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# QUARTERLY

FIRE MARSHALS ASSOCIATION OF NORTH AMERICA • Winter 1998

## President's Corner

**T**his edition of *Fire Marshals Quarterly* marks the beginning of a new era for our 92-year-old organization as the membership has approved the adoption of our new name—International Fire Marshals Association, or IFMA. At your preference during the business meeting held in Atlanta on November 17, I shared with those in attendance that I've written to and received a positive response from all of our international members regarding this change. Help our association grow by providing the board members or executive secretary with names of prospective members who live in other countries.

Please welcome R.T. (Whitey) Whitey of Marshallton, DE, to the IFMA Board as an at-large member. He was elected to complete the unexpired term of Ron Farr, who currently serves as second vice president. Whitey has worked closely with the Board for some time, providing an invaluable service by reviewing proposed code changes and apprising the Board of their potential implications. He's a hard worker and will serve all of us well.

Immediate Past President Bob Melton has been busy moving to his new home and is thankful that his family did so with little interference from the heavy rains that have plagued much of Texas in recent months. We missed him in Atlanta, but he'll be with us during the winter meeting in Utah.

While we were meeting in Atlanta, we announced the approval of a South Carolina chapter, the anticipated approval of new Illinois and Tennessee chapters, and the expectation of receiving chapter applications from Utah and Oregon. None of this would be possible without each of you and your desire to see IFMA be everything it can be, both now and in the future. The Board congratulates those of you responsible for these important strides and encourages everyone to keep up the good work.

Many positive comments were presented at NFPA's Fall Meeting regarding the report on Fire Prevention 2000 as well as NFPA 1. Both of these documents represent a considerable effort on the part of many people and organizations associated with fire prevention and fire safety, not the least of which are NFPA and IFMA.

The Board is working on several proposed changes to the *Constitution and Bylaws*, and expects to present all proposals to the membership following the winter meeting.

We wish each of you the best of everything during the coming holidays and look forward to working with you during the new year. Have a fire safe winter!

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## *Fire Marshals Quarterly*

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# CPSC, Central Sprinkler Recall Omega Fire Sprinklers; Settle Lawsuit

The U.S. Consumer Product Safety Commission (CPSC) and Central Sprinkler have announced the nationwide recall of approximately 8.4 million Omega brand fire sprinklers manufactured since 1982 by Central Sprinkler Corporation and its subsidiary, Central Sprinkler Company, of Lansdale, PA. CPSC alleges that Omegas are defective and could likely fail in a fire. This recall announcement follows the resolution of the lawsuit filed by the Commission staff against these companies on March 3, 1998.

CPSC alleges that, on average, between 30 and 40 percent of Omegas removed from various locations across the country for testing failed to activate as they should. In some buildings, all Omegas tested failed to activate. CPSC is warning consumers that they are at risk of bodily injury or death and should have Omegas replaced as soon as possible. CPSC is urging consumers to take immediate action to determine whether the buildings where they live and work are equipped with Omegas, and if so, to call the Omega Sprinkler Recall Hotline to participate in the recall. Properly functioning fire sprinklers save lives when a fire occurs. With the Omega sprinklers, this line of defense may not be there when it's needed most.

CPSC has received reports of Omega sprinklers not functioning in 17 fires. At least four persons suffered injuries, including burns and smoke inhalation. Over \$4.3 million in property damage has been reported. The fires occurred between 1990 and the present in Arizona, California, Florida, Georgia, Indiana, Maryland, Massachusetts, Michigan, New York, Pennsylvania, and Texas. In some cases, the sprinkler directly above the fire failed to operate.

Omega fire sprinklers are installed in homes, schools, hospitals, dormitories, nursing homes, prisons, offices, hotels, and other buildings as well as federal buildings, including the Smithsonian Museums and the U.S. Capitol, which house many of the country's historical artifacts. Omegas have been or are being removed from many state and federal

buildings, including the White House. As part of the settlement agreement, Central has asked Underwriters Laboratories to withdraw its listing of approval for all Omega brand fire sprinklers.

Consumers themselves should be able to determine whether their homes or other buildings are equipped with Omega fire sprinklers. On most models, consumers will be able to see three flat round metal disks stacked one above the other with a small space between each disk. Consumers should not attempt to unscrew the sprinkler or shut down their sprinkler system to determine if they have Omegas. Central will send consumers a packet of information to help them identify the sprinklers involved.

The recall of the Omega sprinklers includes models referred to or marked as follows:

C1 (or C-1)  
 C1A (or C-1A)  
 C-1A PRO (or C1-A PRO)  
 C1-A PRO QR  
 EC-20  
 EC-20A  
 R-1  
 R-1A  
 R-1M  
 Flow Control (FC, Flow Control-FC)  
 Protector-M or M Protector (Upright, Pendent, Sidewall, Sidewall EC)  
 HEC-12  
 EC-12 RES  
 HEC-12 EC  
 HEC-12 EC PRO  
 HEC-12 ID  
 HEC-12 PRO  
 HEC-12 PRO QR  
 HEC-20  
 Prohibitor QR and AC

Central is offering consumers free replacement glass bulb fire sprinklers and reimbursement toward the cost of having Omega sprinklers removed and replaced.

CPSC routinely requires companies to pay the full costs associated with recalls. In this case, Central's reported financial condition reveals that its ability to pay the cost of replacing the Omega sprinklers is limited. Consumers are urged to call the Omega Sprinkler Recall Hotline, available 24 hours a day, at (800) 896-5685, or to access the Omega recall website at [omegarecall.com](http://omegarecall.com). To receive any monetary reimbursement for installation costs, consumers must submit a proof of claim and release to Central postmarked by August 1, 1999. Consumers are urged to take immediate action and call today.

