

# Shipyards Fire Protection Frequently Asked Questions (FAQs)



Occupational Safety and Health Administration  
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## Shipyard Fire Protection FAQs

This document provides general guidance about OSHA's shipyard fire protection standard (29 CFR Part 1915, Subpart P). The questions and answers in this document do not themselves impose enforceable obligations; such obligations are imposed only by the standard. The FAQs are divided into three sections: general questions, fire watch questions, and questions about fuel gas and oxygen supply lines.

### A. General Questions

A-1. When did the final rule go into effect?

The final rule went into effect on December 14, 2004. Some of the training requirements did not go into effect until 90 days later, on March 14, 2005. OSHA delayed enforcement of the requirement to train fire watch workers using live fire training. Employers were given until June 30, 2005 to conduct the practical portion of the live fire training for fire watch employees.

A-2. Who is required to comply with the new standard?

The standard applies to shipyard employment. Contractors are covered only when they are engaged in shipyard employment. The standard does not apply to employment in general industry or construction; these employers are covered by the 29 CFR Part 1910 and 29 CFR Part 1926 standards, respectively. If you have questions about whether or not you are covered by the new standard, contact your local OSHA or State Plan office.

A-3. Does the standard apply to municipal or volunteer fire departments?

No. Federal OSHA does not have jurisdiction over State and municipal fire departments or volunteers in States under the jurisdiction of Federal OSHA, so in those States the standard does not cover them. In those States with jurisdiction over occupational safety and health, State and local workers are covered by the State's standards and information can be obtained from the State. OSHA intends to promote coordination between the shipyard and local fire response organizations so they can work together safely. OSHA believes that any fire response organization that expects to respond to shipyard fires will benefit from the coordination of activities required by this standard, and will be able to respond to fires faster, more effectively, and with greater safety for the shipyard workers and their own fire response members.

A-4. The standard incorporates a number of National Fire Protection Association (NFPA) standards. If I am using a more recent edition of an NFPA standard than the one used in the OSHA standard, could I be cited for not following the NFPA standard listed in the OSHA Standard?

Yes. However, under OSHA's *de minimis policy*, where OSHA has adopted an earlier consensus standard, employers who are in compliance with the updated version will not be cited for a violation of the old version as long as the new one is at least equally protective (OSHA Field Inspection Reference Manual, CPL 02-00-103). OSHA has reviewed the newer NFPA standards in the following table and found that they all

provide equal or greater protection than the NFPA standards incorporated in the OSHA rule. Therefore, employers will not be cited for using the newer NFPA standards in the table. OSHA is updating the shipyard fire protection standard to incorporate these newer NFPA standards.

<b>Section</b>	<b>Paragraph</b>	<b>NFPA Standards Currently Incorporated by Reference in Subpart B of 29 CFR Part 1915</b>	<b><i>Latest Version of NFPA Standard</i></b>
1915.505 Fire Response	(e)(3)(v)	NFPA 1981-1997 <i>Standard on Open-Circuit Self-Contained Breathing Apparatus for the Fire Service</i>	NFPA 1981-2002 <i>Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services</i>
1915.507 Land-side fire protection systems	(b)(1)	NFPA 10-1998 <i>Standard for Portable Fire Extinguishers</i>	NFPA 10-2002 <i>Standard for Portable Fire Extinguishers</i>
	(c)(6)	NFPA 72-1999 <i>National Fire Alarm Code</i>	NFPA 72-2002 <i>National Fire Alarm Code</i>
	(d)(1)	NFPA 14-2000 <i>Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems</i>	NFPA 14-2003 <i>Standard for the Installation of Standpipe and Hose Systems</i>
	(d)(2)	NFPA 13-1999 <i>Standard for the Installation of Sprinkler Systems</i>	NFPA 13-2002 <i>Standard for the Installation of Sprinkler Systems</i>
		NFPA 750-2000 <i>Standard on Water Mist Fire Protection Systems</i>	NFPA 750-2003 <i>Standard on Water Mist Fire Protection Systems</i>
	(d)(3)	NFPA 11-1998 <i>Standard for Low-Expansion Foam</i>	NFPA 11-2005 <i>Standard for Low-, Medium-, and High-Expansion Foam Systems</i>
		NFPA 11A-1999 <i>Standard for Medium- and High-Expansion Foam Systems</i>	
	(d)(5)	NFPA 12A-1997 <i>Standard on Halon 1301 Fire Extinguishing Systems</i>	NFPA 12A-2004 <i>Standard on Halon 1301 Fire Extinguishing Systems</i>
		NFPA 12-2000 <i>Standard on Carbon Dioxide Extinguishing Systems</i>	NFPA 12-2005 <i>Standard on Carbon Dioxide Extinguishing Systems</i>
		NFPA 2001-2000 <i>Standard on Clean Agent Fire Extinguishing Systems</i>	NFPA 2001-2004 <i>Standard on Clean Agent Fire Extinguishing Systems</i>

- A-5. The standard requires employers to provide ways for employees to participate in reviewing the programs and policies required by the standard (§1915.501(c)). Does OSHA require employers to document employee participation?

