast response sprinklers

around heat sources that are common in residential occupancies. The guidance in Table 8.3.2.5(c) is also applicable to non-residential situations. If you doubt the guidance in Table 8.3.2.5(c) for any particular non-residential situation, then you need to evaluate the temperature in the location where the sprinkler is going to go. Put a thermometer in that location and record the temperature after the light has been on for a long period of time (several hours). If the temperature exceeds 100 degrees, use an intermediate temperature rated sprinkler.

QUESTION 12 –

Inspection, Testing and Maintenance of Pilot Sprinkler Lines

A deluge system at our facility tripped because of various leaks on the air pilot lines.

In reading NFPA 25, I do not see anything that specifically mentions maintaining or testing pilot lines. Should the pilot lines be tested and how? What do other facilities do?

ANSWER: The pilot lines are technically part of the detection system, which is required to be tested and maintained in accordance with NFPA 72. Unfortunately, that document does not have specific rules for testing or maintaining pilot detectors. Instead there are statements such as "test and maintain in accordance with manufacturers instructions". We'll try to clarify this in future editions of NFPA 25 and NFPA 72. But, since a dry pilot line is essentially a small dry pipe system, the same air leakage tests should be performed once every three years. Ⓞ

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Fig. 75



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*Patent Pending



Fig. 29





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A month ago, I saw a sign that said... “How Mean Is Your Green?”

The poster sign was made to provoke some thought about how much water and energy we waste. According to the poster, we are not thinking green and being green in a conservation effort to protect and sustain our planet.

And if you're not thinking green, then the words on the poster clearly suggest that you may have a mean, “I-don't-care” attitude about this global problem and that you should change your habits, not just for you but for your kids and their kids and their kids.

In the October, 2007 issue of Kiplinger's Personal Finance Magazine there is an excellent article that identified 29 ways to save energy and water around your home that can be done with little or no installation costs and hardly a change in your personal home habits. Collectively they can save hundreds of dollars a year in household energy bills, thousands of gallons of water and thousands of pounds of carbon-dioxide emissions. The cost in energy savings by using compact fluorescent light (CFLs) is astounding. If every U.S. household replaced just one incandescent bulb with a compact fluorescent bulb, the emission savings would be comparable to taking three million cars off the road for an entire year!

Many western states are establishing requirements for utilities to use more renewable energy and improve energy efficiency. Last November, Washington State voters passed Initiative No. 937 that requires large utilities to obtain 15 percent of their electricity from renewable resources. Many utilities across the country are using various incentives to help customers fund energy-efficient products and one that I thought was very interesting from a fire protection

standpoint was the use of LED (light emitting diode) Exit Signs. Why replace incandescent or fluorescent exit signs with an “energy star qualified” LED exit sign? LED exit signs use 81% less energy than fluorescent exit signs and 93% less energy than an incandescent sign!

In addition, Puget Sound Energy (in Seattle) is offering a \$35.00 rebate per installed exit sign and that makes the change nearly free. Compare the cost of running one 24-hour exit sign:

| | Incandescent | Fluorescent | LED |
|---|--------------|-------------|------------|
| Annual energy use (<i>kilowatt hours</i>) | 350 | 140 | 26 |
| Annual energy cost per sign | \$ 25 | \$ 10 | \$ 2 |
| Lamp service life | 3 months | 11 months | 10 + years |
| 10 year cost of one sign | \$ 280 + | \$ 100 + | \$ 40 |

Imagine the incredibly huge savings if this was done across America and around the world where hundreds of millions of 24-hour exit signs have to be there because safety and building codes require it.

Another very interesting development is the growth of the “Residential Green” movement. There are a growing number of homebuilders who are constructing “environmentally friendly homes” as state and local governments offer incentives to create such communities. In a recent USA TODAY article written by Charisse Jones, Mr. Calli Schmidt, Director of Environmental Communications for the National Association of Homebuilders says “it's pretty much the future of building.” Environmental advocates are saying that there is a growing awareness among builders and homebuyers about environmentally friendly building products and methods even though building green can be more expensive. Jason Hartke, of the U.S. Green Building Council, which is a collective organization based

in Washington, DC said “We're starting to see a greater focus on incentives for green residential buildings.” He also further stated, “When you think about the idea that 40% of our carbon emissions in the U.S. comes from buildings and about half of that is residential, we've got to address all our building types.”

The U.S. Green Building Council has building standards known as Leadership in Energy and Environmental Design (LEED) which previously applied to commercial

buildings. A rating system for residential homes is expected to be unveiled very soon. Currently, 500 homebuilders across the nation are participating in a LEED pilot program where approximately 10,000 homes are being built to meet LEED standards.

Some cities where green home building is taking place:

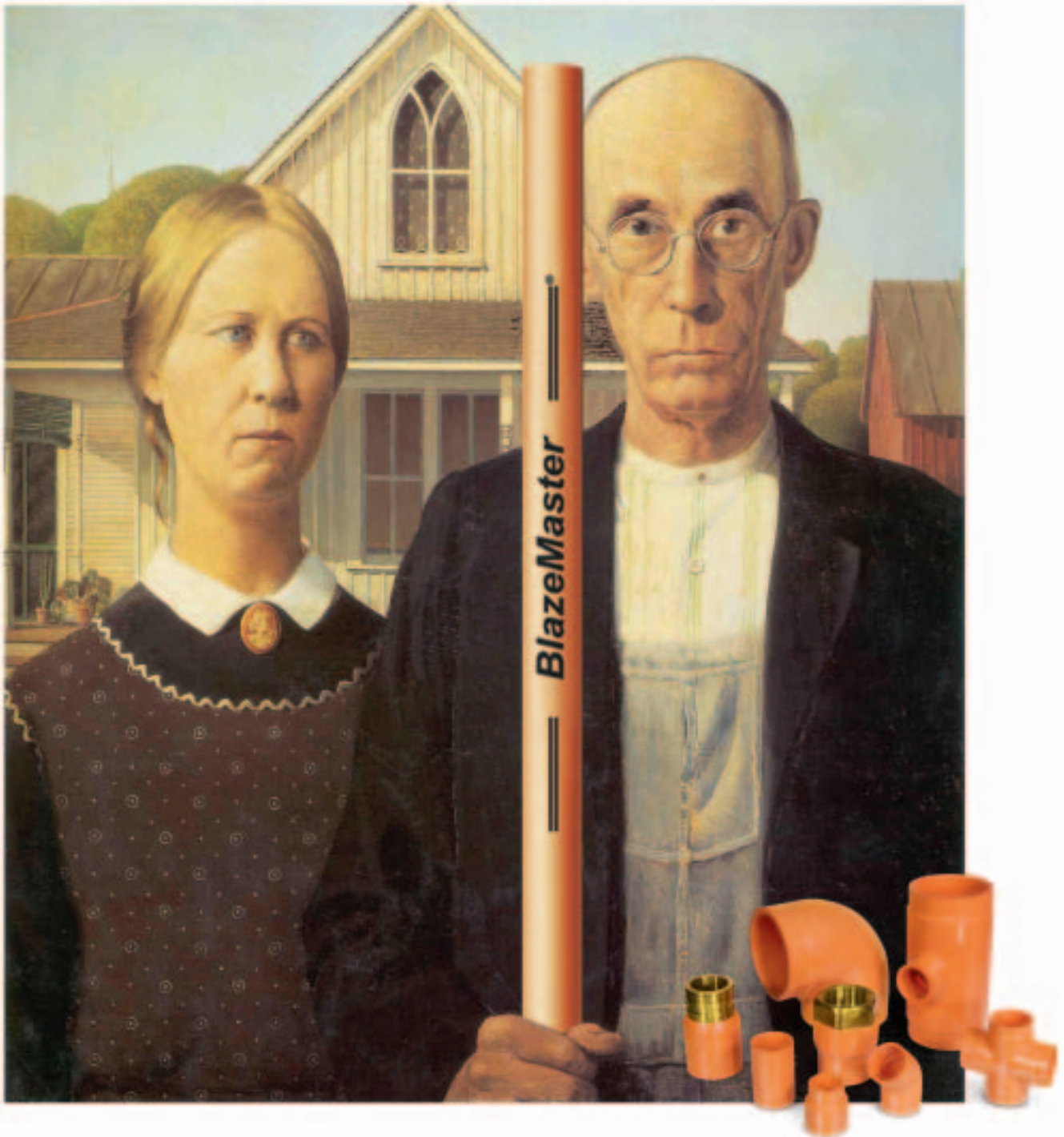
- Cincinnati residents won't pay city property taxes for 15 years on homes that are built or renovated to LEED standards.
- In Dallas-Fort Worth, McGuyer Homebuilders, which builds about 800 single-

CONTINUED ON PAGE 19



Don Pamplin

NFSA's Regional Manager for the Pacific Northwest.



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family homes a year in the area, is now building all new residences according to criteria set by the Environmental Protection Agency (EPA) and the Dallas Home Builders Association.

- In Wood River, Illinois, 150 single-family homes will be built to green guidelines set by the National Association of Homebuilders.

- In Levittown, New York, the nation's first suburb, discounts and low-cost financing will be offered to enable residents to buy energy-efficient appliances for their homes. And the list goes on. But, guess what? Not one of these homes has an NFPA 13D residential fire sprinkler systems in it! That requirement is not found in any of the above-mentioned standards or projects for an eco-friendly house!


- How can a home be eco-friendly when it catches fire and the carbon-emissions and toxic products of that fire significantly pollute the atmosphere?

- How can a home be eco-friendly when the local fire department on average will use more than 3000 gallons of water to put out that residential fire compared to a residential fire sprinkler system that will put out or control the fire with less than 150 gallons of water?

- How can a home be eco-friendly when there will be on average over two thousand gallons of highly toxic, fire-polluted run-off water effecting the local neighborhood?

- According to NFPA statistics, there are approximately 300,000 residential home fires per year in the U.S. and the vast majority of them do not have "environmentally friendly fire sprinkler protection" in them. This number of annual residential home fires represents an incredibly huge volume of air-pollutants, excessive water usage and ground/building run-off water contamination.

For the last 20 years, the homebuilding associations across this nation have consis-

tently said that "requiring fire sprinkler systems in residential homes will make housing unaffordable to the American people." Now they want you to buy their "eco-friendly homes" that are significantly more expensive. While I believe that it is a positive step to help sustain this planet, there is a significant note of hypocrisy echoing from these folks. Why are they not expressing concern that these new eco-friendly building guidelines will make housing unaffordable for those same American people? That's because their marketing is hidden in an immensely huge "politically correct" agenda to save our planet. It will also make them a lot more profit. While I agree that we should be practicing more conservation in everything we do, we should make the greening of our homes more effective. One of the most important components to make a home truly eco-friendly and life-saving friendly is to put a residential fire sprinkler system in it! 

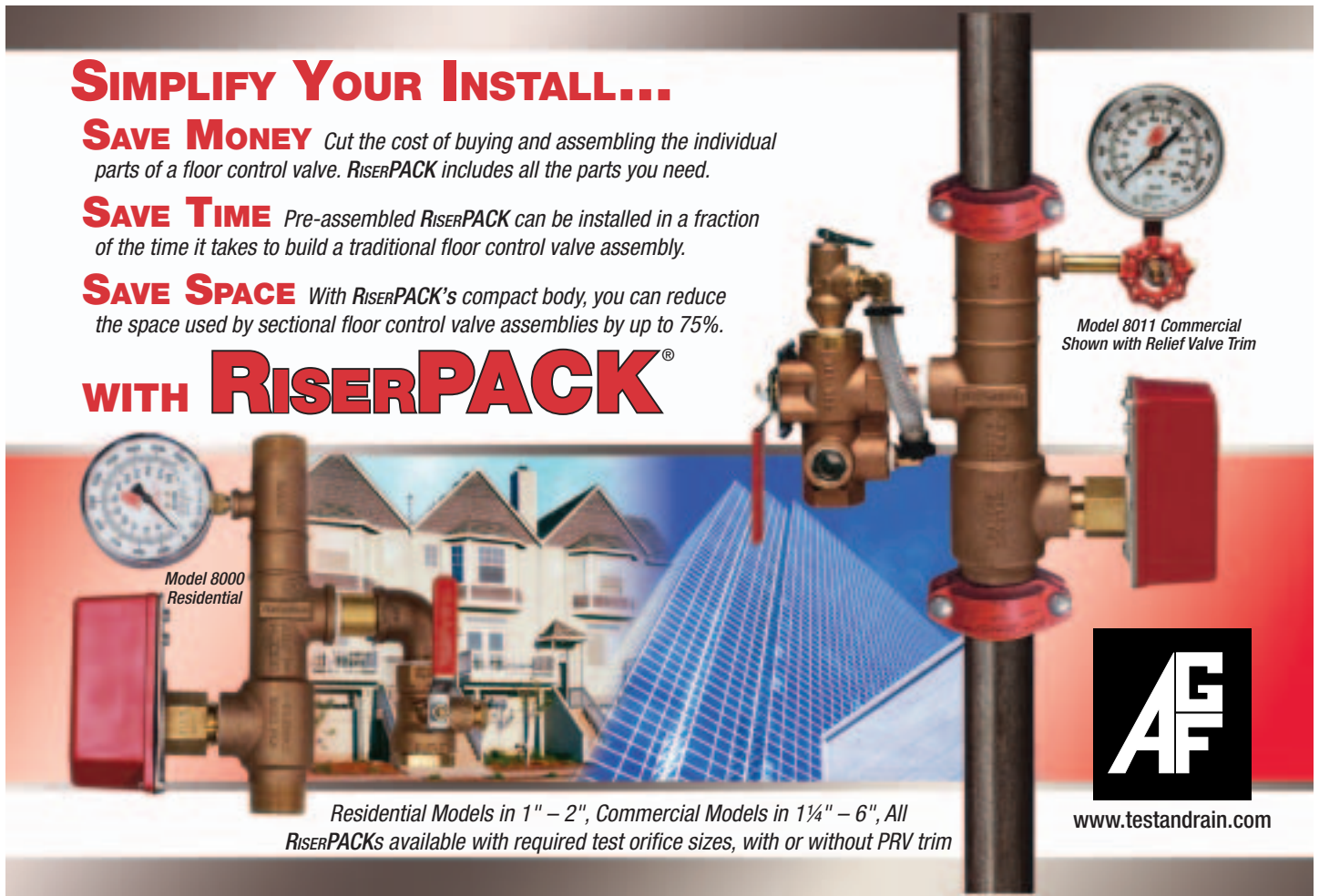
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The NFSA Industry Advancement Fund

Introduction

NFSA has initiated a fund for the advancement of the fire sprinkler industry for any sprinkler contractor, Supplier, Manufacturer, individual or organization to participate in on a totally voluntary basis. The Industry Advancement Fund will supplement the efforts of the Sprinkler Manufacturers Industry Fund and Industry Promotion Funds. Such promotional efforts include, but are not limited to legislative efforts to pass the Fire Sprinkler Incentive Act and to support the following programs and organizations:

- Design Advantage Program (Architect Training)
- Best Practices
- Center for Campus Fire Safety
- Campus Fire Watch
- Fire Team USA (and Fire Team Tennessee)
- Home Fire Sprinkler Coalition
- Adoption of fire sprinklers in the International Residential Code (IRC)
- Advertising and public relations to promote the fire sprinkler concept

The sprinkler industry is on the verge of vastly expanding current markets through legislative and code initiatives intended to result in 100% sprinkler requirements for all new commercial construction and retrofit of existing high-rise buildings. Meanwhile, the residential market offers fire sprinkler industry concerns the opportunity to expand their businesses and garner additional market share while providing life saving protection to the public.