Since Omegas may not operate in a fire, it's particularly important that consumers have at least one fully operational smoke detector on every floor of their home, especially near bedrooms. To ensure that the detector's batteries are working, test the detector every month. Consumers also should have a well-defined and rehearsed escape plan and an alternate escape plan in the event of a fire. "Your Home Fire Safety Checklist" is available at the CPSC website or you can obtain a free copy by writing to CPSC, Washington, D.C. 20207.

Consumers can also view a video news release about this recall, which helps identify these sprinklers. It's 10 megabytes long and the download time depends upon the speed of your Internet connection.

The U.S. Consumer Product Safety Commission protects the public from the unreasonable risk of injury or death from 15,000 types of consumer products under the agency's jurisdiction. To report a dangerous product or a product-related injury and for information on CPSC's fax-on-demand service, call CPSC's hotline at (800) 638-2772 or CPSC's teletypewriter at (800) 638-8270. To order a press release through fax-on-demand, call (301) 504-0051 from the handset of your fax machine and enter the release number. Consumers can obtain this release and recall information via Internet gopher services at [cpsc.gov](http://cpsc.gov) or report product hazards to [info@cpsc.gov](mailto:info@cpsc.gov).

# Fire Investigation Summaries

To order full copies of this or any other Fire Investigation report, call NFPA's Charles S. Morgan Library at (617) 984-7445, send a fax to (617) 984-7060, or E-mail [library@nfpa.org](mailto:library@nfpa.org).

## Retail Store Fire in Mableton, Georgia, on October 26, 1997

At approximately 1:00 a.m. on October 26, 1997, an explosion occurred in an 86,400 square foot (8,026.6 m<sup>2</sup>) mercantile store in Mableton, GA. At the time of the incident, the store was occupied by four people who were cleaning and restocking. It was not open to the general public at that time.

A general merchandise retail facility, the store measured 240 ft. x 360 ft. (73 m x 110 m) and was one story high, measuring 20-22 feet (6.1-6.7 m) in height. Its exterior walls were constructed of masonry block and supported lightweight steel trusses. Its roof was composed of corrugated steel deck and was covered by a layer of fiberboard, which in turn was covered by a layer of expanded foam insulation. Over this lay a black, rubberlike membrane covered with gravel.

Within the sales floor area of the store hung a suspended acoustical tile ceiling. The area within the stockroom was open to the roof deck. A second stockroom located in the southwest portion of the store housed a propane-fueled fork truck. Five spare 40-pound cylinders of propane were also stored in this area.

The building was equipped with a sprinkler system in the occupied spaces. Sprinkler protection in the noncombustible void space above the suspended ceiling was lacking, however. The sprinkler system was equipped with flow switches that were monitored by a central station alarm company.

The Cobb County Fire and Emergency Services, notified of an alarm sounding by the alarm monitoring company, initiated a standard, two-engine response to the incident. Shortly thereafter, the occupants of the store called to report the explosion. Additional companies were then dispatched to the incident.

The first arriving company (E1) responded to the front door of the store and reported that nothing was visible from the exterior of the building. Upon entering the building, the officer observed that some ceiling tiles had been knocked down and that some stock had fallen to the floor. He walked through the sales floor to the area of the stockroom that

the employees reported an explosion had occurred.

After entering the stockroom, the officer observed that the rear wall had been knocked out, and he reported that there was possibly a fire behind the building. Water from the sprinkler system was flowing across the floor in the area. He then returned to his engine company by the front door, had the four occupants removed from the building, and, based on his observations, planned to attack the fire with a pre-connected handline.

A second company (Engine 9) responded to the southeast corner of the store and, using the wall post indicator valves, shut down the sprinkler system because of the damage to the sprinkler system. As his crew carried out this task, the company officer walked farther west to assess the damage. He observed that 150 feet (46 m) of the south wall in the southwest corner had been blown out into the driveway and that the roof was sagging. In addition, a 40-foot (12-m) storage trailer adjacent to the building had been blown over on its side by the force of the explosion. The officer determined that the fire in the loading dock area could be handled by handlines if the company attacked it quickly. He ordered his engine company to move farther west and to advance a handline to attack the fire from the rear. Another engine company (Engine 22) was ordered to establish a water supply for this company. Engine 22 advanced a handline as well as a 3-inch supply line to Engine 9's deck gun.

The officer from the first arriving company (E1) passed command to the Ladder 1 captain, who was located at the front of the store. The Engine 1 officer then looked back into the store and observed a fire in the building. He and his crew then re-entered the store with a crew advancing a handline. As the officer entered the building he immediately removed a ceiling tile with a pike pole and reported that black smoke and moderate heat escaped the void space. The officer advanced a little farther and removed another tile and experienced the same result. Feeling that he and his crew were in a dangerous position with a fire above them, the officer ordered his personnel to exit the structure.

A defensive fire attack was initiated using master streams from two ladder companies and three portable monitors. Personnel report that within 30 minutes the roof began to fail in the southwest corner of the building, and shortly thereafter large sections of the roof collapsed. During firefighting operations, several explosions that have been attributed to the spare propane cylinders BLEVEing occurred in the area of the stockroom.

The fire burned for approximately two hours, until it was declared under control at 0305 hours. The entire building and contents were destroyed by the initial explosion and subsequent fire and explosions.

At 4:30 a.m., a curb-box type valve that controlled a portion of the local domestic and fire protection water supply to the store was found to be closed by the local water authority.

Investigators for the Cobb County Fire and Emergency Services and the Metro Fire Investigations Task Force determined that the cause of the explosion and ensuing fire was a propane leak from one of the tanks in the stockroom. The leaking cloud was ignited by an ignition source in the area.

