



Bill Meyer, Central Sprinkler Company Founder, 85

William J. Meyer, 85, founder of Central Sprinkler Company, passed away on Monday, July 31st, 2006.

Bill earned a bachelor's degree from the University of Notre Dame. He played on the school's golf team and remained a lifelong golfer. While at Notre Dame, he met his future wife, Catherine Hampsch, who attended nearby St. Mary's College. During World War II, Bill served in the Army in the Philippines.

In 1944, Bill started his distinguished career in the industry by becoming a fitter for the "Automatic" Sprinkler Corporation of America.

In 1964, Bill purchased Star Sprinkler Corp. in Philadelphia from long-time friend T. Seddon Duke.

After selling Star Sprinkler to INA Corporation, Bill bought Central Sprinkler Corp. in Lansdale in 1973, where he was President and CEO.

The firm became a leading manufacturer and innovator of fire protection equipment. The emphasis for early sprinkler technology had been on nonresidential property protection, said Bill's son George. Bill developed fire suppression systems that saved people as well as property, and were used in homes, hotels and nursing facilities, his son said.

In 1984, Bill was the recipient of American Fire Sprinkler Association's highest honor, the Henry S. Parmelee Award.

In 1994, in recognition of his lifetime commitment to the fire sprinkler concept, he was awarded the Golden

Sprinkler Award, National Fire Sprinkler Association's highest honor.

Bill's life revolved around work and family, his son said. Several relatives were employed with the company and his customers became friends. He was chairman of Central Sprinkler when it was sold to Tyco Fire & Building Products in 1999.



In addition to his son, Bill is survived by his daughters Cathy, Mariah Pardue, Anne Meyer-Post, Martha Bilo, and Marilyn Thomas; sons Stephen and John;

two sisters; 23 grandchildren; and one great-grandchild. His wife of 52 years died in 1999.

Bill was a true pioneer of the modern fire sprinkler industry era and will be missed by all who knew him. In lieu of flowers the family requests any donations be made to Amigo de Jesus, 118 Woodland Ave, Malvern, PA. 19355.

(NFSA, AFSA, Philadelphia Inquirer)

2006

1999

Acting Chairman of Central when it is sold to Tyco

1994

NFSA Awards Bill with Golden Sprinkler Award

1984

AFSA Awards Bill the Henry S. Parmelee Award

1973

Founded Central Sprinkler Company; leads as President & CEO

1964

Purchased Star Sprinkler

1944

Started work as a fitter for "Automatic" Sprinkler

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Identifying and Preventing Water Supply and Sprinkler System Impairments

by Charlie Bauroth

A risk manager leaves his office one evening after a long day of protecting his company's assets. His mind is at ease because the sprinkler retrofit project to replace pendant sprinklers with upright ones for the Early Suppression Fast Response (ESFR) sprinkler systems protecting the warehouse has been completed. The company is protected in the event of a fire.

Late that night, a fire starts within the high rack storage area of the warehouse. The heat generated by the fire quickly activates the unobstructed sprinkler system. Water began to flow from the sprinklers but then slowed to a trickle and, despite the fire department's best efforts, the fire developed unchecked and heavily damaged the warehouse.

During their investigation, the fire department discovered an almost totally closed valve at the city main connection. Not fully re-opened after completion of the work to and around the warehouse sprinkler systems, it was open just enough to show the usual static pressure at the sprinkler risers. Because testing was not conducted, the warehouse – with its unimpaired sprinkler system – was nearly destroyed.

From 1999 through 2002, in fires where they were present, sprinkler systems failed only seven percent of the time in structure fires large enough to activate them, according to a study by the NFPA. While seven percent may seem like a small number, the reality is that the number is far too high since 92 percent of those failures were due to human error and are, therefore, preventable.

In the NFPA's study, U.S. Experience with Sprinklers and Other Fire Extinguishing Equipment (PDF, 205 KB), 65 percent of the system failures were due to the system being shut off, 16 percent were due to manual intervention in the operation of the system, and 11 percent were due to a lack of maintenance. And all are scenarios that can happen anywhere – including your facility. Take for example the following case study where testing after a water main retrofit identified a problem in the water supply to a facility.

An office park in a Massachusetts suburb had a tenant occupying a single building. It was a typical low-rise light hazard office building of approximately 200,000 square feet (18,580 square meters) and 100 percent non-combustible construction that was fully sprinklered with a hydraulically calculated system.

Completion of a retrofit of a private water main servicing the office park with a backflow preventor and

associated valves installed within a "Hot Box" system was done in 2003. A "Hot Box" is an aboveground small room that is heated and allows access to equipment such as a backflow preventor. The retrofit included about 100 feet (30 meters) of water main from the backflow preventor to the public water main. The connection at the public water main had no valves associated with it.

