



# OSHA INSTRUCTION

U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration

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**DIRECTIVE NUMBER: CPL 02-00-142**

**EFFECTIVE DATE: August 3, 2006**

**SUBJECT: Shipyard Employment "Tool Bag" Directive**

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## ABSTRACT

**Purpose:** To provide OSHA offices, interested industry representatives, and State and federal agencies guidance concerning the application of occupational safety and health standards in shipyard employment. Also, this instruction provides consistent information and ensures consistent enforcement of OSHA's shipyard employment standards (29 CFR Part 1915).

**Scope:** OSHA-wide.

**References:**

- A. 29 CFR Part 1910, General Industry Standards.
- B. 29 CFR Part 1915, Shipyard Employment Standards.
- C. Department of Labor 2003-2008 Strategic Plan.
- D. OSHA 2003-2008 Strategic Management Plan.

**Cancellations:** CPL 02-00-133, Shipyard "Tool Bag" Directive, October 22, 2003.

**State Impact:** State adoption not required.

**Action Offices:** National, Regional, and Area Offices; Consultation Project Managers.

**Originating Office:** Directorate of Enforcement Programs (DEP).

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By and Under the Authority of  
Edwin G. Foulke, Jr.  
Assistant Secretary

## **Executive Summary**

This instruction provides guidance to the Occupational Safety and Health Administration (OSHA) national, regional, and area offices; industry employer and employee groups; State programs; and federal agencies concerning OSHA's policy and procedures for implementing intervention and inspection programs to reduce or eliminate workplace hazards related to shipyard employment. As detailed in the Department of Labor's (DOL's) Strategic Plan and supported by OSHA's Strategic Management Plan, OSHA is committed to focused interventions in the ship and boat building and repair industries to reduce injuries, illnesses, and fatalities.

This instruction provides tools to support intervention and inspection programs related to shipyard employment. This instruction:

- Supports DOL's Strategic Plan Outcome Goal 3.1 for increased emphasis on reducing workplace injuries, illnesses, and fatalities.
- Supports the reduction of occupational exposure to hazards through direct intervention; the promotion of a safety and health culture through compliance assistance, cooperative programs, and strong leadership; and supports the maximization of OSHA's effectiveness and efficiency by strengthening its capabilities and infrastructure.
- Provides OSHA compliance officers and consultants, and other interested government and industry parties, with information to support shipyard employment intervention efforts and to minimize employee exposure to hazards.
- Supports the National Emphasis Program (NEP) on Shipbreaking, and the Site-Specific Targeting (SST) program for the shipbuilding and ship repairing industries.
- Provides guidance regarding the applicability of 29 CFR Part 1910, General Industry Standards, to shipyard employment worksites (Appendix A); includes answers to commonly asked questions related to shipyard employment in an appendix (Appendix B); and incorporates guidance from other information sources into this "Tool Bag" directive.
- Delivers available shipyard employment safety and health information in a web-based format with electronic links to noted references.

## **Significant Changes**

- Updates enforcement inspection scheduling guidance in the main text of the directive to include Site-Specific Targeting (SST) and the Enhanced Enforcement Program (EEP).
- Updates references and directives to include new documents and the current version of documents previously listed.
- Updates inspection data guidance to include information regarding the North American Industry Classification System (NAICS) codes.

- Provides additional guidance information regarding boat building, repair or breaking operations that are performed at boat marinas.
- Updates guidance regarding the applicability of 29 CFR Part 1910, General Industry Standards, to shipyard employment worksites (Appendix A).
- Updates answers to commonly asked shipyard employment questions in Appendix B by incorporating recently issued interpretations (New Q & As are numbers 4, 5, 12, 15, 32, 36, 37, 38, and 39); updates previously issued interpretations to include references to the recently issued shipyard employment fire protection standard; and removes two fish processing vessel interpretations that are addressed by [CPL 02-01-020](#), OSHA/U.S. Coast Guard Authority over Vessels, November 8, 1996.
- Provides guidance for fire protection in shipyard employment including responses to frequently asked questions (Appendix C).