Business Opportunity

The Chairman of the Board of NFSA, Mr. Wayne Gey, suggested the establishment of such a Fund at the NFSA Annual Seminar & Exhibition in Las Vegas in May of 2007. Subsequently, NFSA approached several contractors and inquired whether a vehicle could be established to permit any business, individual or organization to supplement industry promotion efforts already established by NFSA Sprinkler Manufacturers and union contractors.

As a result, the NFSA Industry Advancement Fund has been established to offer Contractors, Suppliers, Manufacturers and others the opportunity to provide additional revenue to support those efforts and to increase the sprinkler market. It would also allow those who participate to be publicly listed as supporting these special promotional efforts. In addition to being publicly recognized as a contributor to the Fund, Suppliers and Manufacturers making contributions to the Fund will be given credit in the current booth selection process administered by NFSA's show management firm, Exhibit Promotions Plus.

Current Business Position

Currently, there is no vehicle available for many contractors and others to participate in industry promotion efforts. The creation of this Fund provides such a vehicle.

Product/Service Description

The Industry Advancement Fund is a Section 501(c)(6) tax exempt organization under the IRS code. Contributions, except money used for lobbying efforts, are tax deductible. The Fund is separate from all other Industry Funds and NFSA. Contributions and expenditures are not commingled with other Funds or NFSA finances. All participants will receive annual audited statements reflecting all activity. All disbursements must be approved or directed by the Board of Trustees and all checks written must be signed by the NFSA President and NFSA Financial Controller.

Board of Trustees

The Fund is administered by a Board of Trustees consisting of the President and the Executive Vice President of NFSA and three contributors elected from those participating in the Fund.

Financial Potential

Several voluntary contribution levels are available. They are:

- \$2,000: Industry supporter;
- \$5,000: Industry promoter;
- \$10,000: Industry Bronze level promoter;
- \$20,000: Industry Silver level promoter;
- \$30,000: Industry Gold level promoter; and,
- \$50,000: Industry Platinum level promoter

Contributions may be paid on an annual basis, or in twelve equal monthly installments. The above contribution levels are intended to provide interested

contributors with some guidelines within which to make such a contribution but should not be considered limitations.

Summary

Adoption of this Plan by the NFSA Board of Directors has resulted in providing a vehicle for Contractors, Suppliers, Manufacturers and others to finance industry promotion efforts, much the same as unionized contractors and Sprinkler Manufacturers have done for many years. Again, participation in the Industry Advancement Fund is strictly voluntary.

To make a contribution, follow the Industry Advancement Fund link at the NFSA website at www.nfsa.org

NFSA Industry Advancement Fund Hits \$163,000

| | |
|--|---|
| SimplexGrinnell \$50,000, Platinum level promoter | RCI Systems \$5,000, Industry promoter |
| Wayne Automatic Fire Sprinklers \$30,000 Gold level promoter | Globe Fire Sprinkler Corporation \$5,000, Industry promoter |
| Dalmatian Fire, Inc. \$10,000, Bronze level promoter | System Sensor \$5,000, Industry promoter |
| Gregg Huennekens \$10,000, Bronze level promoter | Bruce LaRue \$2,000, Industry supporter |
| Northstar Fire Protection of Texas \$10,000, Bronze level promoter | Robertson Fire Protection \$2,000, Industry supporter |
| Engineered Fire Protection \$10,000, Bronze level promoter | Tri-State Fire Protection \$2,000, Industry supporter |
| Allied Tube & Conduit \$10,000, Bronze level promoter | Wolverine Fire Protection \$2,000, Industry supporter |
| Flexhead Industries \$10,000, Bronze level promoter | |

Systems Update

BY BOB TRIEBER

For the first half of 2008, the NFSA “Technical Tuesday” Online Seminars will focus on recent changes in system requirements. In each of ten selected subject areas, the seminars will feature an update on rules changes that are important to fire sprinkler contractors, technicians, and authorities having jurisdiction. The seminars will present information not only on the changes themselves, but in many cases on the research, deliberations and intentions behind the changes, which provide valuable insights needed for proper application.

The following are the descriptions for each class:

March 11, 2008

**NFPA 13R Systems
–Outside the Dwelling Unit**

*Cecil Bilbo, Jr.
Director of Technical Services*

INTERMEDIATE

NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, has two different levels of protection required. The protection requirements “inside the dwelling” can be less demanding than “areas outside the dwelling.” Participants will learn what portions of a building need to follow the rules for areas outside of the dwelling. The correct type of sprinkler for these applications will be identified, as will the density and area requirements. There will be references to both NFPA 13 and NFPA 13R. Participants should be ready to move back-and-forth between these standards to gain a thorough understanding on when and how to identify these areas.

April 1, 2008

Foam Sprinkler Systems Update

*Russell P. Fleming, P.E.
Executive Vice President*

INTERMEDIATE

This seminar will focus on recent changes to the NFPA standards on foam and foam-water systems (NFPA 11 and 16). The presentation will include a discussion of the use of the Darcy-Weisbach formula for hydraulic calculations for piping carrying foam concentrate. Special attention will be given to the growing acceptance of fixed piping systems employing compressed air foam (CAF) technology. •

April 22, 2008

Water Supply Systems

*Cecil Bilbo, Jr.
Director of Technical Services*

BASIC/INTERMEDIATE

When a sprinkler system is called on to help control a fire in a building, the adequacy of the water supply can determine if property and lives will be saved. Understanding the different types of water supplies that can be used in the NFPA Standards will ensure the system works properly. Whether it is a city water supply, fire pump, tank, or a pond, you will need to know the rules that affect the installation, testing, use and inspection of the different types of water supply systems. This seminar will cover a broad review of the rules for each of the types of water supplies allowed for use in fire protection systems. It will also cover some of the federal regulations that have made it into each state and county in the United States. •

May 6, 2008

Exposure Protection Systems

*Russell P. Fleming, P.E.
Executive Vice President*

INTERMEDIATE

Changes to the 2007 edition of NFPA 13 restored long-lost criteria to the standard that is necessary for proper installation of an exposure protection system. This seminar will not only review how that criteria

is applied, but review the use of exposure protection systems in the context of the entire need for exposure protection based on the principles of NFPA 80A exposure protection recommended practice and corresponding provisions of model building codes in the United States and Canada. •

May 20, 2008

Water Cooling Towers

*Michael J. Friedman, P.E.
NFSA Consultant*

INTERMEDIATE

Protection of cooling towers falls under the umbrella of “Special Hazards” in the fire protection industry. This seminar will provide an overview of design considerations such as type of cooling tower, materials of construction for towers and system piping. It shall also cover types of fire protection systems, devices, detection methods and design criteria and system testing based on NFPA 214, Standard on Water-Cooling Towers, 2005 Edition. •

June 10, 2008

Standpipes, Pressures and Pumps

*Kenneth E. Isman, P.E.
Vice President of Engineering*

INTERMEDIATE

Standpipe systems in very tall buildings have always been a challenge. Recent changes in NFPA 14 and NFPA 20 have made these systems more difficult to design and install. This seminar will cover the effect of deci-



Bob Treiber

Based in Centerville, Ohio,
Bob is NFSA's Director of
Training & Education

sions such as breaking up the system into multiple vertical zones, using pressure reducing valves, and using variable speed pumps. The new provisions of NFPA 14 for master pressure reducing valves will also be explored. •

June 24, 2008

The Extent of Systems

Jeff Hugo, Manager of Codes

BASIC

Are sprinklers required under a Porte-

Cochere? When is an addition a separate building? Does the foundation of a building have anything to do with sprinklers? This seminar will answer those questions that stump the designer and can come out to haunt you in some jurisdictions. The Extent of Systems will go into detail on where to install sprinklers, where the codes and standards designate them, and how to justify their existence or non-existence. This seminar will also summarize the “Systems” theme for the first half of 2008. •

2008 On-line Seminar Descriptions

| DATE | TOPIC | INSTRUCTOR |
|----------|--|--------------------------|
| March 11 | NFPA 13R Systems-Outside the Dwelling Unit | Cecil Bilbo, Jr. |
| April 1 | Foam Sprinkler Systems Update | Russell P. Fleming, P.E. |
| April 22 | Water Supply Systems | Cecil Bilbo, Jr. |
| May 6 | Exposure Protection Systems | Russell P. Fleming, P.E. |
| May 20 | Water Cooling Towers | Michael Friedman, P.E. |
| June 10 | Standpipes, Pressures and Pumps | Kenneth E. Isman, P.E. |
| June 24 | The Extent of Systems | Jeff Hugo |

In-Class Training Seminars

Seminar topics, dates, and locations for upcoming National Fire Sprinkler Association (NFSA) in-class training seminars are as follows:

| | | |
|----------|--|-------------------|
| March 4 | Sprinklers for Dwellings | Murfreesboro, TN |
| March 5 | Hydraulics for Fire Protection | Murfreesboro, TN |
| March 6 | Residential: Homes to High-Rise | Murfreesboro, TN |
| March 10 | Sprinklers for Dwellings | Winston-Salem, NC |
| March 11 | Plan Review Policies & Procedures | Winston-Salem, NC |
| March 12 | NFPA 13 Update 2002 | Winston-Salem, NC |
| March 25 | Pumps for Fire Protection | Jacksonville, FL |
| March 26 | Residential Homes to High-Rise | Jacksonville, FL |
| March 27 | Sprinkler Protection for General Storage | Jacksonville, FL |
| March 28 | Sprinklers for Dwellings | Jacksonville, FL |

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

For more information on these seminars, or to register, please visit www.nfsa.org or call Michael Repko at 845-878-4207 or email: seminars@nfsa.org.

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

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Main Drains

BY KENNETH E. ISMAN, P.E.

From the questions coming into the NFSA Expert of the Day (EOD) service, it would appear that a great deal more emphasis is being placed on Main Drain tests than ever was intended by either the NFPA 13 or NFPA 25 committees. The intent of this article is to discuss the purpose of the main drain in a fire sprinkler system and the use of the results from the tests conducted at the time of system acceptance (performed in accordance with NFPA 13) and the periodic tests described in NFPA 25.

Purpose

First and foremost, the purpose of a main drain is to provide a mechanism for getting the water out of the pipes in a sprinkler system so that the system can be opened without water discharging from the opening and causing a mess. There are many reasons why a fire sprinkler system might need to be opened, including the replacement of sprinklers, the addition of pipe and fittings to extend a sprinkler system into a new space, and the repair or replacement of pipe, fittings or components. The main drain provides an easy and relatively quick method of getting the water out of the sprinkler system piping so that this work can be done.

This attitude regarding the purpose of the main drain is not my opinion alone. The annex to NFPA 25 specifically states (section A.13.2.5 in the 2008 edition, similar sections in earlier editions), “Main drains are installed on system risers for one principal reason: to drain water from the overhead piping after the system is shut off.”

In order to perform its function, the main drain needs to be located on the sprinkler system side of the main system control valve, so that it is the water from the system that leaves when the drain valve is opened, not the water from the water supply. However, in order to make sure that the water from the system is leaving when the main drain valve is opened, the water supply valve needs to be closed.

The location of the main drain valve (between the main control valve for the system and the sprinklers) makes it ideal for helping to determine other conditions in the sprinkler system, even if this is not its principal purpose. When the sprinkler system is in its normal operating condition, where the main control valve is supposed to be open, the main drain connection can be used to determine that the valve is, in fact, really open.

This test, to see if the valve is really open, is a relatively simple test. The main drain is opened while watching the water supply pressure gage. This gage should show a reduction in pressure as water flows from the supply to the drain. The drain is then closed. The water supply should return to the same static pressure immediately. Any delay in the return of the water to static pressure indicates a partially closed valve or a partial blockage in the piping between the drain and the water supply.

One might ask why this particular main drain test needs to be run. Since we use only indicating valves in fire protection systems, can't we tell that the valve is open without running a main drain test? The answer is

that most indicating valves do let the user know that they are open; however, it is possible for the gate in a valve to become separated from the stem. If this happens, the stem will stick out of the valve when the wheel is turned, but the gate will remain down in the piping.

For this reason, NFPA 25 has required a main drain test to be performed immediately after each time that a valve has been closed and reopened (section 13.3.3.4 in the 2008 edition, similar sections in previous editions). This includes the situations where systems are shut down for short maintenance conditions and situations where systems have been impaired. The typical Impairment Tags that are used by most sprinkler contractors and insurance companies include a space for the user to write down the results of the main drain test after the system has been returned to service to make sure that the test gets performed and the results get saved for future reference.

CONTINUED ON PAGE 26



Kenneth E. Isman, P.E.

Vice President, Engineering for NFSA. Ken represents NFSA on the NFPA Technical Committee on Sprinkler Systems Installation Criteria.

CONTINUED FROM PAGE 25

Acceptance Tests

Since main drain tests will be run periodically on fire sprinkler systems, it makes sense to run a test when the system is brand new to establish a baseline of performance. There is no hard and fast rule regarding the pass/fail criteria of a main drain test (although there is some discussion in NFPA 25 that will be addressed later in this article), so the best way to tell if the results of the tests in

the future are acceptable is to compare them to the results from previous tests. The system acceptance test represents the beginning of the record keeping for the system. Ideally, these results are kept by the owner for the life of the system.