This facility had been surveyed by the same insurance company for several years and, as part of the service, an annual hydrant flow test was conducted on the hydrants on the private water main. The city provided hydrant flow data for the public water main in 2000 that

showed 65 psi static and 60 psi residual pressures while flowing 1,060 gallons (4,012 liters) per minute. In 2002, the test on the private water main showed 65 psi static and 52 psi residual pressures while flowing 1,090 gallons (4,126 liters) per minute. The 2003 survey occurred after the completion of the retrofit of the private water main and showed 46-psi static and 15-psi residual pressures while flowing 497 gallons (1,881 liters) per minute.



(continued on pages 4-5)

Fire Safety Month

October is Fire Safety Month – the one time during the year when the media, first responders, educators and other safety advocates join forces to teach people of all ages how they can be safer from unwanted fire. It seems that everyone is on the same “safety page” during October, especially during Fire Prevention Week (observed October 8-14 this year). And because more than 80% of all fire deaths and injuries occur in residential properties, fire safety educators typically concentrate on home prevention and protection. That’s where you come in. As they do each year, thousands of fire departments across the U.S. and in Canada will utilize this important week to educate and empower their constituents with facts and strategies for greater fire safety. Will you be ready to join them?

SPRINKLERS FRONT AND CENTER

School outreach, retail events, fire station visits and sprinkler trailer demonstrations are a few of the countless avenues for introducing the life saving and property protection benefits of fire sprinklers; especially residential systems. Northern Illinois Fire Sprinkler Advisory Board (NIFSAB) has a wide range of information and materials that you can use to put sprinklers front and center in your town, including a new print ad that you can customize with your department photo and run in local newspapers. Visit the NIFSAB Web site to customize the ad and download other educational resources:
www.firesprinklerassoc.org.



NEED MORE IDEAS?

The Home Fire Sprinkler Coalition (HFSC) Web site is a great starting place (www.homefiresprinkler.org). You can download free animated teaching tools and print out valuable educational materials. And you can order videos and colorful brochures designed specifically for consumers and builders. NFPA, the official sponsor of Fire Prevention Week, chooses an educational theme for the yearly commemoration, typically concentrating on a home fire prevention topic. This year, NFPA will focus its attention on preventing home cooking fires with a campaign called “Watch What You Heat” (more on the web at www.firepreventionweek.org). It’s easier than you think to introduce the fire sprinkler message into a fire prevention campaign theme. Prevention is the best way to stay safe from a fire, but every fire can’t be prevented. People need to know how to protect themselves, their families and their homes. You can start by helping people in your community understand the importance of a total system of fire protection, and the fire sprinklers’ vital role in that system:

- Fire Prevention
- Early Warning (smoke alarms)
- Early Suppression (fire sprinklers)
- Safe Evacuation (escape drills)

A total system of fire safety is a message that transcends any campaign theme. Although the fire death rate is going down, our nation still suffers far too many fire deaths each year; the vast majority of them in homes. Automatic fire sprinkler systems must be included in public safety messages year-round, but especially during Fire Safety Month.

RFSI Workshops



The Residential Fire Safety Institute has been selected by the US Fire Administration to present fire sprinkler ordinance workshops to state chapters of officers charged with fire prevention. These presentations will be given during annual conference, business meeting, or other appropriate event at the request of state chapters.

The presentation can be adjusted from one to two hours in length and will give attendees an overview of benefits derived from a residential sprinkler ordinance, an explanation of why now is an opportune time to lay the groundwork for same, considerations in choosing an ordinance, preparation, estimating cost, anticipating opposition and how to deal with it, and resources available to assist local authorities during the process.

The program will be provided without charge to state chapters. Those interested are asked to contact:

Roy Marshall
Executive Director,
Residential Fire Safety Institute
712-829-2734
rfsirm@netins.net



Impairments (continued from page 2)

Something must have radically changed to show such a significant drop in the available water supply to the facility. The city was contacted and conducted a new flow test of the public main, which revealed no change from the water supply available in 2000. All valves were checked and it was confirmed that they were fully open. The backflow preventor was tested and flowed as designed. It was also noted that the flow was approximately the same as the 2003 private main test.

This research narrowed the possible problem area to about 100 feet (30 meters) of main from the connection to the public water main to the backflow preventor. The connection to the public main was excavated with a backhoe. Upon examination, the excavators found that the "coupon" within the tee had been cut through for only about two thirds of the circumference of the interior of the pipe and was still in place. "Coupon" is a term for the metal within a connection that is removed to join the original pipe to the new pipe.

The coupon was removed and the hole in the tee was smoothed. All of the newly installed piping was re-inspected to verify that there were no further obstructions. Everything was re-assembled and put back in place and another flow test was conducted verifying that the full water supply was available to the building.

