DOLI Virginia Occupational Safety & Health VOSH

VOSH PROGRAM DIRECTIVE: **12-807** **ISSUED**: **December 1, 2011**

SUBJECT **General Working Conditions in Shipyard Employment; Final Rule and Corrections**

Purpose The revised final rule updates current requirements to reflect advances in industry practices and technology, consolidates and streamlines some existing safety and health requirements into single sections. It provides protection from hazards not addressed by existing standards, including the control of hazardous energy.

This Program Directive is an internal guideline, not a statutory or regulatory rule, and is intended to provide instructions to VOSH personnel regarding internal operation of the Virginia Occupational Safety and Health Program and is solely for the benefit of the program. This document is not subject to the Virginia Register Act or the Administrative Process Act; it does not have general application and is not being enforced as having the force of law.

Scope This directive applies to all VOSH personnel. ***NOTE***: Federal OSHA has jurisdiction over private sector maritime industry and VOSH has jurisdiction over the public sector maritime industry.

References 76 FR 24575 (May 2, 2011) and 76 FR 44265 (July 25, 2011)

Cancellation Not Applicable.

Effective Date January 15, 2012

Action Directors and Managers shall ensure that the policies and procedures established in this Directive are followed.

Expiration Date Not Applicable.

_____
Courtney M. Malveaux
Commissioner

Distribution: Commissioner of Labor and Industry
Assistant Commissioner - Programs
VOSH Directors and Managers
Legal Support & IMIS Staffs
Cooperative Programs Director & Manager
VOSH Compliance & Cooperative Programs Staffs
OSHA Regional III & Norfolk Area Offices

Attachments: 76 FR 24575 (May 2, 2011); and
76 FR 44265 (July 25, 2011)

I. Background.

In 1972, federal OSHA adopted many of the provisions for the initial Subpart F from existing federal OSHA standards and national consensus standards. Since then, those national consensus standards have been updated and revised. OSHA reviewed the updated standards and, when they encompassed new technology and requirements to provide greater workplace safety and health, OSHA incorporated those changes in this revised final rule.

In 1982, the Shipbuilders Council of America and the American Waterways Shipyard Conference requested that OSHA: (1) revise and update the existing shipyard standards, including Subpart F; and (2) consolidate into a single set of shipyard standards those general industry standards that apply to shipyards, particularly landside operations.

In response to these recommendations, OSHA established the Shipyard Employment Standards Advisory Committee (SESAC) in November 1988. SESAC met from 1988 until 1993 to develop recommendations and provide technical expertise in developing draft regulatory language for revising the shipyard safety standards. SESAC finalized its recommendations for revisions to 29 CFR Part 1915, Subpart F in 1993. In September 1995, the Maritime Advisory Committee on Occupational Safety and Health (MAOSH) approved the recommendations and draft regulatory language that SESAC developed and made additional recommendations, including that OSHA do a separate rulemaking on the control of hazardous energy.

The Safety and Health Codes Board has addressed on numerous occasions standards seeking to improve the working conditions in Shipyard Employment. In 1996, OSHA promulgated amended regulations for the Personal Protective Equipment (PPE) for Shipyard Employment which the Board adopted on June 17, 1996, with an effective date of September 1, 1996. In 2002, OSHA promulgated technical amendments to its standards for shipyard employment. These amendments were adopted by the Board on December 2, 2002, and became effective on March 1, 2003. On December 14, 2004, and on December 6, 2006, the Board adopted federal OSHA's standard for Fire Protection in Shipyard Employment, effective on March 15, 2005 and March 21, 2007, respectively.

OSHA published this rule as a draft in December 2007, and held public hearings in September and October 2008, with the public comment period closing in February 2009. OSHA published this final rule on May 2, 2011, and subsequent corrections to the final rule on July 25, 2011.

On October 13, 2011, the Safety and Health Codes Board adopted federal OSHA's final rule on General Working Conditions in Shipyard Employment; and corrections, with an effective date of January 15, 2012, except for the provisions in §1915.89, which will become effective and enforceable on April 15, 2012.

II. Summary of the Final Rule

Federal OSHA revised and updated standards to the existing Subpart F of 29 CFR part 1915 that addresses hazards in general working conditions in shipyard employment. Shipyard employment activities are performed aboard vessels, in confined or enclosed spaces below deck, on scaffold and on busy crowded docks. These revisions update existing requirements to reflect advances in industry practices and technology, consolidate certain safety and health requirements into a single subpart, and provide protection from hazards not previously addressed, including the control of hazardous energy.

The final rule would cover diverse working conditions in shipyard employment, including sanitation, medical services and first aid, motor vehicle and pedestrian safety, lighting, housekeeping, and hazardous energy. It would apply to all shipyard employment at landside facilities, on vessels and in vessel sections. The revised final rule would not apply to landside fish-processing facilities, which will continue to be covered by Part 1910 general industry requirements.

In addition, on July 25, 2011, federal OSHA published a correction to §§ 1910.145 and 1910.147 of this revised standard. In the first sentence in paragraph (a)(1) of §1910.145,OSHA substituted "intended to indicate" following "(as included in paragraphs (c) through (e) of this section)" for "that indicate". The corrected sentence now reads: "These specifications apply to the design, application, and use of signs or symbols (as included in paragraphs (c) through (e) of this section) **intended to** (*emphasis added*) indicate and, insofar as possible, define specific hazards that could harm workers or the public, or both, or to property damage".

The first sentence in paragraph (a)(1)(i) of §1910.147 was corrected to read: "This standard covers the servicing and maintenance of machines and equipment in which the ***unexpected*** (*emphasis added*) energization or start up of the machines or equipment, or release of stored energy could cause injury to employees."

III. Highlights of the Revised Standard.

- Significant requirements in this new rule include:
    - accounting for employees working alone;
    - providing an adequate number of trained first aid providers;
    - control of hazardous energy; and
    - use of seatbelts while operating motor vehicles.
- Standard includes guidance on training and maintenance for those employers currently using automatic external defibrillators (AEDs) in shipyard employment even though the standard does not require employers to provide AEDs.
- Lockout/tags-plus (§1915.89), which is a modified version of the general industry standard for control of hazardous energy (§1910.147), will be applied across all servicing operations in shipyard employment, including fish-processing plants onboard fishing vessels.

General Working Conditions in Shipyard Employment;
Revised Final Rule; and Corrections

As Adopted by the

Safety and Health Codes Board

Date: October 13, 2011

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

VIRGINIA OCCUPATIONAL SAFETY AND HEALTH PROGRAM

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

Effective Dates: January 15, 2012, except for
§1915.89 which is effective on April 15, 2012

16 VAC 25-90-1910.145	16 VAC 25-90-1910.147	16 VAC 25-90-1910.177
16 VAC 25-100-1915.80	16 VAC 25-100-1915.81	16 VAC 25-100-1915.82
16 VAC 25-100-1915.83	16 VAC 25-100-1915.84	16 VAC 25-100-1915.85
16 VAC 25-100-1915.86	16 VAC 25-100-1915.87	16 VAC 25-100-1915.88
16 VAC 25-100-1915.89	16 VAC 25-100-1915.90	16 VAC 25-100-1915.91
16 VAC 25-100-1915.92	16 VAC 25-100-1915.93	16 VAC 25-100-1915.94
16 VAC 25-100-1915.162	16 VAC 25-100-1915.163	16 VAC 25-100-1915.164
16 VAC 25-100-1915.181		

When the guidelines, as set forth in this Program Directive, are applied to the Department of Labor and Industry and/or to Virginia employers, the following federal terms if, and where they are used, shall be considered to read as below:

Federal Terms	VOSH Equivalent
29 CFR	VOSH Standard
Assistant Secretary	Commissioner of Labor and Industry
Agency	Department
August 1, 2011	January 15, 2012
October 31, 2011	April 15, 2012

XIII. Amendments to Standards

For the reasons set forth in the preamble, OSHA amends 29 CFR parts 1910 and 1915 as follows:

PART 1910—[AMENDED]

Part 1910 of title 29 of the Code of Federal Regulations is hereby amended as follows:

Subpart J—[Amended]

■ 1. The authority citation for subpart J of 29 CFR part 1910 is revised to read as follows:

Authority: Secs. 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), or 4–2010 (75 FR 55355) as applicable.

Section 1910.145, also issued under 29 CFR 1911.2.

■ 2. In § 1910.145, paragraphs (a)(1) and (f)(1)(ii) are revised to read as follows:

§ 1910.145 Specifications for accident prevention signs and tags.

(a) *Scope.* (1) These specifications apply to the design, application, and use of signs or symbols (as included in paragraphs (c) through (e) of this section) that indicate and, insofar as possible, define specific hazards that could harm workers or the public, or both, or to property damage. These specifications are intended to cover all safety signs except those designed for streets, highways, and railroads. These specifications do not apply to plant bulletin boards or to safety posters.

* * * * *

(f) * * *

(1) * * *

(ii) This paragraph (f) does not apply to construction or agriculture.

* * * * *

■ 3. In § 1910.147, paragraphs (a)(1) is revised to read as follows:

§ 1910.147 The control of hazardous energy (lockout/tagout).

(a) *Scope, application, and purpose*—(1) *Scope.*

(i) This standard covers the servicing and maintenance of machines and equipment in which the energization or start up of the machines or equipment, or release of stored energy, could harm employees. This standard establishes minimum performance requirements for the control of such hazardous energy.

(ii) This standard does not cover the following:

(A) Construction and agriculture employment;

(B) Employment covered by parts 1915, 1917, and 1918 of this title;

(C) Installations under the exclusive control of electric utilities for the purpose of power generation, transmission and distribution, including related equipment for communication or metering;

(D) Exposure to electrical hazards from work on, near, or with conductors or equipment in electric-utilization installations, which is covered by subpart S of this part; and

(E) Oil and gas well drilling and servicing.

* * * * *

Subpart N—[Amended]

■ 4. The authority citation for subpart N of 29 CFR part 1910 is revised to read as follows:

Authority: Secs. 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), or 4–2010 (75 FR 55355) as applicable.

Section 1910.177, also issued under 29 CFR part 1911.

§ 1910.77 [Amended]

■ 5. In § 1910.177, paragraph (a)(2) is revised to read as follows:

(a) * * *

(2) This section does not apply to employers and places of employment regulated under the Longshoring Standards, 29 CFR part 1918; Construction Safety Standards, 29 CFR part 1926; or Agriculture Standards, 29 CFR part 1928.

* * * * *

PART 1915—[AMENDED]

■ 6. The authority citation for part 1915 is revised to read as follows:

Authority: Sec. 41, Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941); secs. 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), or 4–2010 (75 FR 55355) as applicable; 29 CFR part 1911.