Based on NFPA's investigation and analysis of this fire, the following factors are considered to have contributed significantly to the loss of property:

- Improper storage of propane cylinders within the occupancy
- Failure of one of the cylinders, which created the cloud of propane gas
- A closed water valve, which limited the available water supply to the sprinkler system and fire streams

## Bulk Retail Store Fire in Tempe, Arizona, on March 19, 1998

A fire occurred in an occupied bulk retail store in Tempe, AZ, on Thursday, March 19, 1998, at approximately 4:00 p.m. At the time of the fire, 110 people were estimated to be in the store. There were no injuries or fatalities.

The building in which the fire occurred was a sprinklered, bulk retail store that sold general home improvement merchandise. The building was constructed in 1988.

Investigators from the Tempe Fire Department determined that the area of origin was in a rack that contained lawn furniture seat cushions. The cause was determined to be incendiary and was started by someone using a point-and-click type of lighter to ignite the seat cushions.

According to eyewitness testimony, when the fire was first observed it was located approximately chest height on one side of a 12 ft. (3.7 m) high double-row rack. There was an additional 3 ft. (0.9 m) of storage on the top level that created a total height of 15 ft. (4.6 m). The size of the fire at that time was characterized as being as big as a computer monitor. Within a very short time, the fire had extended vertically along both the outside face of the rack and within the flue longitudinal space the full height of the rack.

A series of telephone calls were made to the Phoenix Fire Department Alarm Room, which dispatches for the Tempe Fire Department. One of the first calls was by an off-duty Phoenix fire fighter, who suggested that an immediate first alarm assignment be dispatched because of the severity of the fire. Other calls also reported a serious fire.

The first company to arrive was Phoenix Engine 38, which was located 1.2 miles (1.9 km) away. As soon as they left the station, they could see a large column of smoke coming from the area. Upon arrival, they immediately made entry in through the northeast door, advancing a handline. They reported that smoke had filled the building from floor to ceiling and that visibility was zero. The sprinklers had activated by this time, and the fire fighters were inundated with water as they made entry, advancing with an 1-3/4 in. hose line. The officer reported that they had to climb over debris in the aisles to reach the seat of the fires. Not until they came up to the fire was it visible, due to the heavy smoke conditions.

A ladder company was assigned to ventilate the roof. When they reached the area over the fire, they reported that one skylight had burned through and that three automatic roof vents had opened. They proceeded to open approximately 42 more, either by popping them open with an axe or sawing through the fiberglass panels.

Eventually, 66 sprinklers were activated over an area of 5,082 ft<sup>2</sup> (472 m<sup>2</sup>). Fire damage from flame impingement was limited to 1,500 ft<sup>2</sup> (139 m<sup>2</sup>). The fire destroyed product in the rack of origin for a length of 32 ft. (10 m) and for the full height of the rack. It

also spread to the other side of the double-row rack, destroying product over a length of 32 ft. and for the full height of the rack.

The fire spread across a 10 ft. (3 m) aisle and ignited the commodity being stored on the shelves in that rack. This commodity was comprised of barbecue gas grill products wrapped in plastic or cardboard material.

The fire impinged directly on the combustible roof trusses and the combustible roof panels. Two trusses and a number of roof panels had to be replaced following the fire. A third truss had to be repaired.

The building in which the fire occurred was a one-story, reinforced masonry structure measuring 400 ft. x 250 ft. (122 m x 76 m) and ranged from 24 ft. to 29 ft. (7.3 m to 8.8 m) high. This resulted in an area of 100,000 ft<sup>2</sup> (9,290 m<sup>2</sup>). The roof was supported by lightweight, parallel chord, wood trusses measuring 4 ft. (1.2 m) deep. The trusses were comprised of 2 in. x 4 in. wood members joined by metal gusset plates. The roof assembly consisted of 4 ft. x 8 ft. (1.2 m x 2.4 m) panels constructed of 1/2 in. (13 mm) plywood resting on 2 in. x 6 in. wooden supports.

The building was equipped with three ceiling level, wet sprinkler systems. The systems were designed to provide water at a density of 0.495 gpm/ft<sup>2</sup> over 2,000 ft<sup>2</sup> (20.2 (L/min)/m<sup>2</sup> over 185.8 m<sup>2</sup>) and were designed to protect a Class IV commodity for a maximum storage height of 20 ft. (6 m). The maximum number of sprinklers that it was designed for was 29 sprinklers operating simultaneously. The upright sprinklers were equipped with 286° F (141° C) fusible elements and with 17/32 in. (13 mm) diameter orifices. The building was divided into three zones and was supplied with water through an 8 in. (203 mm) municipal connection. The control valves and flow switches were supervised by the building fire alarm system. The only in-rack sprinkler system was located in a section of the paint aisle that was not affected by the fire.

A series of draft curtains were located throughout the building. They were constructed of sheet metal and measured 78 in. (2,000 mm) in depth. One draft curtain was located directly over the aisle where the fire occurred.

There were a total of 93 skylights and 29 automatic, thermal activated roof vents, each measuring 4 ft. x 8 ft. (1.2 m by 2.4 m). The roof vents were equipped with 165° F (74° C) fusible links.

The rack in the area of origin measured 12 ft. high (3.7 m), 32 ft. long (9.8 m), and 2.5 ft. deep (0.76 m). An additional 3 ft. (0.9 m) of storage on the top level of the rack resulted in a total storage height of 15 ft. (4.6 m). Immediately adjacent to this rack was another rack measuring 4.5 ft. (1.4 m) deep. The two racks were separated by a longitudinal flue space, creating a double-row rack configuration.

