

Fire Protection

1. Purpose

This policy sets forth requirements for preventing and detecting fires, sounding an alarm, and suppressing fires. Fire protection requirements may vary from one location to another based on location size, type of equipment available, local jurisdictional requirements, and capability of fire departments and local mutual aid.

2. Scope

This policy applies to all personnel and covers safety requirements for fire emergencies, such as OSHA Emergency Action Plans, OSHA Fire Prevention Plans, and requirements for fire detection and extinguishing systems. Excluded are inspection, testing, and maintenance requirements which are contained in USPL-GMS-016-023, Generic Maintenance Strategy (GMS) Fire Detection, Alarm & Suppression Systems.

The following sections of the safety manual contain related policies and should be consulted for additional requirements and guidance:

- Flammable Liquid Storage and Handling
- Hazard Communication (HAZCOM)
- HAZWOPER
- Bulletin Board Postings
- Housekeeping
- Smoking
- Hot Work

3. Minimum Requirements

	Minimum Requirements	Supporting Documentation
1.	Under no circumstances shall personnel be required to perform fire fighting.	Section 6
2.	Employees shall immediately report all fire emergencies as instructed in the location's response plan.	Section 6
3.	Emergency telephone numbers shall be posted near telephones or on bulletin boards at each facility.	Section 9
4.	All portable fire extinguishers shall be readily accessible in conspicuous locations.	Section 10
5.	Employees who are designated to use fire fighting equipment shall be provided with training in the use of the appropriate equipment.	Section 10

4. Definitions

Class A fire—Fire in ordinary combustible materials, such as wood, cloth, paper, rubber, and many plastics.

Class B fire—Fires in flammable liquids, combustible liquids, petroleum greases, tars, oils, oil-based paints, solvents, lacquers, alcohols, and flammable gases.

Class C fire—Fires that involve energized electrical equipment.

Class D fire—Fires in combustible metals, such as magnesium, titanium, zirconium, sodium, lithium, and potassium.

Detection equipment—Equipment that automatically detects heat, flame, UV light, products of combustion, or other conditions which may indicate the presence of a fire or explosion hazard, and causes automatic actuation of alarm or suppression systems..

Emergency Response Plan—Guidelines to quickly, safely, and effectively respond to a spill. USPL uses this term to generally refer to plans prepared for geographic pipeline areas.

Facility Response Plan—A facility-specific procedure for prevention of, preparedness for, and response to oil discharges. USPL uses this term to generally refer to plans prepared for terminals and facilities.

Fire alarm system—A system of components and circuits arranged to monitor and annunciate the status of signal initiating devices and to initiate the appropriate response to those signals.

Fire protection—Measures and practices for preventing or reducing injury and loss of life or property by fire.

Fixed extinguishing system—A permanently installed system that either extinguishes or controls a fire at the location of the system. The system may include fire detection (e.g. manual or automatic), activation devices, delivery equipment (e.g. pumps, piping, foam chambers, spray nozzles), and an extinguishing agent (e.g. water, foam, dry chemical, gas).

Incipient stage—The beginning stage of a fire when it can be controlled or extinguished by portable fire extinguishers or standpipe or small hose systems without the need for protective clothing or breathing apparatus.

Sprinkler system—A network of overhead piping to which sprinklers are attached in a systematic pattern for the purpose of automatically discharging water or foam upon detection of fire, usually from heat or optical detectors.

Standpipe system—An arrangement of piping, valves, and hose connections located in such a manner that water can be discharged in streams or spray patterns through attached hose and nozzles, for the purpose of extinguishing a fire.

Structural fire-fighting—The activities of rescue, fire suppression, and conservation of property from fires involving buildings, structures, vehicles, vessels, aircraft, or other large objects.

5. Roles and Responsibilities

5.1. Supervisor

- A. Provide instruction to employees for reporting emergencies.
- B. Schedule drills and exercises, document the performance, and address noted deficiencies.
- C. Confirm that the elements of the OSHA Fire Prevention Plan are included in the facility response plan, emergency response plan, or other similar plan and that the plan is reviewed annually at a minimum and updated if necessary. Note that updates to the plan should occur following any modification to the fire protection system.
- D. Conduct emergency evacuation drills at least annually.

6. General Requirements

6.1 Personnel Requirements

- A. Under no circumstances shall personnel be required to perform fire fighting.
 - 1. If an employee chooses to fight a fire, it shall only be attempted while the fire is in its incipient stage.
- B. Employees' response to fires shall be in accordance with the site emergency response plan. At a minimum, employees shall immediately report all fire emergencies as instructed in the location's response plan.

6.2. Means of Egress

- A. Each exit shall be clearly visible and marked by a sign reading "Exit."
- B. Exit routes shall be free and unobstructed. No material or equipment may be placed, either permanently or temporarily, within the exit route.
- C. No lock or fastening shall be permitted that prevents free escape from the inside of any building while occupied.
- D. Each doorway or passage along an exit access that could be mistaken for an exit shall be marked "Not an Exit" or similar designation, or be identified by a sign indicating its actual use (e.g., a closet).
- E. Each exit route door shall be free of decorations or signs that obscure the visibility of the exit route door.
- F. Each exit route shall be adequately lighted so that an employee with normal vision can see along the exit route.