Testing after installation revealed that there was a problem. But do obstructions like this happen regularly in pipes, closed valves and other impairments to the water supply and sprinkler systems? The answer: yes.

Stories of impaired protection are plentiful and run the gamut from conducting a main drain test where the static pressure drops from 80 psi to 0 psi as soon as the valve is opened, indicating that a control valve is shut, to the gradual decrease in residual pressure from a cracked underground main that is revealed over several months of tests.

In order to reduce your facility's chances of an impaired water supply or sprinkler system, establish and follow a regular testing and maintenance program. Implement a documented impairment program. Train all personnel who perform these programs to ensure that the tests are conducted correctly and the results are properly analyzed. Provide valve supervision to a proprietary or central station monitoring station using a tamper switch. And, at the very least, lock all valves controlling water supply in the open position.

NFPA 25, Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, provides guidance on testing of fire protection equipment, obstruction investigation, and impairment programs. It also establishes general requirements of the owner or occupant of the facility. For our purposes, Section 4.1.2.1 is the basic requirement that states: "by means of periodic inspections, tests, and maintenance, the equipment shall be shown to be in good operating condition, or any defects or impairments shall be revealed." In addition, Section 4.1.4 states: "the owner or occupant shall promptly correct or

repair deficiencies, damaged parts, or impairments found while performing the inspection, test, and maintenance requirements of this standard."

Table 5.1 is a summary of sprinkler system inspection, testing, and maintenance and refers to various sections within the standard. For instance, main drain (two inch drain) tests should be conducted annually and Table 5.1 refers to Table 12.1, Section 12.2.6 which provides the detail that "a main drain test shall be conducted annually at each water-based fire protection riser to determine whether there has been a change in the condition of the water supply piping and control valves." Other tables within NFPA 25 cover additional requirements such as annual flow tests for private hydrants or testing and maintenance of fire pumps.

A properly designed facility testing and maintenance program should include the basic requirements set forth in NFPA 25 necessary for the fire protection equipment and components present at that facility. The program should take into consideration any increased testing frequencies that might be necessary for a specific building or geographic area. For instance, if your facility is located in an area where the public or private water mains are relatively old, quarterly, rather than annual, main drain testing might better protect your building.

You should document all test results and maintenance performed and keep readily accessible the testing/maintenance history. Whether facility personnel or a contractor, the person conducting the testing should provide complete testing results to the manager of the testing and maintenance program. Moreover, the manager should have the necessary training to understand the test results

and identify if a potential problem exists. You can do this by comparing current results to past test results and noting any major changes in residual or static pressures or by seeing gradual changes over a period of time. If changes or problems are noted, you should immediately initiate investigation and action.

Chapter 13 in NFPA 25 discusses obstruction investigation both within a sprinkler system and in system or yard main piping. Section 13.2.2 requires an obstruction investigation within yard main piping for a variety of reasons, including a record of broken public mains in the vicinity.

All sprinkler-protected facilities should have a written impairment program to minimize the increased risks to a facility and limit the impairment's duration. Chapter 14 in NFPA 25 establishes the minimum requirements for a water-based fire protection system impairment program. These include:

- Impairment Coordinator – should have sufficient authority to develop, implement and oversee the program as well as full senior management support.
- Tag Impairment System – provides a visual reminder of what systems, or components of systems, have been impaired until the systems are restored. You should maintain all completed tags for future reference.
- Identify Impaired Equipment – all impaired systems or components must be identified.
- Pre-planned Impairments – must be authorized by the impairment coordinator. You should have all materials needed to complete the project onsite and ready to go before disabling any fire protection systems.
- Emergency Impairments – notify all interested parties immediately, discontinue hazardous operations such as handling flammable liquids or hot work operations, establish an hourly fire watch for the areas

covered by the impaired protection systems and expedite the work to complete as fast as possible.

Restoring Systems to Service – return all systems to service; verify through testing that the systems are operational. Secure all valves and notify all interested parties that the systems are restored to service.

The facility insurer usually has testing forms or impairment programs and materials available that you can use to supplement or in some cases can be used in lieu of, designing your own program. These materials often include a "Red Tag" program to meet the Tag Impairment System requirement. In addition, insurers usually provide toll free numbers to report impairments and to provide access to experienced loss prevention personnel who can answer questions - especially in the event of emergency impairments such as water main breaks.



Local knowledge of the facility and surrounding area is an advantage when dealing with impairments. Consider this example. Multiple tenants occupied an old mill complex in a large city in the Northeast. The complex covered two city blocks and was completely protected by wet sprinkler systems supplied by multiple risers. The private yard system was complex and fed from two separate points of connection - east and west - to the gridded municipal system.