The basic procedure of a main drain test has already been described, but will be listed here in step-by-step instructions. It may be necessary to turn off the alarm control lines

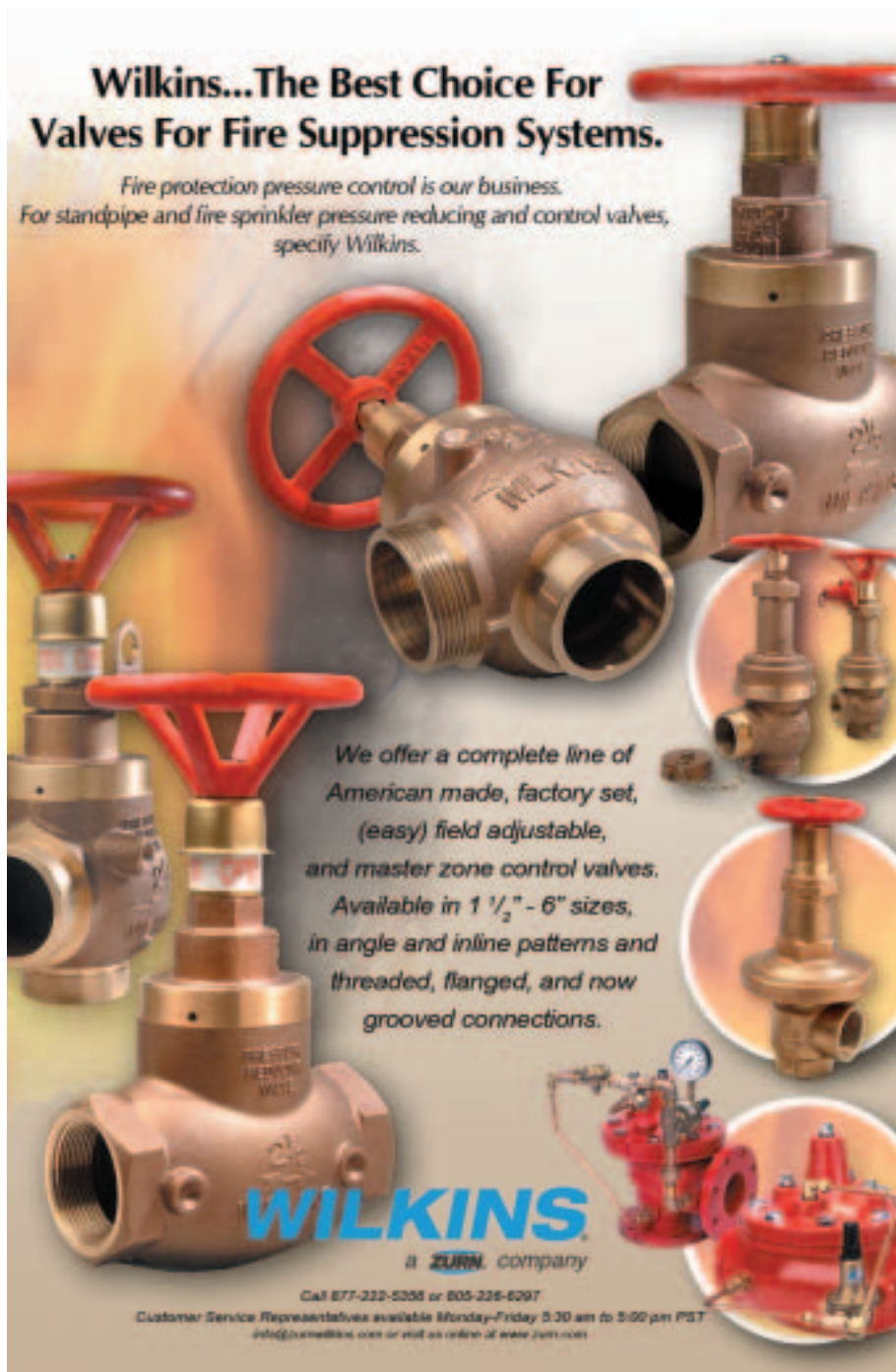
on sprinkler systems with wet alarm valves so that the flow of water does not set off a waterflow alarm. On dry-pipe systems, the main drain should be below the dry-pipe valve and should not trip the valve. To perform a main drain test:

- 1) Note the static pressure of the water supply on the water supply pressure gage at the system riser.
- 2) Open the main drain valve (slowly so as not to create water hammer) to the fully open position.
- 3) Verify the flow of water from the drain and verify that the flow of water is steady.
- 4) Note the residual pressure on the water supply pressure gage at the system riser with the water flowing from the drain.
- 5) Slowly close the main drain valve (so as not to cause water hammer or trip a dry-pipe valve).
- 6) Watch the water supply pressure gage and make sure that the system immediately returns to the static pressure noted in step 1. (It is possible for the system to return to a higher pressure than the static pressure noted in step 1 if a pump sensed the flow from the main drain and started up, thereby increasing the pressure in the system).
- 7) Return the wet alarm valve to service if you closed the alarm line before starting the test.

Once the test is complete and the data has been recorded, it is tempting to analyze the data to determine whether or not the system passed the test. However, since this is an acceptance test, and there is no prior data to compare the performance of the system to, there is not much analyzing that can be done.

Certainly, if no water came out of the main drain when the valve was open, or if the pressure gage took time in returning to the static pressure, then there is a problem with a potential obstruction in the piping between the water supply and the drain. But unless one of these conditions occurs, there isn't much other analysis that can be

CONTINUED ON PAGE 27



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done at this stage.

There are some people that want to use the results from a main drain test to determine the adequacy of the water supply to meet the demand of the fire protection system. This would be a bad idea and is not well supported by the science of hydraulics. In many cases, the main drain test does not provide sufficient information to determine the adequacy of the water supply.

One of the problems in using the data from a main drain test to determine adequacy of a water supply is that there is no information on the flow. During the main drain test, you read the pressure of the water supply from a gage, but you do not have any manner of determining the flow. Knowing the residual pressure without knowing the flow associated with it limits the amount of information that you can get from the data. A residual pressure of 50 psi with 800 gpm flowing from the drain would mean something completely different than a residual pressure of 50 psi with 300 gpm flowing from the drain. Unfortunately, there are

not many of us that can tell the difference between these flows by sight.

There have been people over the years that have attempted to put Pitot gages in the flow stream to try and determine what the flow is discharging from the drain. However, the discharge of a drain is very different from a nozzle or a fire hydrant, where we use Pitot gages more frequently. Coefficients have been worked out to determine how to account for the portions of fire hydrants and nozzles that are void of flow during the test. But no such coefficients have been developed that really work for main drain arrangements.

There was a graph floating around the industry for many years that purported to provide some mechanism for determining flow from main drains with a Pitot gage, but research into the science behind that graph has found that its use is sketchy at best. Although the graph originally came from the insurance industry, that industry now disavows any knowledge of any legitimate research for developing the graph and

does not use the graph. Unfortunately, the graph has been distributed in other circles (including the National Fire Academy), and has grown to urban legend status, but it should not be used since it does not accurately predict flow.

Without knowing the flow coming from the drain, it is difficult (if not impossible) to determine the adequacy of the water supply in meeting the demand of a fire sprinkler system. However, there are some basic statements that can be made. If the fire sprinkler system has a large riser and a large flow demand, it is doubtful that a 2 inch main drain (the largest main drain that we install) is going to discharge anywhere near the flow demand of the fire protection system. If the residual pressure drops below the demand pressure for the sprinkler system in this (and only this) instance, there is some problem that needs to be identified. But a great deal of caution needs to be placed on this kind of interpretation of the data of the main drain test.

CONTINUED ON PAGE 30



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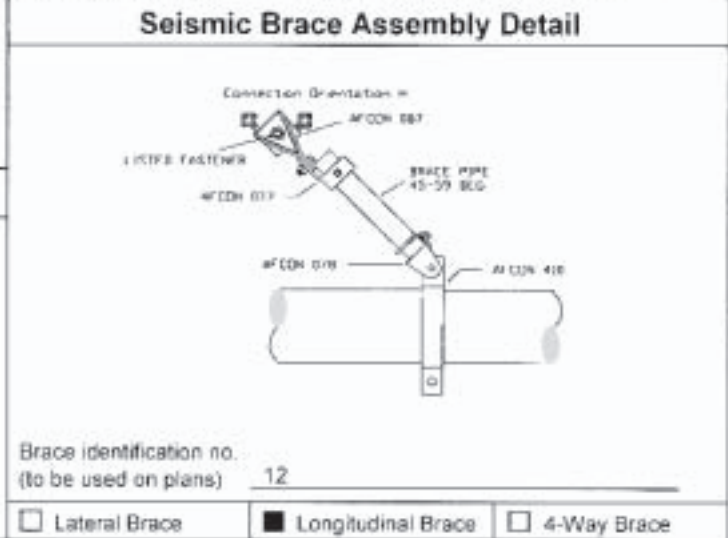
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Sway Bracing Calculations per 2007 NFPA 13

| Project/Contractor Information | Seismic Brace Attachments |
|---|--|
| Project: <u>ABC COMPANY</u> | Structure Attachment Adapter: # 087 Adapter Stl Web Joist Listed load rating: <u>2,015 lb</u> |
| Project Address: <u>1234 Main Street</u> | Structure Attachment Fitting: # 077 Attachment End (Locking) Listed load rating: <u>2,015 lb</u> Adj. load rating per 9.3.5.10.3: <u>1,425 lb</u> |
| Project City/St: <u>Brea, Cal 93307</u> | Pipe Connection Attachment: # 078 Straight Attachment End Locking Listed load rating: <u>2,015 lb</u> Adj. load rating per 9.3.5.10.3: <u>1,425 lb</u> |
| Contractor: <u>AFCON</u> | Pipe Attachment Fitting: # 410 Pipe Clamp (For Sway Bracing) Listed load rating: <u>2,015 lb</u> Adj. load rating per 9.3.5.10.3: <u>1,425 lb</u> |
| Contractor Address: <u>9600 Klingerman Street</u> | |
| Contractor City/St: <u>South El Monte, CA 91733</u> | |

| Brace Pipe Information | |
|---------------------------|--------------------|
| Length of Brace: | <u>3 ft 6 in</u> |
| Diameter of Brace: | <u>1 in</u> |
| Type of Brace: | <u>Schedule 40</u> |
| Angle of Brace: | <u>45° to 59°</u> |
| Least Radius of Gyration: | <u>0.42</u> |
| L/R Value: | <u>200</u> |
| Maximum Horizontal Load: | <u>2,500 lb</u> |

| Fastener Information | |
|---|--|
| <input type="checkbox"/> NFPA 13 Fastener | <input checked="" type="checkbox"/> Listed Adapter |
| Structural Supporting Member: | <u>Web Beam</u> |
| Orientation of connecting surface: | <u>"H"</u> |
| Fastener Type: | <u>n/a (n/a)</u> |
| Fastener Diameter: | <u>n/a</u> |
| Fastener Length (under head): | <u>n/a</u> |
| Maximum Load: | <u>n/a</u> |



| Sprinkler System Load Calculation Ss: 1.15 Cp: 0.568 Cp per AHJ: | | | | | | |
|--|----------|-------------|-------------|------------|---------------------|--------------------|
| | Diameter | Type | Length (ft) | Total (ft) | 0.568 Weight per ft | 0.568 Total Weight |
| <input checked="" type="checkbox"/> | 4 in | Schedule 10 | 80 ft | 80.0 ft | 6.69 lb/ft | 615.48 lb |
| <input type="checkbox"/> | 2 in | Schedule 10 | 15 ft | 15.0 ft | 2.40 lb/ft | 41.40 lb |
| <input type="checkbox"/> | 1-1/2 in | Schedule 10 | 40 ft | 40.0 ft | 1.73 lb/ft | 79.58 lb |
| <input type="checkbox"/> | 1-1/4 in | Schedule 10 | 40 ft | 40.0 ft | 1.43 lb/ft | 65.78 lb |
| <input type="checkbox"/> | 1 in | Schedule 10 | 80 ft | 80.0 ft | 1.03 lb/ft | 94.76 lb |
| <input type="checkbox"/> | | | | | | |
| <input type="checkbox"/> | | | | | | |
| <input type="checkbox"/> | | | | | | |
| <input type="checkbox"/> | | | | | | |
| <input type="checkbox"/> | | | | | | |
| <input type="checkbox"/> | | | | | | |
| Brace Connection Valve/Fitting Factor: 2007 - 1.15 Total 0.568 weight of water-filled pipe | | | | | 897.00 lb | |

CONTINUED FROM PAGE 27

If the sprinkler system has a large riser and a small flow demand (common for combined standpipe/sprinkler systems), it is entirely possible that the flow during the main drain test will exceed the flow demand of the sprinkler system and that the pressure during the main drain test will drop below the pressure demand for the fire sprinkler system. There is absolutely nothing wrong with this situation and the water supply may easily be able to meet the demand of the fire sprinkler system. In this case, it would be wrong to “fail” the system due to the main drain test when there is absolutely nothing wrong with the system or the water supply.

Periodic Tests

NFPA 25 calls for the performance of a main drain test at least annually (section 13.2.5 in the 2008 edition). However, the test needs to be run more often in certain situations. As previously described, NFPA 25 requires the performance of the test after each time that a valve is closed and then opened again. Also, the main drain test needs to be performed at least quarterly for systems where the sole source of supply for the fire protection system includes a backflow preventer. The purpose of this more frequent test is to exercise the internally loaded check valves in the backflow preventer.

The procedure for the main drain test is exactly the same as described previously in this article. However, the analysis is different. Since the test has been performed before, the results can be compared back to previous results to determine whether or not the system is still in good shape. There are two comparisons that need to take place. The static pressure during the test needs to be compared to the static pressure from previous tests. Then the residual pressure during the test needs to be compared to the residual pressure from previous tests.

Many people just compare the results of the residual pressure readings, but this would be an incomplete picture. For example, if the residual pressure was 45 psi during the test and 60 psi the previous time that the test was performed, there may or may not be a problem. It is difficult to tell unless the static pressures are also compared. If the static pressure was 80 psi during the previous test and 63 psi during the more

recent test, the situation is probably okay because the drop in pressure during the test is fairly consistent (20 psi during the older test and 18 psi during the more recent test). However, if the static pressure was 80 psi during both tests (old and more recent) then there is a significant problem because there was a drop of only 20 psi during the older test and a drop of 35 psi during the more recent test. This would indicate that something is causing 15 psi more friction loss during the more recent test, which might be an obstruction in the piping or a partially closed valve.

NFPA 25 relies on the person performing the test being knowledgeable enough to use judgment in interpreting the results of the test. For the older editions of NFPA 25, there was no explicit pass/fail criteria. In the 2008 edition, the committee added some basic guidance (section 13.2.5.2) for determining when the situation needs to be investigated further (although it is still not explicit pass/fail criteria). The new rule requires that when the residual pressure of the most test is more than 10% less than the residual pressure from a previous test, the reason needs to be explained. Note that this does not mean that the system fails the test if the result is more than 10% lower than the previous test. It just means that the reduction needs to be explained. A reasonable explanation might well be that the static pressure has gone down, which would also mean that the residual pressure will go down similarly.

Many people have asked whether or not fire pumps should be on during this test. In most systems, the main drain test will create sufficient flow (which the jockey pump will not be able to make up) for the fire pump to automatically start. In most cases, it is a good idea to run the main drain test with the fire pump on. Since the fire pump needs to be tested weekly anyway (see Chapter 8 of NFPA 25) the main drain test can be the mechanism used to start the pump that week. For facilities with many fire sprinkler systems and fewer pumps, the performance of multiple main drain tests on the same day can be a problem for some pumps in that it is sometimes a problem for pumps to start multiple times in a short period of time. For these situations, it is permitted to run the main drain tests while the pump is already running, or to run the main

drain tests with the pump turned off. However, if you are going to run the main drain tests with the pump turned off, you need to do three things differently:

- 1) You need to follow the impairment procedures of NFPA 25 because the sprinkler system will not work with the pump off and if a fire occurs during the test, you will need to get the pump on as quickly as possible. Usually, this means that a person must be standing by the pump ready to open any closed valves or turn on the pump at a moments notice. Usually, this person is in communication with others at the facility running the test through walkie-talkies or radios.
- 2) The water supply must be capable of getting water to the main drain through the pump bypass. Some water supplies are not capable of getting water to remote locations (especially high up in a building) without the pump, so make sure that the water supply can get some water to the main drain without the pump.
- 3) The results will be completely different in terms of pressure, so do not compare the results back to a time when the test was conducted with the fire pump in order to determine whether or not the system passed the test.

