



SECTION 1

CHAPTER 4

FIRE PROTECTION

Purpose

This policy provides an overview of the:

- types of fires and the associated extinguishing agents
- maintenance requirements of the suppression equipment

Scope

This policy applies to all Company employees and contractors.

In this chapter

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Overseeing the Fire Protection Program

Purpose This document outlines the responsibilities of Yard Management and Safety Personnel with respect to the Fire Protection Program.

Yard Managements responsibilities Yard Management is responsible for ensuring that:

- the proper precautions are taken in areas where flammable or combustible materials are stored, handled, used, or loaded (see "Preventing Fires" in this chapter for more information)
- the correct type and quantity of fire equipment is:
 - available
 - inspected monthly
 - inspected quarterly
 - certified annually (by state certified third party)
 - maintained properly and functional at all times
 - stored in the proper location, indicated by signage and easily accessible in case of emergency (36" clearance)
 - used properly
- an adequate number of personnel are trained to use and maintain fire-fighting equipment
- good communication with the public fire department is maintained

Fire Fighting Equipment The Company will maintain and inspect, at least annually, fire fighting equipment to assure the safe operational conditions on the equipment. Portable fire extinguishers will be inspected at least monthly. A certified third party will record the annual maintenance date and retain this record for one year after the last entry for the life of the shell, whichever is less. Fire extinguishers which have been listed or approved by a national recognized testing laboratory will be used to meet the requirements of this section.

Note Reference: Portable fire extinguishers shall be inspected periodically and maintained in accordance with maintenance and use of portable fire extinguishers, NFPA No.10A-1970.

Inspection requirements**Monthly inspections**

Yard Management or designee is responsible to conduct monthly inspections of fire extinguishers to ensure that they are in operating order at all times.

Monthly inspection records will include:

- the name or initials of the person responsible for maintaining the fire extinguishers
- the date in which the inspection was performed

Quarterly inspections

HSE Coordinators are responsible to conduct quarterly inspections of fire extinguishers to ensure the monthly inspections have been completed and the extinguishers are in operating order at all times

NOTE: All fire extinguisher located in shops/buildings must be mounted not less than four inches above the ground and not to exceed 36 inches to the bottom of the fire extinguisher. 20 - 30 lb fire extinguishers in the field may be placed on the ground.

Annual inspections

Managers will appoint a certified inspector from an outside firm to conduct annual inspections.

See Inspecting and Testing Fire Extinguishers later in this Section

Training and Education

Yard Management and Safety Personnel will provide portable fire extinguishers for employees' use in the workplace, Gravity Oilfield Services will also provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting.

- Gravity Oilfield Services will provide field employees with the training and education required in above paragraph of this section upon initial employment and at least annually thereafter.



Maintaining communications with public fire departments

Maintain good communications with the public fire departments. **IF** the services of outside fire-fighting personnel such as city fire departments, local volunteer departments or mutual aid groups are used for fire emergencies, **THEN** brief the outside groups on the facilities/Equipment.

Required elements for the briefing include:

- map of the facilities
- hazardous chemicals in the facility/Equipment
- number of personnel
- locations of utility connections

Preventing Fires

Purpose	This document describes the safety precautions required for minimizing fires in the workplace.
Precautions for hazardous areas	<p>In areas where flammable or combustible material is stored, handled, used, or loaded, Yard Management and Safety Personnel will:</p> <ul style="list-style-type: none">● eliminate sources of ignition● install explosion-proof motors, lights, and electrical equipment designed in accordance with the National Electric Code● ban smoking according to the guidelines outlined below● enforce compliance with the safety regulations for working in hazardous areas <p>Employees will:</p> <ul style="list-style-type: none">● not smoke in potentially hazardous/flammable work environments● create a positive bond between the filling line and the metallic container being filled (grounding) to prevent a spark from discharge of static electricity during open system filling operations● keep their work area free of combustible sources● know the locations of fire extinguishers● know the emergency response plan
Smoking restrictions	<p>Yard Management/Safety Personnel will establish No Smoking areas based on:</p> <ul style="list-style-type: none">● the type of products handled● the design of the building, facility or location● local conditions <p>Yard Management/Safety Personnel will post "No Smoking" signs wherever smoking is forbidden. Designated smoking areas will be indicated with signage. See the chapter on <i>Safe Conduct in the Workplace</i> in this manual for more information on smoking restrictions.</p>



Responding to a Fire

Purpose This document outlines the procedure for responding to a fire.

Procedure Fires are generally localized. Employees should take the following steps when a fire erupts in their vicinity.

Step	Action
1	Sound alarms so all employees in the vicinity can take protective action and assemble at the designated muster area (briefing area).
2	Remove injured persons from immediate danger.
3	Call 911 or the local emergency number to report the fire as quickly as possible.
4	Notify local management or safety personnel for your area.
5	Take appropriate action to fight the fire (incipient only) without excessive risk to self or others. (See "Extinguishing Fires" in this chapter for more information.)
6	Remove flammable substances or objects from the path of the fire, if it is possible to do so safely. Do not risk injury to yourself to move these materials.
7	Turn off all machinery, welding systems, and gas and air lines in the vicinity of the fire, if it is safe to do so. Do not risk injury to yourself trying to shut down equipment.
8	Provide security for the area as required by the emergency response plan. See the chapter on <i>Developing an Emergency Response Plan</i> for more information.

Extinguishing Fires

Purpose This document discusses the basic concepts behind extinguishing incipient (infant) fires.

Fire Triangle Fires require:

- oxygen
- fuel
- source of ignition (heat)

These three items are referred to as the "fire triangle." Any two of the above can co-exist without the fire as long as the third is not present.

