

# Section 8

## Fire Prevention

One of the most costly and destructive causes for loss of life and property that the County could experience would be from a major fire. All facilities or parts thereof used by County employees shall have a current written Emergency Evacuation Plan that will provide for the safe evacuation of all persons in the event of an emergency of any kind.

This Plan should be put into action, evaluated and updated as necessary, or at least annually.

## Reporting Fires

All employees should report fires immediately to 911 and follow the procedures outlined in your Emergency Evacuation Plan. Note that from many office buildings it is required to dial “9” to get an outside line. Therefore, you may have to dial 9911.

Note: Know the location of the exits and the location and correct operation of the nearest fire extinguisher.

## Portable Fire Extinguishers

All portable fire extinguishers shall be inspected by the division/department each month with the inspection date and inspector’s initials recorded on the extinguishers inspection tag.

Access to fire extinguishers must be kept clear at all times.

A fire extinguisher shall be used only on a small fire.

Use a fire extinguisher only if trained to use it.

Most portable fire extinguishers are classified:

Fire Safety

(a) “A” for fires involving combustibles such as wood or paper.

(b) “B” for flammable liquids.

(c) “C” for electrical wiring and equipment.

Fire Extinguisher  
Procedures

(d) “ABC” for combination fires.

(e) “D” for combustible metals such as magnesium and sodium

(f) “K” for industrial kitchens or wherever there is a fire suppression hood.

Signs should be visible indicating the location of fire extinguishers.

Have the used fire extinguishers replaced or recharged as soon as possible after each use.

Table 2-1 Summary of Sprinkler System Inspection, Testing, and Maintenance

Item	Activity	Frequency
Gauges (dry, preaction deluge systems)	Inspection	Weekly/Monthly
Control Valves	Inspection	Weekly/Monthly
Alarm Devices	Inspection	Quarterly
Gauges (wet pipe systems)	Inspection	Monthly
Hydraulic Name Plate	Inspection	Quarterly
Buildings	Inspection	Annually (prior to freezing weather)
Hanger/Seismic Bracing	Inspection	Annually
Pipe & Fittings	Inspection	Annually
Sprinklers	Inspection	Annually
Spare Sprinklers	Inspection	Annually
Fire Department Connections	Inspection	
Valves (all types)	Inspection	
Alarm Devices	Test	Quarterly
Main Drain	Test	Quarterly
Antifreeze Solution	Test	Annually
Gauges	Test	5 Years
Sprinklers-Extra High Temp.	Test	5 Years
Sprinklers-Fast Response	Test	At 20 Years & Every 10 Years Thereafter
Sprinklers	Test	At 50 Years & Every 10 Years Maintenance
Valves (all types)	Maintenance	Annually or As Needed
Obstruction Investigation	Maintenance	5 Years or as Needed

Extinguishers are to be placed in accordance with the hazard associated with the workplace.

## **Fixed Fire Suppression Equipment**

### Automatic Sprinklers

- (a) Materials shall not be piled within eighteen (18) inches of sprinkler heads.
- (b) There shall not be any storage above the sprinkler protection. Do not store materials above the suspended ceiling.
- (c) Sprinkler heads must be in good condition, with no accumulation of dirt, dust or grease and free from paint.
- (d) Inspection of sprinkler system should be based on NFPA 25, Chapter 2, Summary of System Testing, Inspection and Maintenance follows as Table 2-1.

### Dry Chemical Systems

- (a) In the event of fire, the fire protection system should automatically activate. If it fails to activate, there is an emergency manual pull.
- (b) Employees who work in the area protected by a dry chemical system should know where the manual pull station is located in an exit pathway and is to be activated as you leave the area in the event of a fire.

## **Fire/Smoke Alarm Systems**

All fire/smoke alarms must be operable and in good condition, protected from physical damage, maintained and tested bimonthly. In the event an alarm sounds, employees shall follow the facility's Emergency Evacuation Plan to immediately evacuate the building.