Subpart F—[Amended]

■ 8. Subpart F of 29 CFR part 1915 is revised to read as follows:

Subpart F—General Working Conditions

Sec.

1915.80 Scope, application, definitions and effective dates.
1915.81 Housekeeping.
1915.82 Lighting.
1915.83 Utilities.
1915.84 Working alone.
1915.85 Vessel radar and communication systems.
1915.86 Lifeboats.
1915.87 Medical services and first aid.
1915.88 Sanitation.
1915.89 Control of hazardous energy (lockout/tagout).
1915.90 Safety color code for marking physical hazards.
1915.91 Accident prevention signs and tags.
1915.92 Retention of DOT markings, placards, and labels.
1915.93 Motor vehicle safety equipment, operation, and maintenance.
1915.94 Servicing of multi-piece and single-piece rim wheels.

Subpart F—General Working Conditions

§ 1915.80 Scope, application, definitions, and effective dates.

(a) The provisions of this subpart apply to general working conditions in shipyard employment, including work on vessels, on vessel sections, and at landside operations, regardless of geographic location.

(b) *Definitions applicable to this subpart.*

(1) *Additional safety measure.* A component of the tags-plus system that provides an impediment (in addition to the energy-isolating device) to the release of energy or the energization or startup of the machinery, equipment, or system being serviced. Examples of additional safety measures include, but are not limited to, removing an isolating circuit element; blocking a controlling switch; blocking, blanking, or bleeding lines; removing a valve handle or wiring it in place; opening an extra disconnecting device.

(2) *Affected employee.* An employee who normally operates or uses the machinery, equipment, or system that is going to be serviced under lockout/tags-plus or who is working in the area where servicing is being performed under lockout/tags-plus. An affected employee becomes an authorized employee when the employer assigns the employee to service any machine, equipment, or system under a lockout/tags-plus application.

(3) *Authorized employee.* (i) An employee who performs one or more of the following lockout/tags-plus responsibilities:

(A) Executes the lockout/tags-plus procedures;

(B) Installs a lock or tags-plus system on machinery, equipment, or systems; or

(C) Services any machine, equipment, or system under lockout/tags-plus application.

(ii) An affected employee becomes an authorized employee when the employer assigns the employee to service any machine, equipment, or system under a lockout/tags-plus application.

(4) *Capable of being locked out.* An energy-isolating device is capable of being locked out if it has a locking mechanism built into it, or it has a hasp or other means of attachment to which, or through which, a lock can be affixed. Other energy-isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild, or replace the energy-isolating device or permanently alter its energy-control capability.

(5) *Contract employer.* An employer, such as a painting, joinery, carpentry, or scaffolding subcontractor, that performs shipyard-related services or work under contract to the host employer or to another employer under contract to the host employer at the host employer's worksite. This excludes employers who provide services that are not directly related to shipyard employment, such as mail delivery, office supply, and food vending services.

(6) *Dummy load.* A device used in place of an antenna to aid in the testing of a radio transmitter that converts transmitted energy into heat to minimize energy radiating outward or reflecting back to its source during testing.

(7) *Energy-isolating device.* A mechanical device that, when utilized or activated, physically prevents the release or transmission of energy. Energy-isolating devices include, but are not limited to, manually operated electrical circuit breakers; disconnect switches; line valves; blocks; and any similar device used to block or isolate energy. Control-circuit devices (for example, push buttons, selector switches) are not considered energy-isolating devices.

(8) *Hazardous energy.* Any energy source, including mechanical (for example, power transmission apparatus, counterbalances, springs, pressure, gravity), pneumatic, hydraulic, electrical, chemical, and thermal (for example, high or low temperature) energies, that could cause injury to employees.

(9) *Hazardous substances.* A substance that may cause injury, illness, or disease, or otherwise harm an employee by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful.

(10) *Health care professional.* A physician or any other healthcare professional whose legally permitted scope of practice allows the provider to independently provide, or be delegated the responsibility to provide, some or all of the advice or consultation this subpart requires.

(11) *Host employer.* An employer that is in charge of coordinating shipyard-related work, or that hires other employers to perform shipyard-related work or to provide shipyard-related services, at a multi-employer worksite.

(12) *Isolated location.* An area in which employees are working alone or with little assistance from others due to the type, time, or location of their work. Such locations include remote locations or other work areas where employees are not in close proximity to others.

(13) *Lock.* A device that utilizes a positive means, either a key or combination lock, to hold an energy-isolating device in a "safe" position that prevents the release of energy and the startup or energization of the machinery, equipment, or system to be serviced.

(14) *Lockout.* The placement of a lock on an energy-isolating device in accordance with an established procedure, thereby ensuring that the energy-isolating device and the equipment being controlled cannot be operated until the lock is removed.

(15) *Lockout/tags-plus coordinator.* An employee whom the employer designates to coordinate and oversee all lockout and tags-plus applications on vessels or vessel sections and at landside work areas when employees are performing multiple servicing operations on the same machinery, equipment, or systems at the same time, and when employees are servicing multiple machinery, equipment, or systems on the same vessel or vessel section at the same time. The lockout/tags-plus coordinator also maintains the lockout/tags-plus log.

(16) *Lockout/tags-plus materials and hardware.* Locks, chains, wedges, blanks, key blocks, adapter pins, self-locking fasteners, or other hardware used for isolating, blocking, or securing machinery, equipment, or systems to prevent the release of energy or the startup or energization of machinery, equipment, or systems to be serviced.

(17) *Motor vehicle.* Any motor-driven vehicle operated by an employee that is used to transport employees, material, or property. For the purposes of this subpart, motor vehicles include passenger cars, light trucks, vans, motorcycles, all-terrain vehicles, small utility trucks, powered industrial trucks, and other similar vehicles. Motor vehicles do not include boats, or vehicles operated exclusively on a rail or rails.

(18) *Motor vehicle safety equipment.* Systems and devices integral to or installed on a motor vehicle for the purpose of effecting the safe operation of the vehicle, and consisting of such systems or devices as safety belts, airbags, headlights, tail lights, emergency/hazard lights, windshield wipers, defogging or defrosting devices, brakes, horns, mirrors, windshields and other windows, and locks.

(19) *Navy ship's force.* The crew of a vessel that is owned or operated by the U.S. Navy, other than a time- or voyage-chartered vessel, that is under the control of a Commanding Officer or Master.

(20) *Normal production operations.* The use of machinery or equipment, including, but not limited to, punch presses, bending presses, shears, lathes, keel press rollers, and automated burning machines, to perform a shipyard-employment production process.

(21) *Portable toilet.* A non-sewered portable facility for collecting and containing urine and feces. A portable toilet may be either flushable or non-

flushable. For purposes of this section, portable toilets do not include privies.

(22) *Potable water.* Water that meets the standards for drinking purposes of the state or local authority having jurisdiction, or water that meets the quality standards prescribed by the U.S. Environmental Protection Agency's National Primary Water Regulations (40 CFR part 141).

(23) *Readily accessible/available.* Capable of being reached quickly enough to ensure, for example, that emergency medical services and first aid intervention are appropriate or that employees can reach sanitation facilities in time to meet their health and personal needs.

(24) *Sanitation facilities.* Facilities, including supplies, maintained for employee personal and health needs such as potable drinking water, toilet facilities, hand-washing and -drying facilities, showers (including quick-drenching or flushing) and changing rooms, eating and drinking areas, first aid stations, and on-site medical-service areas. Sanitation supplies include soap, waterless cleaning agents, single-use drinking cups, drinking water containers, toilet paper, and towels.

(25) *Serviceable condition.* The state or ability of supplies or goods, or of a tool, machine, vehicle, or other device, to be used or to operate in the manner prescribed by the manufacturer.

(26) *Servicing.* Workplace activities that involve the construction, installation, adjustment, inspection, modification, testing, or repair of machinery, equipment, or systems. Servicing also includes maintaining machines, equipment, or systems when performing these activities would expose the employee to harm from the start-up or energization of the system being serviced, or the release of hazardous energy.

(27) *Sewered toilet.* A fixture maintained for the purpose of urination and defecation that is connected to a sanitary sewer, septic tank, holding tank (bilge), or on-site sewage-disposal treatment facility, and that is flushed with water.

(28) *Shield.* To install a covering, protective layer, or other effective measure on or around steam hoses or temporary steam-piping systems, including metal fittings and couplings, to protect employees from contacting hot surfaces or elements.

(29) *Short bight.* A loop created in a line or rope that is used to tie back or fasten objects such as hoses, wiring, and fittings.

(30) *Tag.* A prominent warning device that includes a means of attachment that can be securely fastened to an energy-isolating device in accordance with an established procedure to indicate that the energy-isolating device and the equipment being controlled must not be operated until the tag is removed by an authorized employee.

(31) *Tags-plus system.* A system to control hazardous energy that consists of an energy-isolating device with a tag affixed to it, and at least one additional safety measure.

(32) *Verification of isolation.* The means necessary to detect the presence of hazardous energy, which may involve the use of a test instrument (for example, a voltmeter), and, for other than electric shock protection, a visual inspection, or a deliberate attempt to start-up the machinery, equipment, or system.

(33) *Vermin.* Insects, birds, and other animals, such as rodents and feral cats, that may create safety and health hazards for employees.

(34) *Vessel section.* A subassembly, module, or other component of a vessel being built or repaired.

(35) *Walkway.* Any surface, whether vertical, slanted, or horizontal, on which employees walk, including areas that employees pass through, to perform their job tasks. Walkways include, but are not limited to, access ways, designated walkways, aisles, exits, gangways, ladders, ramps, stairs, steps, passageways, and scaffolding. If an area is, or could be, used to gain access to other locations, it is to be considered a walkway.

(36) *Work area.* A specific area, such as a machine shop, engineering space, or fabrication area, where one or more employees are performing job tasks.

(37) *Working surface.* Any surface where work is occurring, or areas where tools, materials, and equipment are being staged for performing work.

(38) *Worksite.* A general work location where one or more employees are performing work, such as a shipyard, pier, barge, vessel, or vessel section.

(c) *Effective dates.* This final rule becomes effective and enforceable on August 1, 2011, except for the provisions in § 1915.89, which become effective and enforceable on October 31, 2011.

§ 1915.81 Housekeeping.

(a) *General requirements.*

(1) The employer shall establish and maintain good housekeeping practices to eliminate hazards to employees to the extent practicable.

(2) The employer shall eliminate slippery conditions, such as snow and ice, on walkways and working surfaces as necessary. If it is not practicable for the employer to remove slippery conditions, the employer either shall:

(i) Restrict employees to designated walkways and working surfaces where the employer has eliminated slippery conditions; or

(ii) Provide slip-resistant footwear in accordance with 29 CFR part 1915, subpart I.

(3) The employer shall store materials in a manner that does not create a hazard for employees.