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- I. Purpose. This instruction provides guidance to the Occupational Safety and Health Administration (OSHA) national, regional, and area offices; industry employer and employee groups; State programs; and federal agencies concerning OSHA's policy and procedures for implementing intervention and inspection programs to reduce or eliminate workplace hazards in shipyard employment (i.e., ship repair, shipbuilding, and shipbreaking). In support of DOL's Strategic Plan, OSHA is committed to focused interventions in the ship and boat building and repair industries to reduce injuries, illnesses, and fatalities. Further, this instruction provides consistent information and ensures the consistent enforcement of OSHA's shipyard employment standards (29 CFR Part 1915).
- II. Scope. This instruction applies OSHA-wide to all programmed and unprogrammed compliance inspections, consultation interventions, and other activities such as compliance assistance, cooperative programs, training and education in the shipyard employment industry.
- III. Cancellation. This instruction cancels the following:
- CPL 02-00-133, Shipyard "Tool Bag" Directive, October 22, 2003.
- IV. Significant Changes. This instruction provides the tools needed to support shipyard employment industry intervention and inspection programs. This instruction:
- Updates enforcement inspection scheduling guidance in the main text of the directive to include Site-Specific Targeting (SST) and the Enhanced Enforcement Program (EEP).
  - Updates references and directives to include new documents and the current version of documents previously listed.
  - Updates inspection data guidance to include information regarding the North American Industry Classification System (NAICS) codes.
  - Provides additional guidance information regarding boat building, repair or breaking operations that are performed at boat marinas.
  - Updates guidance regarding the applicability of 29 CFR Part 1910, General Industry Standards, to shipyard employment worksites (Appendix A).
  - Updates answers to commonly asked shipyard employment questions in Appendix B by incorporating recently issued interpretations (New Q & As are numbers 4, 5, 12, 15, 32, 36, 37, 38, and 39); updates previously issued interpretations to include references to the recently issued shipyard employment fire protection standard; and removes two fish processing vessel interpretations that are addressed by [CPL 02-01-020](#), OSHA/U.S. Coast Guard Authority over Vessels, November 8, 1996.

- Provides guidance for fire protection in shipyard employment including responses to frequently asked questions (Appendix C).

V. References.

- A. [29 CFR Part 1903](#), Inspections, Citations and Proposed Penalties.
- B. [29 CFR Part 1904](#), Recordkeeping and Reporting Occupational Injuries and Illnesses.
- C. [29 CFR Part 1910](#), General Industry Standards.
- D. [29 CFR Part 1915](#), Shipyard Employment Standards.
- E. [29 CFR Part 1919](#), Gear Certification Standards.
- F. [29 CFR Part 1926](#), Construction Standards.
- G. [Department of Labor 2003-2008 Strategic Plan](#), Department of Labor Strategic Plan for Fiscal Years 2003-2008.
- H. [OSHA Strategic Management Plan 2003-2008](#), Occupational Safety and Health Administration (OSHA) Strategic Management Plan for Fiscal Years 2003-2008.
- I. OSHA Directives.
  - [06-01 \(CPL 02\)](#), Site-Specific Targeting 2006 (SST-06), June 12, 2006.
  - [CPL 02-00-025](#), Scheduling Systems for Programmed Inspections, January 4, 1995.
  - [CPL 02-00-051](#), Enforcement Exemptions and Limitations Under the Appropriations Act, May 28, 1998.
  - [CPL 02-00-103](#), OSHA Field Inspection Reference Manual (FIRM), September 26, 1994.
  - [CPL 02-00-124](#), Multi-Employer Citation Policy, December 10, 1999.
  - [CPL 02-00-130](#), National Emphasis Program: Lead, July 20, 2001.
  - [CPL 02-00-135](#), Recordkeeping Policies and Procedures Manual, December 30, 2004.
  - [CPL 02-00-136](#), OSHA's National Emphasis Program (NEP) on Shipbreaking, March 16, 2005.

- [CPL 02-00-137](#), Fatality/Catastrophe Investigation Procedures, April 14, 2005.
- [CPL 02-00-140](#), Complaint Policies and Procedures, June 23, 2006.
- [CPL 02-01-020](#), OSHA/U.S. Coast Guard Authority over Vessels, November 8, 1996.
- [CPL 02-01-028](#), Compliance Assistance for the Powered Industrial Truck Operators Training Standards, November 30, 2000.
- [CPL 02-01-039](#), Enforcement of Cargo Gear Regulations and the Requirements for Gear Certification in the Maritime Program, March 24, 2003.
- [CPL 02-01-042](#), 29 CFR Part 1915, Subpart B, Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment – Inspection Procedures and Interpretive Guidance, September 7, 2005.
- [CPL 02-02-063](#), Inspection Procedures for Occupational Exposure to Asbestos Final Rule, 29 CFR Parts 1910.1001, 1926.1101, and 1915.1001, November 3, 1995.
- [CPL 04-00-001](#), Procedures for Approval of Local Emphasis Programs (LEPs), November 10, 1999.
- [CSP 01-03-001](#), Maritime Jurisdiction in State-Plan States, October 30, 1978.
- [CSP 03-01-002](#), Voluntary Protection Programs (VPP): Policies and Procedures Manual, March 25, 2003.
- [CSP 03-02-002](#), OSHA Strategic Partnerships for Worker Safety and Health, December 9, 2004.
- [STD 02-04-002](#), 29 CFR Part 1915, Subpart I, Personal Protective Equipment (PPE) for Shipyard Employment – Inspection Procedures and Interpretive Guidelines, September 27, 1996.