No. Some employers may decide to document their employee participation activities, but the standard does not require employers to produce written documentation of employee participation.

- A-6. When multiple employers have responsibility for fire protection at a single facility, the standard requires the host employer or employers to coordinate their activities, assign fire protection duties to other employers, and communicate relevant fire hazard information to each other (§1915.501(d)(iii)). When the ship acts as a host employer, who is in charge, the ship's master or the shipyard employer?

When there are multiple host employers, the standard does not designate or require either party to be "in charge" of the overall fire protection activity. The employers are jointly responsible for determining which responsibilities will be assigned to each host employer. It is extremely important for the host employers to agree on the details of the incident command system that will be used in the event of a fire. If a fire occurs, a clear chain of command is needed to ensure the effectiveness of fire response and suppression activities.

- A-7. The standard includes requirements for fire emergency plans (§1915.502). Do I still need to comply with the §1910.38 and §1910.39 standards requiring fire prevention and emergency plans?

Yes. Shipyard employers who are currently complying with §§1910.38 and 1910.39 will now also be required to comply with the additional requirements of §1915.502. However, there is no need to produce three separate emergency plans. OSHA will accept one unified plan that meets all of the requirements in §§1910.38, 1910.39, and 1915.502.

- A-8. When employees are working in a space onboard a vessel or vessel section that is equipped with a fixed fire extinguishing system, the standard requires employers to protect employees from the accidental discharge of that system with physical isolation, or by providing employees with specific training (§1915.506(b)). Does this requirement apply only to hot work, or to any kind of work?

The requirement applies to any work done in a space on a vessel or vessel section with a fixed fire extinguishing system. While hot work has the greatest potential for causing accidental activation of the system, other work, such as rigging material into or out of a space, can also result in accidental activation. Moreover, when a vessel is undergoing sea or dock trials, the employer must ensure that all fire extinguishing systems remain operational (§1915.506(c)).

A-9. What types of training are required by the new standard?

The standard requires four levels of training that become more complex for workers who are expected to perform more sophisticated fire response and suppression. The training that must be performed includes evacuation procedures for all employees, basic firefighting for employees who may be called upon to fight incipient stage fires, additional firefighting training for fire watch employees, and advanced training for fire response employees. The details of each type of training can be found at §1915.508.

A-10. Why does the standard use a definition of “hot work” that is different from the definition in 29 CFR Part 1915 Subpart B - Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment?

29 CFR Part 1915 Subpart B uses a definition of hot work that excludes grinding, drilling, blasting, and other spark producing operations that are physically isolated from any atmosphere containing more than 10% of the lower explosive limit of a flammable or combustible substance. That definition is appropriate for protecting workers from the hazards posed by confined and enclosed spaces and other dangerous atmospheres. Subpart P uses a broader definition of hot work to ensure that all hot work operations are evaluated for fire hazards.

B. Fire Watch Questions

B-1. Is a fire watch always needed when an employee is performing hot work, such as welding or cutting?

No. A fire watch is only required under certain circumstances outlined in the standard at §1915.504(b), when the following conditions are present during hot work:

- (1) Slag, weld splatter, or sparks might pass through an opening and cause a fire;
- (2) Fire-resistant guards or curtains are not used to prevent ignition of combustible materials on or near decks, bulkheads, partitions, or overheads;
- (3) Combustible material closer than 35 ft. (10.7m) to the hot work in either the horizontal or vertical direction cannot be removed, protected with flameproof covers, or otherwise shielded with metal or fire-resistant guards or curtains;
- (4) The hot work is carried out (performed) on or near insulation, combustible coatings, or sandwich-type construction that cannot be shielded, cut back, or removed, or in a space within a sandwich-type construction that cannot be inerted;
- (5) Combustible materials adjacent to the opposite sides of bulkheads, decks, overheads, metal partitions, or sandwich-type construction may be ignited by conduction or radiation;
- (6) The hot work is close enough to cause ignition through heat radiation or conduction on the following:

(i) Insulated pipes, bulkheads, decks, partitions, or overheads; or

(ii) Combustible materials and/or coatings;

(7) The work is close enough to unprotected combustible pipe or cable runs to cause ignition; or

(8) A Marine Chemist, a U.S. Coast Guard-authorized person, or a Shipyard Competent Person, as defined in 29 CFR Part 1915, Subpart B, requires that a fire watch be posted.

B-2. Do I need to remove all combustible and flammable materials closer than 35 feet before performing hot work?