(4) The employer shall maintain easy and open access to each fire-alarm box, fire-call station, fire-fighting equipment, and each exit, including ladders, staircases, scaffolds, and gangways.

(5) The employer shall dispose of flammable and combustible substances, such as paint thinners, solvents, rags, scrap, and waste, or store them in covered fire-resistant containers at the end of each workshift or when the job is completed, whichever occurs first.

(b) *Walkways.*

(1) In addition to the requirements in paragraph (a), the employer also shall ensure that each walkway:

(i) Provides adequate passage;

(ii) Is clear of debris, including solid and liquid wastes, that may create a hazard for employees;

(iii) Is clear of tools, materials, equipment, and other objects that may create a hazard for employees; and

(iv) Is clear of hoses and electrical service cords. The employer shall:

(A) Place each hose and cord above walkways in a location that will prevent injury to employees and damage to the hoses and cords;

(B) Place each hose and cord underneath walkways;

(C) Place each hose and cord on walkways, provided the hoses and cords are covered by crossovers or other means that will prevent injury to employees and damage to the hoses and cords; or

(D) Protect each hose and cord by other suitable means.

(2) While a walkway or part of a walkway is being used as a working surface, the employer shall cordon off that portion to prevent it from being used as a walkway.

(c) *Working surfaces.* In addition to the requirements in paragraph (a), the employer also shall ensure that each working surface:

(1) Is cleared of tools, materials, and equipment that are not necessary to perform the job in progress;

(2) Is cleared of debris, including solid and liquid wastes, at the end of each workshift or job, whichever occurs first;

(3) Is maintained, so far as practicable, in a dry condition. When a wet process

is used, the employer shall maintain drainage and provide false floors, platforms, mats, or other dry standing places. When the employer demonstrates that this procedure is not practicable, the employer shall provide each employee working in the wet process with protective footgear, in accordance with 29 CFR part 1915, subpart I.

§ 1915.82 Lighting.

(a) *General Requirements.* (1) The employer shall ensure that each work area and walkway is adequately lighted whenever an employee is present.

(2) For landside areas, the employer shall provide illumination that meets the levels set forth in Table F–1 to § 1915.82.

TABLE F–1 TO § 1915.82—MINIMUM LIGHTING INTENSITIES IN FOOT-CANDLES

Lumens (foot-candles)	Area or operation
3	General areas on vessels and vessel sections such as accessways, exits, gangways, stairs, and walkways.
5	General landside areas such as corridors, exits, stairs, and walkways.
5	All assigned work areas on any vessel or vessel section.
5	Landside tunnels, shafts, vaults, pumping stations, and underground work areas.
10	Landside work areas such as machine shops, electrical equipment rooms, carpenter shops, lofts, tool rooms, warehouses, and outdoor work areas.
10	Changing rooms, showers, sewered toilets, and eating, drinking, and break areas.
30	First aid stations, infirmaries, and offices.

Note to table F–1 to § 1915.82: The required illumination levels in this table do not apply to emergency or portable lights.

(3) For vessels and vessel sections, the employer shall provide illumination that meets the levels set forth in the table to paragraph (a)(2) or meet ANSI/IESNA RP–7–01 (incorporated by reference, see 1915.5).

(4) When adequate illumination is not obtainable by permanent lighting sources, temporary lighting may be used as supplementation.

(5) The employer shall ensure that neither matches nor open-flame devices are used for lighting.

(b) *Temporary lights.* The employer shall ensure that temporary lights meet the following requirements:

(1) Lights with bulbs that are not completely recessed are equipped with guards to prevent accidental contact with the bulb;

(2) Lights are equipped with electric cords designed with sufficient capacity to safely carry the electric load;

(3) Connections and insulation on electric cords are maintained in a safe condition;

(4) Lights and lighting stringers are not suspended solely by their electric cords unless they are designed by the manufacturer to be suspended in this way;

(5) Lighting stringers do not overload branch circuits;

(6) Branch circuits are equipped with over-current protection with a capacity that does not exceed the rated current-carrying capacity of the cord used;

(7) Splices have insulation with a capacity that exceeds that of the original insulation of the cord; and

(8) Exposed, non-current-carrying metal parts of lights are grounded. The employer shall ensure that grounding is provided either through a third wire in the cord containing the circuit conductors or through a separate wire that is grounded at the source of the current. Grounding shall be done in accordance with the requirements of 29 CFR 1910, subpart S.

(c) *Portable lights.* (1) In any dark area that does not have permanent or temporary lights, where lights are not working, or where lights are not readily accessible, the employer shall provide portable or emergency lights and ensure that employees do not enter those areas without such lights.

(2) Where the only means of illumination on a vessel or vessel section are from lighting sources that are not part of the vessel or vessel section, the employer shall provide portable or emergency lights for the safe movement of each employee. If natural sunlight provides sufficient illumination, portable or emergency lights are not required.

(d) *Explosion-proof, self-contained lights.* The employer shall provide and ensure that each employee uses only explosion-proof, self-contained temporary and portable lights, approved for hazardous conditions by a nationally recognized testing laboratory (NRTL), in any area that the atmosphere is determined to contain a concentration of flammable vapors that are at or above 10 percent of the lower explosive limit (LEL) as specified in 29 CFR part 1915, subparts B and C.

§ 1915.83 Utilities.

(a) *Steam supply system.* (1) The employer shall ensure that the vessel's steam piping system, including hoses, is designed to safely handle the working pressure prior to supplying steam from an outside source. The employer shall obtain a written or oral determination from a responsible vessel's representative, a contractor, or any other person who is qualified by training, knowledge, or experience to make such determination that the working pressure of the vessel's steam piping system is safe.

(2) The employer shall ensure that each outside steam supply connected to a vessel's steam piping system meets the following requirements:

(i) A pressure gauge and a relief valve are installed at the point where the temporary steam hose joins the vessel's steam piping system;

(ii) Each relief valve is set to relieve excess steam at, and is capable of relieving steam at, a pressure that does not exceed the safe working pressure of the system in its present condition;

(iii) There are no means of inadvertently disconnecting any relief valve from the system that it protects;

(iv) Each pressure gauge and relief valve is legible and located so it is visible and readily accessible; and

(v) Each relief valve is positioned so it is not likely to cause injury if steam is released.

(b) *Steam hoses.* The employer shall ensure that each steam hose meets the following requirements:

(1) The steam hose and its fittings are used in accordance with manufacturer's specifications;

(2) Each steam hose is hung tightly with short bights that prevent chafing and to reduce tension on the hose and its fittings;

(3) Each steam hose is protected from damage; and

(4) Each steam hose or temporary steam piping, including metal fittings and couplings, that pass through a walking or working area is shielded to protect employees from contact.

(c) *Electric shore power.* When a vessel is supplied with electric shore

power, the employer shall take the following precautions prior to energizing any of the vessel's circuits:

(1) Ensure that the vessel is grounded;

(2) Equip each circuit to be energized with over-current protection that does not exceed the rated current-carrying capacity of the conductors; and

(3) Ensure that each circuit to be energized is in a safe condition. The employer must obtain a determination of the safe condition, either orally or in writing, from a responsible vessel's representative, a contractor, or any other person who is qualified by training, knowledge, or experience to make such determination.

(d) *Heat lamps.* The employer shall ensure that each heat lamp, including the face, is equipped with surround-type guards to prevent contact with the lamp and bulb.

§ 1915.84 Working alone.

(a) Except as provided in § 1915.51(c)(3) of this part, whenever an employee is working alone, such as in a confined space or isolated location, the employer shall account for each employee:

(1) Throughout each workshift at regular intervals appropriate to the job assignment to ensure the employee's safety and health; and

(2) At the end of the job assignment or at the end of the workshift, whichever occurs first.

(b) The employer shall account for each employee by sight or verbal communication.

§ 1915.85 Vessel radar and communication systems.

(a) The employer shall service each vessel's radar and communication systems in accordance with 29 CFR 1915.89, Control of Hazardous Energy.

(b) The employer shall secure each vessel's radar and communication system so it is incapable of energizing or emitting radiation before any employee begins work:

(1) On or in the vicinity of the system;

(2) On or in the vicinity of a system equipped with a dummy load; or

(3) Aloft, such as on a mast or king post.

(c) When a vessel's radar or communication system is operated, serviced, repaired, or tested, the employer shall ensure that:

(1) There is no other work in progress aloft; and

(2) No employee is closer to the system's antenna or transmitter than the manufacturer's specified safe minimum distance for the type, model, and power of the equipment.

(d) The employer shall ensure that no employee enters an area designated as hazardous by manufacturers' specifications while a radar or communication system is capable of emitting radiation.

(e) The requirements of this section do not apply when a radar or communication system is incapable of emitting radiation at levels that could injure workers in the vicinity of the system, or if the radar or communication system is incapable of energizing in a manner than could injure workers working on or in the vicinity of the system.

§ 1915.86 Lifeboats.

(a) Before any employee works in or on a stowed or suspended lifeboat, the employer shall secure the lifeboat independently from the releasing gear to prevent it from falling or capsizing.

(b) The employer shall not permit any employee to be in a lifeboat while it is being hoisted or lowered, except when the employer demonstrates that it is necessary to conduct operational tests or drills over water, or in the event of an emergency.

(c) The employer shall not permit any employee to work on the outboard side of a lifeboat that is stowed on chocks unless the lifeboat is secured by gripes or another device that prevents it from swinging.

§ 1915.87 Medical services and first aid.

(a) *General requirement.* The employer shall ensure that emergency medical services and first aid are readily accessible.

(b) *Advice and consultation.* The employer shall ensure that healthcare professionals are readily available for advice and consultation on matters of workplace health.

(c) *First aid providers.* (1) The employer shall ensure that there is an adequate number of employees trained as first aid providers at each worksite during each workshift unless:

(i) There is an on-site clinic or infirmary with first aid providers during each workshift; or

(ii) The employer can demonstrate that outside first aid providers (i.e., emergency medical services) can reach the worksite within five (5) minutes of a report of injury or illness. The employer must take appropriate steps to ascertain that emergency medical assistance will be readily available promptly if an injury or illness occurs.

(2) The employer shall ensure that a first aid provider is able to reach an injured/ill employee within five (5) minutes of a report of a serious injury, illness, or accident such as one involving cardiac arrest, acute breathing problems, uncontrolled bleeding, suffocation, electrocution, or amputation.

(3) The employer shall use the following factors in determining the number and location of employees who must have first aid training: size and location of each worksite; the number of employees at each worksite; the hazards present at each worksite; and the distance of each worksite from hospitals, clinics, and rescue squads.

(4) The employer shall ensure that first aid providers are trained to render first aid, including cardiopulmonary resuscitation (CPR).

