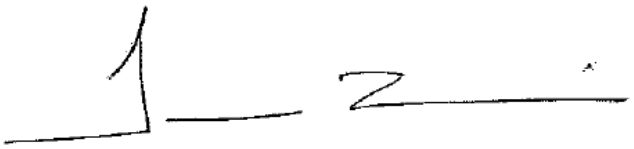
SEATTLE FIRE DEPARTMENT

Administrative Rule 26.02.24

SUBJECT:	EFFECTIVE DATE:
DESIGNATED MARINE HOT WORK FACILITIES AND SHIPYARDS	March 15, 2024
REFERENCES **Seattle Fire Code** **Administrative Rule 26.01.24 Cutting, Welding and other Hot Work on Marine Vessels.** **OSHA 29 CFR1915** **Seattle Building Code Section 429** **NFPA 307, Standard for the *Construction and Fire Protection of Marine Terminals, Piers, and Wharves***.	SUPERSEDES: Administrative Rule 26.02.14 Effective April 4, 2014 FCAB REVIEW DATE: January 31, 2024
NOTICE: Administrative Rules are established per Seattle Fire Code Section 104.1, and they are subject to the Administrative Sections 104.9, Modifications, 104.10, Alternative materials, design and methods of construction and equipment, and 111, Means of Appeals.	APPROVED:  Timothy J. Munnis, FIRE MARSHAL

Section 1. INTENT

This intent of this administrative rule is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions at new and existing piers and wharves where hot work activities are conducted aboard vessels and to provide safety to fire fighters and emergency responders during emergency operations.

Section 2. SCOPE

The requirements of this rule apply to all new and existing marine related facilities where hot work on vessels occurs.

> **Exception:** Facilities where only level I hot work is conducted are not required to meet this rule; however, a hot work permit is still required at such facilities in accordance with Administrative Rule 26.01.24.

Section 3. DEFINITIONS

For the purpose of this Rule, certain terms are defined as follows:

DESIGNATED HOT WORK FACILITY. Those piers, designated by the fire code official, and by virtue of their construction, location, fire protection, emergency vehicle access and fire hydrant availability, that are suitable to permit certain repairs to *vessels*.

FACILITY. A shore-side location such as a shipyard, cleaning plant, naval base, dock, pier complex, etc. that is under the ownership or control of the same party and has the same continuous shoreline under their ownership or operation.

HOT WORK. Any activity involving riveting, welding, burning, brazing, soldering, heating, use of powder-actuated fastening tools or similar fire-producing operations, including any operation that raises the temperature of the work piece to 204ºC (400ºF) or above. Grinding, drilling, abrasive blasting, or similar spark-producing operations are also considered *hot work* unless deemed otherwise by a *Marine Chemist* or when such operations are *physically isolated* from any atmosphere containing more than 10 percent of the lower explosive limit of a flammable or combustible substance, as determined by a *Shipyard Competent Person***.**

LEVEL I HOT WORK. Hot work in areas or compartments that are not on or near foam insulation; do not contain or have not contained flammable or combustible vapors, coatings, fuel oils, hydraulic oil, lube oil, waste oil or other petroleum products. Such areas or compartments may include, but are not limited to:

* Ballast tanks, chain lockers and voids.
* Superstructures, deck house, galley and living spaces.
* Shell plating, framing decks, bulkheads.
* Main deck, dry cargo holds, dry stores and processing areas that are not insulated with flammable or combustible foam insulation.

Certain *hot work* operations normally classified as Level I may be classified as Level II *hot work* if deemed necessary by the Seattle Fire Department inspector.