The double-row racks were separated by a longitudinal flue space that varied in measurement from approximately 0 to 6 in. (0 mm to 150 mm). The transverse flue spaces measured three inches in width and were spaced approximately 8 ft. (2.4 m) apart. Due to the damage in the area of origin, it was not possible to determine if the longitudinal flue spaces were blocked by product or kept open. However, it was observed throughout the store that it was very common to have the longitudinal flue space obstructed by product. There did not appear to be any provisions made to keep this from occurring.

Shelving was a combination of either solid sheets of plywood that measured 4 ft. x 8 ft. (1.2 m x 2.4 m) by 3/4 in. (19 mm) thick, or 2 in. x 6 in. wooden slats that were installed next to each other, creating a solid shelf without spacing between the individual slats.

The area where the fire occurred contained merchandise such as seat cushions, patio umbrellas, and plastic lawn chairs. Merchandise at the lower levels was either loosely packed or within cartons that had been opened to allow customer access to the product. Merchandise on the upper levels was on pallets that had been shrink-wrapped around four sides. The product on the adjacent rack was comprised of grass trimmers, plastic gasoline cans, and other outdoor-related products. Much of the material would be classified as a Group A plastic, both expanded and unexpanded, as defined by NFPA 231C, *Standard for Rack Storage of Materials*.

During the investigation, it was noticed that the foil facing on the roof-level fiberglass insulation (also known as reflective insulation) had become dislodged. In some areas, this foil was either draped over sprinklers or hanging in such a way as to obstruct the flow of water from the sprinkler.

Based on NFPA's investigation and analysis of this fire, the following significant factors were considered as having con-

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tributed to the loss of property:

- Fire ignition through arson
- Ceiling sprinkler density
- Flue spaces
- Draft curtains
- Fusible links on the ceiling vents
- Obstructed sprinkler spray patterns

This is the third fire that NFPA has investigated in a bulk retail building in three years. The other two, one in Quincy, MA, and the other in Albany, GA, involved pool chemicals, which greatly accelerated the fire. In this case, however, the fire was fueled by conventional fuel loads and overwhelmed the inadequately designed sprinkler system, destroying 96 linear ft. (29 m) of racks and product and causing six million dollars in damage.

**Fire Fighter Fatalities in West Helena, Arkansas, on May 8, 1997**

On Thursday, May 8, 1997, the West Helena Fire Department responded to a reported fire at a pesticides repackaging facility. An explosion occurred as fire-ground operations were beginning. As a result, four fire fighters were struck and buried by debris. One of the fire fighters was rescued but seriously injured, and the other three died before they could be rescued. The building was destroyed by the fire and explosion.

The building involved was approximately two years old and of unprotected, noncombustible construction. Most of the building's area was used for storage of product. However, in one small production area where pesticides were repackaged, there were several offices in the building. The building was served by a wet-pipe sprinkler system.

Facility personnel discovered a smoking sack of commodity in the facility's receiving area and attempted to extinguish the smoldering fire before calling the fire department at 1:02 p.m. In response, the West Helena Fire Department sent two engines, and several fire fighters drove to the scene in their own vehicles. The West Helena fire chief reported smoke showing upon arrival and requested a full response from the West Helena Fire Department and mutual aid assistance from the Helena Department.

The Helena fire chief and his driver were just down the street when they heard the request for mutual aid, and they responded immediately. Upon arrival, both the chief and his driver observed yellow smoke coming from the facility. The Helena chief approached the West Helena chief, who was meeting with the facility personnel, for assignment. The West Helena chief handed him the MSDS sheets and asked him to evaluate the hazards being presented by the products.

The Helena chief reviewed the MSDS sheets, and, based on his evaluation, felt that it would be appropriate to pull back and develop a plan of attack prior to approaching the building. He was approaching the West Helena chief to relay this information when the explosion occurred.

The explosion occurred as the West Helena fire fighters approached the building to investigate the source of the smoke. The four fire fighters were on the outside of the building and were struck and buried by debris. Immediate efforts were made to extricate the trapped fire fighters by others on the scene. West Helena and Helena fire fighters were able to rescue only one fire fighter because of the severe fire. The other three were buried under debris that couldn't be removed quickly. The fire was rapidly growing, and the incident commander believed it involved chemicals that posed a high risk to all in the area. As a result, the incident commander ordered everyone withdrawn before the last fire fighters could be removed, and he kept all personnel at a safe distance until a hazardous materials response team from West Memphis, AR, arrived.

Since fire fighters couldn't attack the fire and the smoke was considered to be extremely toxic, the focus of the fire department turned toward protecting the community from exposure. City, county, and state law enforcement and emergency management agencies were notified. Evacuation of areas that could be exposed to the smoke was initiated. The local hospital was one of the many facilities in the evacuation zone.

When the West Memphis hazardous materials response team arrived, they assessed the situation and planned a fire attack to determine whether they could extinguish the fire. Their attack had no effect on the fire, so the team decided that they couldn't extinguish the fire. Instead, they concentrated on recovering the three victims, which was successfully completed.

The EPA dispatched a team to the incident, and they assumed command of the scene. Over the following days, an incident command structure was slowly created, incorporating the many agencies involved in the suppression and recovery operations.

Several days into the incident, another private hazardous materials team arrived on the scene. They conducted a more comprehensive evaluation. Based on this evaluation and their airborne monitoring, they established a new hot zone that was larger than the one that had originally been established.

