

quantity that can extinguish fires of any class in their early stages which could occur as a result of the fire hazards present.

FIREFIGHTING PROCEDURES/ALARMS/
DRILLS

§ 57.4330 Surface firefighting, evacuation, and rescue procedures.

(a) Mine operators shall establish emergency firefighting, evacuation, and rescue procedures for the surface portions of their operations. These procedures shall be coordinated in advance with available firefighting organizations.

(b) Fire alarm procedures or systems shall be established to promptly warn every person who could be endangered by a fire.

(c) Fire alarm systems shall be maintained in operable condition.

§ 57.4331 Surface firefighting drills.

Emergency firefighting drills shall be held at least once every six months for persons assigned surface firefighting responsibilities by the mine operator.

§ 57.4360 Underground alarm systems.

(a) Fire alarm systems capable of promptly warning every person underground, except as provided in paragraph (b), shall be provided and maintained in operating condition.

(b) If persons are assigned to work areas beyond the warning capabilities of the system, provisions shall be made to alert them in a manner to provide for their safe evacuation in the event of a fire.

§ 57.4361 Underground evacuation drills.

(a) At least once every six months, mine evacuation drills shall be held to assess the ability of all persons underground to reach the surface or other designated points of safety within the time limits of the self-rescue devices that would be used during an actual emergency.

(b) The evacuation drills shall—

- (1) Be held for each shift at some time other than a shift change and involve all persons underground;
- (2) Involve activation of the fire alarm system; and

(3) Include evacuation of all persons from their work areas to the surface or to designated central evacuation points.

(c) At the completion of each drill, the mine operator shall certify the date and the time the evacuation began and ended. Certifications shall be retained for at least one year after each drill.

§ 57.4362 Underground rescue and firefighting operations.

Following evacuation of a mine in a fire emergency, only persons wearing and trained in the use of mine rescue apparatus shall participate in rescue and firefighting operations in advance of the fresh air base.

§ 57.4363 Underground evacuation instruction.

(a) At least once every twelve months, all persons who work underground shall be instructed in the escape and evacuation plans and procedures and fire warning signals in effect at the mine.

(b) Whenever a change is made in escape and evacuation plans and procedures for any area of the mine, all persons affected shall be instructed in the new plans or procedures.

(c) Whenever persons are assigned to work in areas other than their regularly assigned areas, they shall be instructed about the escapeway for that area at the time of such assignment. However, persons who normally work in more than one area of the mine shall be instructed at least once every twelve months about the location of escapeways for all areas of the mine in which they normally work or travel.

(d) At the completion of any instruction given under this standard, the mine operator shall certify the date that the instruction was given. Certifications shall be retained for at least one year.

FLAMMABLE AND COMBUSTIBLE LIQUIDS
AND GASES

§ 57.4400 Use restrictions.

- (a) Flammable liquids shall not be used for cleaning.
- (b) Solvents shall not be used near an open flame or other ignition source,

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near any source of heat, or in an atmosphere that can elevate the temperature of the solvent above the flash point.

§ 57.4401 Storage tank foundations.

Fixed, unburied, flammable or combustible liquid storage tanks shall be securely mounted on firm foundations. Piping shall be provided with flexible connections or other special fittings where necessary to prevent leaks caused by tanks settling.

§ 57.4402 Safety can use.

Small quantities of flammable liquids drawn from storage shall be kept in safety cans labeled to indicate the contents.

§ 57.4430 Surface storage facilities.

The requirements of this standard apply to surface areas only.

(a) Storage tanks for flammable or combustible liquids shall be—

(1) Capable of withstanding working pressures and stresses and compatible with the type of liquid stored;

(2) Maintained in a manner that prevents leakage;

(3) Isolated or separated from ignition sources to prevent fire or explosion; and

(4) Vented or otherwise constructed to prevent development of pressure or vacuum as a result of filling, emptying, or atmospheric temperature changes. Vents for storage of Class I, II, or IIIA liquids shall be isolated or separated from ignition sources. These pressure relief requirements do not apply to tanks used for storage of Class IIIB liquids that are larger than 12,000 gallons in capacity.

(b) All piping, valves, and fittings shall be—

(1) Capable of withstanding working pressures and stresses;

(2) Compatible with the type of liquid stored; and

(3) Maintained in a manner that prevents leakage.

(c) Fixed, unburied tanks located where escaping liquid could present a hazard to persons shall be provided with—

(1) Containment for the entire capacity of the largest tank; or

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(2) Drainage to a remote impoundment area that does not endanger persons. However, storage of only Class IIIB liquids does not require containment or drainage to remote impoundment.

§ 57.4431 Surface storage restrictions.

(a) On the surface, no unburied flammable or combustible liquids or flammable gases shall be stored within 100 feet of the following:

(1) Mine openings or structures attached to mine openings.

(2) Fan installations for underground ventilation.

(3) Hoist houses.

(b) Under this standard, the following may be present in the hoist house in quantities necessary for the day-to-day maintenance of the hoist machinery:

(1) Flammable liquids in safety cans or in other containers placed in tightly closed cabinets. The safety cans and cabinets shall be kept away from any heat source, and each cabinet shall be labeled “flammables.”

(2) Combustible liquids in closed containers. The containers shall be kept away from any heat source and the hoist operator’s work station.

§ 57.4460 Storage of flammable liquids underground.

(a) Flammable liquids shall not be stored underground, except—

(1) Small quantities stored in tightly closed cabinets away from any heat source. The small quantities shall be stored in safety cans or in non-glass containers of a capacity equal to or less than a safety can. Each cabinet shall be labeled “flammables.”

(2) Acetylene and liquefied petroleum gases stored in containers designed for that specific purpose.

(b) Gasoline shall not be stored underground in any quantity.

§ 57.4461 Gasoline use restrictions underground.

If gasoline is used underground to power internal combustion engines—

(a) The mine shall be nongassy and shall have multiple horizontal or inclined roadways from the surface large enough to accommodate vehicular traffic;