The Water Supply


The discussion under the Acceptance Test portion of this article regarding the warning about not using the results of the main drain test to determine the adequacy of the water supply also holds for the periodic tests performed in accordance with NFPA 25. Since we still don't know the flow during the main drain test, we can't really compare this test to the water supply demand.

The purpose of the main drain test, as explained by NFPA 25 (section 13.2.5), is to check the condition of the pipes bringing water to the fire protection system and to make sure that the control valves are open. The purpose of the test is NOT to test the adequacy of the water supply. If you want to test the adequacy of the water supply itself, you should be conducting flow tests at the water supply (through hydrants or other direct connections), not through

individual fire protection systems connected to that supply. Building owners are responsible for their fire protection systems, but have little or no control over the water utility, so they should not be held financially responsible for problems that may or may not exist in the water utility and they should not be placed in a position of needing to investigate the utility and its practices.

As discussed before, in the situation where the riser is much larger than the drain connection, and where the fire protection system demand is high (there is no chance that the flow from the drain during the test comes anywhere near the demand of the fire protection system), the residual pressure during the main drain test should be above the system demand pressure. But this situation only describes a fraction of fire protection systems, so the statement CANNOT be made that all systems need to have the residual pressure above the system demand pressure during the main drain test.

More importantly, the person performing the main drain test should not be fooled into thinking that everything is okay just because the residual pressure during the main drain test is above the system demand pressure. If the flow is nowhere near the flow demand of the fire protection system demand, then a residual pressure that is higher than the demand pressure does not mean that the water supply can deliver the demand pressure at the demand flow. Since you cannot tell whether or not the system can supply the demand pressure at the demand flow, it is best not to even try to make any comparison or representation between the system demand and the main drain test.

It is best to just perform the main drain test and compare the results to previous tests to determine if the valves are open and make sure that there do not appear to be any obstructions in the piping. 

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■ IFSA

K. Won Kim

Seoul, South Korea



NFSA Illinois Regional Manager, Bob Kleinheinz (r.) presents Brian Conway (m.) and an employee of Great Lakes Plumbing and Heating from Chicago, Illinois an anniversary plaque for 40 years as a NFSA member.



NFSA Illinois Regional Manager, Bob Kleinheinz gave a class at a Sprinkler Summit in Illinois on September 28, 2007. The 100 attendees learned how they could use new Home Fire Sprinkler Coalition public education material.



Jodie Arnold and David Dispenza accept an NFSA 10th Anniversary plaque on behalf of REM-C Fire Protection of Hooksett, NH.



Dominick Kasmauskas congratulates Mr. Dennis Burns, President of D. M. Burns Security of Dover, NH, on their 15th Anniversary as a NFSA Member.

Spring Ahead

BY KARYN HUDGENS

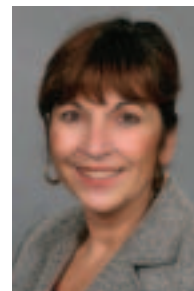
The long, cold winter is finally coming to an end. The spring of 2008 is upon us. We all eagerly await the fresh air and sunshine and are invigorated by the promise of spring, the flowers blossoming, the robins nesting. This renewal of all things warm and wonderful goes hand in hand with renewals of memberships. This is just a reminder to look for your membership renewal letters in the mail. Our Accounting Department has been sending them out on a regular basis and unfortunately, too many end up on my desk for follow up. I would love to talk to each and every member we have, but when I have to call for membership renewals, it just takes the fun out of it. So remember to fill out your renewals and send them in on time.

NFSA wants you to know that we appreciate you, our members! NFSA is your association. Without you, we wouldn't exist. We value your concerns and ideas, opinions, thoughts, triumphs and struggles. We want to know what's going on within your company and what we can do to serve you better. Keep in touch! This column is for you. Celebrate your company's triumphs, send in your pictures and news, share your party photos, your anniversary news and your corporate changes. Most importantly, tell us what's on your mind! We want to know and we want to share it all with the rest of our members.

Now that the warmer weather will have you out and about more, mention the benefits of membership in NFSA to your non-member peers and business associates. Through you, our association gains strength and recognition. Through these invaluable factors, we are able to spread the sprinkler concept throughout the country in an expedient and effective manner. By banding together and encouraging others to join us we can educate lawmakers and the general public on the life and property saving benefits of fire sprinklers.

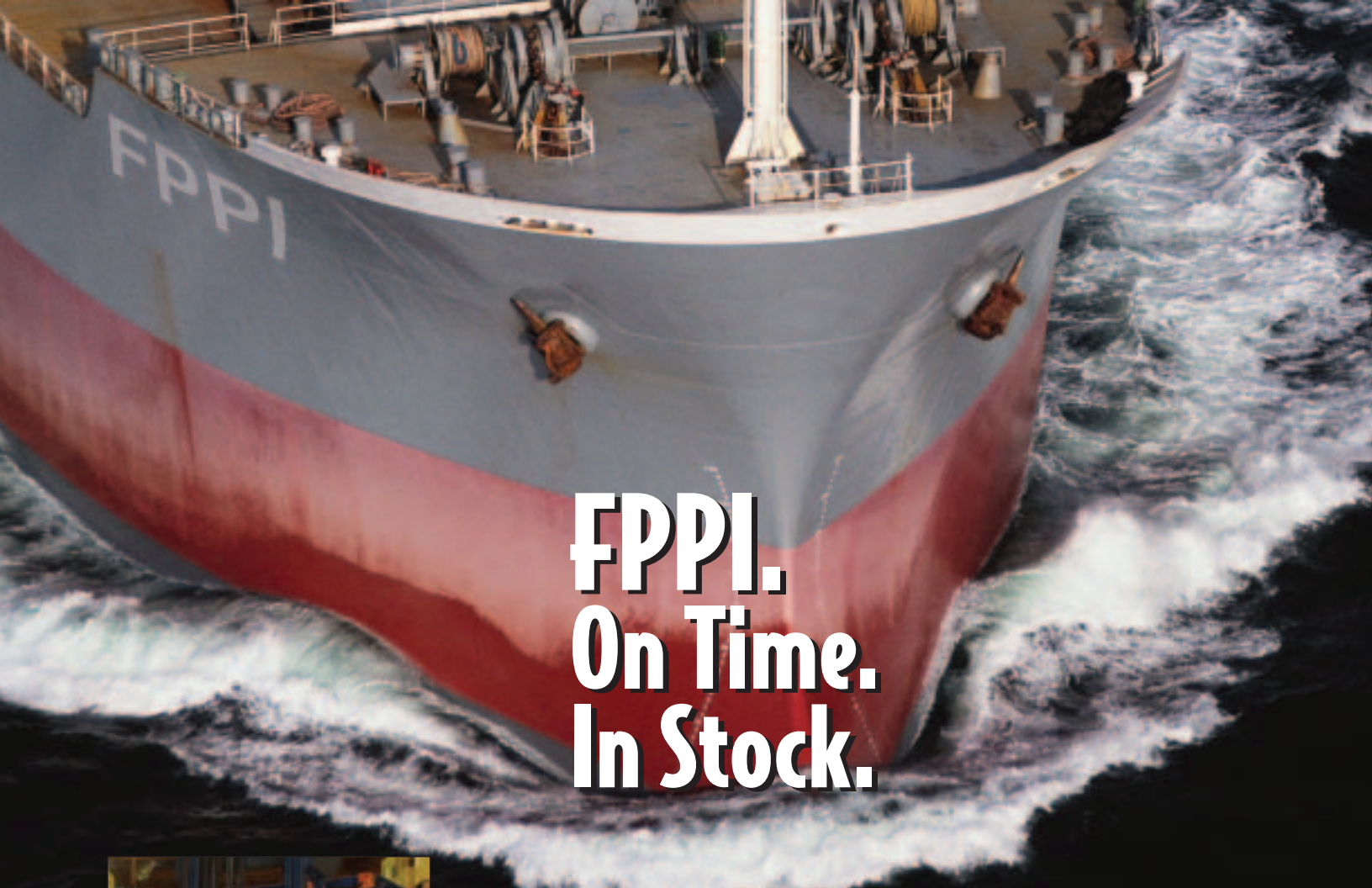
Enjoy the warm weather to come and let it invigorate your spirit. Use some of the extra energy you get from the sunshine and long days to invest in your industry. Get involved with NFSA. It is through the involvement of our members that we are able to accomplish our goals. When it comes to excellence and integrity in spreading the sprinkler concept, we set the bar high. Join us in clearing that hurdle.

Here are just a few of our proud members celebrating an anniversary and a Regional Manager who loves to teach!



Karyn Hudgens

NFSA's Director
of Membership



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Does the Building Official Have to Get Up at 2 a.m.?

Errata: In the January/February 2008 issue of SQ it was mistakenly reported that Russ Fleming was the author of the article that appeared in the Code Corner department. While Russ is a frequent contributor to SQ, the article entitled CMS and Fire Sprinklers in Long Term Care Facilities was researched and written by regular Code Corner contributor Jeff Hugo, NFSAs's Manager of Codes. We apologize for any inconvenience the misprint may have caused.

The most important thing in communication is to hear what isn't being said."

—Peter Drucker (1909 - 2005)

Those that participate in the ICC's code hearings may have noticed subtle changes in the past few years. Changes that have fire officials in the building code committees and vice versa. I see great cooperation between the two in the national code arena. However, locally we still see the division between the two. In the world of building and fire officials, there has been a long silence between the two parties. Or, shall I say, turf battle. Building officials will say 'this is mine' and fire officials will say 'no, that is ours,' whether it is fire alarms, fire sprinklers, dampers, etc. These latter items are both in the building and fire code, so why the battle? Why can't both departments put forth a joint effort to benefit the community? Worst of all, contractors are stuck in the middle while the turf wars are settled. Cooperation between the two needs to be made a top priority!

I've been in the building official and plan examiner business since 1995. By far, I'm no expert. I've made mistakes and fortunately have learned from them. I've learned to make relationships between departments and contractors work for me. I've worked in jurisdictions where no fire marshal was present and in others where the fire marshal played a major role in new and exist-

ing buildings. In areas that a fire marshal wasn't present, I was constantly consulted about the Fire Code by local fire chiefs and asked for an opinion whether it was outdoor storage, setbacks to LPG tanks or FDC locations. I worked well with our local fire departments and shared my code knowledge with them. Most people outside the code business find code books confusing and intimidating. My experience with the local fire departments proved this point. They were glad to have me looking into the issues and relaying the code language back to them in "English." I would operate on the philosophy that we could sleep through the night and didn't have to get up at 2:00 a.m. in the middle of winter to put a fire out. Later on, I was with a building department in a city that had a full time fire marshal and two fire inspectors. Not only were they grateful for a building official that shared plans for them to review, they were taken aback by my knowledge of the fire code and the building code. Both parties learned so much from each other. While I learned more about the fire service, such as how engines and ladder trucks approach a fire, standard operation procedures, the effectiveness of different nozzles and sprinkler operations, they learned building construction from the ground up, formal plan review procedures, how the building code figured in and where they could step up and be more of a team.

A team of the building and fire departments in plan review, inspections and enforcement is the best defense for a city or municipality. Our team was faced with many challenges in a highly politicized town. However, after the first few battles, opinions changed. They changed because we were fair, we were proactive, and we didn't come on site with any last minute surprises. We did our reviews in conjunction, shared our comments, and sent them out as one. We both felt we had jurisdiction over new and existing sprinkler systems. Did we confuse our contractors with our differences? No, we got together and did the underground, aboveground, rough piping, and final inspections as a team. We got to the point as a team that if an inspector that had to be there, couldn't be there, he or she could trust the others to make their inspection report complete. This eliminated the need to have the contractor perform tests again.

CONTINUED ON PAGE 36



Jeff Hugo

Based in Essexville, Michigan, Jeff is NFSAs's Manager of Codes.

CONTINUED FROM PAGE 35

It's time to give old couplings the shaft!

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We were not perfect, but we built a good reputation, and if we had sprung a violation on a contractor that we missed in the past, our reputation smoothed the way. Instead of the contractor beating a path to the city manager, they knew we weren't "out to get them." If a building department or fire department is at odds with the other, it's missing out on great knowledge and the total team experience all contractors are expecting. Extend the olive branch, at least from 8:00 a.m. to 5:00 p.m.

Some of the Expert of the Day (EOD) questions we get floor me. We get numerous questions or situations where the contractor is asked to install sprinklers on the balconies and decks of the residential project they are working on from the local AHJ. This request is made at the final inspection, when residents are waiting to move in. Internally I get angry, not at the contractor asking the question or looking for a solution, but at the local AHJ's. Why? Something went wrong inside City Hall or at the Fire Department most likely. I am one of those pesky building or fire officials, and I expect more professionalism from my fellow reviewers and inspectors. Many times, I'll ask, "Why wasn't this caught at plan review?" Many times the exasperated contractor says, "I don't know" or "Well, it's not done yet?" If the plan review is not done by the time the Certificate of Occupancy is requested there is a problem. Tell me this, AHJ's, how can you inspect a project without approved plans? These plans contain the hydraulic calculations, the cut sheets of all the installed equipment, and the proposed locations of the entire pipe. How can you arrive on site, walk through and give the thumbs up, when you haven't got the ok from the plan reviewer and have those plans on site to double check? I've got a member contractor on the phone, saying, "Is this true? Do sprinklers have to be out on the balconies?" "Yes, it's in the building code and has been since 2003." I'm not put out by the contractor; I'm outraged by the fire and building department. Why do we have to put the contractor who buys the permit, who pays our salaries, in such turmoil?

Summary

Bottom line, we at NFSA want our contractor's plans reviewed for compliance, and we want them reviewed under the guide-

lines of the ICC and NFPA in a timely manner. We expect the best out of our contractors. Being able to see things from both sides, I see great efforts and practices from our contractors, and great efforts from the plan reviewers. Fire sprinkler contractors usually are behind to start, and we always stress to them to get plans to the AHJ as soon as they are done. I know local AHJ's and the budgets they face, and I don't blame them personally, but something has to change. Both the sprinkler contractor and the AHJ need to communicate to come to a solution. The contractor can't afford the last minute changes, and the AHJ can't afford the extra time for paperwork, time taken away from other projects, and the "black eye" given to their profession anymore. We are proud to represent both the sprinkler contractors and the AHJ's. Remember, as professionals of the industry, NFSA is standing by and is ready to help out. ☺



Bear Tracks Theorem

BY BARRY WATERMAN

I've seen fear of liability drive some pretty silly things over my career. We all would think some of this stuff was crazy, except we've read the articles about the big court awards. The person who received an award for getting burned by McDonald's coffee is the poster child.