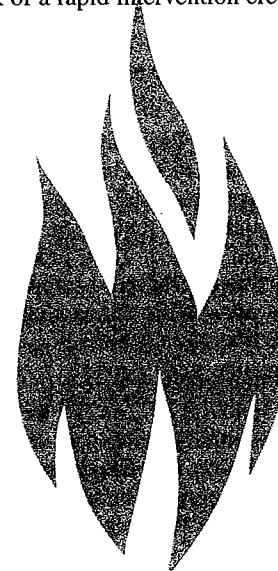
The fire gradually decreased as it consumed the fuel, and, by noon on Sunday, May 11, 1997, only smoldering spot fires remained.

The building where the incident occurred was reportedly fully sprinklered. However, due to the damage, NFPA's fire investigators were unable to approach the building to verify the details. Furthermore, the plans to the building were destroyed in the explosion. There were 50 employees in the building at the time of the incident.

The exact cause of the fire and explosion are unknown at the time of this report.

Based on NFPA's investigation and analysis of this fire, the following significant factors were considered as having contributed to the loss of life and property:

- Inadequate size-up
- Delayed alarm
- Ignition of material
- Proximity of fire personnel to building containing identified hazardous materials
- Lack of a rapid intervention crew



## NATIONAL FIRE PROTECTION RESEARCH FOUNDATION ISSUES TECHNICAL REPORTS FROM IBC FIRE TEST PROJECT AND POOL CHEMICALS STORAGE FIRE TEST PROJECT

New technical reports from two groundbreaking research projects conducted by the National Fire Protection Research Foundation have been issued and are available.

The Foundation initiated the *International Intermediate Bulk Container Fire Test Project* with the aim of documenting effective fire protection for the storage of combustible liquids in non-metallic intermediate bulk containers (IBCs). The project independently documented fire performance and protection criteria that might be incorporated into standards, codes, and certification test protocols. Previously, IBCs have been unrecognized or "unprotected" in fire codes. The fire tests were among the first conducted at Underwriters Laboratories' new large-scale fire test facility.

The results are presented in four separate reports. "Scoping Tests" documents fire tests to help quantify potential failure mechanisms of IBCs for a range of poten-

tial exposure fires. "Required Delivered Density Tests" documents RDD tests of single IBCs and IBCs stacked two-high. "Evaluation of Large Arrays" documents large-scale fire tests of IBCs in representative real-world storage/use scenarios. "Verification Tests and Development of a Standard Evaluation Methodology" reports on fire tests of larger arrays and correlates the large-scale results with a potential standardized reduced-scale test protocol.

These reports cost \$50 each or \$120 for all four. A video accompanies orders of all four IBC reports.

The *National Oxidizing Pool Chemicals Storage Fire Test Project* was initiated to better understand the burning behavior and the ability of automatic fire sprinkler systems to control fires involving dry oxidizing pool chemicals stored in containers. This information was needed for bulk retail buildings, also known as "big box" stores, where oxidizing pool chemicals are stored

in rack storage arrays. These fire tests were also done at UL's new test facility.

In addition, the data developed from the testing is available for consideration by the Technical Committee responsible for NFPA 430, *Storage of Liquid and Solid Oxidizers*, and for others concerned with fire safety in large volume retail stores.

The technical report contains project background and objectives, results from large-scale calorimetry fire tests and sprinklered fire tests, observations and conclusions, and appendices containing convective heat release rate results, oxygen concentrations, thermocouple and radiometer graphs, damage assessment graphics, selected fire test photographs, and abstracts from the literature review conducted at the project's outset.

This report is available for \$50.

To order a Research Foundation report, call Kristen Allegro at (617)984-7283.

## Have You Spotted NFPA's New Sparky® Web Site?

Want to turn common animals into spotted wonders? How about designing your own fireworks show, or getting behind the wheel of a 20-ton fire truck? Log on to [www.sparky.org](http://www.sparky.org) to do all this and more! On September 1, 1998, Sparky the Fire Dog®, the official mascot of NFPA, made his Internet debut as the host of a witty, hip website filled with fun and educational sites for children ages six to nine and their families.

By offering a wide selection of interactive sites, [www.sparky.org](http://www.sparky.org) entertains young web-surfers while teaching them basic safety messages. "With so many media to choose from these days, it's tough to compete for the attention of young children," says Meri-K Appy, NFPA's vice president for Public Education. "By combining creativity and a little humor with the latest technologies, our hope is that the Sparky web site will capture kids' attention, hold their interest, and make them a little safer in the process."

In one of the web site's activities, users help Sparky find his way out of a home, an apartment, and a classroom while learning the basics of fire escape planning. Other sites allow kids to learn all about Dalmatians, peruse a fire truck gallery, and ask Sparky questions about various safety issues.

"Some of the web site's activities are just plain fun," notes Ms. Appy. For example, "Get Out of the Way!" puts kids behind the wheel of a fire truck, where they can sound the horn and navigate through a city street as the truck makes its way to a fire. Or kids can use the "Dalmatianizer" to transform all sorts of animals and people into spotted characters. And these are just a few examples of what Sparky's web site offers.

Most of today's school-age children know Sparky well. Aside from his star role in "Sparky's ABCs of Fire Safety," a video that NFPA recently distributed to every ele-



mentary school in the U.S., Sparky often makes appearances at schools during Fire Prevention Week each October, as well as at local parades and community events throughout the year. He is also at center stage in a series of broadcast public service announcements now in rotation in the top U.S. television markets.

## NUMBER OF 1997 U.S. FIRE FATALITIES DROPS BY 18.8% Represents Lowest Fire Death Rate in 20 Years

**A**t a total of 4,050 fatalities, 1997's U.S. fire death toll was the lowest in the last 20 years. According to a report released by NFPA, this dramatic 18.8 percent decline follows a two-year increase in the U.S. fire death toll. In light of these recent fluctuations, NFPA's excitement about its latest findings is mixed with caution.