LEVEL II HOT WORK. Hot work in hazardous areas or compartments that are insulated with foam, contain or have contained flammable or combustible vapors, coatings, fuel oils, hydraulic oil, lube oil, waste oil or other petroleum products. Such hazardous areas or compartments may include, but are not limited to:

* Fuel oil tanks and piping systems, including pumps, strainers, vents and its associated appurtenances.
* Hydraulic, lube, slops or waste oil tanks and their associated piping systems.
* Engine rooms, diesel generator rooms, reefer flats, machinery spaces, shaft alleys and steering gear compartments.
* Cargo tanks or compartments that contain or have contained hazardous materials including flammable or combustible gases, liquids or solids.
* Sewage holding tanks and piping systems, including pumps and vents.
* Foam-insulated compartments such as refrigerated cargo holds, fish holds or processing areas not in compliance with Section 10.3.2 of Administrative Rule 26.01.24.
* Work conducted on refrigeration and/or cooling systems using Freon or ammonia.
* Work on bulkheads and overheads directly adjacent to those compartments listed

above.

* All *hot work* performed on cruise ships at cruise ship terminals.

Certain *hot work* operations normally classified as Level I may be classified as Level II *hot work* if deemed necessary by a Seattle Fire Department inspector.

SHIPYARD. A pier, wharf, or series of piers and related onshore facilities, designated by the fire code official, which by virtue of the pier construction, location, emergency vehicle access, fire protection, hydrant availability and onsite safety personnel, is suitable to permit repairs, including major conversions, on *vessels* of any length.

SHIPYARD COMPETENT PERSON (SCP). A person who is designated in writing by their employer in accordance with OSHA 29 CFR 1915.7 and able to evaluate employee exposure to hazardous substances, fire hazards or to other unsafe conditions and is able of specify the necessary precautions to be taken.
The *SCP* must be trained and hold a valid Certificate of Training issued by the National Fire Protection Association (NFPA) or from a *SCP* Training Course provided by an NFPA Certified *Marine Chemist*.

VESSEL. Every description of watercraft or other artificial contrivance used or capable of being used as a means of transportation on water, including special purpose floating structures (dry docks, caissons, bridge pontoons, buoys, pipe piles) not primarily designed for or used as a means of transportation on water.

Section 4. REQUIREMENTS

4.1. PERMIT

A *Designated Hot Work Facility* permit issued by Seattle Fire Department, verifying the facility is in compliance with this rule, is required for each marine related facility where level II hot work on vessels occurs. In addition, a hot work permit itself is required as detailed in Seattle Fire Department Administrative Rule 26.01.24.

4.2. PROHIBITED LOCATIONS

Certain locations, by virtue of their primary or secondary use, are prohibited from being a *Designated Hot Work Facility*. Such locations include the following:

- Fuel terminals or piers
- Passenger terminals unless under special temporary permit.
- Grain terminals
- Piers where primary use is residential or recreational in nature

4.3. FIRE DEPARTMENT APPARATUS ACCESS

Fire Department apparatus access lanes in accordance with Chapter 5 of the Seattle Fire Code shall be provided and so located as to provide fire department apparatus access to within 75 feet of all portions of the pier.

Exceptions:

1. When the access requirement cannot be met due to practical difficulties, a Class I standpipe system shall be installed in accordance with this Rule.
2. Facilities where hot work is conducted on vessels 200 feet or less in length.

4.4. FIRE HYDRANTS

At least two fire hydrants shall be provided. One hydrant shall be located within 500 feet of the most remote portion of the approved fire department access lane. The second fire hydrant shall be located within 1000 feet of the first hydrant. Additional hydrants shall be required for each 100 feet of vessel length over 300 feet up to a maximum of five hydrants. When additional hydrants are required, they shall not be more than 1000 feet apart.

> **Exception:** A Class I Standpipe, in accordance with this Rule, may be provided in lieu of a fire hydrant within 500 feet of the most remote portion of the fire department apparatus access lane.

Each of the two hydrants located closest to the most remote portion of the fire department access lane shall be capable of delivering not less than 1,000 gpm at a minimum residual pressure of 20 psi each.