Ever look at one of your A-frame ladders? It's plastered with some of the stupidest statements imaginable. "Not a step!" "Don't stand here!" Who, we ask, would be stupid enough to stand on the very top of an A-frame ladder? Doesn't simple good sense kick in and prevent these behaviors?

Well, no. And the record will back us up, here. We all know that the nitwit that stood on the top of the ladder took a header. Then he sued his employer, the property where he was working and the ladder manufacturer – AND WON! Well, actually the attorneys for the insurance company sued and won. There is no other explanation for the ridiculous stickers plastered on our ladders.

If you don't warn a nitwit to refrain from even the most obviously dangerous behavior, IT'S YOUR FAULT! Just read the newspaper. This reality has driven anyone with a halfway full pocket (there's no point in suing a homeless person) to sleeplessness, nervous twitches and serious skin rashes. This just can't be so, but we all know it is.

Why do you think your lawnmower shuts off unless you hold down a special bar? Why do you think a circular saw has that thing that slides over the blade?

Warnings we've seen: (on a hammer) "Remove thumb from nail head before striking," (on a matchbook) "Keep flame away from hair," (on a pencil sharpener) "After

sharpening, do not jam pencil into eyeball."

OK, we haven't seen these, but stay tuned for future lawsuits. I want to know this: Why hasn't anybody ever been sued for failing to install a sprinkler system? The consequences of any fire are altered so dramatically by the presence of sprinklers that in our litigious world, one would think this action would be common. Maybe it's just not ridiculous enough.

Maybe there is some cosmic law that we haven't discovered yet like Murphy's Law or The Peter Principle or Catch-22: "No law suit can make sense unless it makes no sense."

Hmmm, how about "Bear Tracks Theorem?"

At any rate there is a cool German word – *Schadenfreude*. There is no exact English word that could be substituted, but the general meaning is "pleasure taken from someone else's misfortune." Not particularly elevating as far as human traits go, but we all know it exists and we all dabble in it from time to time. The supermarket tabloids would be out of business if many of us didn't enjoy hearing how others are suffering.

I want to sit in a courtroom for a few days and hear a hapless property owner get grilled by a few high priced lawyers over why his property was not equipped with a sprinkler system. I want to sit in that section of the courtroom where you can smoke a big cigar and just enjoy watching somebody squirm.

"So you have sufficient means to own property?"

"You knew people would work and/or live in the property?"

"Do you have any knowledge of fire sprinkler technology?"

"Wait. You are of sufficient means to own commercial property, but know nothing of fire sprinkler technology?"

"Oh. Actually, you do. Yet your property was not equipped with sprinklers? Why not?"

"The codes didn't require it? But still you say you are aware of their effectiveness?"

"Did the cost of providing a sprinkler system enter into your decision?"

"So you saved the cost of the sprinkler system even though you knew that the disastrous fire in your property would have been a minor incident if you had invested in a sprinkler system?"

I have to stop. This is just too reasonable, although I was enjoying the fantasy for a few minutes. To my knowledge there has never been such an action in a courtroom, and I have never seen a property with a big sign attached saying, "Danger, not protected by a fire sprinkler system."

Yet I have seen, "Danger, keep hands and feet from under mower." Bear Tracks Theorem. I think I need to get to work on this.



Barry Waterman

Independent consultant to the Northern Illinois Fire Sprinkler Advisory Board.

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NFPA 25 vs. FM 2-81: FM is more restrictive ...sometimes

As you read this, we are somewhere in the world teaching a class on the Inspection, Testing and Maintenance of Water-based Fire Protection Systems. After presenting this to more than 1,200 people in the U.S., the NICET Review

Class on this subject is still going strong and the subject matter is evolving even as we wait for NICET to do the same. There is no shortage of inspectors seeking our help in getting through the maze that NICET presents for applicants. There also is no shortage of information to present in these classes. From case studies of friends that have been invited to a courtroom to explain their side of the inspection process, to the varying requirements of NFPA 25 and FM Global, we have much to discuss in the measly three days we are given with our inspectors out there in the real world. You have heard us lament about the industry's use of that mythic phrase: "The Annual Inspection." Indeed, we have called for the death of this phrase. You have heard us talk about the many inspection and testing procedures and their differing frequencies. You have heard us plead for action from you in inviting AHJs and owners to these classes.

Boy, are you responding! We constantly field questions about proper language for inspection contracts. How impressive that our industry is interested in protecting themselves and the property owner by ensuring there is language defining exactly what is to be done and when. How impressive it is

that the industry is trying so very hard to educate both AHJs and owners, about the proper and required procedures for the upkeep of a most important life safety system. Most municipalities have ordinances that point to NFPA 25 as the law. Most insurers have contract language that requires NFPA 25 at a minimum. Some insurers have their own requirements. Are you familiar with FM Global's (FM) requirements for the proper inspection, testing and maintenance (ITM)? Most of you have told us that you inspect properties insured by FM and we know you want what is best for your customers. You'd like very much for your customer to get paid for any claims that may happen during a fire event while the sprinkler system is being tested and inspected. So let's discuss FM's inspection requirements for their insured properties.

FM

Ok, so you've never heard of this document, but you've likely heard of FM 2-8N, FM's guide for the installation of sprinkler systems. 2-8N has every word of NFPA 13 in it. When FM does not agree with any requirement found in NFPA 13, they have written their special requirements immediately following that section of NFPA 13. Now mind you, FM has separate data sheets for ESFR systems, water supplies, and many other subjects. One of these is a separate document that is buried way down in the list of data sheets in between all of the FM approval sheets for the parts and pieces of a sprinkler system. Located between an accelera-

tor and a flooding valve is data sheet 2-81, Fire Protection System Inspection, Testing and Maintenance and Other Fire Loss Prevention Inspections. There is a big difference between FM's sprinkler installation guide and their inspection guide. One of the differences is that the FM sprinkler installation guide actually includes the requirements from NFPA 13 in it. The FM inspection guide 2-81 does not have the requirements of NFPA 25 within the document. Compared with NFPA 25, some of FM's requirements are more stringent and some are less. This article does not even come close to a good comparison, but is intended to show that there can be a substantial difference between FM 2-81 and NFPA 25. If your company is going to perform an inspection correctly in an FM insured property, you will need to perform the more demanding inspection or test.

The first things to consider, when thinking about a contract for an FM insured property, are the intervals required for certain inspection and testing procedures. The

CONTINUED ON PAGE 40



Cecil Bilbo

Cecil is NFSAs Director of Technical Services. He is a member of the NFPA Sprinkler System Installation Criteria Committee.

| System or Component | NFPA 25 procedure (2002 edition) | NFPA 25 frequency | FM 2-81 procedure (2007 edition) | FM 2-81 frequency |
|---------------------|---|---|---|--|
| Control Valves | Inspect | Weekly (locked) Monthly (tampered) | Inspect Try Valve Handle | Weekly (locked) Monthly (tampered) |
| | Test Full Operation | Annually | Test Full Operation | Annually |
| | Test Position of Valve | Annually | Test Position of Valve | Annually (OS&Y, B'fly) Monthly (PIV & roadway box) |
| Tamper Switches | Inspect | Same as control valve | Inspect | Same as control valve |
| | Test for Alarm | 6 months | Test for alarm | Monthly |
| Water Flow Devices | Test for Alarm | flow switch / 6 mo's press switch / 3 mo's WMG / 3 mo's | Test for Alarm | All Types / Quarterly |
| Gauges | Inspect (Wet System) | Monthly | Inspect | Weekly |
| | Inspect (Dry, Preaction and Deluge Systems) | Monthly (w/low air switch) Weekly (w/o low air switch. Also freezers) | | |
| | Test (calibrate or replace) | 5 years | | |
| Main Drain Test | Open valve, read gauges, close valve, read gauges | Qrtly with backflow, annual w/o backflow After any impairment | open valve, read gauges, close valve, read gauges | Annually, weekly in freezing temps, after any impairment |

CONTINUED FROM PAGE 39

table below is a brief comparison of some of the frequencies and procedure differences required in these two documents. This is a small comparison of just a few items.

As you can see in the table the more stringent requirement may be NFPA 25 or it may be the FM guidelines. The other differing requirements that deserve discussion are the impairment procedures found in both documents. The impairment procedures in NFPA 25 are very important to the Inspector and the Owner. These procedures define the responsibilities for each role. This lays a clear legal line for us to follow in our contractual relationships. The FM impairment process carries a little more of a bite. FM is an aggressive enforcer of the contracts they hold with their customers. Their contracts include following the procedures outlined in what is known as the "red-tag system." Under this system, there are 11 steps to be followed by the owner when the system is taken out of service. Remember, FM is reluctant to pay a claim when these steps are not followed:

1. Determine if any "hot work" is being

- performed. Take appropriate actions.
2. Determine if smoking is allowed in affected areas. Take appropriate actions.
3. Determine if there are any hazardous operations ongoing. Take appropriate actions.
4. Has "pre-work" (i.e. materials laid out and distributed for installation) been accomplished prior to impairing the system?
5. Ensure that work can be carried out to completion.
6. Determine if temporary protection can be provided. Take appropriate actions.
7. Determine if the work can be performed after hours or when there are fewer sources of ignition.
8. Inform the FM Global Customer Service Desk by phone, fax, or email that system is going to be impaired. FM has a list of at least six items to include in this communication.
9. Notify the local fire services of the system impairment.
10. Provide a fire watch for unprotected areas.
11. Assign an individual to be responsible

for opening valves and turning on equipment in the event of an emergency during the impairment.

Once these 11 steps have been completed, the owner must give parts 2 and 3 of the "red tag" to the person that is going to close the valve. The owner is required to instruct the person closing the system control valve to count the number of turns it takes to do so. This allows the person opening the valve to ensure that the valve does not get stuck partially open.

Once the work is complete and the system is restored to service, the following steps must be taken on an FM insured property:

1. Perform a main drain test to ensure water supply is open and restored.
2. Flush and test underground mains when alterations are performed on underground supply piping.
3. Ensure fire pump is fully reset.
4. Ensure control valves are open fully and monitored properly.
5. Ensure all electric actuators (switches, pre-action, and deluge valves) are reset and in service.
6. Notify the FM Global customer service desk and let them know that the impairment is over and the system is back in service.

These requirements from FM are specific to the insurance side of the ITM procedures and do not discuss the various requirements for the impairment coordinator from NFPA 25. It is important that you combine these requirements to determine a course of action on every FM insured property for which you have contracted the inspection, testing and maintenance services. It is our hope that the fire sprinkler industry continues improving the performance of installed systems through the proper inspection, testing, and maintenance of water-based fire protection systems. We also hope that this industry continues to pursue the advancement of educational opportunities for the owner and the AHJ. We are proud to work for the members of an association that has these interests driving the work we perform. If you inspect systems on FM insured properties, we hope this article helps you raise the level of quality of the work you do. And remember, you can always contact us with your technical questions and concerns at eod@nfpa.org. ☎

Cooperation and Communication – A Formula for Success

The interaction between authorities having jurisdiction (AHJ) and fire sprinkler contractors sets the tone on whether the process of plan submittal to final inspection is a journey of trust and satisfaction to all parties or a quest to see who can overpower the other. In the words of Sherlock Holmes, “Alas my dear Watson, the game’s afoot!”

Cooperation and communication on issues of local rule and plan review policies will assist all parties in timely and complying submittals. The fire service representatives work on a base of federal, state and municipal principles that establish the guidelines they must follow to ensure the public safety of their respective communities. Whereas, the fire sprinkler contractor works on a code of business ethics to ensure that their product or service is of quality to provide the client with what was promised thereby not creating a level of liability that could cost the contractor their reputation or business itself.

Communication becomes the first element in establishing a cooperative process. When all involved parties are informed of the specifics of a project, the evolution from nothing to viable product becomes a journey of distinction. When strife enters into the formula, the result is a trek into unpleasant and strained relationships, from which no winner surfaces.

To the contractor, it becomes a tedious task to understand and adapt the local ordinances, policies and other nuances of a community when not all have been publicly

posted. It is understood by the AHJ that local rule is a norm. To the contractor working in more than 150 Twin City area jurisdictions, it is a monumental pain to keep abreast of potentially ever-changing edicts in the multiple communities they do business. Does it happen that an AHJ exceeds their authority with some unrealistic and costly requirements? Yes may be the answer. Does this affect the base cost of a successful bid? Most definitely.

To the AHJ, working with different fire sprinkler layout technicians, installers and general contractors poses some issues. AHJ’s expect an established process to be followed; quality and correct plan submittal, review & acceptance of those plans, permit issuance, authorized work start, successful timely inspections, completed project inspection and acceptance and activation of a reliable fire sprinkler system. Challenges to relationships often occur when an element of the equation is unsuccessfully met. Does sub-par design, materials or installation occur? That answer may too be yes! Will this affect the acceptance of a sprinkler system? Again, the answer is most definitely?

Now one would ask if this is a local or national issue, the answers are yes and yes. Communication and cooperation problems exist in every state and most municipalities to some extent. Is this a dilemma that cannot be fixed? I believe all would say NO. But what will it take to clear the lines of communication and establish a working trust with all of the parties? The answer may be simpler than the solution but the parties need to get together and air their concerns instead of attempting to conquer

the other through a power struggle.

The state of Minnesota is entering into the solution process to establish the communication and cooperation formula to successfully promote public and private relationships that will provide the best possible product for the public at large. It started with a meeting of State Fire Marshal’s Division, state fire chiefs & fire inspectors along with representatives of the fire sprinkler industry. It will progress with a survey to all Twin Cities collar communities to recognize those jurisdictions that have local ordinances or policies that exceed the state building code requirements. By state code, there are specifics that restrict some amending of the code. The survey will help establish two points of interest; those communities that have ordinances and policies different than state code and what the contractors will need to use for information to adjust their bidding of projects before they feel they have been blindsided.

The AHJ has always stated, “Perfection is not optional.” The contractor has subsequently asked, “Why can’t the process

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Dan Gengler

NFSA's North Central
Regional Manager.

Regulations Technology ARE CHANGING

**What is YOUR Business
Doing To Be As Competitive
As It Can Be?**

Fire protection contractors may not realize the impact that changes in regulations and technology have on their bottom line.

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Contractors who have trained their employees on the latest technology can often leverage that skill to *be more competitive in the bid process.*

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Those contractors often see a jump in accurate designed and quality of work, resulting in *fewer change orders or rework.*



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follow the standard of reference and not be deviated?" These two statements have the opportunity to be unison in scope and in reality, the opportunity for that outcome is the goal of the focus group addressing the issues of concern.

The local survey and a document created by the Minnesota State Fire Marshal and the Minnesota Chapter of the National Fire Sprinkler Association White Paper titled, "FIRE CODES and SPRINKLER REQUIREMENTS-LOCAL CODES vs. STATE CODES" will be reviewed by all concerned parties to help establish a "Summit" sometime in

early 2008. The agenda for that local area gathering is to present contractors, fire, building and legislative officials an understanding of state law with opportunities to address local issues and contractor responsibilities to help foster the cohesive atmosphere that will ensure cooperative and communicative relationships to which everyone wins. Who can challenge that euphoric business climate? We hope to report sometime in 2008 an agenda that will help all do their respective business easier and with the integrity of the fire and sprinkler parties at its pinnacle of cooperation. ☉

Save the Date!

