

## Fire and Smoke Detectors

**Line of Business:** General Liability, Property, Workers Compensation

**Risk Control Strategy/Key Issues:** Proper selection and maintenance of smoke detectors, alarm devices and or heat detectors.

### Suggested Program Elements:

#### 1. Introduction: Fire Safety (smoke detection and alarm systems)

Operations require different alarm and detection systems based on their occupancy, hazards, and corresponding code requirements determined by the National Fire Protection Agency. NFPA life safety Code 101 as well as other NFPA codes will determine specific alarm requirements. Local ordinances may also play a part in determining what type of alarm and detection system a building may need. Since we can not address all of the types needed in this short article, contact your local fire department and review what they require.

In the short term, when was the last time you checked your building fire alarm system and your fire detection system? If you can't remember, then you are taking a chance with your life, property, organization, and the lives of others that work for you, or are under your care. Fire safety involves more than checking out your fire detection and alarm systems. Fire safety should include fire drills, pre plans, housekeeping, building design and maintenance, and many other topics. This article is going to focus on detection and alarms.

#### 2. Fire Alarm and Detection Systems

Basic issues regarding fire alarm and detection systems.

- a. Does your building have a detection system and alarm system? The age of your building if old, is no excuse for not having detection and alarms.
- b. Does it work? If not why? Is it too old, incorrect for your occupancy, not powered? Simply test the alarm. If does not work find out why. Is your business the first user of the building, if not is the alarm adequate for your occupancy? Smoke detectors have a life span of about 8 to 10 years. Heat detectors may be less or about the same. Environmental exposure to the detectors plays a big part in life span. Dust and exposure to heat and cold temperatures shortens life? When detectors are installed write the date on the back side, this will document their age.
- c. Is the system inspected, tested and maintained quarterly, monthly, annually? Frequency depends on the severity of the hazards present.
- d. Does your system have backup power in the event of power outage? Many new smoke detectors have 9-volt battery backup, or your place of business may have a generator. Many new detectors are combination units such as CO2.
- e. Is your system a local alarm, central station alarm, or does it directly notify a fire station? You need to know this before you do a test. If not, the fire department may show up without your expecting them!
- f. Is it loud enough to warn you, your employees, or students? Recent studies have shown that children tend to sleep through a buzzer or beeping type smoke detector and react better to an alarm with a message using their parent's voices. In many cases the noise from your computer is louder than an alarm, or the alarm sound is weak. Again, this is why testing is so important.

- g. Does the system work as it was intended to? Do people heed the alarm sound? Do they know what to do when they hear it? This is why testing is so important.

### **3. History, the future, failures, and fire drills:**

Since the 1960s, smoke alarms have become very affordable for most if not all occupancies. Occupancies mean a building with people, processes, equipment and activity in it. A dorm, a school, an office, a garage are all types of occupancies. Detection systems have a basic function; detect smoke, heat or fire. The most common detect smoke followed by heat detection. After detecting smoke or heat the unit sounds an alarm warning the occupants of the fire, or warning a monitoring company of the fire. The goal of these devices is to protect human life first and then property through early detection. When a fire breaks out in a residence smoke detectors reduce the risk of dying in that fire by fifty percent. In both business and residential settings, detectors reduce the response time to the incident by minutes. Every minute counts in fighting a fire.

The future of fire safety is always changing. Unfortunately we learn from past and present fire events, often tragically. Many towns and cities have passed laws with penalties for those that have tampered with a smoke, heat detector and or alarm systems. Simply removing the battery or disconnecting the detector is a violation of the law in these areas. Keep this in mind if your detector is sounding false alarms due to cooking, cleaning, or other work processes. While false alarms are a nuisance they are a good indication that the detector is working, could be in the wrong location, or the wrong type for the area. Do not remove it, or take the battery out.

Make sure that you're familiar with your building's evacuation plan, which should illustrate what residents are supposed to do in the event of an emergency. The evacuation plan should be posted in places where all residents can see and review it, and the building management should hold a fire drill with occupants at least once a year. Most states also require that buildings periodically test their fire safety systems as well. Be sure to participate when your building drills take place. When looking for an apartment or high-rise home, look for one with an automatic sprinkler system. Sprinklers can extinguish a home fire in less time that it takes for the fire department to arrive. Practice a drill, test your alarms and detectors, keep your exits free and clear of stored items – and be safe.

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