## **Fire Doors**

A fire door is a special door designed to contain the spread of fire and smoke within a building. Some models of fire doors will operate automatically in case of a fire. Do not “prop” open self-closing fire doors. Keep self-closing fire doors closed, but not locked.

Check that nothing blocks or will prevent full closure of a fire door. Also check that nothing will prevent operating the fire door.

## **Egress**

Egress Checklist

Doors, stairs, passages and aisles will be maintained free of obstructions, hoses, tools and materials. There must be full access to those areas in case of fire or other emergencies.

Exit signs must be visible from all areas or there must be signs indicating the direction to an exit.

Other doors and passageways that could be confused as exits shall be properly marked “NO EXIT”.

## **General Fire Safety Practices**

Do not overload electrical outlets. Check that electric wires and plugs are in good condition, no frayed or worn areas. Turn off electrical equipment at the end of the workday.

Egress & Fire Protection

All cords shall have ground in place.

Strip-type multiple electrical plug-in units shall be used; not the box-type units.

Observe good housekeeping practices.

Observe “NO SMOKING” requirements, especially around flammable materials.

Flammable liquids shall be stored in U.L. approved safety cans and/or U.L. approved flammable liquids cabinets.

When transferring flammable liquids from one container to another, the containers must be bonded and grounded.

Personal space heaters are prohibited.

## **Fire Protection Impairment**

Fire protection systems cannot perform their intended function of life and property protection if removed from service for any reason—planned or unplanned.

Whenever it is necessary to make alterations, repairs or extensions (AREs) on any part of the fire protection system, the Department safety representative must be notified prior to shutting down the system. The Department safety representative will perform the following:

### Planned Impairment

- (a) Advise security or Department personnel prior to impairment, allowing for proper response to incoming alarms(s).
- (b) Determine if other precautions may be warranted to protect life and property.
- (c) Advise the insurance company and Risk Management by telephone of the impairment, what is impaired, estimated time the system will be out of service and precautions being taken to protect life and property.
- (d) Notify the appropriate Fire Department and advise them where protection is out of service, so they can react with an appropriate response under the emergency conditions.

### Unplanned Impairment

- (a) All previous steps will be taken as soon as possible.
- (b) Upon discovery of impairment to sprinkler, piping, or breaks in water mains to sprinkler systems, the control valve or valves shall be closed.
- (c) The RED card(s) shall be applied to the affected valve(s).
- (d) The insurance company shall be advised of the impairment and all other emergency procedures and precautions taken.

When there is a planned impairment for preventive maintenance, group(s) will perform the following:

- (a) Notify the Department's safety representative before beginning the AREs. Tag each shut valve with the RED card before repairs are to begin and ensure tags remain in place during the AREs process.
- (b) Supervise the AREs. Document that the valve shut off and system are impaired. When work is completed, notify the Department's safety representative that system(s) are coming back on line, open valve, perform drain test, and document.
- (c) When the system is back on line, the Department safety representative shall advise Risk Management, the insurance company and the Fire Department that the system is operational.
- (d) The maintenance group shall forward the RED card(s) to that Department's safety representative for filing and later auditing.
- (e) The Department safety representative shall record results on the impairment record and maintain the RED card(s) on file.

### Fire Pumps and Extinguishing Systems

Fire pumps, water supplies and special extinguishing systems that are out of service shall be handled in the same manner, whether or not a valve is involved. For Example—A fire pump with malfunctioning automatic controls is considered out of service because it may not be started manually soon enough when a fire starts. Water spray, carbon dioxide, foam and dry

chemical are also considered out of service unless they are in condition to be operated immediately when needed.

Contact Risk Management for tags and stickers.

## **Fire Watch**

The purpose of a fire watch is to maintain continuous fire protection of a facility during fire system impairment.

Fire watch personnel will be trained and made familiar with the facility, construction and fire reporting procedures, The fire watch personnel will also be familiar with the fire extinguishing equipment, and trained on its use and limitations.