**7th International Fire Sprinkler
Conference & Exhibition**
Radisson SAS Scandinavia
24 – 25, June 2008
Copenhagen, Denmark

COPENHAGEN 2008

NFPA 13 Computerized Hydraulics Forms Requirements Take Effect

NFPA 13 has only rarely contained effective dates for specific requirements. The last one was the inclusion of a January 1, 2001 implementation date for the Sprinkler Identification Number system in the 1999 edition of the standard. This was intended to allow sprinkler manufacturers enough time to choose identification characters, implement the markings, and revise their technical literature appropriately.

The 2007 edition of the sprinkler standard also contains an implementation date, one that became effective January 1, 2008. The date governs the implementation of new requirements for the presentation of computerized hydraulic calculations in Section 22.3.5. This change was made to benefit individuals charged with plan review responsibilities. The variety of marketed computerized hydraulic programs had led to substantial differences in the way in which information was presented. Since this new change was essentially finalized when the 2007 edition of NFPA 13 was accepted at the June 2006 NFPA World Safety Conference in Orlando, software vendors had 18 months to make the necessary adjustments to their programs.

The changes involve the addition of a new Figure 22.3.5.1(c) – Supply and Node Analysis Sheet and Figure 22.3.5.1(d) – Detailed Work Sheet. These sheets contain specific formats to be utilized in the presentation of the information prepared for and during hydraulic calculations. The Supply Analysis data is straightforward water supply test information. The Node Analysis identifies “node tags” assigned to hydraulic reference points on the shop drawings, and organizes information regarding the elevation, node type, and the pressure and discharge at each node. The Detailed Work Sheet presents “pipe information” in a manner similar to the hydraulic calculation work sheet used for hand calculations, as contained for many years in the annex of NFPA 13 (Figure A.22.3.2(c) of the 2007 edition).

Although the 2007 edition may not yet be officially adopted in most jurisdictions, the fact that this implementation date has been established will lead to requirements

by a growing numbers of AHJs. The ability to review computerized calculations in a manner similar to traditional hand calculations should help eliminate oversights and errors.


NFPA Issues Report on Cooking Fires

The National Fire Protection Assn. (NFPA) announced the completion of a report and accompanying educational tools on behavioral mitigation of cooking fires. The report, “Behavioral Mitigation of Cooking Fires Through Strategies Based on Statistical Analysis,” and accompanying educational videos and presentation are the result of an NFPA partnership with the U.S. Fire Administration (USFA) to develop sound research-based recommendations for behavioral mitigation strategies to reduce cooking fires in the United States and the resulting injuries and deaths.

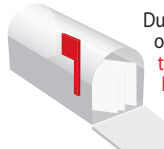
Unattended cooking is the single leading factor contributing to cooking fires. According to the USFA’s National Fire Incident Reporting System data from 1999 to 2003, cooking equipment had been left unattended in 37% of the reported home cooking equipment fires overall and was a factor in 45% of the deep fryer fires and 43% of the range fires.

In addition, unattended equipment was a factor in 42% of the cooking fire deaths and

44% of the injuries. Some type of combustible material too close to the cooking equipment was a factor in 13% of home cooking fires, 24% of the associated deaths, and 12% of the associated injuries, making heat source too close to combustibles the second leading factor contributing to ignition for home cooking fires, after unattended equipment. 55% of the people injured in U.S. home cooking fires were injured when they tried to fight the fire themselves.

The project recommends educational messages for safe home cooking that address several behaviors including: staying alert and watching what you are cooking, keeping things that can catch fire apart from heat sources, knowing what to do if you have a cooking fire and your clothes catch fire, properly installing and using cooking equipment, preventing and treating scalds and burns, and having working smoke alarms. 

NFSA ADDRESS CHANGE



Due to changes at the local post office, NFSA is **discontinuing** the use of the P.O. boxes for NFSA and IP mailings (Box 1000 and Box 448). Mail will be delivered directly to NFSA at 40 Jon Barrett Road. As such, please discontinue the use of the P.O. boxes in all correspondence, payments, billings et al. sent to NFSA headquarters in New York. The post office will forward from the P.O. boxes for a while, but at some point in 2007 will stop honoring the forwarding instructions.

IMPORTANT SAFETY RECALL

Model “J” Dry Style Fire Sprinklers
Manufactured by Globe Fire Sprinkler Corporation

The sprinklers may not operate in a fire, creating a risk of death or serious injury.

AFFECTED SPRINKLERS

- Globe Model “J” dry style fire sprinklers
- Manufactured between 1990 & 1999
- Pendent, upright, and sidewall sprinklers

WHAT TO LOOK FOR:

- “GLOBE,” “J,” and year (1990 - 1999) embossed on flat surfaces of the frame

- Installed in nursing homes, hospitals, long-term care facilities, offices, supermarkets, apartment buildings, and other buildings

WHAT TO DO:

- Check areas where dry sprinklers might be installed (unheated attics, porches, freezers and coolers, parking garages, warehouses)
- Until you obtain replacement sprinklers, have working smoke detectors and adequate escape plans

To learn how to receive replacement sprinkler heads at a substantially reduced cost:

- (1) Call **1-800-248-0278** between 8:00 a.m. and 5:00 p.m. EST,
- (2) Visit Globe’s web site at www.globesprinkler.com and click on the “Recall” link,
- or (3) Contact Globe by mail at 4077 Airpark Drive, Standish, MI 48658.

Jim Tuten Named Chairman of the Codes and Standards Committee for the Georgia Fire Sprinkler Association

NFSA member, **James W. Tuten**, SET of Harrington Group, Inc. has been named Georgia Fire Sprinkler Association's (GFSA) Chairman of the Codes and Standards Committee. Mr. Tuten has been a Project Manager with Harrington Group for over four years, specializing in the consultation of fire sprinkler system design and installation. He is NICET (National Institute for Certification of Engineering Technicians) Level IV certified in automatic sprinkler systems. His areas of expertise include: design and estimation of sprinkler systems, performing computer hydraulic calculations, CAD drawing preparations, and management of installation projects.

Mr. Tuten's responsibilities as Chairman of the Codes and Standards Committee of the GFSA will include mediation between fire sprinkler contractors and fire officials in the interpretation of codes and standards. GFSA is a nonprofit organization designed to promote and educate the public in regards to the automatic fire sprinkler industry. For more information on GFSA, please visit: <http://www.georgiafiresprinkler.org/index.php>.

Viking SupplyNet Announces New Regional Sales Manager for the Southeast U.S.

Viking SupplyNet announces the promotion of Jeff Trew to the position of

Regional Sales Manager for the South region. In his new capacity, Trew will manage the company's total sales efforts in an eleven state region stretching from Texas to North Carolina.

Trew brings with him seventeen years of proven sales experience with Viking SupplyNet. Most recently, he served as the company's Territory Manager for the Georgia and north Florida markets. In this role, Trew twice received the company's annual Sales Leadership Award. His previous experience also includes roles as a Viking National Technical Representative and as the Territory Manager for the Florida and Texas markets. He is also the acting President of the Georgia Fire Sprinkler Association and is a member of both the Society of Fire Protection Engineers and the American Society of Plumbing Engineers.

Paul Merryman joins Elkhart Brass As Regional Sales Manager

Elkhart Brass is pleased to announce **Paul K. Merryman, Jr.** has accepted the position of Regional Sales Manager for our Mideast Territory Region, including: Ohio, Kentucky, Indiana, Michigan, and Illinois.

Paul comes to us with over 15 years of Sales experience, most recently as a Sales Representative at Fire Safety Services, where he achieved a proven record of sales leadership. Paul has also been a volunteer fire fighter with the Utica Volunteer Fire Department in Utica, Ohio for the past 4 years and holds Ohio-state certification as Fire Fighter I.


Prior to his work with Fire Safety Services, Paul was the Warehouse and Sales Manager of Adrian L. Wallick Company, a materials supply and installation company. Paul has done course work at Indi-

ana State University and Trevecca Nazarene University.

Elkhart Brass is proud Paul has chosen to join our team as we continue to grow to better serve our customers. We strongly believe Paul's commitment to excellence in customer service and his experience in the fire service industry will benefit future growth and development of the Mideast Territory.

Richard E. Oliver Retires from Oliver Sprinkler Co., Inc.

Oliver Sprinkler Co., Inc. announced that **Richard "Dick" E. Oliver** retired from the family-owned, King of Prussia, Pennsylvania-based, fire protection company on June 30, 2007, after 33 successful years in the business. Dick began working with Oliver Sprinkler Co., Inc. in June, 1974 where he started in the Inspections Department and later took over all service work. Dick also served as Project Manager, President and Chairman of the Board during his tenure. Dick stepped into the role of President in 2000 when his older brother Bill retired and passed the company reins to the third-generation in 2005 when his eldest son, David, took over the position of President.

Dick was actively involved in the fire protection industry serving as a committee member on the NFPA 25 Inspection, Testing and Maintenance of Water-Based System Committee, NFPA 13 Sprinkler System Installation Criteria Committee, Chairman and Member of the National Fire Sprinkler Association (NFSA) Engineering & Standards Committee and President of the Philadelphia-Delaware Valley Chapter of the Society of Fire Protection Engineers (SFPE). 

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NFSA Supplier and Manufacturers (SAM) Council – 2008

NFSA Realigns Three Regions to Better Serve Membership

In a move to better serve the membership, NFSA is very pleased to announce the realignment of three regions. The state of Nevada has been moved from the Mountain Region to the Southwest Region served by Doyle Sutton. The Southwest Region now includes the states of Arizona, Colorado and Nevada. With the announcement of Chris Gaut being appointed as Regional Manager for the Central Region, the region has been realigned to include the states of Iowa, Kansas and Missouri. The state of Nebraska has been moved to the Mountain region served by Terry Phillips. The Mountain region now includes the states of Montana, North and South Dakota, Utah, Wyoming and Nebraska.

NFSA Announces SAM Council Election Results

NFSA is pleased to announce the following three supplier and manufacturer members received the most votes in the recent SAM Council election and have been seated effective January 1, 2008 to 3-year terms: Buck Buchanan of HD Supply Fire Protection, Jim Henry of Potter-Roemer and Dean Taylor of Anvilstar.

Among the SAM Council's most important responsibilities are site selections for the NFSA Annual Seminar during exhibition years. Below is an updated roster of SAM Council members.

NFSA Welcomes New Chapter

The National Fire Sprinkler Association (NFSA) is very pleased to welcome the Tennessee Fire Sprinkler Contractors Association (TFSCA) as its newest state chapter. The announcement comes following the conclusion of a two-year pilot program in which TFSCA members were able to take advantage of all the services, resources and benefits of NFSA membership.

Upon receiving the news yesterday of the TFSCA commitment to NFSA, NFSA President John Viniello said, "We are absolutely delighted the members of the Tennessee Fire

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Sprinkler Contractors Association have collectively made the strategic decision to join with NFSA to promote fire sprinklers. This partnership will help strengthen NFSA's presence not only in the state of Tennessee, but throughout our Southeast Region." He added, "This is a perfect example of a state association working with a national organization to set and achieve mutually beneficial goals. Our Director of Regional Operations, Buddy Dewar, Director of Membership, Karyn Hudgens, Southeast Regional Manager and Tennessee Fire Sprinkler Contractors Association Executive Director, Wayne Waggoner and the leadership of the TFSCA are to be commended for the statesman-like work that went into making this partnership a reality."

Regular updates on the activities of the Tennessee Fire Sprinkler Contractors Asso-

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Fred Barall, Secretary
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 Fax: (410) 884-1511
 Email: barall@nfsa.org

ciation – a Chapter of NFSA, are posted at the TFSCA website at www.tfsc.com.

For more details about this and other TFSCA news, NFSA's Southeast Regional Manager Wayne Waggoner can be contacted by phone at: 865.947.3393; or by email: waggoner@nfsa.org.

Industry Advancement Fund Hits \$163,000 in Pledges

The previous update from the Industry Advancement Fund from the middle of December 2007 indicated that the fund had reached \$98,000 in pledges. As of this writing, however, NFSA is very pleased to report that contributions to the fund now total

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\$163,000.

The most recent pledges include a \$50,000 Platinum Level Sponsorship from SimplexGrinnell – the highest level of sponsorship and first of its kind so far, \$10,000 Bronze Level Sponsorship from Allied Tube & Conduit and a \$5,000 Industry Promoter Sponsorship from System Sensor.

Since the introduction of the Industry Advancement Fund back in November 2007, the outpouring of support has been tremendous. Fire sprinkler contractors, suppliers, manufacturers and even individuals have made generous contributions into the fund. To follow is a complete list of contributors:

Wayne Automatic Fire Sprinklers, \$30,000; Dalmatian Fire, \$10,000; Gregg Huenekens, \$10,000; Northstar Fire Protection of Texas, \$10,000; Bruce LaRue, \$2,000; Engineered Fire Protection, \$10,000; Robertson Fire Protection, \$2,000; Flexhead Industries, \$10,000; Tri-State Fire Protection, \$2,000; RCI Systems, \$5,000; Wolverine Fire Protection, \$2,000; Globe Fire Sprinkler Corporation, \$5,000; SimplexGrinnell, \$50,000; Allied Tube & Conduit, \$10,000; System Sensor, \$5,000.

News of the first disbursements to be made from the fund and the appointment of trustees will be reported in future issues of NFSA publications and at the website. Detailed information about to how to make a contribution into the fund and its function can be found at the NFSA website through a link at the Industry Advancement Fund logo.

NFSA Announces Chris Gaut as Manager of Central Region

NFSA is pleased to announce the appointment of **Chris Gaut** as Regional Manager of the Central Region, which includes the states of Iowa, Kansas and Missouri. Chris has spent the last 12 years in the fire service. He began his fire service career as a firefighter, later moving to the positions of Fire Inspector and Assistant Fire Marshal. Before joining NFSA, Chris was the Fire Marshal for the Eureka Fire Protection District in Eureka, Missouri.

“We are extremely pleased to have Chris join the NFSA Regional Manager Team,” says NFSA President, John Viniello, “We

expect him to make a swift and effective impact on spreading the fire sprinkler concept in our Central Region.”

Chris holds certifications in fire investigations, fire inspections and firefighting. He holds professional memberships with the NFPA, ICC, IAAI and the Missouri Fire Marshal’s Association.

Chris can be reached at cgaut@charter.net or 189 Eureka Town Center Dr. Suite 135, Eureka, Missouri 60325 Phone (845) 803-6426 Fax (636) 410-7700.

Sprinklerman™ Coloring Contest Winners Announced

After what was a long and difficult decision process, the winners have finally been selected for the 2007 Sprinklerman™ Coloring Contest. The contest picture was available in both GrassRoots and on the NFSA

website. Deadline for entries was October 31, 2007.