Fire Fighting in incipient (infant) stage Company employees will fight fires to remove oxygen from the fire triangle by:

- using an ABC fire extinguisher
- using the PASS method
- fighting fires at the base of flames

NOTE: Any time the available fire extinguishers have been discharged and the fire remains, vacate the area and report to the muster area. If wind direction has changed, the muster point will change and be located up wind of fire.

Fire Extinguisher Types

Class A extinguishers

Class A extinguishers are suitable for use on fires which require a quenching, cooling effect. These fires typically involve:

- ordinary combustibles, including
 - wood
 - paper
 - rubber
 - cloth
 - plastics

Extinguishers rated for Class A hazards are:

- pressurized water
- foam
- multi-purpose (ABC rated) dry chemical

Class B extinguishers

Class B extinguishers are suitable for fires where a fire interruption effect is essential. These fires typically involve:

- flammable liquids and gases (such as gasoline, diesel, propane, acetylene)
- combustible liquids
- greases

These extinguishers include:

- foam
- ordinary (BC rated) dry chemical
- multi-purpose (ABC rated) dry chemical

If water is used to cool a flammable or combustible liquid fire or remove vapors, it is important not to splash the burning liquid or the fire will spread much faster.

Class C extinguishers

Class C extinguishers are suitable for use on fires that put the extinguisher at risk of hazardous electrical shock. These fires typically involve:

- electrical equipment
- wiring

When an electrical fire is de-energized, it becomes a Class A fire.

Class C extinguishers include:

- multi-purpose dry chemical fire extinguishers rated for use on A, B, and C class fires
- standard dry chemical fire extinguishers rated for use on B and C fires
- CO₂ extinguishers.

Do **not** use a water-solution extinguisher on energized electrical equipment, as water is a conduit for electricity.

Class D extinguishers

Class D extinguishers are suitable for use on fires in combustible metals. This class of extinguishers is usually rated for fires of a specific type of metal, and is not suitable for use on all combustible metal fires.

NOTE: Company employees will vacate the area and report to muster area during a Class D fire. If wind direction has changed, the muster area will change and be located up wind of fire.

Inspecting and Testing Fire Extinguishers

Purpose This document outlines the program requirements for inspecting, maintaining, and testing fire extinguishers.

Yard Management/ Supervisor's responsibilities Each yard will ensure that:

- all extinguishers, including those on vehicles and in remote locations, are:
 - inspected monthly
 - maintained annually
 - hydrostatically tested as required
- records are kept of each:
 - inspection
 - maintenance
 - hydrostatic test
- damaged extinguishers are:
 - taken out of service until repaired
 - replaced by a suitable extinguisher in good condition

IF you have questions concerning the classification of fire extinguishers and locations for installing fire extinguishers, **THEN** contact the appropriate safety personnel.

**Monthly /
Quarterly visual
inspection**

Use the following procedure to perform monthly visual inspections. **IF** your facility uses a third-party inspector, **THEN** have the inspector follow his or her own inspection procedure.

Step	Action								
1	Ensure that the extinguisher is located in its designated place.								
2	Visually inspect to detect any: <ul style="list-style-type: none"> ● obvious physical damage ● external corrosion ● other impairments 								
3	Ensure that the extinguisher hasn't been tampered with. <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="width: 50%;">IF the extinguisher is a...</th> <th>THEN ...</th> </tr> </thead> <tbody> <tr> <td>stored-pressure extinguisher (water or dry chemical),</td> <td>check: <ul style="list-style-type: none"> ● the pressure on the gauge ● the seal ● IF the pressure is inadequate or the seal broken, THEN send the extinguisher to a third party for service. </td> </tr> <tr> <td>cartridge-type dry chemical extinguisher,</td> <td>check the seal. IF the seal isn't in place, THEN ensure: <ul style="list-style-type: none"> ● the cartridge has not been punctured ● a seal is attached </td> </tr> <tr> <td>carbon dioxide (CO₂) extinguisher,</td> <td>check whether: <ul style="list-style-type: none"> ● the pin is in place ● seal is attached ● IF not, THEN: <ul style="list-style-type: none"> ● have the extinguisher weighed to determine whether it is full and refill it as needed (third party) ● put the pin in place ● attach the seal </td> </tr> </tbody> </table>	IF the extinguisher is a...	THEN ...	stored-pressure extinguisher (water or dry chemical),	check: <ul style="list-style-type: none"> ● the pressure on the gauge ● the seal ● IF the pressure is inadequate or the seal broken, THEN send the extinguisher to a third party for service. 	cartridge-type dry chemical extinguisher,	check the seal. IF the seal isn't in place, THEN ensure: <ul style="list-style-type: none"> ● the cartridge has not been punctured ● a seal is attached 	carbon dioxide (CO ₂) extinguisher,	check whether: <ul style="list-style-type: none"> ● the pin is in place ● seal is attached ● IF not, THEN: <ul style="list-style-type: none"> ● have the extinguisher weighed to determine whether it is full and refill it as needed (third party) ● put the pin in place ● attach the seal
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Hydrostatic tests

Only third party contractors will perform hydrostatic testing.

Perform hydrostatic tests:

- when the extinguisher shows signs of corrosion or mechanical damage
- according to the following chart

Extinguisher Type	Time
CO ₂ fire extinguishers	Every 5 years
Dry chemical extinguishers with brazed-brass shells or mild steel shells	Every 6 years
Foam extinguishers	Every 5 years
Nitrogen cylinders on the larger wheeled and fixed extinguishers	Every 5 years
Pressurized water extinguishers (pump type water extinguishers do not require a hydrostatic test)	Every 5 years