

# THE MISSING COG IN Fire Safety



*Schoolchildren  
know all about  
fire prevention.  
Where fire education  
has stopped in this  
country is at the  
doorstep of industry.*

It's 10 o'clock in the morning and you're eight years old again, sitting in your third grade classroom. The fire alarm goes off. Like millions of students across the country each year, you leave the classroom and follow your teacher outside, participating in a fire drill.

Fire prevention and safety education have grown in leaps and bounds over the past four decades, but unfortunately it has always taken a tragedy to cause us to act when it comes to this part of our lives. In December 1958, 90 students and three nuns perished in a fire at Chicago's Our Lady of the Angels School. Investigators from the National Fire Protection Association found the primary cause of the loss of life was inadequacy of the fire exits. This was a terrible awakening for America to the hazardous conditions of the nation's schools.

The National Commission on Fire Prevention and Control released its "America Burning" report in May 1973 to the president and the country. The report told us that more than 12,000 people were dying each year in fires in the United States and that fires accounted for more than \$11 billion in wasted resources each year. The commission's very first recommendation was for more emphasis to be placed on fire prevention.

Fire departments and fire schools across the country grasped this concept and formed coalitions in many communities that are still in place today to educate our young people about personal fire prevention and fire safety concepts and attitudes.

The country worked for safer schools, the country worked for personal safety education for our young people. What's missing is industry. Statistics show that

By ROBERT LAFORD

nearly 50 percent of the companies that experience a serious fire will not be in business in five years. Industry in the United States needs to grasp the same commitment toward fire safety that children have for the past three decades.

By breaking down fire safety and prevention into smaller pieces, we can see how effective small strides can be for the protection of our workplace. More important, for the protection of our people. The parts are planning, the physical plant, and personnel.

### Planning

Commercial and industrial occupancies account for about 9 percent of reported fires in the United States. The statistics also show, however, that nearly 40 percent of the overall dollar loss, about \$3.2 billion each year, is from industrial and commercial fire losses.

Look at your business. There may be processes that could lead to a fire, or certain components of the building that could be more of a fire hazard than other parts.

Talk to your local fire department. It is your partner in fire safety. Your emergency plan is first and foremost, for the protection of your employees. Where are they in danger? What information do they need to keep safe? What is expected of them during a fire emergency?

Keep the plan simple. During an emergency, when stress is higher, people will revert to actions that have become habit. If the company emergency action is kept simple, it will help the employees remember how to act properly during the emergency.

Some companies have fire brigades; others want everyone to evacuate the building. Still others may want to "protect in place" if the building is so large and would create more problems if total evacuation were attempted. These options should be worked out and in place prior to the fire alarm sounding.

The biggest part of the emergency plan, for the largest part of the workforce, is the notification and evacuation plan. Ask any first or second grade kid what to do if the fire alarm goes off and he'll tell you. That is what you want your emergency evacuation plan to accomplish.

Here are the elements of a basic plan:

#### If you discover fire:

- Shut off your machine (if appropriate).

- Activate the fire alarm system.
- Evacuate the building immediately.
- Go to the pre-designated gathering point.

#### If you hear the fire alarm:

- Shut off your machine (if appropriate).
- Evacuate the building immediately.
- Go to the pre-designated gathering point.

It's extremely important that once management has developed its plan, it is shared with the employees. A plan that is not shared with those it affects is worthless.

In the simple notification and evacuation plan above we spell out that the fire alarm has to be activated. Fire grows in proportions that most people do not realize. It is imperative to sound an alarm so others can evacuate the building quickly. If the inter-

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nal alarm does not automatically notify the local fire department, then the plan must also include who and how to notify the fire department. There have been many cases where people have stood and watched a building burn, assuming someone else has notified the fire department—and no one has.

After notification comes evacuation. Get out. The plan should spell out who should try to fight a fire in the building and who should not. Some companies do have individuals trained in some form of fire suppression, but most employees should leave the building at the sound of the alarm.

The last entry on the sample evacuation plan is go to the pre-designated gathering point. Did everyone get out? Does anyone need medical attention or is there still someone trapped in the building? How do you know?

The plan must include the designated

gathering spot and a way to account for all of the building's occupants. Supervisors usually have access to employee lists of who was working where and so forth. This information is essential to achieve accurate accountability of your employees.

Also included in the company's emergency action plan should be information about the building's fire alarm, detection, and suppression systems.

Information on product storage and simple "housekeeping" polices should be made part of the general plan as well. These things are the second part of fire safety in the workplace, the plant.

### The Physical Plant

The plant, or the company's facilities themselves, can contribute to the intensity of a fire as well as to the fire prevention goals of the company's emergency action plan.

Both automatic sprinklers and fire detection systems have been around since the 1800s. So reliable are automatic sprinklers that there have been absolutely no multi-fatality fires in buildings with a properly operating sprinkler system. Fires start small, and if buildings were properly sprinklered, more than 95 percent of all fires would be controlled prior to the arrival of the fire department. But sprinklers are not fail-safe. The systems have to be properly maintained and monitored.

Along with the sprinkler and alarm systems, proper facility safety also requires the maintenance and upkeep of heating, ventilation, and electrical systems.