The NFSA takes pride in announcing that 160 entries were received, double the number received in the last contest, held in 2006. It is very gratifying to see this great increase in participation and to know that more and more children are learning about fire sprinklers. The pictures were all exceptional and the time and care taken in completing them were evident in each and every one.

Entries were separated into four categories, based on age: 3-4, 5-7, 8-9 and 10-12. The winner of each category received a \$50 savings bond. Thanks go out to all who entered.

Congratulations to our 2007 Sprinklerman™ Coloring Contest Winners:

- Angelina Smith, Age 4, Illinois
- Hannah Maus, Age 6, Iowa
- Dylan Lima, Age 9, New Hampshire
- Lizeth Hernandez, Age 11, New York

Angelina Smith, Age 4, Illinois



Hannah Maus, Age 6, Iowa



Dylan Lima, Age 9, New Hampshire



Lizeth Hernandez, Age 11, New York

NORTHEAST

DON KASMAUSKAS, REGIONAL MANAGER



Connecticut- 13D Concerns to be Discussed by State

A Spring 2008 Symposium is being

scheduled through the Connecticut Department of Public Safety to discuss fire sprinklers in one- and two-family houses. I have been seeking costs and percentages regarding this issue. I thank the few members that have contacted me, but I will need more data to go into this with accurate information and to sit on the panel.

Some issues identified to be discussed are:

- Benefits of Residential Sprinklers
- Cost of Residential Sprinklers
- Water Supply for Fire Protection
- Technical Issues of Installations
- Residential Sprinkler Codes and Standards

If you have any further data or information to offer, please supply as soon as possible. One issue that I know is going to arise are the underground costs; who is doing, is it part of a 13D quote, etc. My contact information is available below.

Fire Sprinkler Saves Abundant in the Northeast

There have been several fire sprinkler saves in many categories of occupancies...student housing, commercial, single-family homes, and a firehouse! Although generally a “non-news event” more and more journalists are picking up on the water damage. Most reporters are just not making the connection of less water damage versus more fire damage without a helping hand.

I have been addressing several media items casting fire sprinklers in a negative light, but I need your help in making sure that the NFSA has the news reports addressed.

On the flip side, acknowledgement is sent to a journalist with a news item that gets it right. There have been more and more news items with well related fire sprinkler operations or coverage of the facts. For example, after the Bennington, Vermont firehouse incident was reported at 6:00 p.m. on one Albany, New York news cast reporting on severe water damage I was able to communicate with the reporter to change

her 11 PM news cast. The 11:00 p.m. edition ended with “the fire damage would have been much worse if there had not been a fire sprinkler present.”

These innocent news reports can leave a (subliminal or conscious) negative taste with their audience and need to be addressed. Many journalists have been curious to learn more, but in many cases I think the reporters are just steering clear of any fire sprinkler reporting.

Dominick Kasmauskas is the NFSA Regional Manager for the Northeast Region. He can be reached at Kasmauskas@nfsa.org or 1436 Altamont Ave. Suite 147 Rotterdam, New York 12303 Phone (914) 414-3337, Fax (518) 836-0210.

MID-ATLANTIC

RAYMOND W. LONABAUGH, REGIONAL MANAGER



NJ League of Municipalities Annual Confer- ence & an Interest- ing Sprinkler Save:

We believe we can

honestly say there is probably no New Jersey municipal official who doesn't know about the New Jersey Fire Sprinkler Advisory Board. Chances are if he or she has a calendar hanging in their office, it's from NJFSAB. Again, this year, NJFSAB participated in the exhibits at the NJ League of Municipalities Annual Conference, which was held on November 13th - 15th in the Atlantic City Convention Center. The NJFSAB booth was definitely alive and did a great job in getting the word out about automatic fire sprinkler systems, especially the current high-rise fire sprinkler retrofit proposal.

While working the booth two women came up to me and told me they knew all about fire sprinklers. As they sure didn't appear to be sprinkler fitters and were not contractors, I inquired how they knew about fire sprinklers. The two women went on to explain that they were having dinner the night before at P. F. Chang's Chinese Restaurant in Atlantic City. As they were having dinner the automatic fire sprinkler system activated in the kitchen. They said the fire alarm sounded, but seeing no fire, no one left the restaurant, they just continued on with their meal. Evacuation of the restaurant did not occur until the Atlantic City

Fire Department arrived. Once outside, the two women looked in the window of the kitchen and noticed that there had been an actual fire in the kitchen, which was contained by the automatic fire sprinkler system. Needless to say, there certainly was no panic, nor were there any injuries; however, there were quite a few free meals.

Raymond W. Lonabaugh is the NFSA Regional Manager for the Mid Atlantic Region. He can be reached at: Lonabugh@nfsa.org or P.O. Box 126, Ridley Park, Pennsylvania, 19078. Phone: (610) 521-4768.

SOUTHEAST

WAYNE WAGGONER, REGIONAL MANAGER



Recent Fires May Spur Fire Sprin- kler Bill in South Carolina

There is a growing movement in South

Carolina to make it easier to install fire sprinklers in businesses and homes in the wake of the tragedies this year in Charleston and Ocean Isle Beach. House Speaker Bobby Harrell said Tuesday he plans to introduce legislation that would provide tax credits to businesses — and possibly home developers — to encourage installation of sprinklers. Top officials with the Municipal Association of South Carolina, Hospitality Association of South Carolina and Home Builders Association of South Carolina told The State they support tax credits for fire sprinklers.

The bill was first proposed after the June 18 furniture store blaze that killed nine Charleston firefighters — the nation's worst firefighting tragedy since the 2001 World Trade Center attacks. The building didn't have fire sprinklers, nor was it required to under state law. The issue of fire sprinklers in homes has taken on new urgency since the Oct. 28 fire at a beach house in Ocean Isle Beach, North Carolina that killed six USC students and one Clemson student. The house had working smoke detectors but no fire sprinklers.

From Fire Chief Gary Corbet of Roanoke Rapids, North Carolina

Thought you might like to hear that we had a sprinkler save last night in Roanoke

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Rapids. Fire was in a 2 story brick "taxpayer," businesses on the ground floor, 6 apartments on the 2nd floor. The incident was one block off the main street of town in the historic district. The incident was also at the rear of City Hall, which is separated from the fire building by an alley. The cause of the fire that ignited the cabinets above the stove was cooking. Fire ran across the ceiling until the fire sprinkler activated and extinguished the fire. What I thought was significant about this call was the fact that we found two apartments without smoke detectors, and in the other four apartments the detectors were not working. Roanoke Rapids Fire Department did not have to flow any water through the deployed attack line.

Wayne Waggoner is the NFSA Regional Manager for the Southeast Region. He can be reached at: Waggoner@nfsa.org or PO Box 9, Andersonville, Tennessee 37705, Phone (863) 947-3393, Fax (863) 381-0597.

FLORIDA

DAVE BOWMAN, REGIONAL MANAGER



Hawk's Cay Conference a Success

The 2007 Annual Conference at Hawk's Cay Resort on Duck Key was termed a

huge success by the nearly 100 fire sprinkler contractors, suppliers and manufacturers and Authorities Having Jurisdiction who attended.

An all-new program was presented by a variety of well-known speakers, offering 22 CEU's to attendees. The keynote speaker was Geri Jewell, an actress best known for her role as Cousin Geri on the "Facts of Life" and as Jewel in HBO's critically acclaimed series "Deadwood." Her presentation was titled "Celebrating Abilities" and moved everyone attending to examine and celebrate their lives and view life in a much wider perspective.

Other speakers included National NFSA Staff members, Jeff Hugo, Manager of Codes, Bob Kleinheinz, Illinois Regional Manager; Dom Kasmauskas, Northeast Regional Manager; Jim Dalton, Director of Public Fire Protection, as well as NFSA Director of Regional Operations, Buddy Dewar and Florida Regional Manager Dave Bowman,

who presented a wide range of topics, including: "Working with the AHJ", "Advancing the Fire Sprinkler Concept", "Tort Reform", "The HFSC and the Chicagoland Project", "Water Purveyors", and the "State Required" courses for contractor license renewal.

Visit www.floridafiresprinkler.com for some photos of the conference.

David Bowman is the NFSA Regional Manager for the Florida Region. He can be reached at Bowman@nfsa.org or 6572 SE 173rd, Court Ocklawaha, Florida 32179

Phone (845) 519-7648, Fax (661)455-3968.

GREAT LAKES

JEFF HUGO, REGIONAL MANAGER

GREAT LAKES REGION



Sprinkler Save at Owensboro, Kentucky Bookstore

An early morning fire on December 18, 2007 at Books A Mil-

lion in Owensboro, Kentucky was doused by the store's fire sprinkler system. Firefighters put the fire out and were quick to credit the stores sprinkler system in aiding with the extinguishment of the blaze.

Steve Leonard, of the Owensboro fire department, pointed out that in 97 percent of all buildings that have fire sprinklers the fire is either put out, or controlled until firefighters arrive. That was the case with the Books A Million fire.

Firefighters say it appeared the fire started in the back of the store. The store suffered smoke and water damage, but the blaze could have been a lot worse. Leonard stated that in dealing with a bookstore, there are a lot of light combustibles and flammables which are the types of things that send a fire out of control very easily. The fire sprinkler system was key in preventing that from happening in this fire.

Jeff Hugo is the NFSA Regional Manager for the Great Lakes Region. He can be reached at Hugo@nfsa.org or 1088 West Borton Road, Essexville, Michigan 78732
Phone (845) 519-5963, Fax (989) 891-0494.

ILLINOIS

BOB KLEINHEINZ, REGIONAL MANAGER

Sprinkler System Douses Christmas Tree Fire In Evergreen Park, Illinois Mall

A 35-foot-high Christmas tree caught fire

ILLINOIS REGION



in The Plaza Shopping Center in Evergreen Park, Illinois about an hour before the mall was scheduled to open on the

morning of December 12, 2007. The blaze quickly spread to nearby holiday decorations, gift wrap and a plastic reindeer, Fire Chief Ron Kleinhaus said. The fire raced up the tree, singeing the ceiling and activating the fire sprinkler system.

A lot of the material surrounding the tree was combustible, like plastic and cardboard, and it created a thick, black, acrid smoke that penetrated the entire structure from floor to ceiling. The sprinkler system was able to contain the fire until firefighters arrived.

Firefighters worked for more than five hours to rid the mall of smoke. Kleinhaus said all of the mall doors and skylights were opened and the Chicago Fire Department provided a mobile ventilation unit to suck out the smoky air.

Kleinhaus said the fire department and the mall's insurance company were investigating the fire. He said it was too soon to know if decorations had been placed too close to a heat source or whether faulty or overloaded wiring sparked the fire.

Bob Kleinheinz is the NFSA Regional Manager for Illinois. He can be reached at Kleinheinz@nfsa.org or 509 Dawes Street, Libertyville, Illinois 60048. Phone (914) 671-1975.

NORTH CENTRAL

DANIEL J. GENGLER, REGIONAL MANAGER

NORTH CENTRAL REGION



Cigarette Causes Massive Coon Rapids Apartment Fire

A fire in an apartment complex in Coon Rapids, MN

left dozens displaced from their homes early Thursday morning. Fire broke out at the Baneberry Estates Complex on the 11000 block of Hanson Boulevard Northwest at about 2:30 a.m. According to the Coon Rapids Fire Department, the fire began on one of the balconies and spread to the attic. It was caused by a cigarette left on the deck. Residents from the 22 units in the three-story building were evacuated as at least

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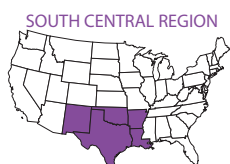
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five fire departments battled the blaze. One resident was treated for smoke inhalation. Because the building has sprinklers, most of the apartments were spared. The attic did not have sprinklers, which authorities said explains why it sustained such extensive damage. Authorities said five apartments were heavily damaged. The Red Cross has been called in to assist.

Dan Gengler is the NFSA Regional Manager for the North Central Region. He can be reached at Gengler@nfsa.org or PO Box 280, Williams Bay, Wisconsin 53191. Phone (262) 245-5255 Fax (262) 245-5258.

SOUTH CENTRAL

STEVEN E. RANDALL, REGIONAL MANAGER



Sprinkler Save at Mansfield, Louisiana Apartment Complex

A fire at the Old Church Inn Apartments in Mansfield, Louisiana on December 15, 2007 was set, either accidentally or intentionally, a state fire marshal has concluded.

Christmas decorations sitting on a table inside a small room were ignited, Old Church Inn Apartment Manager Susan Grant said. The sprinkler system activated in that one room and snuffed out the flames, which continued to smolder and send smoke through the multi-floor facility. The fire marshal credited the fire sprinkler system with doing its job and averting what could have been a disaster.

Steven Randall is the NFSA Regional Manager for the South Central Region. He can be reached at: Randall@nfsa.org or 7165 Lazy Meadow Lane, Frisco, Texas 75034 Phone (972) 668-4022, Fax (972) 668-4077.

CENTRAL

CHRIS GAUT, REGIONAL MANAGER



Campus Fire-watch Rallies to Support Ordinance to Sprinkler University of Missouri Greek Houses

Parents of 13 college students who died in

campus fires across the country since 1996 have signed letters mailed to every University of Missouri fraternity and sorority, asking them not to oppose an ordinance requiring Greek houses to install fire sprinklers.

The letters signed by the parents were written by Campus Firewatch, a monthly publication that lobbies for fire safety in college communities across the nation.

A year ago, the city council passed a law requiring fraternities and sororities to install fire sprinklers by December 2012. A few weeks later, members of Greek organizations said they opposed the ordinance, citing cost as the major factor.

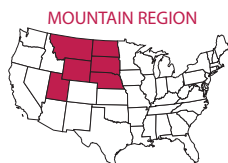
In May, the city council voted to send the matter back to the Building Construction Codes Commission for further review. In October, that commission voted to overturn the ordinance.

Ed Comeau, publisher of Campus Firewatch as well as founder and past director of the Massachusetts-based Center for Campus Fire Safety, said the parents decided to send the letter to the Greek organizations in Columbia to let them know they realize fire sprinklers are expensive, but it's critical in preventing fire-related fatalities.

Chris Gaut is the NFSA Regional Manager for the Central Region. He can be reached at gaut@nfsa.org or 189 Eureka Town Center Dr. Suite 135, Eureka, Missouri 63025 Phone (845) 803-6426, Fax (636) 410-7700.

MOUNTAIN

TERRY PHILLIPS, REGIONAL MANAGER



Fire Sprinkler Saves Sorority House in Missoula, Montana

Fire Inspector Gordy Hughes of the Missoula, Montana Fire Department credited the fire sprinkler system at a local sorority house with preventing a possible tragedy. Three sprinkler heads activated in a rapidly moving fire on December 9, 2007, shortly before 5:00 a.m. The cause of the fire was an unattended candle left burning on a wooden desk covered by a cotton sheet. There were numerous sheets hung around the room and from the ceiling which caused the rapid fire spread. Hughes stated that if it had not been for the sprinkler system, the

damage to the dwelling would have been extensive, if not devastating. More importantly, because of the fire sprinkler system, the potential for injury or death was averted.