"We're greatly pleased that the total number of fire deaths dropped so much in 1997. It means that nearly 1,000 lives were saved compared to the death tolls in 1995-1996. However, our enthusiasm is tempered by the fact that we have experienced one-year spikes or dips in the past that were reversed a year later," says Dr. John Hall, NFPA's assistant vice president of Fire Analysis and Research. "Our hope is that last year's reduction will be sustained, but that remains to be seen." Statistics show a general decline in the number of U.S. fire deaths over the last two decades.

Although the number of fire deaths in the home also dropped considerably, by 16.7 percent to a total of 3,360 in 1997, the percentage of fire fatalities occurring in the home has increased for the third consecutive year. Home fire deaths now account for 83 percent of all U.S. fire deaths. "It's ironic that most people feel safest from fire in their own homes when, in reality, that's where most fire deaths

occur, fire death risks are highest, and relative progress in reducing fire deaths has been slowest," says Dr. Hall. Home fires also resulted in nearly \$4.4 billion in direct property damage.

According to NFPA's report, declines were reflected in many aspects of the 1997 fire loss picture: The 1,795,000 fires attended by public fire departments represent a decrease of 9.1 percent from the year before, and property damage dropped by 9.4 percent to an estimated \$8.5 billion, even when adjusted for inflation. Incendiary and suspicious structure fires decreased by 8.2 percent to 78,500, and the 445 deaths resulting from those fires represent a decrease of 14.4 percent from 1996. In addition, 23,750 civilians were reportedly injured in all fires, which represents a 7.1 percent decrease from the year before. (This estimate is on the low side, however, due to under-reporting of civilian injuries to the fire service.)

Even with decreases in 1997's fire rates, the overall U.S. fire problem remains considerable, resulting in billions of dollars of property damage, thousands of lost lives, and tens of thousands of injuries each year. "I don't want to underplay the improvements reflected in last year's fire loss numbers, since they were unquestionably in the right direction," concludes Dr. Hall. "At the same time,

more than 4,000 people died in fires last year. That's still way too many lives lost. We can and must do better still."

The full findings of NFPA's report, published in the September/October 1998 issue of NFPA Journal, address several major strategies to reduce the overall fire death toll. These include more widespread public fire safety and prevention education; increased use, testing and maintenance of smoke alarms, and practicing and developing home fire escape plans; much greater use of residential fire sprinkler systems; creation of more fire-safe home products; and increased attention to the needs of high-risk groups, such as the young, older adults, and low income communities.

The following statistics are also included in NFPA's report:

- Every 18 seconds, a fire department responds to a fire somewhere in the U.S.
- Nationwide, there was a fire death every 130 minutes and a civilian injury every 22 minutes.
- The South had the highest fire incident rate per thousand population.
- The South and the Northeast shared the highest civilian death rate (17.5 deaths per million population).
- 397,000 vehicle fires occurred in 1997.

### NEW ON-LINE CATALOG NOW AVAILABLE FROM NFPA

**N**FPA's catalog of fire, electrical, and life safety products and services is now on-line at <http://catalog.nfpa.org>. The on-line catalog can also be accessed through NFPA's web site at <http://www.nfpa.org>.

NFPA's new catalog website offers membership enrollment as well as more than 500 individual products and services, available for ordering 24 hours a day. Customers will be invoiced or can fax a form for credit card orders. A secure web site credit

card transaction process is planned for the near future. The site allows users to locate a product by entering a key word or phrase into a search box, or by clicking categories that match the topics of interest.

A toll-free telephone ordering and customer sales number remains in operation for NFPA customers without Internet access; call (800) 344-3555.

## NFPA and Certified Fire Protection Specialist Board Offer Examination Program

**N**FPA and the Certified Fire Protection Specialist Board (CFPSB) have announced they will work in partnership to offer the Certified Fire Protection Specialist Examination to non-engineering fire prevention or protection technologists who have acquired expertise and professionalism through applied work experience and related educational opportunities. NFPA will administer the program and CFPSB will provide overall direction.

Certification may be awarded upon successful completion of at least six years of education and progressive experience in any field of fire protection, and a passing score on the Certification Examination, which is based on the 18th Edition of *NFPA's Fire Protection Handbook*.

The CFPS credential is pursued by fire chiefs and marshals, inspectors, educators and safety managers, loss and risk control specialists, as well as fire protection consultants and design professionals.

The Certified Fire Protection Specialist Program was established in 1971 to complement other certification and licensing

programs. "Continuation of this certification program is critical to our industry," says Gary O. Togle, NFPA assistant vice president for Public Fire Protection. "Professionalism in the field of fire protection specialists is reliant upon a balance of education, experience, and knowledge. Standardized certification ensures consistent excellence in those attributes. For the individuals, earning internationally recognized certification brings both peer recognition and the opportunity for career advancement."

Bill Tamburro, chair of CFPSB, says this new partnership is a giant step in the right direction. "Recognition for experience, expertise, and professionalism for fire protection specialists is an important incentive for excellence. I'm delighted that CFPSB and NFPA have joined in partnership to further this valuable certification program. Both organizations look forward to a long and fruitful partnership."

For information on the CFPS program, exam locations and dates, and a brochure, call the CFPS administrative office at (617) 984-7484.

## Executive Secretary's Corner



by Steven F. Sawyer

At the Fall Business Meeting, the members voted to change the name of the association to the International Fire Marshals Association (see "President's Corner" on p.1). This is a step in the right direction for our current and future international members.

It's been a very active year for the Association. We've had three new chapter applications, South Carolina, Illinois, and Tennessee. We'd like to welcome South Carolina Fire Inspectors Association as Chapter 14. The Executive Board held four meetings and has set the course for the next year. The *Principle of Fire Protection Engineering* courses were successful, with 90 attendees in two courses.