J. Other references.

- [OSHA Maritime Web Page](#).
- OSHA Local Emphasis Programs (LEPs); most recent list (internal OSHA document).
- [OSHA eTools](#).



- [Examining Fatal Shipyard Accidents: Hazards and Solutions \(Video\)](#).
- [Safe Work Practices for Marine Hanging Staging; an OSHA Guidance Document](#).
- [Safety and Health Topics: Silica, Crystalline](#).
- [Special Emphasis Program \(SEP\) for Silicosis](#), May 2, 1996.
- OSHA Notice, [Safety and Health Program Management Guidelines; Issuance of Voluntary Guidelines – 54 FR 3904-3916](#), January 26, 1989.
- [OSHA Publications](#). Telephone number (202) 693-1888; Text Telephone (TTY) (877) 889-5627.

VI. Expiration Date. This instruction will remain in effect until canceled or superseded by instruction or notice.

VII. Federal Program Change. This instruction describes a federal program change. Those States with OSHA-approved State Plans that cover shipyard employment activities, as well as those with public sector employees engaged in these activities, are expected to have enforcement policies and procedures in place which are at least as effective as those in this instruction. All States with OSHA-approved State Plans cover public sector (State and local government) maritime activities; only California, Minnesota, Vermont and Washington cover private sector shore-side operations for shipyard employment and marine terminals.

Because of the significant nature of the policy changes contained in this instruction, notice of intent to adopt identical or different policies and procedures in response to this instruction is required from those States with covered employees.

The State's policy and procedures regarding enforcement of shipyard employment standards must be accessible to all interested parties. Where the State's policy differs from the federal standards, States may either post their policy on their State Plan's website and provide a link to OSHA or submit their policy to OSHA in electronic format, for posting on OSHA's website. An explanation of the differences, including an indication of whether the State's shipyard standards are identical to or different from the federal, also must be submitted for posting. Where the State's policies, and federal standards, are identical, a statement to that effect with appropriate State references may be sufficient for posting.

VIII. Action Information.

A. Responsible Office. Directorate of Enforcement Programs (DEP), Office of Maritime Enforcement (OME).

B. Action Offices. National, Regional, and Area Offices; Consultation Project Managers.

C. Information Offices. State-Plan States.

IX. Actions Required. The policies and procedures set forth in this instruction are effective immediately and will remain in effect until canceled by proper authority. OSHA Regional Administrators, Area Directors, and National Office Directors must ensure that the policies and procedures set forth in this instruction are followed.

The Department of Labor's Strategic Plan Outcome Goal 3.1 describes the linking of OSHA's compliance assistance and enforcement strategies, including the OSHA consultation program, to impact the hazards and industries targeted by OSHA's performance goals in a coordinated, complementary manner. Therefore, Regional Administrators also must ensure that State-Plan State Designees and Consultation Program Managers in their regions are informed of the requirements of this instruction and encourage the involvement of Consultation Programs in shipyard employment.

X. Federal Agencies. This instruction describes a change that may affect federal agencies. It is the responsibility of the head of each federal agency to establish and maintain an effective and comprehensive safety and health program. Executive Order 12196, Section 1-201, and 29 CFR 1960.16, require federal agencies to adopt policies and procedures necessary to provide a level of protection equivalent to that provided by OSHA standards and regulations.

XI. Definitions.

A. Data Initiative (aka Data Survey): The Data Initiative is a nationwide collection of establishment-specific injury and illness data from approximately 80,000 employers. The Data Initiative is compiled using OSHA's Annual Survey Form referenced in 29 CFR 1904.41.

B. Days Away, Restricted, or Transferred (DART) Rate: This includes cases involving days away from work, restricted work activity, and transfers to another job. The DART rate is calculated based on  $(N/EH) \times (200,000)$  where N is the number of cases involving days away and/or job transfer or restriction, EH is the total number of hours worked by all employees during the calendar year, and 200,000 is the base for 100 full-time equivalent employees (2,000 hours per employee x 100 employees). The DART rate replaced the Lost Workday Injury and Illness (LWDII) rate as of January 1, 2002.

C. Shipyard-Related Employment: Any employment performed incidental to, or in conjunction with ship repair, shipbuilding or shipbreaking work, including but not restricted to, inspection, testing, and employment as a watchman.

D. Ship Repair: Any repair of a vessel including but not restricted to, alterations, conversions, installations, cleaning, painting, and maintenance work.