(5) The employer shall ensure that each first aid provider maintains current first aid and CPR certifications, such as issued by the Red Cross, American Heart Association, or other equivalent organization.

(d) *First aid supplies.* (1) The employer shall provide and maintain adequate first aid supplies that are readily accessible to each worksite. An employer's on-site infirmary or clinic containing first aid supplies that are readily accessible to each worksite complies with this requirement.

(2) The employer shall ensure that the placement, content, and amount of first aid supplies are adequate for the size and location of each worksite, the number of employees at each worksite, the hazards present at each worksite, and the distance of each worksite from hospitals, clinics, and rescue squads.

(3) The employer shall ensure that first aid supplies are placed in a weatherproof container.

(4) The employer shall maintain first aid supplies in a dry, sterile, and serviceable condition.

(5) The employer shall replenish first aid supplies as necessary to ensure that there is an adequate supply when needed.

(6) The employer shall inspect first aid supplies at sufficient intervals to ensure that they are adequate and in a serviceable condition.

(e) *Quick-drenching and flushing facilities.* Where the potential exists for an employee to be splashed with a substance that may result in an acute or serious injury, the employer shall provide facilities for quick-drenching or flushing the eyes and body. The employer shall ensure that such a facility is located for immediate emergency use within close proximity to operations where such substances are being used.

(f) *Basket stretchers.* (1) The employer shall provide an adequate number of basket stretchers, or the equivalent, readily accessible to where work is being performed on a vessel or vessel section. The employer is not required to

provide basket stretchers or the equivalent where emergency response services have basket stretchers or the equivalent that meet the requirements of this paragraph.

(2) The employer shall ensure each basket stretcher, or the equivalent, is equipped with:

(i) Permanent lifting bridles that enable the basket stretcher, or the equivalent, to be attached to hoisting gear capable of lifting at least 5,000 pounds (2,270 kg);

(ii) Restraints that are capable of securely holding the injured/ill employee while the basket stretcher, or the equivalent, is lifted or moved; and

(iii) A blanket or other suitable covering for the injured/ill employee.

(3) The employer shall store basket stretchers, or the equivalent, and related equipment (i.e., restraints, blankets) in a clearly marked location in a manner that prevents damage and protects the equipment from environmental conditions.

(4) The employer shall inspect stretchers, or the equivalent, and related equipment at intervals that ensure the equipment remains in a safe and serviceable condition, but at least once a year.

Appendix A to § 1915.87—First Aid Kits and Automated External Defibrillators (Non-Mandatory)

1. First aid supplies are required to be adequate and readily accessible under paragraphs § 1915.87(a) and (d). An example of the minimal contents of a generic first aid kit for workplace settings is described in ANSI/ISEA Z308.1–2009, "Minimum Requirements for Workplace First Aid Kits and Supplies" (incorporated by reference as specified in § 1915.5). The contents of the kit listed in this ANSI standard should be adequate for small worksites. When larger operations or multiple operations are being conducted at the same worksite, employers should determine the need for additional first aid kits, additional types of first aid equipment and supplies, and additional quantities and types of supplies and equipment in the first aid kits.

2. In a similar fashion, employers that have unique or changing first aid needs at their worksite may need to enhance their first aid kits. The employer can use the OSHA 300 Log, OSHA 301 Incident Report form, or other reports to identify these unique problems. Consultation from the local fire or rescue department, appropriate healthcare professional or local emergency room may be helpful to employers in these circumstances. By assessing the specific needs of their worksite, employers can ensure that reasonably anticipated supplies are available. Employers should assess the specific needs of their worksite periodically, and augment first aid kits appropriately.

3. If it is reasonably anticipated that employees will be exposed to blood or other potentially infectious materials while using first aid supplies, employers must provide appropriate personal protective equipment (PPE) in compliance with the provisions of the Occupational Exposure to Bloodborne Pathogens standard, § 1910.1030(d)(3). This standard lists appropriate PPE for this type of exposure, such as gloves, gowns, face shields, masks, and eye protection.

4. Employers who provide automated external defibrillators (AEDs) at their workplaces should designate who will use AEDs and train those employees so they know how to correctly use the AEDs. Although a growing number of AEDs are now designed to be used by any person, even without training, training reinforces proper use and promotes the usefulness of AEDs as part of an effective cardiopulmonary resuscitation plan. For AEDs to be effective, employers should:

a. Ensure that AEDs are located so they can be utilized within three to five minutes of a report of an accident or injury;

b. Ensure that employees use AEDs in accordance with manufacturers' specifications; and

c. Inspect, test, and maintain AEDs in accordance with manufacturers' specifications.

§ 1915.88 Sanitation.

(a) *General requirements.* (1) The employer shall provide adequate and readily accessible sanitation facilities.

(2) The employer shall establish and implement a schedule for servicing, cleaning, and supplying each facility to ensure it is maintained in a clean, sanitary, and serviceable condition.

(b) *Potable water.* (1) The employer shall provide potable water for all employee health and personal needs and ensure that only potable water is used for these purposes.

(2) The employer shall provide potable drinking water in amounts that are adequate to meet the health and personal needs of each employee.

(3) The employer shall dispense drinking water from a fountain, a covered container with single-use drinking cups stored in a sanitary receptacle, or single-use bottles. The employer shall prohibit the use of shared drinking cups, dippers, and water bottles.

(c) *Non-potable water.* (1) The employer may use non-potable water for other purposes such as firefighting and cleaning outdoor premises so long as it does not contain chemicals, fecal matter, coliform, or other substances at levels that may create a hazard for employees.

(2) The employer shall clearly mark non-potable water supplies and outlets as "not safe for health or personal use."

(d) *Toilets.* (1) *General requirements.* The employer shall ensure that sewered and portable toilets:

(i) Provide privacy at all times. When a toilet facility contains more than one toilet, each toilet shall occupy a separate compartment with a door and walls or partitions that are sufficiently high to ensure privacy; and

(ii) Are separate for each sex, except as provided in (d)(1)(ii)(B) of this section;

(A) The number of toilets provided for each sex shall be based on the maximum number of employees of that sex present at the worksite at any one time during a workshift. A single-occupancy toilet room shall be counted as one toilet regardless of the number of toilets it contains; and

(B) The employer does not have to provide separate toilet facilities for each sex when they will not be occupied by more than one employee at a time, can be locked from the inside, and contain at least one toilet.

(iii) The employer shall establish and implement a schedule to ensure that each sewered and portable toilet is maintained in a clean, sanitary, and serviceable condition.

(2) *Minimum number of toilets.* (i) The employer shall provide at least the following number of toilets for each sex. Portable toilets that meet the requirements of paragraph (d)(3) of this section may be included in the minimum number of toilets.

TABLE F–2 TO § 1915.88

Number of employees of each sex	Minimum number of toilets per sex
1 to 15	1
16 to 35	2
36 to 55	3
56 to 80	4
81 to 110	5
111 to 150	6
Over 150	1 additional toilet for each additional 40 employees.

Note to Table F–2 of § 1915.88: When toilets will only be used by men, urinals may be provided instead of toilets, except that the number of toilets in such cases shall not be reduced to less than two-thirds of the minimum specified.

(3) *Portable toilets.* (i) The employer shall provide portable toilets, pursuant to paragraph (d)(2)(i) and Table to paragraph (d)(2) of this section, only when the employer demonstrates that it is not feasible to provide sewered toilets, or when there is a temporary increase in the number of employees for a short duration of time.

(ii) The employer shall ensure that each portable toilet is vented and equipped, as necessary, with lighting.

(4) *Exception for normally unattended worksites and mobile work crews.* The requirement to provide toilets does not apply to normally unattended worksites

and mobile work crews, provided that the employer ensures that employees have immediately available transportation to readily accessible sanitation facilities that are maintained in a clean, sanitary, and serviceable condition and meet the other requirements of this section.

(e) *Handwashing facilities.* (1) The employer shall provide handwashing facilities at or adjacent to each toilet facility.

(2) The employer shall ensure that each handwashing facility:

(i) Is equipped with either hot and cold or lukewarm running water and soap, or with waterless skin-cleansing agents that are capable of disinfecting the skin or neutralizing the contaminants to which the employee may be exposed; and

(ii) If the facility uses soap and water, it is supplied with clean, single-use hand towels stored in a sanitary container and a sanitary means for disposing of them, clean individual sections of continuous cloth toweling, or a hand-drying air blower.

(3) The employer shall inform each employee engaged in the application of paints or coatings or in other operations in which hazardous or toxic substances can be ingested or absorbed about the need for removing surface contaminants from their skins surface by thoroughly washing their hands and face at the end of the workshift and prior to eating, drinking, or smoking.

(f) *Showers.* (1) When showers are required by an OSHA standard, the employer shall provide one shower for each 10, or fraction of 10, employees of each sex who are required to shower during the same workshift.

(2) The employer shall ensure that each shower is equipped with soap, hot and cold water, and clean towels for each employee who uses the shower.

(g) *Changing rooms.* When an employer provides protective clothing to prevent employee exposure to hazardous or toxic substances, the employer shall provide the following:

(1) Changing rooms that provide privacy for each sex; and

(2) Storage facilities for street clothes, as well as separate storage facilities for protective clothing.

(h) *Eating, drinking, and break areas.* The employer shall ensure that food, beverages, and tobacco products are not consumed or stored in any area where employees may be exposed to hazardous or toxic substances.

(i) *Waste disposal.* (1) The employer shall provide waste receptacles that meet the following requirements:

(i) Each receptacle is constructed of materials that are corrosion resistant, leak-proof, and easily cleaned or disposable;

(ii) Each receptacle is equipped with a solid tight-fitting cover, unless it can be kept in clean, sanitary, and serviceable condition without the use of a cover;

(iii) Receptacles are provided in numbers, sizes, and locations that encourage their use; and

(iv) Each receptacle is emptied as often as necessary to prevent it from overfilling and in a manner that does not create a hazard for employees. Waste receptacles for food shall be emptied at least every day, unless unused.

(2) The employer shall not permit employees to work in the immediate vicinity of uncovered garbage that could endanger their safety and health.

(3) The employer shall ensure that employees working beneath or on the outboard side of a vessel are not contaminated by drainage or waste from overboard discharges.

(j) *Vermin control.* (1) To the extent reasonably practicable, the employer shall clean and maintain the workplace in a manner that prevents vermin infestation.

(2) Where vermin are detected, the employer shall implement and maintain an effective vermin-control program.

§ 1915.89 Control of hazardous energy (lockout/tags-plus).

(a) *Scope, application, and effective dates .* (1) *Scope.* This section covers the servicing of machinery, equipment, and systems when the energization or startup of machinery, equipment, or systems, or the release of hazardous energy, could endanger an employee.