No. The standard states that you must evaluate hot work areas to make sure the area is free of fire hazards (§1915.503(a)(2)) and maintain fire-hazard free conditions (§1915.503(b)(1)). The most effective method is to remove combustible and flammable materials a safe distance away from ignition sources (35 feet). The next most effective methods are to shield the combustible or flammable material with metal or flame-resistant guards, use flame-proof covers, or inert sandwich type material with appropriate precautions. When these methods are not used, a fire watch must be posted.

B-3. Is the “35-foot” rule for hot work a new requirement?

No. OSHA’s general industry welding and brazing rules at 29 CFR 1910.252(a)(2)(vii) and NFPA’s 51B-2003 Standard for Fire Prevention During Welding, Cutting, and Other Hot Work, use a 35-foot limit as an appropriate safety measure.

B-4. When hot work is to be performed at a location within 35 feet of combustible material, can I choose to post a fire watch instead of removing or shielding the combustible material, even though it could be removed or shielded?

Yes. You can authorize employees to perform hot work only in areas that are free of fire hazards, or that have been controlled by physical isolation, fire watches, or other positive means (§1915.503(a)(2)(ii)).

B-5. Is a fire watch required if the combustible material is treated to be fire-resistant or fire retardant?

No. If the employer has purchased fire-resistant or fire retardant material, or has treated normally combustible material so that it is no longer combustible, then a fire watch is not required.

B-6. Can a worker performing hot work, such as welding, act as his or her own fire watch?

No. A worker who is performing hot work is concentrating on his or her own work, and may be too distracted to quickly observe a fire as it ignites. Therefore, another employee or employees must be assigned the fire watch duty.

B-7. Can an employee engaged in fire watch duties also perform other kinds of work?

No. When a worker is actively engaged in fire watch duty, he or she cannot perform other duties (§1915.504(c)(1)). Because the situations requiring a fire watch carry a high risk of fire, a fire watch must have only one task at hand – to watch for and respond to fires that occur during hot work. The fire watch employee must also have the authority to stop the hot work and assist with fire prevention activities, such as wetting down a fire blanket, repositioning a fire curtain, and removing combustible debris that has entered the area. After the hot work is completed, the fire watch must remain in the area for at least 30 minutes to ensure that there is no further fire hazard, unless the employer or its representative surveys the area and determines that there is no further fire hazard. During this 30-minute period, the fire watch can perform other duties.

B-8. Can one employee perform fire watch duty for more than one employee performing hot work?

Yes. One employee can perform fire watch duty for several employees performing hot work, as long as the fire watch meets all the requirements of the standard. For example, the fire watch employee must have a clear view of and immediate access to all areas included in the fire watch, must be able to communicate with all workers exposed to hot work, and must be authorized to stop work and restore safe conditions when necessary (§1915.504(c)(2)). If the fire watch employee stops work for one employee performing hot work to restore safe conditions, he or she must also stop the remaining hot work covered by the fire watch.

B-9. Are there situations where more than one fire watch employee is needed?

Yes. A fire watch employee must have a clear view of all areas assigned. Depending on the specific circumstances, two or more employees may be required in the fire watch to ensure that all areas are within view. For example, a fire watch employee may be needed on each side of a bulkhead on which hot work is being performed. Similarly, where hot material from hot work could spread or fall over more than one level, as in trunks and machinery spaces, a fire watch must be stationed at each affected level unless positive means are available to prevent the spread or fall of hot material.

B-10. Can the fire watch or an employee performing hot work be the designated employer representative to determine that it is safe to vacate the watch before the 30-minute period is over?

Yes. The employer can designate any employee to perform this function. Of course, OSHA requires that person to have the necessary training, experience, or both to make appropriate decisions concerning the monitoring of recently completed hot work.

B-11. The employer is required to ensure that employees assigned to fire watch duty are physically capable of performing the work. How does the employer determine the physical qualifications of employees assigned to perform fire watch duty?

OSHA expects the employer to evaluate the hot work, the environment in which it is performed, and the employee to make sure that the employee can physically perform the

work. The employee must have the strength and physical ability to handle fire extinguishing equipment, to access and exit the location, to observe fires, and to extinguish incipient stage fires. The physical requirements may vary. For example, if the hot work in question is in an area that can only be accessed with ladders, an employee who cannot climb ladders is not physically capable of performing fire watch duty. However, the employee may be capable of performing fire watch duties at ground level.

B-12. Do I have to train all fire watch employees with live fire exercises?

Yes. Each fire watch employee is expected to extinguish one fire using a fire extinguishing method the employee is likely to use (§1915.508(e)). You do not have to use live fire training for each medium or extinguishing method the employee may use; only one is required. Merely watching another employee extinguish a fire does not meet the requirements of the standard.

B-13. Must a shipyard build a permanent training facility or contract for the use of a geographically separated training facility for live fire training?