Terry Phillips is the NFSA Regional Manager for the Mountain Region. He can be reached at: Phillips@nfsa.org or Phone (914) 525-4396, Fax (307) 514-0406.

SOUTHWEST

DOYLE SUTTON, REGIONAL MANAGER



Sprinklers Douse Fires in Two Separate Apartment Blazes in Surprise, Arizona

Fire sprinklers contained two apartment fires caused by carelessness at two Surprise, Arizona apartments, by the time the Fire Department arrived, officials said. The fires, which resulted in no injuries or displaced people, each caused less than \$10,000 in damage, said Assistant Chief Kevin Pool. Without the sprinkler systems, he said, both buildings could have seen up to millions of dollars in damage.

When firefighters arrived at the first fire, the sprinkler system already was activated. The fire crew turned off the sprinkler system and put out the remaining flames.

The second incident involved someone who became distracted after putting frozen bread in a toaster oven, Pool said. The appliance caught fire and the flames spread to cabinets. Firefighters arrived to see that the black smoke was quickly becoming white, which meant the sprinkler system was helping put the fire out.

Luckily, sprinkler systems are mandatory in all newer-model apartment complexes in Arizona.

Doyle Sutton is the NFSA Regional Manager for the Southwest Region. He can be reached at: Sutton@nfsa.org or Phone (845) 803-3785, Fax (307) 514-0406.

WEST

OYSTEIN (SAM) HUSOE, REGIONAL MANAGER

Hawaii Fire Chiefs' Association's 29th Annual Conference

The Hawaii Fire Chiefs' Association (HFCA) held its 29th Annual Conference in Kahuku,

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Hawaii, during the week of November 12, 2007. One of the guest speakers was Dennis Compton, former Fire Chief of Mesa Fire Department in Arizona. His speech covered seven major components of his Systems Management and Leadership Model: (1) Management of Finances and Human Resources, (2) Management of Facilities, Equipment, Fleet, Communication

Systems, etc., (3) Prevention through Consensus Codes and Built-In Protection, (4) Emergency Response & Homeland Security, (5) All Risk Public Education, (6) Community Partnerships, Relationships and Politics, and (7) Preparing Members to Perform Their Roles. He talked at some length about the important relationship and interdependence of all these components on the successful outcome on fire and life safety efforts. He stressed that built-in fire protection, such as fire sprinkler systems, was

a very important element not only for the community but also for fire fighter safety.

California Fire Prevention Institute Workshop

The 18th Annual California Fire Prevention Institute Workshop has been scheduled for March 10 – 14, 2008 at the Santa Ynez Valley Marriott in Buellton. Industry Exhibit Day will be on Wednesday, March 12. Terri Simmons Leyton, CFPI Exhibit Coordinator, can be reached at ph: 858.751.2930 x/101, fax: 858.751.2933, or email: Terri@protectiondesign.com.

Sam Husoe is the NFSA Regional Manager for the West Region. He can be reached at: Husoe@nfsa.org or 23642 Valle Road, San Juan Capistrano, California 92675, Phone (949) 661-3631, Fax (949) 661-5768.

PACIFIC NORTHWEST

DON PAMPLIN, REGIONAL MANAGER



One Fire Sprinkler Saves Care Home in Bend, Oregon

The activation of one fire sprinkler in a northeast Bend, Oregon assisted living home extinguished a fire on November 20, 2007 before the fire department arrived on-scene. The fire was caused by the improper installation of two fluorescent bulbs in a fixture over a bathroom sink which allowed one of the two pins on the end of each bulb to be improperly seated. The exposed pins heated-up, melting the surrounding plastic fixture. The one fire sprinkler in the bathroom put the fire out and limited the total amount of damage to approximately \$4,000.00 in this three-million-dollar building. Bend Fire Inspector Cindy Kettering said that this is the third time this year that a building in Bend has been saved by a sprinkler system.

Don Pamplin is the NFSA Regional Manager for the Pacific Northwest Region. He can be reached at Pamplin@nfsa.org or 1436 Harrison Avenue Blaine, Washington 98230 Phone (380) 332-1948, Fax (380) 422-1752.

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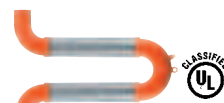
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■ System Sensor Announces New Fire Alarm Control Panels for Monitoring Sprinkler Systems

The newest additions to the System Sensor fire sprinkler systems monitoring line are the PDRP-2001 and PDRP-2001E fire alarm control panels (FACPs). These deluge releasing control panels are compatible with conventional sprinkler system input devices, tamper switches, 2-wire smoke detectors, 4-wire smoke detectors, pull stations, pressure switches, and other normally-open contact devices.

The PDRP-2001 and PDRP-2001E panels supervise wiring, AC voltage, battery charge, and battery level. They have four outputs that are programmable as notification appliance circuits (NACs) or releasing circuits. Three programmable Form-C relays (factory programmed for alarm, trouble and supervisory) and 24 VDC special application resettable and non-resettable power outputs are also included on the main circuit board.

These System Sensor sprinkler panels are listed to UL 864, 9th edition.

Each offers 100% programmable relays, 80 character LCD display, 256 event history, and the ability to download history to a computer.

For more information about the new System Sensor PDRP-2001 and PDRP-2001E control panels, contact System Sensor at 800/736-7672 or visit www.systemsensor.com.

■ Tyco's SprinkCAD Offers Inspection Software

Tyco Fire & Building Products' SprinkCAD group has entered into an exclusive license agreement with Asurio Inspection Systems to provide their leading mobile fire protection inspection software.

The Asurio software is a mobile system designed for fire sprinkler, alarm and extinguishing companies' electronic inspections, and will be offered along side SprinkCAD's line of fire protection software. For contractors in the field, this complete handheld software platform offers a professional format to review jobsites and record work electronically. With simple Q&A to ensure that nothing is missed, the software helps shorten jobsite time and improves the accuracy of the inspection, resulting in an enhanced rep-

utation for the contractors.

Once the information is recorded on the jobsite, the system can automatically download the inspection data to the home office – reducing mounds of paperwork and administrative work time. The software automatically generates invoices, work orders, inspection schedules and can even upload the data to many accounting systems. The end result is a better bottom line for contractors.

One of the key benefits of this system is the opportunity for contractors to increase field inspection and service sales. By using the automated equipment information included in the software package and listing any deficiencies for service follow-up, contractors have immediate access to potential work orders.

To find out more about this or any other offering from SprinkCAD, please visit www.sprinkcad.com or call 1-800-495-5541.

■ Tyco Fire & Building Products Donates Residential Sprinkler System to Idaho Extreme Makeover: Home Edition Family

This past summer, Extreme Makeover: Home Edition rolled into Middleton, Idaho, to build a remarkable family a new home. Ryan and Karia Stockdale live to help their four small children diagnosed with eosinophilic esophagitis lead normal lives. The disease afflicts the entire body and makes it nearly impossible to swallow food.

A residential sprinkler system was not part of the original construction plans for the home. Corey Barton, president of CBH Homes and the lead contractor for the project, recognized the need to protect the family from fire – especially with four small children in the home. He contacted Jim Danes of American Fire Protection, LLC, to work on the assignment.

American Fire Protection worked closely with Idaho State Fire Marshal Mark Larson to fast-track the system design and approval process. Danes consistently uses Tyco Fire & Building Products' (TFBP) Rapid Response™ line of residential sprinklers, so he requested that TFBP donate the components of the system.

CBH Homes and the people of Middleton worked diligently to help the Stockdale family. Aside from helping in the construction

process, they raised more than \$50,000 in five days. They provided the family with two new cars and Ryan with a full scholarship.

The project was completed in July, and the show aired on Sun., Dec. 2, on ABC.

■ Dixon Powhatan Opens New Manufacturing Facility, Adds to Fire Industry Product Line Offering

It has been just over one year since the Powhatan line of fire protection products was acquired by Dixon from Kidde Fire Fighting. In that short time, the operation has opened a completely new manufacturing facility, as well as expanded its product line offerings to the fire protection market.

Craig French, plant manager, and many other veteran Powhatan employees made the move to the company's new manufacturing operations located in Winchester, Virginia.

According to Hazen Arnold, sales manager, the design of the Winchester facility was driven by the need for customers to have a steady available supply of products. The new plant is a true "made for stock" facility rather than "made to order" operation. This means that customers – no matter where they are located – can receive orders the very next day as opposed to waiting for days or weeks for them to arrive. In addition to supplying the complete standard Dixon Powhatan line, quick delivery is also provided on special-thread items to meet the individualized needs of customers.

In addition to improving product availability, delivery and reliability, Dixon Powhatan's R&D department is also re-engineering certain fire department connections to make them stronger, more durable and better-performing. R&D specialists are also working with Dixon's own foundry, Buck Company in Quarryville, Pa. to develop ductile iron FDCs as an alternative to conventional brass construction. In addition to being manufactured domestically, this material is more cost effective and less susceptible to pilferage.

Reflecting Dixon Powhatan's renewed commitment to the fire industry, the company has also joined or increased its involvement with several leading industry groups, including the Fire Equipment Manufactur-

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ers Association and the National Fire Sprinkler Association.

To learn more details about the complete line of Dixon Powhatan fire protection products and other products from Dixon Powhatan, visit www.dixonpowhatan.com.

■ The Burn Foundation and Tyco Fire & Building Products Set New Fundraising Record

The Burn Foundation, a Philadelphia-based non-profit organization dedicated to burn-prevention education and supporting burn victims and their families, celebrated its 34th anniversary on Friday, Oct. 19, at the Hyatt Regency Philadelphia. The gala, sponsored by Tyco Fire & Building Products, honored the life of acclaimed photographer and burn survivor John W.H. Simpson.

The evening's program included Everett Marshall, the former mayor and fire chief of Newfield, N.J., as the keynote speaker. Marshall was severely burned when a petroleum-transporter tank that he was cleaning exploded. As a result, he has devoted his life to building a public awareness of burn injury prevention.

Honorees included the late Simpson, for his work and support of burn victims' families, and Philadelphia Firefighters Walter Jackson and Lt. James Williamson. There was also a celebration of the life of the late Cynthia Rauso, the Burn Foundation's president and chief executive.

Thanks to Tyco Fire & Building Products' generous support, The Burn Foundation was able to raise a record amount of almost \$100,000 at the gala, twice as much as last year.

For those interested in learning more about the Burn Foundation or donating to the worthy cause, call (215) 988-9882 or visit www.burnfoundation.org.

■ Clarke Couplings for Electric Fire Pump Drivers Now UL-Listed

Clarke Fire Protection Products, Inc. announced that it has been granted UL certification for its flexible metal couplings for use with electric motor fire pump drivers.

Many in-service couplings rely exclusively on elastomeric material for power transmission. However, a large number of doc-

umented failures indicate that elastomeric couplings may be unreliable for high performance fire protection applications. Better solutions for fire protection systems include flexible metal couplings for electric motors and flexible connecting shafts (universal joint driveshafts) for diesel engines.

As an industry leader in fire protection, Clarke stepped up with the engineering expertise and resources necessary to develop and test couplings to make them certifiable

for fire pump service. As a result, Clarke flexible metal couplings for electric motor fire pump drivers are now UL-listed and available for shipping and installation in January 2008.

Applications for Clarke flexible metal couplings include: new fire pump sets, retrofits of existing fire protection systems, or wherever the use of listed, certified couplings is required.

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■ Victaulic Announces the Availability of the FireLock® Series 747M Zone Control Riser Module

Victaulic, the original innovator of grooved pipe joining, announced the availability of the FireLock® Series 747M Zone Control Riser Module. The Series 747M Riser Module is designed for commercial, wet sprinkler systems and was made available on January 1, 2008 in sizes 2½" - 6".

The Series 747M Zone Control Riser Module complies with NFPA 13 standards and features: waterflow switch and alarm connection, pressure gauge, alarm test with orifices to support multiple K factors, drain connection and sight glass. The 747M is also FM Approved and UL, and ULC Listed for working pressures up to 300psi/2065kPa. A pressure relief option is also available.

The compact cast ductile iron one-piece design allows the Series 747M Riser Module provides easy installation in either a horizontal or vertical position. Other features include a ¼ turn shutoff and test and drain valve combination. The multiple K-factor options, including standard K5.6 test orifice and optional K6.9, 8.0, 11.2, 16.8 test orifices, allow the 747M to support a variety of system requirements. The Series 747M Riser Module is also considerably lighter to handle in larger pipe sizes than competitive products.

Visit Victaulic online at www.victaulic.com for more information.

■ Viking SupplyNet Opens New Distribution and Fabrication Center in Sacramento

Viking SupplyNet announces the open-

ing of a new distribution and fabrication facility serving Northern California and Nevada. The new facility will provide complete pipe fabrication services including threading, grooving, and welding of black or galvanized pipe.

Located near I-5 and I-80 in Sacramento, California, this 24,000 square foot distribution and fabrication location will provide dedicated delivery services to area facilities and job sites. The new facility is the 28th Viking SupplyNet location in the U.S. and the eighth in the West region. Contact information for the new facility is as follows:

Viking SupplyNet
5081 Kelton Way, Suite 100
Sacramento, CA 95838

Telephone: (916) 923-1080
Facsimile: (916) 923-1748
Email: west@supplynet.com

■ New Chemistry Lessons Teach Students about Fire

The Society of Fire Protection Engineers (SFPE) has partnered with Discovery Education to create a new in-school program titled The Chemistry of Fire. The program is funded by a grant from the U.S. Department of Homeland Security.

The Chemistry of Fire is geared to high school chemistry students. It will teach students the science behind fire as a way for students to fully understand the dangers of fire. As a result, it will increase the awareness of fire and the importance of home fire prevention.

The interactive program includes a teacher's guide with five lesson plans, a DVD that

demonstrates experiments included in the lessons, three classroom posters and a web site where teachers and students can find more classroom and career resources. The program is aligned to the National Science Teachers Association Standards for 9th-12th grades.

Currently, there is a nationwide shortage of fire protection engineers. Their skills are necessary to protect people and property from the threat of fire. These lessons will help students explore career opportunities in the field of fire protection engineering.

The program will be released to nearly 20,000 high school science department chairs nationwide in mid-January 2008.

■ AGF Announces New RemoteTEST Test and Drain Valve

AGF Manufacturing's announces its new Model 1200 RemoteTEST, the only product offering a self-contained method to "remotely" fulfill the primary function of the wet pipe system inspector's test. Using the required TESTanDRAIN valve for testing the waterflow alarm devices for system viability and water supply integrity, the RemoteTEST checks the entire system's readiness to deal with a fire. RemoteTEST can be integrated into an existing panel or wired to an independent one so that a single person can activate multiple specific systems from one central location. Its remote operation saves time and manpower and allows for quarterly or more frequent system tests to be performed easily during off-peak hours. RemoteTEST is available with an optional bypass loop. To learn more, visit www.testandrain.com. ☎



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