

an organization is expected to use the fire response equipment within a facility or vessel or vessel section.

§ 1915.506 Hazards of fixed extinguishing systems on board vessels and vessel sections.

(a) *Employer responsibilities.* The employer must comply with the provisions of this section whenever employees are exposed to fixed extinguishing systems that could create a dangerous atmosphere when activated in vessels and vessel sections, regardless of geographic location.

(b) *Requirements for automatic and manual systems.* Before any work is done in a space equipped with fixed extinguishing systems, the employer must either:

(1) Physically isolate the systems or use other positive means to prevent the systems' discharge; or

(2) Ensure employees are trained to recognize:

(i) Systems' discharge and evacuation alarms and the appropriate escape routes; and

(ii) Hazards associated with the extinguishing systems and agents including the dangers of disturbing system components and equipment such as piping, cables, linkages, detection devices, activation devices, and alarm devices.

(c) *Sea and dock trials.* During trials, the employer must ensure that all systems shall remain operational.

(d) *Doors and hatches.* The employer must:

(1) Take protective measures to ensure that all doors, hatches, scuttles, and other exit openings remain working and accessible for escape in the event the systems are activated; and

(2) Ensure that all inward opening doors, hatches, scuttles, and other potential barriers to safe exit are removed, locked open, braced, or otherwise secured so that they remain open and accessible for escape if systems' activation could result in a positive pressure in the protected spaces sufficient to impede escape.

(e) *Testing the system.* (1) When testing a fixed extinguishing system involves a total discharge of extinguishing medium into a space, the employer must evacuate all employees from the space and assure that no em-

ployees remain in the space during the discharge. The employer must retest the atmosphere in accordance with § 1915.12 to ensure that the oxygen levels are safe for employees to enter.

(2) When testing a fixed extinguishing system does not involve a total discharge of the systems extinguishing medium, the employer must make sure that the system's extinguishing medium is physically isolated and that all employees not directly involved in the testing are evacuated from the protected space.

(f) *Conducting system maintenance.* Before conducting maintenance on a fixed extinguishing system, the employer must ensure that the system is physically isolated.

(g) *Using fixed manual extinguishing systems for fire protection.* If fixed manual extinguishing systems are used to provide fire protection for spaces in which the employees are working, the employer must ensure that:

(1) Only authorized employees are allowed to activate the system;

(2) Authorized employees are trained to operate and activate the systems; and

(3) All employees are evacuated from the protected spaces, and accounted for, before the fixed manual extinguishing system is activated.

§ 1915.507 Land-side fire protection systems.

(a) *Employer responsibilities.* The employer must ensure all fixed and portable fire protection systems needed to meet an OSHA standard for employee safety or employee protection from fire hazards in land-side facilities, including, but not limited to, buildings, structures, and equipment, meet the requirements of this section.

(b) *Portable fire extinguishers and hose systems.* (1) The employer must select, install, inspect, maintain, and test all portable fire extinguishers according to NFPA 10-1998 Standard for Portable Fire Extinguishers (incorporated by reference, see § 1915.5).

(2) The employer is permitted to use Class II or Class III hose systems, in accordance with NFPA 10-1998, as portable fire extinguishers if the employer selects, installs, inspects, maintains, and tests those systems according to

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the specific recommendations in NFPA 14–2000 Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems (incorporated by reference, see § 1915.5).

(c) *General requirements for fixed extinguishing systems.* The employer must:

(1) Ensure that any fixed extinguishing system component or extinguishing agent is approved by an OSHA Nationally Recognized Testing Laboratory, meeting the requirements of 29 CFR 1910.7, for use on the specific hazards the employer expects it to control or extinguish;

(2) Notify employees and take the necessary precautions to ensure employees are safe from fire if for any reason a fire extinguishing system stops working, until the system is working again;

(3) Ensure all repairs to fire extinguishing systems and equipment are done by a qualified technician or mechanic;

(4) Provide and ensure employees use proper personal protective equipment when entering discharge areas in which the atmosphere remains hazardous to employee safety or health, or provide safeguards to prevent employees from entering those areas. See § 1915.12 for additional requirements applicable to safe entry into spaces containing dangerous atmospheres;

(5) Post hazard warning or caution signs at both the entrance to and inside of areas protected by fixed extinguishing systems that use extinguishing agents in concentrations known to be hazardous to employee safety or health; and

(6) Select, install, inspect, maintain, and test all automatic fire detection systems and emergency alarms according to NFPA 72–1999 National Fire Alarm Code (incorporated by reference, see § 1915.5).

(d) *Fixed extinguishing systems.* The employer must select, install, maintain, inspect, and test all fixed systems required by OSHA as follows:

(1) Standpipe and hose systems according to NFPA 14–2000 Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems (incorporated by reference, see § 1915.5);

(2) Automatic sprinkler systems according to NFPA 25–2002 Standard for

the Inspection, Testing, and Maintenance of Water-based Fire Protection Systems, (incorporated by reference, see § 1915.5), and either NFPA 13–1999 Standard for the Installation of Sprinkler Systems (incorporated by reference, see § 1915.5) or NFPA 750–2000 Standard on Water Mist Fire Protection Systems (incorporated by reference, see § 1915.5);

(3) Fixed extinguishing systems that use water or foam as the extinguishing agent according to NFPA 15–2001 Standard for Water Spray Fixed Systems for Fire Protection (incorporated by reference, see § 1915.5); NFPA 11–1998 Standard for Low-Expansion Foam (incorporated by reference, see § 1915.5); and NFPA 11A–1999 Standard for Medium- and High-Expansion Foam Systems (incorporated by reference, see 1915.5);

(4) Fixed extinguishing systems using dry chemical as the extinguishing agent according to NFPA 17–2002 Standard for Dry Chemical Extinguishing Systems (incorporated by reference, see § 1915.5); and

(5) Fixed extinguishing systems using gas as the extinguishing agent according to NFPA 12–2000 Standard on Carbon Dioxide Extinguishing Systems (incorporated by reference, see § 1915.5); NFPA 12A–1997 Standard on Halon 1301 Fire Extinguishing Systems (incorporated by reference, see § 1915.5); and NFPA 2001–2000 Standard on Clean Agent Fire Extinguishing Systems (incorporated by reference, see § 1915.5).

§ 1915.508 Training.

(a) The employer must train employees in the applicable requirements of this section:

(1) Within 90 days of December 14, 2004, for employees currently working;

(2) Upon initial assignment for new employees; and

(3) When necessary to maintain proficiency for employees previously trained.

(b) *Employee training.* The employer must ensure that all employees are trained on:

(1) The emergency alarm signals, including system discharge alarms and employee evacuation alarms; and

(2) The primary and secondary evacuation routes that employees must use