The city was conducting street re-conditioning on the east side of the complex as well as re-lining the existing municipal water supply piping. At the same time, mill complex management personnel were conducting routine main drain testing on all sprinkler risers. The facility insurer was onsite to witness the testing. While conducting the last main drain tests of the day, someone noticed that the systems on the east side of the complex were experiencing dramatic residual pressure drops uncharacteristic of previous test records. The local property manager immediately questioned the roadwork managers on possible closed valves from the road or re-lining work. The supervisor onsite affirmed that all valves were opened.

However, the loss prevention representative, who was familiar with the use of old "reverse turn" sectional valves in the area, asked if any of these were still in use. The supervisor was unsure. Thus, the sectional valve that controlled the east public main feed to the complex was located and checked. The problem turned out to, indeed, be a "reverse turn" sectional valve that had been operated by turning in the same direction as all of the regular turn valves in the area. This valve had been shut while the workers thought it had been completely opened.

It is invaluable to have onsite employees who are familiar with the facility, the fire protection equipment and the area. With properly designed, documented and implemented testing, maintenance and impairment programs, you greatly decrease the chances of being awoken in the middle of the night to learn that an impairment resulted in the loss of your facility.

Charlie Bauroth is an account engineering manager at Liberty Mutual Property and a member of the Technical Committee on Automatic Sprinklers.

Sprinkler Success Stories

JC Penny Countryside Fire Protection District

One sprinkler controlled a fire in a clothing rack while a store employee used a fire extinguisher to extinguish the fire. "It was because of the system and the action of the store employee that it was kept in check," Fire Marshal Mike McNally said. "We came in and made sure it was completely out and took care of some embers." Mike McNally, Fire Marshal, Countryside Fire Protection District.

(NFPA Journal)

Sprinklers Save Pet Store

According to the *Record-Searchlight*, Redding, California, July 4, 2006, a pet store caught fire Tuesday around 9:20 p.m., but none of the animals were hurt thanks to an effective sprinkler system.

A problem in the electrical wiring – an overloaded adapter – caused the fire, said Deputy Fire Marshall Bruce Becker. He estimated the fire damage at \$1,000. One sprinkler put out the fire by pumping 10 to 15 gallons of water per minute onto the flames before two fire engines and firefighters arrived, Becker said.

Family Pet & Fish owners Duane and Della Betha have owned the pet store for three months and were glad the animals were not hurt, they said.

(FPC Magazine)

Sprinklers douse high-rise fire

Minnesota – Two sprinklers activated and extinguished a fire in an apartment in a 20-story apartment building. At the time of the fire, the occupant of the second-floor apartment was not at home. Each floor of the 149-unit building covered about 15,000 square feet (4,572 square meters) and was protected by a sprinkler system and fire detection system. Firefighters received the alarm at 5:54 a.m. and responded to the apartment to find that the fire had already been extinguished. A small burned area in the living room contained the melted remains of a portable box-type fan and an upholstered swivel chair. The apartment's occupant told investigators that the fan had been operating normally when he left the apartment about five hours earlier. The investigator determined that it malfunctioned and tipped over, igniting the carpeting

and chair. Losses were estimated at \$10,000. There were no injuries.

(NFPA Journal)

Pulioma Paints Carpentersville Fire Department

Employees cleaning mixers with flammable chemicals caused a fire that flashed and spread to the surrounding area causing six sprinklers to activate. According to Captain Rick Paul, "the sprinkler system held the fire in check prior to our arrival. The chemical plant was open for business in three days." Rick Paul, Captain, Carpentersville Fire Department

(NFPA Journal)

Sprinklers Help Save Wood Panel Plant

An article by Mark Baker published July 1, 2006, in the *Tasmania Examiner*, Launceston, Tasmania, Australia, said an estimated \$250,000 was caused by a fire at the Carter Holt Harvey wood panel factory at Bell Bay.

Firefighters said that the blaze, which began about 10 p.m. on Thursday in the plant's press section, was accidental.

North-East district officer John Hazzlewood said that a sprinkler system helped firefighters contain the blaze and lower the risk of a dust explosion.

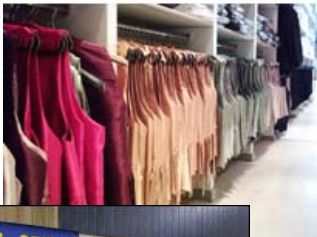
"The George Town brigade initially responded and were backed up by units from Bell Bay, and Launceston brought down their snorkel to get over the top of the fire," Hazzlewood said.

"The sprinklers system helped contain the spread but it was a couple of hours before we could say, 'Yes, we've got this fire worked out.'"

George Town brigade chief Andrew Taylor said that extinguishing the fire had been a challenge. No staff were injured in the fire.

Fire Investigators were still determining the exact cause of the blaze.

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