(2) *Application.* (i) This section applies to the servicing of any machinery, equipment, or system that employees use in the course of shipyard employment work and that is conducted:

(A) In any landside facility that performs shipyard employment work; and

(B) On any vessel or vessel section.

(ii) This section applies to such servicing conducted on a vessel by any employee including, but not limited to, the ship's officers and crew unless such application is preempted by the regulations of another federal agency.

(3) When other standards in 29 CFR part 1915 and applicable standards in 29 CFR part 1910 require the use of a lock or tag, the employer shall use and supplement them with the procedural and training requirements specified in this section.

(4) *Exceptions.* This section does not apply to:

(i) Work on cord-and-plug-connected machinery, equipment, or system, provided the employer ensures that the machinery, equipment, or system is unplugged and the plug is under the exclusive control of the employee performing the servicing;

(ii) Minor servicing activities performed during normal production operations, including minor tool changes and adjustments, that are routine, repetitive, and integral to the use of the machinery, equipment, or system, provided the employer ensures that the work is performed using measures that provide effective protection from energization, startup, or the release of hazardous energy.

(b) *Lockout/tags-plus program.* The employer shall establish and implement a written program and procedures for lockout and tags-plus systems to control hazardous energy during the servicing of any machinery, equipment, or system in shipyard employment. The program shall cover:

(1) Procedures for lockout/tags-plus systems while servicing machinery, equipment, or systems in accordance with paragraph (c) of this section;

(2) Procedures for protecting employees involved in servicing any machinery, equipment, or system in accordance with paragraphs (d) through (m) of this section;

(3) Specifications for locks and tags-plus hardware in accordance with paragraph (n) of this section;

(4) Employee information and training in accordance with paragraph (o) of this section;

(5) Incident investigations in accordance with paragraph (p) of this section; and

(6) Program audits in accordance with paragraph (q) of this section.

(c) *General requirements.* (1) The employer shall ensure that, before any authorized employee performs servicing when energization or startup, or the release of hazardous energy, may occur, all energy sources are identified and isolated, and the machinery, equipment, or system is rendered inoperative.

(2) If an energy-isolating device is capable of being locked, the employer shall ensure the use of a lock to prevent energization or startup, or the release of hazardous energy, before any servicing is started, unless the employer can demonstrate that the utilization of a tags-plus system will provide full employee protection as set forth in paragraph (c)(6) of this section.

(3) If an energy-isolating device is not capable of being locked, the employer shall ensure the use of a tags-plus system to prevent energization or

startup, or the release of hazardous energy, before any servicing is started.

(4) Each tags-plus system shall consist of:

(i) At least one energy-isolating device with a tag affixed to it; and

(ii) At least one additional safety measure that, along with the energy-isolating device and tag required in (c)(4)(i) of this section, will provide the equivalent safety available from the use of a lock.

Note to paragraph (c)(4) of this section: When the Navy ship's force maintains control of the machinery, equipment, or systems on a vessel and has implemented such additional measures it determines are necessary, the provisions of paragraph (c)(4)(ii) of this section shall not apply, provided that the employer complies with the verification procedures in paragraph (g) of this section.

(5) After October 31, 2011, the employer shall ensure that each energy-isolating device for any machinery, equipment, or system is designed to accept a lock whenever the machinery, equipment, or system is extensively repaired, renovated, modified, or replaced, or whenever new machinery, equipment, or systems are installed. This requirement does not apply when a shipyard employer:

(i) Does not own the machinery, equipment, or system; or

(ii) Builds or services a vessel or vessel section according to customer specifications.

(6) *Full employee protection.* (i) When a tag is used on an energy-isolating device that is capable of being locked out, the tag shall be attached at the same location that the lock would have been attached, and;

(ii) The employer shall demonstrate that the use of a tags-plus system will provide a level of safety equivalent to that obtained by using a lock. In demonstrating that an equivalent level of safety is achieved, the employer shall:

(A) Demonstrate full compliance with all tags-plus-related provisions of this standard; and

(B) Implement such additional safety measures as are necessary to provide the equivalent safety available from the use of a lock.

Note to paragraph (c)(6) of this section: When the Navy ship's force maintains control of the machinery, equipment, or systems on a vessel and has implemented such additional measures it determines are necessary, the provisions of paragraph (c)(6)(ii)(B) of this section do not apply, provided that the employer complies with the verification procedures in paragraph (g) of this section.

(7) *Lockout/tags-plus coordination.* (i) The employer shall establish and implement lockout/tags-plus coordination when:

(A) Employees on vessels and in vessel sections are servicing multiple machinery, equipment, or systems at the same time; or

(B) Employees on vessels, in vessel sections, and at landside facilities are performing multiple servicing operations on the same machinery, equipment, or system at the same time.

(ii) The coordination process shall include a lockout/tags-plus coordinator and a lockout/tags-plus log. Each log shall be specific to each vessel, vessel section, and landside work area.

(iii) The employer shall designate a lockout/tags-plus coordinator who is responsible for overseeing and approving:

(A) The application of each lockout and tags-plus system;

(B) The verification of hazardous-energy isolation before the servicing of any machinery, equipment, or system begins; and

(C) The removal of each lockout and tags-plus system.

(iv) The employer shall ensure that the lockout/tags-plus coordinator maintains and administers a continuous log of each lockout and tags-plus system. The log shall contain:

(A) Location of machinery, equipment, or system to be serviced;

(B) Type of machinery, equipment, or system to be serviced;

(C) Name of the authorized employee applying the lockout/tags-plus system;

(D) Date that the lockout/tags-plus system is applied;

(E) Name of authorized employee removing the lock or tags-plus system; and

(F) Date that lockout/tags-plus system is removed.

Note to paragraph (c)(7) of this section: When the Navy ship's force serves as the lockout/tags-plus coordinator and maintains control of the lockout/tags-plus log, the employer will be in compliance with the requirements in paragraph (c)(7) of this section when coordination between the ship's force and the employer occurs to ensure that applicable lockout/tags-plus procedures are followed and documented.

(d) *Lockout/tags-plus written procedures.* (1) The employer shall establish and implement written procedures to prevent energization or startup, or the release of hazardous energy, during the servicing of any machinery, equipment, or system. Each procedure shall include:

(i) A clear and specific outline of the scope and purpose of the lockout/tags-plus procedure;

(ii) The means the employer will use to enforce compliance with the lockout/tags-plus program and procedures; and

(iii) The steps that must be followed for:

(A) Preparing for shutting down and isolating of the machinery, equipment, or system to be serviced, in accordance with paragraph (e) of this section;

(B) Applying the lockout/tags-plus system, in accordance with paragraph (f) of this section;

(C) Verifying isolation, in accordance with paragraph (g) of this section;

(D) Testing the machinery, equipment, or system, in accordance with paragraph (h) of this section;

(E) Removing lockout/tags-plus systems, in accordance with paragraph (i) of this section;

(F) Starting up the machinery, equipment, or system that is being serviced, in accordance with paragraph (j) of this section;

(G) Applying lockout/tags-plus systems in group servicing operations, in accordance with paragraph (k) of this section;

(H) Addressing multi-employer worksites involved in servicing any machinery, equipment, or system, in accordance with paragraph (l) of this section; and

(I) Addressing shift or personnel changes during servicing operations, in accordance with paragraph (m) of this section.

Note to paragraph (d)(1) of this section: The employer need only develop a single procedure for a group of similar machines, equipment, or systems if the machines, equipment, or systems have the same type and magnitude of energy and the same or similar types of controls, and if a single procedure can satisfactorily address the hazards and the steps to be taken to control these hazards.

(2) The employer's lockout procedures do not have to be in writing for servicing machinery, equipment, or systems, provided that all of the following conditions are met:

(i) There is no potential for hazardous energy to be released (or to reaccumulate) after shutting down, or restoring energy to, the machinery, equipment, or system;

(ii) The machinery, equipment, or system has a single energy source that can be readily identified and isolated;

(iii) The isolation and lock out of that energy source will result in complete de-energization and deactivation of the machinery, equipment, or system, and there is no potential for reaccumulation of energy;

(iv) The energy source is isolated and secured from the machinery, equipment, or system during servicing;

(v) Only one lock is necessary for isolating the energy source;

(vi) The lock is under the exclusive control of the authorized employee performing the servicing;

(vii) The servicing does not create a hazard for any other employee; and

(viii) The employer, in utilizing this exception, has not had any accidents or incidents involving the activation or reenergization of this type of machinery, equipment, or system during servicing.

(e) *Procedures for shutdown and isolation.* (1) Before an authorized employee shuts down any machinery, equipment, or system, the employer shall:

(i) Ensure that the authorized employee has knowledge of:

(A) The source, type, and magnitude of the hazards associated with energization or startup of the machine, equipment, or system;

(B) The hazards associated with the release of hazardous energy; and

(C) The means to control these hazards; and

(ii) Notify each affected employee that the machinery, equipment, or system will be shut down and deenergized prior to servicing, and that a lockout/tags-plus system will be implemented.

(2) The employer shall ensure that the machinery, equipment, or system is shut down according to the written procedures the employer established.

(3) The employer shall use an orderly shutdown to prevent exposing any employee to risks associated with hazardous energy.

(4) The employer shall ensure that the authorized employee relieves, disconnects, restrains, or otherwise renders safe all potentially hazardous energy that is connected to the machinery, equipment, or system.

Note to paragraph (e) of this section: When the Navy ship's force shuts down any machinery, equipment, or system, and relieves, disconnects, restrains, or otherwise renders safe all potentially hazardous energy that is connected to the machinery, equipment, or system, the employer will be in compliance with the requirements in paragraph (e) of this section when the employer's authorized employee verifies that the machinery, equipment, or system being serviced has been properly shut down, isolated, and deenergized.

(f) *Procedures for applying lockout/tags-plus systems.* (1) The employer shall ensure that only an authorized employee applies a lockout/tags-plus system.

(2) When using lockout systems, the employer shall ensure that the authorized employee affixes each lock in a manner that will hold the energy-isolating device in a safe or off position.

(3) When using tags-plus systems, the employer shall ensure that the authorized employee affixes a tag directly to the energy-isolating device that clearly indicates that the removal of the device from a safe or off position is prohibited.

(4) When the tag cannot be affixed directly to the energy-isolating device the employer shall ensure that the authorized employee locates it as close as safely possible to the device, in a safe and immediately obvious position.

(5) The employer shall ensure that each energy-isolating device that controls energy to the machinery, equipment, or system is effective in isolating the machinery, equipment, or system from all potentially hazardous energy source(s).

Note to paragraph (f) of this section: When the Navy ship's force applies the lockout/tags-plus systems or devices, the employer will be in compliance with the requirements in paragraph (f) of this section when the employer's authorized employee verifies the application of the lockout/tags-plus systems or devices.

