

Evaluation of Shipyard Fire and Rescue Services

An Employer's Self-Assessment Tool

Fire is often a common hazard in shipyard employment as a result of tasks performed on vessels, vessel sections, and landside operations. Many of the basic tasks involved, such as welding, grinding, and cutting metal with torches, provide an ignition source for fires. Also, there are many combustible materials on vessels and in shipyards, including flammable fuels, cargo, wood structures, building materials, and litter. When cutting torches are used in enclosed or confined spaces, accidentally oxygen-enriched atmospheres can cause ordinarily fire-resistant materials to readily burn. Often when fires do occur, workers are located in confined or enclosed spaces that create a greater challenge for escape. Additionally, fires in such confined or enclosed spaces can result in atmospheres of combustible gases, toxic fumes, or oxygen-depleted air.

This document is intended for use by employers in the shipyard industry to evaluate the capability and capacity of their fire and rescue services to respond to and extinguish fires arising from shipyard operations. The information contained in this document may also be useful to other members of the shipyard community, such as subcontractors and inspectors for evaluating a shipyard's program. Requirements for worker protection from fire hazards exist in 29 CFR 1915 Subpart P – Fire Protection in Shipyard Employment. Included in this section are elements designed to ensure adequate fire response, including planning, training, equipment requirements and response methods. To ensure your facility is ready in the event that an emergency occurs, it is important to not only have a written plan in place, but to train workers quarterly on the written operating procedures including live response exercises, and semi-annual drills ([29 CFR 1915.508](#)).

OSHA regulations that address emergency procedures and rescue teams for confined and enclosed spaces, or other dangerous atmospheres are found in [29 CFR 1915.12\(e\) through \(f\)](#). These provisions require employers to either establish an in-house rescue team or arrange for this service from an outside source that can respond promptly upon request. Under [29 CFR 1915.87\(c\)\(1\)\(ii\)](#), outside first aid providers (i.e., emergency medical services) must be able to demonstrate that they can reach the worksite within five minutes of a report of injury or illness. Workers assigned to a rescue team must receive training relevant to their assigned roles on the rescue team, as well as training on personal protective equipment (PPE), and must also participate in drills at least annually ([29 CFR 1915.12\(e\)](#)). Similar preparation is recommended in cases where an outside rescue team is used, including notifying the members of the hazards that they may encounter.

The following evaluation tool does not cover the entire fire or rescue service requirements, but can be used to evaluate the facilities general readiness for fire and rescue response.

RESCUE RESPONSE

- Has the facility determined if they will be using an in-house response team or will an outside service respond to an emergency? ([29 CFR 1915.12\(e\)](#))
- Is there a rescue plan available for an outside rescue team to promptly respond to an incident?
- Does a rescue plan contain critical components such as qualified individuals, emergency contacts and phone numbers?
- Has the rescue team been trained and know how to use personal protective equipment including respirators and any special equipment that may be necessary for confined space rescue? ([29 CFR 1915.12\(e\)\(1\)\(i\)\(ii\)](#))
- Has the shipyard rescue team conducted a practice drill using mannequins and rescue equipment during the last 12 months?
- Has the simulation been done in locations that will closely represent those locations where an actual rescue may be required? If an actual rescue has been conducted within the last 12 months, then this type of rescue does not have to be repeated in the 12 month window. ([29 CFR 1915.12\(1\)\(iii\)](#))
- If using an outside rescue team, has the facility provided the team with information on the hazards they may encounter when conducting a confined space rescue, to ensure that the team will have the proper training and equipment available? ([29 CFR 1915.12\(e\)\(2\)](#))
- Does at least one person on the rescue team have current certification on basic first aid that includes maintenance of an airway, control of bleeding, maintenance of circulation and cardiopulmonary resuscitation (CPR) skills? ([29 CFR 1915.12\(e\)\(1\)\(iv\)](#))
- If you use contract employers within your facility, have you provided them with the expected hazards they may encounter, safety rules and the emergency response plan? ([29 CFR 1915.12\(f\)](#))

FIRE RESPONSE

- Is there a written fire safety plan? ([29CFR 1915.502\(a\)](#))
- Does the written fire safety plan include the following? ([29CFR 1915.502\(b\)](#))
 - Identification of fire hazards
 - Procedures for recognizing and reporting unsafe conditions
 - Alarm procedures
 - Procedures for notifying workers and the fire response organization of a fire emergency

- Evacuation procedures including ways to account for workers after evacuation
- Who to contact for additional information on the plan

- Has the written plan been reviewed with workers and is it accessible to all? ([29CFR 1915.502\(c\)\(d\)](#))

- Has the plan been updated annually? ([29CFR 1915.502\(d\)\(2\)](#))

- If using an outside fire response organization, has the plan been provided to them? ([29CFR 1915.502\(d\)\(4\)](#))

- Is there a fire response plan? ([29CFR 1915.505\(a\)](#))

- Does the fire response plan contain the following components, which are applicable when using an internal response team? ([29CFR 1915.505\(a\)\(2\) and \(b\)\(1\)](#))
 - Describes the type of response which should be used? (Internal vs. external services)
 - Describe evacuation procedures
 - The structure of the organization
 - The number of trained fire response workers
 - The fire response functions that may need to be carried out
 - The number of fire fighters necessary to respond to a fire
 - The number and type of apparatuses and suppression operations for each type of response

- If using an external fire response organization, is the following included in a written plan? ([29CFR 1915.505\(b\)\(2\)](#))
 - The types of incidents which the organization is expected to respond to
 - The liaison between the facility and the outside organization
 - Procedures for obtaining outside assistance
 - Information on the layout of the facility including access routes to potential fire sites
 - How hose and coupling connections are to be made compatible and where located

- If a mixture of internal and external response is used, is the following information in the response plan? ([29CFR 1915.505\(b\)\(3\)](#))
 - Organization structure of the combined fire response
 - The number of combined responders
 - Functions to be carried out by each organization
 - The minimum number of fire response personnel necessary
 - The number and types of apparatuses, along with a description of the fire suppression operations for each type of response

- The type, amount and frequency of joint training
- Does the written evacuation plan include the following? ([29CFR 1915.505\(b\)\(4\)](#))
 - Emergency escape procedures
 - Procedures for critical team members who must remain onsite during an evacuation
 - Means of reporting fires
 - Methods to account for workers after an evacuation is completed

FIRE RESPONSE MEDICAL REQUIREMENTS

- Do fire response workers receive annual physicals to ensure they are able to perform their expected duties? ([29CFR 1915.505\(c\)\(1\) and \(3\)](#))
- Are an adequate number of responders trained in respiratory protection, including fit testing where applicable? ([29CFR 1915.505\(c\)\(2\)](#))
- Medical records are kept on file? ([29CFR 1915.505\(c\)\(4\)](#))

FIRE RESPONSE TEAMS

- Are enough workers available to conduct emergency response safely? ([29CFR 1915.505\(d\)\(1\)](#))
- Are clear lines of authority established? ([29CFR 1915.505\(d\)\(2\)](#))
- Is an incident management system in place? ([29CFR 1915.505 \(d\)\(3\)](#))

Note: This document and associated questions may provide employers with a general sense of readiness with respect to the fire and rescue response capabilities. However, a more thorough evaluation should be performed, as outlined in the references provided, to not only ensure that fire and rescue response services are compliant, but capable of responding effectively to situations that may occur in the workplace.