

OSHA Shipyard Fire- The Minimum

Working in a shipyard environment poses numerous challenges for the ships, shipyard employers, and non-contract and contract workers. A mistake or an omission in the basic standard operating procedures can create life-threatening events.

To help ship's force, shipyard employers, and various occupational workers better understand the OSHA Shipyard Fire Protection Standard (29 CFR Part 1915, Subpart P), excerpts from the OSHA website (www.osha.gov/dts/maritime/standards/faqs.html) follow. Please remember that OSHA regulations are the minimum requirements. Local shipyard fire-protection instructions may be more stringent than the OSHA standard.

Question: Who is required to comply with the new standard?

Response: The standard applies to shipyard employment. Contractors are covered only when they are engaged in shipyard employment. Excluded are employers who provide incidental services that do not influence shipyard employment, such as mail delivery or office supply services. The standard also 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.

Question: 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?

Response: Yes. Shipyard employers who currently are complying with 1910.38 and 1910.39 now also will be required to comply with the additional requirements of 1915.502. However, there is no need to produce three separate emer-

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gency plans; OSHA will accept one unified plan that meets all the requirements in 1910.38, 1910.39 and 1915.502.

Question: 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)(1)(iii)). When the ship acts as a host employer, who is in charge: the ship's master, CO, or the shipyard employer?

Response: 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.

Question: When employees are working in a space on



Navy photo by MC3 David Shen

board 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?

Response: 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, also can 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)).

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

Response: Not always. A fire watch only is required under certain circumstances outlined in the standard at 1915.504(b) (e.g., 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 feet (10.7 meters) 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 which a sandwich-type construction 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
 - (ii) Combustible materials and/or coatings.
- (7) The work is close enough to unprotected combustible pipe or cable runs to cause ignition.
 - (8) A marine chemist, a U.S. Coast Guard-authorized person or a shipyard competent person (such as a Navy-certified gas-free engineer) as defined in 29 CFR 1915, Subpart B, requires that a fire watch be posted. Also, NSTM 074, sections 074-10.8.4.1, 074-10.8.4.2, and 074-10.8.5, has additional requirements for U.S. naval vessels.

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

Response: 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 flameproof covers, or inert sandwich type material with appropriate precautions. When these methods are not used, a fire watch must be posted.

Question: Can an employee engaged in fire-watch duties also perform other kinds of work?

Response: 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 also must have 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 there is no further fire hazard, unless the employer or its representative surveys the area and determines there is no further fire hazard. During this 30-minute period, the fire watch can perform other duties.



Question: Are there situations where more than one fire-watch employee is needed?

Response: 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.

Question: 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?

Response: 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. Also, NSTM 074, sections 074-10.8.4.1, 074-10.8.4.2, and 074-10.8.5, has additional requirements for U.S. naval vessels.

Question: Do I have to train all fire-watch employees with live-fire exercises?

Answer: 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. ■