We'd like to congratulate two of our chapters for anniversaries this year. The Florida Fire Marshals Association celebrated its 50th anniversary, and the North Carolina Fire Marshal Association celebrated its 30th anniversary. FMANA presented both chapters with a resolution from the Executive Board. We congratulate both Chapters for their long, dedicated service to their communities and to FMANA.

Next year's Fire Protection Institute includes both the *Principles of Fire Protection Engineering and Management Institute for Fire Marshals* and the schedule should be out soon. Stay tuned to the *Quarterly* and the homepage.

At NFPA's Fall Meeting, FMANA held five educational sessions, which were very well attended. We're looking to hold more sessions at the 1999 Fall Meeting in New Orleans; anyone wishing to suggest topics and presenters, please contact me.

Thank you for all of your support during this last year, it's been a great help for me in my first year as your executive secretary. I'd like to wish everyone a fire safe and joyous holiday season.

### FMANA BECOMES IFMA

At its November 17, 1998, business meeting, the Fire Marshals Association of North America membership voted to change its name to the International Fire Marshals Association. Executive Board members proposed the change. They felt it would better reflect the current membership from 20 countries, including the United States and Canada. The change should remove the perceived member restriction to North America and increase our international membership. We hope this will also incorporate new international chapters to the current 15 chapters in the United States and Canada. Look for more information and the new logo in upcoming editions of the *Quarterly*.

### FIRE PREVENTION 2000 REPORT AVAILABLE

In February 1998, FMANA and NFPA sponsored the Fire Prevention 2000 workshop, held in Scottsdale, AZ.

Forty-two diverse fire service leaders representing fire service organizations throughout the United States and Canada participated in this workshop, which looked at current fire prevention challenges, attempted to anticipate pending challenges, and then formulated suggested solutions for addressing these challenges. Copies of Fire Prevention 2000 have been mailed to all members of FMANA (enclosed with this edition of the *Quarterly*).

## NFPA Will Hold World Fire Safety Congress and Exposition™ in May 1999

NFPA has announced that its Annual Meeting and Fire Safety Exhibit held each May will be called the "World Fire Safety Congress and Exposition™" beginning next spring at its conference in Baltimore, MD. This changed title represents the addition of new educational programs and session "tracks," with course credit awarded to those who attend the sessions.

"NFPA's Annual Meetings have been an overall success in the past, but we continually work to make it even more beneficial for attendees each May," says Albert B. Sears, Jr., assistant vice president of NFPA's Meetings Division. "After carefully evaluating feedback from people who have attended the meeting in recent years, we found some excellent opportunities to further enhance the total value of the conference. Changing the title of the Annual Meeting to the World Fire Safety Congress and Exposition was a way to recognize those improvements."

Primary changes at the 1999 World Safety Congress and Exposition, May 16-20, include attendees' ability to receive CEUs for the sessions they attend. In addition, a series of educational tracks has been developed to break down all programs offered into eight sections: codes and standards; electrical safety; fire safety engineering; fire prevention; firefighting operations; life safety education; management/professional development; and research and testing. This new system will allow attendees to more easily identify the sessions that interest and benefit them most.

Mike McCurry, former press secretary and assistant to President Clinton, who will be the keynote speaker at the conference's opening general session, represents another highlight of the 1999 World Safety Congress and Exposition.

"We're confident that the 1999 World Fire Safety Congress and Exposition will provide increased resources and improved access to sessions for all attendees," concludes Mr. Sears. "Ultimately, we hope that people walk away with new skills and timely information that enrich and improve their careers."

NFPA's trade exposition continues to attract an ever-growing number of companies to demonstrate state-of-the-art fire safety products and services. More than 250 companies representing some 30 industries will have exhibit booths at the May 1999 meeting.

## Robert Melton Honored as FMANA Past President



*Robert Melton (right), fire marshal at the Dallas, TX, Fire Department and FMANA president from 1997 to 1998, was presented with his past president plaque during the Summer FMANA Executive Board Meeting held at NFPA headquarters.*

## FMANA JOINS HOME FIRE SPRINKLER COALITION

FMANA has been invited to participate as a non-voting member of the Home Fire Sprinkler Coalition, whose purpose is to provide accurate information to consumers about the life-saving value of automatic home fire sprinklers, particularly in new construction of one- and two-family dwellings. The coalition's activities include consumer surveys on home fire sprinkler awareness in Connecticut, Illinois, and Oregon; national and local publicity outreach; a toll-free information line, (888) 635-7222, and a website, [www.firesprinkler.org/hfsc/](http://www.firesprinkler.org/hfsc/), to provide the public with access to free, accurate information about home fire sprinklers; and public educator kits, available to educators for teaching seminars and educational programs.

The HFSC founding organizations are the American Fire Sprinkler Association (AFSA), National Fire Protection Association (NFPA), and National Fire Sprinkler Association (NFSA).

The coalition's accomplishments are as follows:

### Year 1

- Launched a pilot program in Connecticut
- Reached 10 million consumers
- Landed feature segments on *Good Morning America* and the *Gayle King Show*
- Retained Ron Hazelton, *Good Morning America's* House Doctor, as spokesperson

### Year 2

- Expanded public awareness campaign to Illinois and Oregon
- Recruited seven new organizations to join HFSC

For information about the HFSC partnership programs, please call Gary Keith at (617) 984-7263, or send an E-mail to [gkeith@nfpa.org](mailto:gkeith@nfpa.org).