7. OSHA Fire Prevention Plan

- A. An OSHA fire prevention plan shall be in writing, be kept in the workplace, and be made available to employees for review.
- B. The minimum elements of the plan shall include:
 - 1. A list of all major fire hazards, proper handling and storage procedures for hazardous materials, potential ignition sources and their control, and the type of fire protection equipment necessary to control each major hazard.
 - 2. Procedures to control accumulations of flammable and combustible waste materials.
 - 3. Procedures for regular maintenance of safeguards installed on heat-producing equipment to prevent the accidental ignition of combustible materials.
 - 4. The name or job title of employees responsible for maintaining equipment to prevent or control sources of ignition or fires.
 - 5. The name or job title of employees responsible for the control of fuel source hazards.
- C. These required elements may be contained within other plans such as the Facility Response Plan.

8. OSHA Emergency Action Plan

The requirements of the OSHA Emergency Action Plan are included in the facility response plan, emergency response plan, or spill response plan.

9. Fixed Fire Detection and Extinguishing Systems

All fixed fire detection and extinguishing systems shall be inspected and tested in accordance with USPL-GMS-016-023, Fire Detection, Alarm & Suppression systems.

9.1. Emergency Alarm Systems

- A. The need for fire alarm systems shall be in accordance with local requirements. Consideration should include the NFPA requirement “In every building of such size, arrangement, or occupancy that a fire itself could not provide adequate occupant warning, fire alarm systems shall be provided where necessary to warn occupants of the existence of fire.”
- B. Supervisors shall explain to employees the preferred means for reporting emergencies (e.g., manual alarm, radio, telephone, verbal, etc.) typically during Facility Response Plan reviews.
- C. Emergency telephone numbers shall be posted near telephones or on bulletin boards at each facility.

9.2. Fire Drills for Locations with Standpipe and Hose Systems

- A. Locations with a water-based fire protection system shall conduct regular fire drills, scheduled at least annually. Consider including local responders in drills.
- B. The drills shall simulate the various procedures to be implemented by personnel in an actual fire or other emergency. Drills and related training exercises shall cover, at a minimum, the following topics:
 - 1. Capabilities and limitations of the standpipe system and its components.
 - 2. Fire pump operation and water deliverability.
 - 3. Personal protective equipment.
 - 4. Foam-making requirements, supplies, and limitations where foam is available.
 - 5. Manpower allocations to fight fire.
 - 6. Fire situation chain of command.
 - 7. Use of monitors and stationary equipment.
- C. The Supervisor shall prepare a written report that critiques the performance of participants in the drill, noting strengths and weaknesses.

10. Portable Fire Extinguishers

10.1. Placement and Marking

- A. All portable fire extinguishers shall be readily accessible in conspicuous locations.
 - 1. In areas where extinguishers are blocked from view, their locations shall be marked with conspicuous signs or symbols.

- B. Portable fire extinguishers for employee use shall be selected and distributed based on the classes of anticipated workplace fires and on the size and degree of hazard that would affect their use.

Note: The requirements for placement of extinguishers are for inside buildings. Placement of extinguishers outside buildings is at USPL's discretion unless required by local jurisdictions.

1. Class A-rated extinguishers shall be placed so that no point in the protected area is more than 75 feet from an extinguisher.
 2. Class B-rated extinguishers shall be placed so that no point in the protected area is more than 50 feet from an extinguisher.
 3. Class C-rated extinguishers shall be available in areas where energized electrical equipment is located.
- C. Portable hand extinguishers shall be placed along normal paths of travel for immediate availability in case of fire.
 - D. Portable wheeled fire extinguishers, e.g. 125 lb. Purple-K, are recommended to be placed near gasoline loading racks where other fire suppression systems are not present.
 - E. Portable extinguishing equipment maintained in a separate housing shall be accessible year round through good housekeeping practices.
 - F. Fire fighting foam supplies shall be stored above their freezing point.
 - G. Extinguishers for automobiles and trucks shall be conveniently installed inside the car or cab.
Exception: Extinguishers weighing more than 4 pounds should be mounted outside the truck cab (e.g., in the truck bed or on the rear end of the trailer).
Note: Extinguishers for vehicles, equipment, or other locations subject to vibrations that may cause packing of dry chemical agents should be mounted in a horizontal position so that the hose is on the upper side of the shell.
 - H. Extinguishers subject to temperatures below 20°F shall be cartridge-operated only. The expellant in the cartridge shall be nitrogen if these temperatures are to be expected.
 - I. Fire extinguishers, once used, shall be recharged as soon as possible and returned to their original location.
 1. While an extinguisher is being recharged, a spare extinguisher shall be temporarily installed until the regular extinguisher is returned to service.

11. Training

- A. Where portable fire extinguishers are provided, employees will be provided an educational program to familiarize them with the general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting.
- B. Where portable fire extinguishers are provided and employees are designated to use them, hands-on fire extinguisher training shall be provided.
Note: Virtual fire extinguisher training can fulfill this requirement.
- C. Employees who are designated with roles in the operation and maintenance of fire protection equipment shall be provided with training in the use and maintenance of the equipment as required by the manufacturer.
- D. Employees designated with roles in Fire Prevention and Emergency Action plans shall receive training on those responsibilities.

12. References

1. National Fire Protection Agency, NFPA 10, 13.
2. Occupational Safety and Health Administration, Department of Labor, 29 CFR 1910.35 (Compliance with NFPA 101-2000, Life Safety Code), 1910.37 (Maintenance, safeguards, and operational features for exit routes), 1910.38 (Emergency action plans), 1910.39 (Fire Prevention Plans), 1910.156–157, 1910.164 (Fire Detection Systems), 1910.165 (Employee Alarm Systems).