No. Employers may decide to build a permanent facility or contract with a facility to provide the training, but they are not required to do so. OSHA specifies the material the training must cover, and that it must be performed by an instructor with adequate fire watch knowledge and experience, but does not specify the location where training must be given or provide other specifications for the training. Shipyard employers are free to determine the training methods and locations that meet their needs, and may consider quality, cost and convenience issues when making these decisions. Alternative ways to provide training include building permanent facilities, contracting with an outside facility, using shipyard areas designated for hot work, using other safe areas of the shipyard, or using off-site locations. Likewise, some shipyards will employ their own trainers, some will use contract trainers, and others may obtain training from a local fire department.

B-14. Has OSHA thought of the practical realities, cost, and time needed to seek permits for live fires, assuming the local jurisdiction will permit them?

Yes. OSHA recognizes that some shipyard employers will need to seek permission from local authorities to set the fires that are needed to provide live fire training. OSHA expects employers to make a diligent effort to obtain any needed permits or licenses to provide this important training. OSHA believes that most local authorities will grant this permission when they understand the need for the training and that the employer will be using very short-lived fires in a controlled environment under the supervision of a knowledgeable and experienced instructor. It is also likely that local authorities will issue annual or blanket authorizations so that employers are not required to obtain permits for each individual fire. The standard recognizes that a few employers may not be able to get permission from local authorities. When this occurs, despite their diligent efforts, the employer may use simulated fire training.

- B-15. Has OSHA developed acceptable alternatives to reduce the number of fire watch personnel who must be trained?

No. Paragraph 1915.504(b) sets forth the eight specific circumstances when employers are required to post a fire watch. However, as long as fire watches are used in these circumstances and otherwise follow the requirements of the standard, shipyards are free to seek alternatives to control the cost of the training. For example, a shipyard could train a limited number of personnel and then use them exclusively for fire watch duties. The shipyard could schedule work to reduce the need for fire watches, or make greater use of designated hot work areas. A shipyard could also contract fire watch duties to a specialty service and then use the contract personnel on an “as needed” basis. Others may find that it is better to train large numbers of employees so fire watches can be assigned quickly. OSHA expects that each shipyard will find the most effective method for its individual circumstances.

- B-16. How does a shipyard provide training to subcontractor employees performing work in the shipyard?

In general, each covered employer is required to train its own employees. Section 1915.501(d) of the standard requires host and contract employers to share information about their fire safety plans and share information about fire-related hazards associated with their work. The host employer is required to make sure that responsibilities for fire protection are assigned to other employers as appropriate. These requirements extend to fire watches and fire watch training, and employers are expected to coordinate their activities to make sure that any employees performing fire watch are properly trained.

### C. Fuel Gas and Oxygen Hose Line Management Questions

- C-1. The standard requires employers to ensure that unattended fuel gas and oxygen hose lines or torches are not left in a confined space (§1915.503(b)(2)(i)). Can a fire watch employee attend these hose lines when the employee performing hot work exits the confined space?

Yes. Any employee can attend the lines to make sure that they are not damaged.

- C-2. Can the fire watch employee attend the hose lines for one worker while performing fire watch duty for another worker?

No. When a worker is actively engaged in fire watch duty, he or she cannot perform other duties (§1915.504(c)(1)).

- C-3. The standard requires employers to make sure that charged fuel gas and oxygen hose lines are not left unattended in an enclosed space for more than 15 minutes (§1915.503(b)(2)(ii)). For hose lines that pass through several enclosed spaces, does the entire length of hose line have to be pulled back to open air when unattended?

No. If the charged hose line (any hose line that is connected to the manifold and filled with gas) is going to be left unattended for more than 15 minutes, the employer can either

roll back the hose lines to open air or disconnect the lines at the manifold to allow the gas to discharge. If the hose lines are left in place and disconnected at the manifold, then the employer is required to make sure that the hose lines are given a positive means of identification to keep them from being improperly reconnected. When the hose lines are reconnected, they must be tested to ensure their integrity before the work can resume.

- C-4. If the torch hose line assembly has a quick disconnect device, or the torch is left attached to the hose line, will this be sufficient to allow the torch to be disconnected without pulling the hose line from a confined or enclosed space?

No. The objective is to remove unattended gas-filled hose lines from enclosed and confined spaces. In the situation described above, the hose line is still filled with flammable fuel or oxygen gases and is a potential fire and health hazard. The hose line must be rolled back and/or disconnected at the manifold if left unattended for more than 15 minutes in an enclosed space, and immediately from an unattended confined space. ((§1915.503(b)(2)).

- C-5. Can a hose line be disconnected at the manifold or cylinder instead of being removed from a confined space?

No. A fuel gas and oxygen hose line in a confined space must always be removed or attended.