## APPLICATION PROCEDURES ESTABLISHED FOR 1999 HARVARD FIRE EXECUTIVE FELLOWSHIP PROGRAM

The 1999 Harvard Fire Executive Fellowship Program will be sponsored through a partnership between NFPA, the International Association of Fire Chiefs (IAFC), and the Federal Emergency Management Agency (FEMA) United States Fire Administration's (USFA) National Fire Academy (NFA). NFPA will fund the tuition costs and the IAFC will provide assistance with interview and program travel expenses. NFA will administer the selection process.

Six senior fire executives will be awarded fellowships to attend Harvard's annual "Program for Senior Executives in State and Local Government." The three-week summer program is conducted on the Harvard campus in Cambridge, MA. Selected Fellows would be assigned to attend one of the two 1999 session dates: June 13-July 2 or July 11-31. Applicants must be available to attend either session.

The following criteria and guidelines have been established for the 1999 program:

Application is open to senior fire executives who have demonstrated significant career accomplishments and have the potential to impact and initiate change.

Preference may be given to applicants who are graduates of the

NFA's "Executive Fire Officer Program" although program completion is not a prerequisite.

Preference may also be given to applicants who have completed graduate-level degree programs or course work.

Individuals whose organizations have been represented in the Harvard Fellowship Program during 1996, 1997, or 1998 will not be considered.

A FEMA General Admission Application (Form 75-5) is required and must be postmarked no later than January 31, 1999. An organizational chart of the applicant's sponsoring organization (with applicant's position highlighted) is required with the General Admission Application. All applicants are encouraged to include a resume with their submission. All packages should be forwarded to the following address: Harvard Fellowship Program, c/o Ms. Cynthia Wivell, U.S. Fire Administration, National Fire Academy, 16825 South Seton Ave, Emmitsburg, MD, 21727.

Semi-finalists will be forwarded complete program information and materials for a secondary application process that is essay based.

For questions regarding any application procedures, please call Ms. Wivell at (301) 447-1083.

### MICHIGAN ARSON PREVENTION COMMITTEE PRESENTS THE NINTH ANNUAL JUVENILE ARSON SEMINAR

The Michigan Arson Prevention Committee is sponsoring its Ninth Annual Juvenile Arson Seminar, to be held from January 27 through 29, 1999, in Battle Creek, MI. The fee is \$150 per person, and it covers the three-day conference, lunch on Day 1 and 2, and coffee breaks.

Scheduled speakers include Dr. Gerald Sinclair, John Wilson, Office of OJJDP, Washington, D.C.; Attorney James Hewson, Probate Judge Patricia Sullivan of McComb County; and John Bianco Wayne County Prosecutors Office.

For information, call John Wiechert at (517) 543-4110 or Phillip Caldwell at (734) 487-5434.

### CARBON MONOXIDE COULD BE A RISK IN YOUR HOME

*NFPA Recommends Installing CO Alarms  
Offers Fact Sheet on Web Site*

Carbon monoxide (CO) is an invisible, odorless, colorless gas that can cause sickness and even death. NFPA recommends that people protect themselves and their families against CO poisoning in their homes by installing CO alarms, which provide early warning of accumulating carbon monoxide.

Maintaining, using, and venting heating and cooking equipment properly, and being cautious with vehicles or generators in attached garages, are vital to preventing CO poisoning in the home. NFPA cautions that CO alarms should not be used as substitutes or replacements for smoke alarms, which give early warning of a fire.

To read more about how to prevent CO poisoning, NFPA offers a fact sheet, "Carbon Monoxide Risks at Home," on its web site at [www.nfpa.org](http://www.nfpa.org).

## New from NFPA

**N**FPA's Fire Investigations Report Subscription Service is expanding its services by now offering the reports electronically, either via E-mail or diskette. You can receive the same NFPA Fire Investigations reports that have always been available in hard copy, but now in PDF format, complete with full color photographs. Imagine the convenience of having the reports delivered directly to your E-mail address as soon as they hit the street! Selected reports, among others, scheduled to be released in 1999 will include:

- Gothenburg, Sweden, disco fire
- Vail, Colorado, ski resort fire
- Albert City, Iowa, fire fighter fatalities
- Marks, Mississippi, fire fighter fatalities
- Haysville, Kansas, grain elevator explosion
- St. Louis, Missouri, elderly high-rise fire
- Bremerton, Washington, apartment fire
- Miami, Florida, Ecstasy cruise ship fire
- Pattaya, Thailand, hotel fire

Each of these reports is prepared by NFPA investigators who have conducted on-scene investigations of these events. Often, the information contained in the reports is available exclusively through NFPA.

Some of the reports released in the past include a number of board and care fires, fire fighter fatalities, high-rise fires, and signature

reports such as the English Channel tunnel fire, the Düsseldorf airport terminal fire, the Oklahoma City bombing, and the Kobe, Japan earthquake.

And starting in 1999, the only way to receive the full reports is going to be either through the Fire Investigations Subscription Service or by ordering them from the NFPA Library.

The report summaries, which are abbreviated, stand-alone highlights of the full report, are designed for a nontechnical audience. NFPA will continue to post the summaries, in their entirety, on the NFPA home page at [www.nfpa.org](http://www.nfpa.org).

The cost for the electronic service is \$70.00 (U.S.), per year, or \$63.00 for NFPA members. NFPA members will save 37 percent over the hard copy service, which runs \$100.00 per year. If you were to buy the individual reports through the NFPA Library, they would cost you \$30.00 each. In addition to the full report, you will receive the report summary, too.

To sign up, contact NFPA's One-Stop Data Shop via the Internet at [osds@nfpa.org](mailto:osds@nfpa.org) or by telephone at (617) 984-7450.

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**FIRE MARSHALS ASSOCIATION OF NORTH AMERICA**  
**SECTION NEWSLETTER**

**National Fire Protection Association**

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