Simple, everyday events and duties can help or hurt a building's fire safety. Housekeeping is one of the biggest chores that needs to be monitored during day-to-day operations. Trash and other waste should be stored properly to limit its chance to be an ignition source for a fire and its availability to help a fire spread.

Employee handbooks and company policy should spell out where smoking is allowed, if it is allowed. Proper receptacles should be made available for the proper disposal of smoking materials.

Exit ways, hallways, and other means of travel must be kept clear. Exit doors must not be blocked. One of the recommendations from the "America Burning" report was that fire codes adopt measures spelled out in the Life Safety Code: "The principles of life safety in buildings are to pro-

vide sufficient exits to permit prompt evacuation of occupants during a fire and to provide the means for preventing the occupants from being exposed to undue danger [during their escape]."

Materials storage is a day-to-day activity that must be monitored. Materials that need special handling and storage should be stored according to recommended practices. The many hazardous materials used daily in today's industrial world can have a devastating effect on a plant and its personnel if handled improperly. Materials stored in stacks vertically must not be within 18 inches of sprinkler heads for most materials and up to 3 feet for some specific materials. Material stored too near sprinkler heads will block the intended path of the activated sprinkler and limit its effectiveness.

Without qualified and trained employees, the evacuation plan won't work. Without qualified and trained employees, the physical plant cannot be maintained. Without trained employees, simple day-to-day concerns such as blocked egresses,

trash, and smoking materials may not be taken care of within the plant. Employees are the key to fire prevention and the fire safety environment of any business.

**Personnel**

In 1988, the Federal Emergency Management Agency published a report titled "America Burning Revisited." The report studied the 90 recommendations made by congressional report some 15 years earlier.

One recommendation in the original report was that fire departments take a more proactive role in public fire safety and prevention education. The 1988 sequel stated that most of the nation's fire departments have significantly increased fire prevention and education programs within their communities. The 1988 report continued by saying that "the public's awareness [or lack of awareness] of the fire problem remains a major obstacle."

One of the biggest education success stories is the National Fire Protection Association's Learn Not to Burn curriculum. The NFPA developed this program

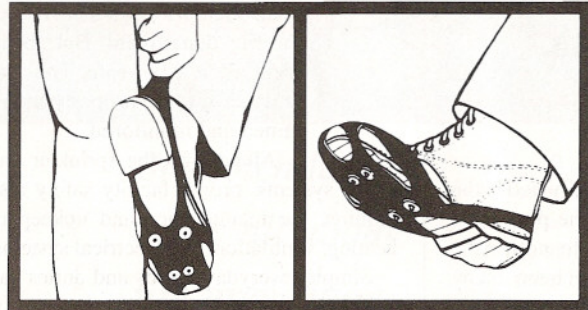
to give teachers valuable information and resources to add fire safety and general life safety lessons into their daily lesson plans. This program also forges a bond between the local schools and the local fire department.

And while fire prevention and safety education in the country's schools has grown and been integrated into school programs, that's where most of the fire safety education has stopped.

Schools are a great place to teach fire and life safety lessons because the audiences are "captive." Children absorb the materials; this is information they need to help themselves keep fire safe. But fire safety programs in the schools not only teach those children, these programs also bring the important information home to siblings, friends, and parents. One child taught a lesson will probably spread the information to at least three or four more people.

How is industry different? Employees are also a captive audience that needs to learn valuable life safety skills: the skills

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that will help them survive a fire in their workplace. But those same skills, learned on the job, will remain with the employees to help them survive a fire at home, where most fire deaths in the United States occur. Like children in school, educated employees will carry home the fire safety message to educate their families.

The simple messages and skills that are taught to children are the same skills adults need for protection against fire:

- Leave the building when the alarm sounds or you think there's a fire.
- Notify the fire department immediately if you think there is a fire.
- Have a designated meeting place (at work and at home).
- Remember "Stop, Drop, and Roll" if your clothes catch fire.
- Test your smoke detector frequently and change its battery when you change your clocks.

By educating the work force, industry not only enhances its job-related benefits. The benefits also become personal for the

employees. The company has given them knowledge and skills that will help protect their families, too.

### Great Strides, More to Do

Fire safety and prevention education communicates very simple, common-sense skills. The United States has helped the fire prevention and safety education cause grow enormously in schools throughout the country. The area where this education is still lacking is in the nation's industries.

By developing a company emergency action plan, industry can begin to incorporate fire safety education into the workplace. This incorporation will be a benefit for the company in regards to a safer workplace, but it will also be a personal benefit to the employees.

Local fire departments and insurance companies can be great partners in this undertaking. Experts in these fields can help the company with recommendations about the physical plant, how to prepare so fire is a less serious threat, and also how to keep the plant safe for its employees.

These outside agencies can also become great partners in the education of the company's employees. These are the people whose careers are focused on loss prevention and emergency actions. Who better to work with you and your employees to make their workplace and homes safer?

Since 1973, fire deaths in the United States have gone from more than 12,000 each year to under 5,000 each year. Great strides have been made in fire suppression and detection equipment, but 5,000 people is still too many.

No sprinkler head, or smoke detector, or fire engine has ever prevented a fire from occurring. It's education that prevents fires from ever happening in the first place. And that is where we must begin. **OHS**

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