(g) *Procedures for verification of deenergization and isolation.* (1) Before servicing machinery, equipment, or a system that has a lockout/tags-plus system, the employer shall ensure that the authorized employee, or the primary authorized employee in a group lockout/tags-plus application, verifies that the machinery, equipment, or system is deenergized and all energy sources isolated.

(2) The employer shall ensure that the authorized employee, or the primary authorized employee in a group lockout/tags-plus application, continues verifying deenergization and isolation while servicing the machinery, equipment, or system.

(3) Each authorized employee in a group lockout/tags-plus application who will be servicing the machinery, equipment, or system must be given the option to verify that the machinery, equipment, or system is deenergized and all energy sources isolated, even when verification is performed by the primary authorized employee.

(h) *Procedures for testing.* In each situation in which a lockout/tags-plus system must be removed temporarily and the machinery, equipment, or system restarted to test it or to position a component, the employer shall ensure that the authorized employee does the following in sequence:

(1) Clears tools and materials from the work area;

(2) Removes nonessential employees from the work area;

(3) Removes each lockout/tags-plus system in accordance with paragraph (i) of this section;

(4) Restarts the machinery, equipment, or system and then proceeds with testing or positioning; and

(5) After completing testing or positioning, deenergizes and shuts down the machinery, equipment, or system and reapplies all lockout/tags-plus systems in accordance with paragraphs (e)–(g) of this section to continue servicing.

Note to paragraph (h) of this section: When the Navy ship's force serves as the lockout/tags-plus coordinator, performs the testing, and maintains control of the lockout/tags-plus systems or devices during testing, the employer is in compliance with paragraph (h) when the employer's authorized employee acknowledges to the lockout/tags-plus coordinator that the employer's personnel and tools are clear and the machinery, equipment, or system being serviced is ready for testing, and upon completion of the testing, verifies the reapplication of the lockout/tags-plus systems.

(i) *Procedures for removal of lockout and tags-plus systems.* (1) Before removing any lockout/tags-plus system and restoring the machinery, equipment, or system to use, the employer shall ensure that the authorized employee does the following:

(i) Notifies all other authorized and affected employees that the lockout/tags-plus system will be removed;

(ii) Ensures that all employees in the work area have been safely positioned or removed; and

(iii) Inspects the work area to ensure that nonessential items have been removed and machinery, equipment, or system components are operationally intact.

(2) The employer shall ensure that each lock or tags-plus system is removed by the authorized employee who applied it.

(3) When the authorized employee who applied the lockout/tags-plus system is not available to remove it, the employer may direct removal by another authorized employee, provided the employer developed and incorporated into the lockout/tags-plus program the specific procedures and training that address such removal, and demonstrates that the specific procedures used provide a level of employee safety that is at least as effective in protecting employees as removal of the system by the authorized employee who applied it. After meeting these requirements, the employer shall do the following in sequence:

(i) Verify that the authorized employee who applied the lockout/tags-plus system is not in the facility;

(ii) Make all reasonable efforts to contact the authorized employee to

inform him/her that the lockout/tags-plus system has been removed; and

(iii) Ensure that the authorized employee who applied the lock or tags-plus system has knowledge of the removal before resuming work on the affected machinery, equipment, or system.

Note to paragraph (i) of this section: When the Navy ship's force serves as lockout/tags-plus coordinator and removes the lockout/tags-plus systems or devices, the employer is in compliance with the requirements in paragraph (i) of this section when the employer's authorized employee informs the lockout/tags-plus coordinator that the procedures in paragraph (i)(1) of this section have been performed.

(j) *Procedures for startup.* (1) Before an authorized employee turns on any machinery, equipment, or system after servicing is completed, the employer shall ensure that the authorized employee has knowledge of the source, type, and magnitude of the hazards associated with energization or startup, and the means to control these hazards.

(2) The employer shall execute an orderly startup to prevent or minimize any additional or increased hazard(s) to employees. The employer shall perform the following tasks before starting up the machinery, equipment, or system:

(i) Clear tools and materials from the work area;

(ii) Remove any non-essential employees from the work area; and

(iii) Start up the machinery, equipment, or system according to the detailed procedures the employer established for that machinery, equipment, or system.

Note to paragraph (j) of this section: When the Navy ship's force serves as lockout/tags-plus coordinator and maintains control of the lockout/tags-plus systems or devices during startup, and the employer is prohibited from starting up the machinery, equipment, or system, the employer is in compliance with the requirements in paragraph (j) of this section when the employer's authorized employee informs the lockout/tags-plus coordinator the procedures in paragraphs (j)(2)(i) and (j)(2)(ii) of this section have been performed.

(k) *Procedures for group lockout/tags-plus.* When more than one authorized employee services the same machinery, equipment, or system at the same time, the following procedures shall be implemented:

(1) *Primary authorized employee.* The employer shall:

(i) Assign responsibility to one primary authorized employee for each group of authorized employees performing servicing on the same machinery, equipment, or system;

(ii) Ensure that the primary authorized employee determines the safe exposure status of each authorized employee in the group with regard to the lockout/tags-plus system;

(iii) Ensure that the primary authorized employee obtains approval from the lockout/tags-plus coordinator to apply and remove the lockout/tags-plus system; and

(iv) Ensure that the primary authorized employee coordinates the servicing operation with the coordinator when required by paragraph (c)(7)(i) of this section.

(2) *Authorized employees.* The employer shall either:

(i) Have each authorized employee apply a personal lockout/tags-plus system; or

(ii) Use a procedure that the employer can demonstrate affords each authorized employee a level of protection equivalent to the protection provided by having each authorized employee apply a personal lockout/tags-plus system. Such procedures shall incorporate a means for each authorized employee to have personal control of, and accountability for, his or her protection such as, but not limited to, having each authorized employee:

(A) Sign a group tag (or a group tag equivalent), attach a personal identification device to a group lockout device, or performs a comparable action before servicing is started; and

(B) Sign off the group tag (or the group tag equivalent), remove the personal identification device, or perform a comparable action when servicing is finished.

Note to paragraph (k)(2) of this section: When the Navy ship's force maintains control of the machinery, equipment, or systems on a vessel and prohibits the employer from applying or removing the lockout/tags-plus system or starting up the machinery, equipment, or systems being serviced, the employer is in compliance with the requirements in paragraphs (k)(1)(iii) and (k)(2), provided that the employer ensures that the primary authorized employee takes the following steps in the following order: (1) Before servicing begins and after deenergization, (a) verifies the safe exposure status of each authorized employee, and (b) signs a group tag (or a group tag equivalent) or performs a comparable action; and (2) after servicing is complete and before reenergization, (a) verifies the safe exposure status of each authorized employee, and (b) signs off the group tag (or the group tag equivalent) or performs a comparable action.

(l) *Procedures for multi-employer worksites.* (1) The host employer shall establish and implement procedures to protect employees from hazardous energy in multi-employer worksites. The procedures shall specify the responsibilities for host and contract employers.

(2) *Host employer responsibilities.* The host employer shall carry out the following responsibilities in multi-employer worksites:

(i) Inform each contract employer about the content of the host employer's lockout/tags-plus program and procedures;

(ii) Instruct each contract employer to follow the host employer's lockout/tags-plus program and procedures; and

(iii) Ensure that the lockout/tags-plus coordinator knows about all servicing operations and communicates with each contract employer who performs servicing or works in an area where servicing is being conducted.

(3) *Contract employer responsibilities.* Each contract employer shall perform the following duties when working in a multi-employer worksite:

(i) Follow the host employer's lockout/tags-plus program and procedures;

(ii) Ensure that the host employer knows about the lockout/tags-plus hazards associated with the contract employer's work and what the contract employer is doing to address these hazards; and

(iii) Inform the host employer of any previously unidentified lockout/tags-plus hazards that the contract employer identifies at the multi-employer worksite.

Note 1 to paragraph (l) of this section: The host employer may include provisions in its contract with the contract employer for the contract employer to have more control over the lockout/tags-plus program if such provisions will provide an equivalent level of protection for the host employer's and contract employer's employees as that provided by paragraph (l) of this section.

Note 2 to paragraph (l) of this section: When the U.S Navy contracts directly with a contract employer and the Navy ship's force maintains control of the lockout/tags-plus systems or devices, that contract employer shall consider the Navy to be the host employer for the purposes of § 1915.89(l)(3).

(m) *Procedures for shift or personnel changes.* (1) The employer shall establish and implement specific procedures for shift or personnel changes to ensure the continuity of lockout/tags-plus protection.

(2) The employer shall establish and implement provisions for the orderly transfer of lockout/tags-plus systems between authorized employees when they are starting and ending their workshifts, or when personnel changes occur during a workshift, to prevent energization or startup of the machinery, equipment, or system being serviced or the release of hazardous energy.

(n) *Lockout/tags-plus materials and hardware.* (1) The employer shall provide locks and tags-plus system hardware used for isolating, securing, or blocking machinery, equipment, or systems from all hazardous-energy sources.

(2) The employer shall ensure that each lock and tag is uniquely identified for the purpose of controlling hazardous energy and is not used for any other purpose.

(3) The employer shall ensure that each lock and tag meets the following requirements:

(i) *Durable.* (A) Each lock and tag is capable of withstanding the existing environmental conditions for the maximum period of time that servicing is expected to last;

(B) Each tag is made so that weather conditions, wet or damp conditions, corrosive substances, or other conditions in the work area where the tag is used or stored will not cause it to deteriorate or become illegible;

(ii) *Standardized.* (A) Each lock and tag is standardized in at least one of the following areas: color, shape, or size; and

(B) Each tag is standardized in print and format;

(iii) *Substantial.* (A) Each lock is sturdy enough to prevent removal without the use of extra force or unusual techniques, such as bolt cutters or other metal-cutting tools;

(B) Each tag and tag attachment is sturdy enough to prevent inadvertent or accidental removal;

(C) Each tag attachment has the general design and basic safety characteristics of a one-piece, all-environment-tolerant nylon tie;

(D) Each tag attachment is non-reusable, attachable by hand, self-locking, and non-releasable, and has a minimum unlocking strength of 50 pounds;

(iv) *Identifiable.* Each lock and tag indicates the identity of the authorized employee applying it; and

(v) Each tag warns of hazardous conditions that could arise if the machinery, equipment, or system is energized and includes a legend such as one of the following: "*Do Not Start,*" "*Do Not Open,*" "*Do Not Close,*" "*Do Not Energize,*" or "*Do Not Operate.*"

(o) *Information and training.* (1) *Initial training.* The employer shall train each employee in the applicable requirements of this section no later than October 31, 2011.