When the fire protection system is impaired, a fire watch will be made available to monitor the area, including floors above and below the impaired system. The fire watch will ensure that a means is available for notifying personnel if a fire were to develop. The fire watch is also to ensure that no hot work is conducted in that area until the fire protection system is functioning correctly.

The fire watch will be assigned to hot work areas as required. The duties will consist of the following:

- (a) Have fire-extinguishing equipment on hand.
- (b) Maintain constant watch of the hot work area.
- (c) Keep the hot work area clear of debris and combustibles.
- (d) Shall be required to remain at the hot work area for at least 30 minutes after burning, welding, brazing or cutting has ceased.
- (e) May be assigned up to four persons performing hot work provided all four are within eyesight, with no blind spots.
- (f) Shall not perform other duties while performing fire watch assignments.

## **Hot Work**

To ensure that all hot work operations are performed in a manner that will minimize the threat of explosion or fire, all burning, welding, brazing and cutting operations shall be approved by the Safety Section of Risk Management or the Department's safety representative.

### Hot Work Permit

The supervisor must submit a hot work request prior to the start time. The Department's safety representative or Risk Management shall inspect the work, and upon their satisfaction, issue a Hot Work Permit.

The supervisor shall have the responsibility of ensuring compliance with the permit requirements. The supervisor shall cease work and notify all employees affected if conditions or hazards change during the course of work.

A hot work permit must be reissued every 8 hours. Before being reissued, the area will again be inspected by the Department's safety representative.

The fire watch and the individual performing the hot work shall be required to acknowledge permit requirements by signing each permit prior to start of work.

Hot work areas may require additional ventilation.

Hot work may be stopped at any time by the supervisor, fire watch or the individual performing the hot work.

Combustibles in the area around the hot work shall be moved or covered (flame-proof covers) as required. Flammable liquids shall be removed to a safe distance as required (35 feet away). Designated fire-fighting equipment shall be stationed within the immediate area of the hot work.

Each hot work permit shall be posted on the job site during hot work operations. Permits shall be removed and handed over to the department safety representative, as the job is completed, but no later than the time of expiration of the permit.

The Safety Section of Risk Management may assign designated hot work areas for a period of not more than (1) one year. This does not relieve the supervisor or the craft supervisor from the other conditions outlined in this manual.

Contractors and subcontractors shall not burn, weld, braze or cut without adhering to the requirements of the above-mentioned Fire Watch section.

It shall be the responsibility of the contractor's representative to contact the Department's safety representative for a hot work permit.

Contractors shall be required to attend a pre-work meeting to review the procedures and rules of the **Safety and Health Manual**.

## **Fire Drills and Emergency Evacuation**

(See [Exhibit J](#) for sample Emergency Action Plan)

One of the most important responsibilities of every manager is to ensure that employees under their supervision know how to exit a building in the event of an emergency.

An orderly evacuation depends on warning devices or equipment functioning properly, the employees knowing their way out and knowing what their responsibilities are in the event of an emergency. The following shall be established:

- (a) Each location shall establish procedures to be followed regarding the evacuation of buildings in an emergency.
- (b) Key emergency instructions shall be highlighted in the Interoffice Directory or phone book.
- (c) Fire drills shall be held at least annually in all locations.

- (d) Concise emergency instructions shall be posted at strategic locations throughout the building; this may also include a floor plan to indicate emergency exits, the procedure for sounding the alarm and the evacuation instructions.
- (e) Each location shall have an alarm system or other suitable means to alert employees and give them ample warning notice and time for an orderly exit.
- (f) When evacuating a building, personnel shall take whatever immediate steps are necessary to minimize any hazard in leaving the work area unattended.
- (g) Employees shall not take elevators for evacuation purposes (unless arrangements are made with the local fire department for disabled person(s) rescue).
- (h) The floor captain or supervisor will direct the evacuation of their area.
- (i) Employees will assemble at a predetermined safe location for the floor captain or supervisor to conduct an attendance check.
- (j) No one will be allowed to re-enter the building until the “all clear” signal or verbal instructions are given by a responsible authority.