> **Exception:** The requirements for fire hydrants may be modified when alternate arrangements are approved by the fire code official. While alternative arrangements will be considered by the fire code official, drafting is not an acceptable substitute for a primary fire suppression water supply.

4.5. STANDPIPE SYSTEM

A manual Class I standpipe system accordance with NFPA 14 and this rule shall be installed if the hose lay distance from the fire apparatus to the most remote accessible portion of the pier, wharf, or float exceeds 150 ft.

The standpipe piping shall be a minimum of 6 inches except the most remote 100 feet, which can be 4 inches. A 2 ½ hose connection shall be located every 100 feet along the pier, wharf, or float. A two-way 2 ½ inch fire department connection shall be located at the fire department access lane or at the shore end of the pier, wharf, or float if the distance from the access lane to the shore end is less than 150 feet.

4.6. FIRE PROTECTION FOR PIERS AND WHARVES

The underside of piers and wharves that exceed 8,000 square feet in area and are constructed with combustible materials shall be provided with an automatic sprinkler system in accordance with NFPA 307.

> **Exceptions:**
> 1. Piers or wharves, over other than tidal water, where sprinkler heads cannot be installed with a minimum clearance of 4 feet above mean high water.
> 2. Existing piers and wharves provided with deck openings, draft curtains, and revolving nozzles in accordance with this rule.

Deck openings (along with draft stops and revolving nozzles) in lieu of providing an automatic sprinkler system for the underside of existing combustible piers and wharves shall be provided at intervals not exceeding 25 feet on center. Each opening shall be conspicuously identified and sized to provide at least 100 square inches open area with a minimum dimension of 9 inches. A readily removable cover constructed of material sufficient to resist the passage of heat and fire in a manner equivalent to deck itself shall be provided over each opening.

Draft stops (along with deck openings and revolving nozzles) in lieu of providing an automatic sprinkler system for the underside of existing combustible piers and wharves shall be installed in accordance with the requirements of Seattle Building Code Section 429.

Revolving nozzles (along with deck openings and revolving nozzles) in lieu of providing an automatic sprinkler system for the underside of existing combustible piers and wharves shall be 2 ½ inches and have a minimum rating of 250 gpm. There shall be a sufficient number of nozzles to permit establishing two complete water curtains across the pier or wharf. The nozzles shall be located at the shore end of the pier or wharf in a readily accessible labeled location.

4.7. SIGNAGE AND LABELS

Signs shall be posted to alert vessel owners and other users of the facility that a Seattle Fire Department permit is required prior to conducting any *hot work* on *vessels* at the site. Such signage shall be placed in conspicuous locations at the site and shall display the following warning:

THE SEATTLE FIRE DEPARTMENT REQUIRES A PERMIT TO PERFORM ANY HOT WORK ON VESSELS IN SEATTLE.**HOT WORK INCLUDES BUT IS NOT LIMITED TO - ANY USE OF A TORCH OR OPEN FLAME, ANY TYPE OF WELDING AND ANY SPARK-PRODUCING GRINDING IN HAZARDOUS LOCATIONS.**

EXCEPTION: When approved by the fire code official after demonstrating that other satisfactory safeguards and controls are in place to alert users of the site that a permit is required.

Conspicuous signage shall be located at the shore end of piers and wharves indicating the address and, for those structures that are designed to support vehicles, the weight limit. Numbers and letters shall be easily legible and have high contrast with the color of the sign background. Numbers and letters shall not be less than 5 inches in height.

Electrical disconnects shall be readily accessible, clearly labeled and indicate the areas they service.

4.8. EMERGENCY OPERATIONS PLAN

An emergency operations plan shall be prepared and maintained for the facility. The emergency operations plan shall be located in an approved location and readily available to the fire department at all times. The emergency operations plan shall include procedures for fire department notification, fire evacuation, and include a site map indicating the location of portable fire extinguishers and hose cabinets, sprinkler and standpipe system control valves, fire department connections and electrical disconnects.