(2) *General training content.* The employer shall train each employee who is, or may be, in an area where lockout/tags-plus systems are being used so they know:

(i) The purpose and function of the employer's lockout/tags-plus program and procedures;

(ii) The unique identity of the locks and tags to be used in the lockout/tags-plus system, as well as the standardized color, shape or size of these devices;

(iii) The basic components of the tags-plus system: an energy-isolating device with a tag affixed to it and an additional safety measure;

(iv) The prohibition against tampering with or removing any lockout/tags-plus system; and

(v) The prohibition against restarting or reenergizing any machinery, equipment, or system being serviced under a lockout/tags-plus system.

(3) *Additional training requirements for affected employees.* In addition to training affected employees in the requirements in paragraph (o)(2) of this section, the employer also shall train each affected employee so he/she knows:

(i) The use of the employer's lockout/tags-plus program and procedures;

(ii) That affected employees are not to apply or remove any lockout/tags-plus system; and

(iii) That affected employees are not to bypass, ignore, or otherwise defeat any lockout/tags-plus system.

(4) *Additional training requirements for authorized employees.* In addition to training authorized employees in the requirements in paragraphs (o)(2) and (o)(3) of this section, the employer also shall train each authorized employee so he/she knows:

(i) The steps necessary for the safe application, use, and removal of lockout/tags-plus systems to prevent energization or startup or the release of hazardous energy during servicing of machinery, equipment, or systems;

(ii) The type of energy sources and the magnitude of the energy available at the worksite;

(iii) The means and methods necessary for effective isolation and control of hazardous energy;

(iv) The means for determining the safe exposure status of other employees in a group when the authorized employee is working as a group's primary authorized employee.

(v) The requirement for tags to be written so they are legible and understandable to all employees;

(vi) The requirement that tags and their means of attachment be made of materials that will withstand the environmental conditions encountered in the workplace;

(vii) The requirement that tags be securely attached to energy-isolating devices so they cannot be accidentally removed while servicing machinery, equipment, or systems;

(viii) That tags are warning devices, and alone do not provide physical barriers against energization or startup, or the release of hazardous energy, provided by locks, and energy-isolating devices; and

(ix) That tags must be used in conjunction with an energy-isolating device to prevent energization or startup or the release of hazardous energy.

(5) *Additional training for lockout/tags-plus coordinator.* In addition to training lockout/tags-plus coordinators in the requirements in paragraphs (o)(2), (o)(3), and (o)(4) of this section, the employer shall train each lockout/tags-plus coordinator so he/she knows:

(i) How to identify and isolate any machinery, equipment, or system that is being serviced; and

(ii) How to accurately document lockout/tags-plus systems and maintain the lockout/tags-plus log.

(6) *Employee retraining.*

(i) The employer shall retrain each employee, as applicable, whenever:

(A) There is a change in his/her job assignment that presents new hazards or requires a greater degree of knowledge about the employer's lockout/tags-plus program or procedures;

(B) There is a change in machinery, equipment, or systems to be serviced that presents a new energy-control hazard;

(C) There is a change in the employer's lockout/tags-plus program or procedures; or

(D) It is necessary to maintain the employee's proficiency.

(ii) The employer also shall retrain each employee, as applicable, whenever an incident investigation or program audit indicates that there are:

(A) Deviations from, or deficiencies in, the employer's lockout/tags-plus program or procedures; or

(B) Inadequacies in an employee's knowledge or use of the lockout/tags-plus program or procedures.

(iii) The employer shall ensure that retraining establishes the required employee knowledge and proficiency in the employer's lockout/tags-plus program and procedures and in any new or revised energy-control procedures.

(7) Upon completion of employee training, the employer shall keep a record that the employee accomplished the training, and that this training is current. The training record shall contain at least the employee's name, date of training, and the subject of the training.

(p) *Incident investigation.* (1) The employer shall investigate each incident that resulted in, or could reasonably have resulted in, energization or startup, or the release of hazardous energy,

while servicing machinery, equipment, or systems.

(2) Promptly but not later than 24 hours following the incident, the employer shall initiate an incident investigation and notify each employee who was, or could reasonably have been, affected by the incident.

(3) The employer shall ensure that the incident investigation is conducted by at least one employee who has the knowledge of, and experience in, the employer's lockout/tags-plus program and procedures, and in investigating and analyzing incidents involving the release of hazardous energy. The employer may also use additional individuals to participate in investigating the incident.

(4) The employer shall ensure that the individual(s) conducting the investigation prepare(s) a written report of the investigation that includes:

(i) The date and time of the incident;

(ii) The date and time the incident investigation began;

(iii) Location of the incident;

(iv) A description of the incident;

(v) The factors that contributed to the incident;

(vi) A copy of any lockout/tags-plus log that was current at the time of the incident; and

(vii) Any corrective actions that need to be taken as a result of the incident.

(5) The employer shall review the written incident report with each employee whose job tasks are relevant to the incident investigation findings, including contract employees when applicable.

(6) The employer shall ensure that the incident investigation and written report are completed, and all corrective actions implemented, within 30 days following the incident.

(7) If the employer demonstrates that it is infeasible to implement all of the corrective actions within 30 days, the employer shall prepare a written abatement plan that contains an explanation of the circumstances causing the delay, a proposed timetable for the abatement, and a summary of the steps the employer is taking in the interim to protect employees from hazardous energy while servicing machinery, equipment, or systems.

(q) *Program audits.* (1) The employer shall conduct an audit of the lockout/tags-plus program and procedures currently in use at least annually to ensure that the procedures and the requirements of this section are being followed and to correct any deficiencies.

(2) The employer shall ensure that the audit is performed by:

(i) An authorized employee other than the one(s) currently using the energy-control procedure being reviewed; or

(ii) Individuals other than an authorized employee who are knowledgeable about the employer's lockout/tags-plus program and procedures and the machinery, equipment, or systems being audited.

(3) The employer shall ensure that the audit includes:

(i) A review of the written lockout/tags-plus program and procedures;

(ii) A review of the current lockout/tags-plus log;

(iii) Verification of the accuracy of the lockout/tags-plus log;

(iv) A review of incident reports since the last audit;

(v) A review conducted between the auditor and authorized employees regarding the authorized employees' responsibilities under the lockout systems being audited; and

(vi) A review conducted between the auditor and affected and authorized employees regarding their responsibilities under the tags-plus systems being audited.

(4) The employer shall ensure that, within 15 days after completion of the audit, the individual(s) who conducted the audit prepare and deliver to the employer a written audit report that includes at least:

(i) The date of the audit;

(ii) The identity of the individual(s) who performed the audit;

(iii) The identity of the procedure and machinery, equipment, or system that were audited;

(iv) The findings of the program audit and recommendations for correcting deviations or deficiencies identified during the audit;

(v) Any incident investigation reports since the previous audit; and

(vi) Descriptions of corrective actions the employer has taken in response to the findings and recommendations of any incident investigation reports prepared since the previous audit.

(5) The employer shall promptly communicate the findings and recommendations in the written audit report to each employee having a job task that may be affected by such findings and recommendations.

(6) The employer shall correct the deviations or inadequacies in the lockout/tags-plus program within 15 days after receiving the written audit report.

(r) *Recordkeeping.* (1) Table to paragraph (r)(1) of this section specifies what records the employer must retain and how long the employer must retain them:

TABLE TO PARAGRAPH (R)(1) OF THIS SECTION—RETENTION OF RECORDS REQUIRED BY § 1915.89

The employer must keep the following records . . .	For at least . . .
(i) Current lockout/tags-plus program and procedures	Until replaced by updated program and procedures.
(ii) Training records	Until replaced by updated records for each type of training.
(iii) Incident investigation reports	Until the next program audit is completed.
(iv) Program audit report	12 months after being replaced by the next audit report.

(2) The employer shall make all records required by this section available to employees, their representatives, and the Assistant Secretary in accordance with the procedures and time periods specified in 29 CFR 1910.1020(e)(1) and (e)(3).

(s) *Appendices.* Non-mandatory Appendix A to this section is a guideline to assist employers and employees in complying with the requirements of this section, and to provide them with other useful information. The information in Appendix A does not add to, or in any way revise, the requirements of this section.

Appendix A to § 1915.89 (Non-Mandatory)—Typical Minimal Lockout/Tags-Plus Procedures

General

Lockout/Tags-Plus Procedure

Lockout/Tags-Plus Procedure for

[Name of company for single procedure or identification of machinery, equipment, or system if multiple procedures used.]

Purpose

This procedure establishes the minimum requirements for the lockout/tags-plus application of energy-isolating devices on vessels and vessel sections, and for landside facilities whenever servicing is done on machinery, equipment, or systems in shipyards. This procedure shall be used to

ensure that all potentially hazardous-energy sources have been isolated and the machinery, equipment, or system to be serviced has been rendered inoperative through the use of lockout or tags-plus procedures before employees perform any servicing when the energization or start-up of the machinery, equipment, or system, or the release of hazardous energy could cause injury.

Compliance With This Program

All employees are required to comply with the restrictions and limitations imposed on them during the use of lockout or tags-plus applications. Authorized employees are required to perform each lockout or tags-plus application in accordance with this procedure. No employee, upon observing that machinery, equipment, or systems are secured using lockout or tags-plus applications, shall attempt to start, open, close, energize, or operate that machinery, equipment, or system.

Type of compliance enforcement to be taken for violation of the above.

Procedures for Lockout/Tags-Plus Systems

(1) Notify each affected employee that servicing is required on the machinery, equipment, or system, and that it must be isolated and rendered inoperative using a lockout or tags-plus system.

Method of notifying all affected employees.

(2) The authorized employee shall refer to shipyard employer's procedures to identify the type and magnitude of the energy source(s) that the machinery, equipment, or system uses, shall understand the hazards of the energy, and shall know the methods to control the energy source(s).

Type(s) and magnitude(s) of energy, its hazards and the methods to control the energy.

(3) If the machinery, equipment, or system is operating, shut it down in accordance with the written procedures (depress the stop button, open switch, close valve, etc.) established by the employer.

Type(s) and location(s) of machinery, equipment, or system operating controls.

(4) Secure each energy-isolating device(s) through the use of a lockout or tags-plus system (for instance, disconnecting, blanking, and affixing tags) so that the energy source is isolated and the machinery, equipment, or system is rendered inoperative.

Type(s) and location(s) of energy-isolating devices.

(5) *Lockout System.* Affix a lock to each energy-isolating device(s) with assigned individual lock(s) that will hold the energy-isolating device(s) in a safe or off position. Potentially hazardous energy (such as that found in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be controlled by methods such as grounding, repositioning, blocking, bleeding down, etc.

(6) *Tags-Plus System.* Affix a tag to each energy-isolating device and provide at least one additional safety measure that clearly indicates that removal of the device from the safe or off position is prohibited. Potentially hazardous energy (such as that found in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems and air, gas, steam, or water pressure, etc.) must be controlled by methods such as grounding, repositioning, blocking, bleeding down, etc.

Type(s) of hazardous energy—methods used to control them.

(7) Ensure that the machinery, equipment, or system is relieved, disconnected, restrained, or rendered safe from the release of all potentially hazardous energy by checking that no personnel are exposed, and then verifying the isolation of energy to the machine, equipment, or system by operating the push button or other normal operating control(s), or by testing to make certain it will not operate.

CAUTION: Return operating control(s) to the safe or off position after verifying the isolation of the machinery, equipment, or system.

Method of verifying the isolation of the machinery, equipment, or system.

(8) The machinery, equipment, or system is now secured by a lockout or tags-plus system, and servicing by the authorized person may be performed.

Procedures for Removal of Lockout/Tags-Plus Systems

When servicing is complete and the machinery, equipment, or system is ready to return to normal operating condition, the following steps shall be taken:

(1) Notify each authorized and affected employee(s) that the lockout/tags-plus system will be removed and the machinery, equipment, or system reenergized.

(2) Inspect the work area to ensure that all employees have been safely positioned or removed.

(3) Inspect the machinery, equipment, or system and the immediate area around the machinery, equipment, or system to ensure that nonessential items have been removed and that the machinery, equipment or system components are operationally intact.

(4) Reconnect the necessary components, remove the lockout/tags-plus material and hardware, and reenergize the machinery, equipment, or system through the established detailed procedures determined by the employer.

(5) Notify all affected employees that servicing is complete and the machinery, equipment, or system is ready for testing or use.

§ 1915.90 Safety color code for marking physical hazards.

The requirements applicable to shipyard employment under this section are identical to the requirements set forth at 29 CFR 1910.144 of this chapter.

§ 1915.91 Accident prevention signs and tags.

The requirements applicable to shipyard employment under this section are identical to the requirements set forth at 29 CFR 1910.145 of this chapter.

§ 1915.92 Retention of DOT markings, placards, and labels.

(a) Any employer who receives a package of hazardous material that is required to be marked, labeled, or placarded in accordance with the U.S. Department of Transportation Hazardous Materials Regulations (49 CFR parts 171 through 180) shall retain those markings, labels, and placards on the package until the packaging is sufficiently cleaned of residue and purged of vapors to remove any potential hazards.

(b) Any employer who receives a freight container, rail freight car, motor vehicle, or transport vehicle that is required to be marked or placarded in accordance with the U.S. Department of Transportation Hazardous Materials Regulations shall retain those markings and placards on the freight container, rail freight car, motor vehicle, or transport vehicle until the hazardous materials are sufficiently removed to prevent any potential hazards.

(c) The employer shall maintain markings, placards, and labels in a manner that ensures that they are readily visible.

(d) For non-bulk packages that will not be reshipped, the requirements of this section are met if a label or other acceptable marking is affixed in accordance with 29 CFR 1910.1200, Hazard Communication.

(e) For the purposes of this section, the term "hazardous material" and any other terms not defined in this section have the same definition as specified in the U.S. Department of Transportation Hazardous Materials Regulations.

§ 1915.93 Motor vehicle safety equipment, operation and maintenance.

(a) *Application.* (1) This section applies to any motor vehicle used to transport employees, materials, or property at worksites engaged in shipyard employment. This section does not apply to motor vehicle operation on public streets and highways.

(2) The requirements of this section apply to employer-provided motor vehicles. The requirements of paragraphs (b)(2), (b)(4), and (c)(2) of this section also apply to employee-provided motor vehicles.

(3) Only the requirements of paragraphs (b)(1) through (b)(3) apply to powered industrial trucks, as defined in § 1910.178. The maintenance,

inspection, operation, and training requirements in 29 CFR 1910.178 continue to apply to powered industrial trucks used for shipyard employment.

(b) *Motor vehicle safety equipment.* (1) The employer shall ensure that each motor vehicle acquired or initially used after August 1, 2011 is equipped with a safety belt for each employee operating or riding in the motor vehicle. This requirement does not apply to any motor vehicle that was not equipped with safety belts at the time of manufacture.

(2) The employer shall ensure that each employee uses a safety belt, securely and tightly fastened, at all times while operating or riding in a motor vehicle.

(3) The employer shall ensure that vehicle safety equipment is not removed from any employer-provided vehicle. The employer shall replace safety equipment that is removed.

(4) The employer shall ensure that each motor vehicle used to transport an employee has firmly secured seats for each employee being transported and that all employees being transported are using such seats.

(c) *Motor vehicle maintenance and operation.* (1) The employer shall ensure that each motor vehicle is maintained in a serviceable and safe operating condition, and removed from service if it is not in such condition.

(2) The employer shall ensure that, before a motor vehicle is operated, any tools and materials being transported are secured if their movements may create a hazard for employees.

(3) The employer shall implement measures to ensure that motor vehicle operators are able to see, and avoid harming, pedestrians and bicyclists at shipyards. Measures that employers may implement to comply with this requirement include:

(i) Establishing dedicated travel lanes for motor vehicles, bicyclists, and pedestrians;

(ii) Installing crosswalks and traffic control devices such as stop signs, mirrors at blind spots, or physical barriers to separate travel lanes;

(iii) Establishing appropriate speed limits for all motor vehicles;

(iv) Establishing "no drive" times to allow for safe movement of pedestrians;

(v) Providing reflective vests or other gear so pedestrians and bicyclists are clearly visible to motor vehicle operators;

(vi) Ensuring that bicycles have reflectors, lights, or other equipment to maximize visibility of the bicyclist; or

(vii) Other measures that the employer can demonstrate are as effective in protecting pedestrians and bicyclists as those measures specified in paragraphs (c)(3)(i) through (c)(3)(vi) of this section.

§ 1915.94 Servicing multi-piece and single-piece rim wheels.

The requirements applicable to shipyard employment under this section are identical to the requirements set forth at 29 CFR 1910.177 of this chapter.

Subpart J—[Amended]

■ 9. In § 1915.162, paragraph (a)(1) is revised as follows:

§ 1915.162 Ship's boilers.

(a) * * *

(1) The isolation and shutoff valves connecting the dead boiler with the live system or systems shall be secured, blanked, and then locked or tagged, in accordance with § 1915.89, indicating that employees are working on the boiler. This lock or tag shall not be removed nor the valves unblanked until it is determined that this may be done without creating a hazard to the employees working on the boiler, or until the work on the boiler is completed, in accordance with § 1915.89. When valves are welded instead of bolted, at least two isolation and shutoff valves connecting the dead boiler with the live system or systems shall be secured, and then locked or tagged, in accordance with § 1915.89.

* * * * *

■ 10. In § 1915.163, paragraph (a)(1) is revised to read as follows:

§ 1915.163 Ship's piping systems.

(a) * * *

(1) The isolation and shutoff valves connecting the dead system with the live system or systems shall be secured, blanked, and then locked or tagged, in accordance with § 1915.89, indicating that employees are working on the systems. The lock or tag shall not be removed or the valves unblanked until it is determined that this may be done without creating a hazard to the employees working on the system, or until the work on the system is completed, in accordance with § 1915.89. When valves are welded instead of bolted, at least two isolation and shutoff valves connecting the dead system with the live system or systems shall be secured, and then locked or tagged, in accordance with § 1915.89.

* * * * *

■ 11. In § 1915.164, paragraphs (a)(2) and (a)(3) are revised to read as follows:

§ 1915.164 Ship's propulsion machinery.

(a) * * *

(2) If the jacking gear is steam driven, the employer shall ensure that the stop valves to the jacking gear are secured, and then locked or tagged, in accordance with § 1915.89.

(3) If the jacking gear is electrically driven, the circuit controlling the jacking gear shall be de-energized by tripping the circuit breaker, opening the switch, or removing the fuse, whichever is appropriate, and then locked or tagged in accordance with § 1915.89.

* * * * *

■ 12. In § 1915.181, paragraph (c) is revised to read as follows:

§ 1915.181 Electric circuits and distribution boards.

* * * * *

(c) De-energizing the circuit shall be accomplished by opening the circuit breaker, opening the switch, or removing the fuse, whichever method is appropriate. The circuit breaker, switch, or fuse location shall then be locked out or tagged in accordance with § 1915.89.

[FR Doc. 2011–9567 Filed 4–29–11; 8:45 am]

BILLING CODE 4510–26–P

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1910

[Docket No. OSHA–S049–2006–0675 (Formerly Docket No. S–049)]

RIN 1218–AB50

General Working Conditions in Shipyard Employment; Correction

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Final rule; correction.

SUMMARY: The Occupational Safety and Health Administration is correcting a final rule on General Working Conditions in Shipyard Employment published in the **Federal Register** of May 2, 2011 (76 FR 24576).

DATES: Effective August 1, 2011.

FOR FURTHER INFORMATION CONTACT:

Press inquiries: Frank Meilinger, Office of Communications, OSHA, U.S. Department of Labor, Room N–3647, 200 Constitution Avenue, NW., Washington, DC 20210; *telephone:* (202) 693–1999.

General and technical information: Joseph V. Daddura, Director, Office of Maritime, Directorate of Standards and Guidance, OSHA, U.S. Department of Labor, Room N–3621, 200 Constitution Avenue, NW., Washington, DC 20210; telephone (202) 693–2222.

SUPPLEMENTARY INFORMATION:

In FR Doc. 2011–9567 appearing on page 24576 in the **Federal Register** of Monday, May 2, 2011, the following corrections are made:

§ 1910.145 [Corrected]

■ 1. On page 24698, in the first column, in § 1910.145, in paragraph (a)(1), the first sentence "These specifications apply to the design, application, and use of signs or symbols (as included in paragraphs (c) through (e) of this section) that indicate and, insofar as possible, define specific hazards that could harm workers or the public, or both, or to property damage" is corrected to read "These specifications apply to the design, application, and use of signs or symbols (as included in paragraphs (c) through (e) of this section) intended to indicate and, insofar as possible, to define specific hazards of a nature such that failure to designate them may lead to accidental injury to workers or the public, or both, or to property damage."

§ 1910.147 [Corrected]

■ 2. On page 24698, in the second column, in § 1910.147, in paragraph (a)(1)(i), the first sentence "This standard covers the servicing and maintenance of machines and equipment in which the energization or start up of the machines or equipment, or release of stored energy, could harm employees" is corrected to read "This standard covers the servicing and maintenance of machines and equipment in which the *unexpected* energization or start up of the machines or equipment, or release of stored energy could cause injury to employees."

Signed at Washington, DC, on July 19, 2011.

David Michaels,

Assistant Secretary of Labor for Occupational Safety and Health.

[FR Doc. 2011–18601 Filed 7–22–11; 8:45 am]

BILLING CODE 4510–26–P