- E. Shipbreaking: Any breaking down of a vessel's structure to dismantle the vessel, including the removal of gear, equipment, or any component of the vessel. This term is commonly referred to as "ship scrapping" or "ship disposal."
- F. Shipbuilding: The construction of a vessel, including the installation of machinery and equipment.
- G. Shipyards Employment: This includes ship repairing, shipbuilding, shipbreaking, and related employments.
- H. Vessel: Every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water, including special purpose floating structures not primarily designed for or used as a means of transportation on water.

- XII. Application. This instruction applies OSHA-wide to all interventions, inspections, and violation abatement assistance in shipyard employment. This instruction also applies to OSHA outreach efforts that include compliance assistance, cooperative programs, training, and education.

Further, this instruction applies to all 21(d) consultation programs operated in States where Federal OSHA has jurisdiction over shipyard employment. 21(d) consultation programs may provide safety and health program assistance, training, education, hazard identification, and abatement assistance to shipyard employers upon their request for assistance.

When a new OSHA general industry standard (29 CFR Part 1910) that applies to shipyard employment is promulgated after the effective date of this "Tool Bag" directive, such standard may be applied in applicable maritime environments even though the standard is not listed in Appendix A of this directive.

- XIII. Background. This instruction is issued in support of the Department of Labor (DOL) Strategic Plan Outcome Goals (lead and silica are targeted hazards). This instruction consolidates OSHA references and guidance related to shipyard employment into one "Tool Bag." To achieve the results required by DOL's Strategic Plan Performance Goals, OSHA has linked compliance assistance and enforcement strategies, including the OSHA Consultation Programs, to impact the targeted hazards and industries.

- XIV. Outreach and Cooperative Programs.

- A. OSHA Website. OSHA's website has been developed to provide the latest assistance to employers and employees in all industries, including the maritime industry (i.e., shipyard employment, marine terminals, and longshoring). The website can be accessed at:

Intranet – Accessible to OSHA only.

<http://www.osha.gov/> (Internet – Accessible to the general public.)

In addition to general industry and construction topics, specific maritime industry and related information can be found at:

1. [OSHA Assistance for the Maritime Industry](#). These web pages are part of OSHA’s commitment to provide maritime employers and employees with information and assistance to help in complying with OSHA standards and in ensuring safe and healthful workplaces. Information on these OSHA web pages includes the following:

- [Maritime Standards and Guidance](#). This web page provides direct links to OSHA maritime standards and policy documents for obtaining information and guidance regarding these standards.
- [Maritime Topics](#). These include safety, health, and compliance information pertinent to a specific topic. This web page contains links to related agencies and organizations that also can provide information or assistance to maritime employers and employees.
- [Publications](#). OSHA has developed numerous safety and health publications covering a variety of topics. The following publications are selected from OSHA’s general publications list because they provide information related specifically to maritime and shipyard employment safety and health:

[Maritime Safety and Health Topics: OSHA Publications](#). These are publications selected from the general OSHA publications page that provide information related to maritime. For other publications not specific to maritime or to order publications, refer to the OSHA publications page below.

[Shipyard Industry](#), OSHA Publication Number 2268, Revised 1998 (also known as the “Blue Book”). A pocket-size booklet containing the shipyard employment standards (29 CFR Part 1915). It also addresses the importance of training in establishing and reinforcing employee awareness of job safety and health, the elements of an effective safety and health program, and OSHA’s on-site consultation program.

This information, along with many other publications, may be obtained through [OSHA’s publications page](#).

Hard copies are also available, along with other publications, by dialing (202) 693-1888; Text Telephone (TTY) number is (877) 889-5627.

- [OSHA eTools](#). eTools are "stand-alone," interactive, web-based training tools on occupational safety and health topics. They are highly illustrated and use

graphic menus. Some also use expert system modules which enable the user to answer questions and receive reliable advice on how OSHA regulations apply to a particular worksite. The shipyard employment eTools address the entire group of 29 CFR Part 1915 regulations as they pertain to ship repair, shipbuilding and shipbreaking.

[OSHA eTools and Electronic Products for Compliance Assistance](#)  
and  
[Shipyard Employment eTools](#)

- [Examining Fatal Shipyard Accidents: Hazards and Solutions \(Videos\)](#). In conjunction with the shipyard employment industry, OSHA developed two videos based on actual case files, depicting shipyard employment fatal accidents. Each video contains eight accidents that have been recreated using computer-generated animation. Each scenario includes a review of the factors that contributed to the accident and how to avoid them. Copies of OSHA's videos are distributed to OSHA regions and consultation project managers, and to all known shipyards and boatyards nationally. Information on and the availability of these videos can be obtained by contacting:

Directorate of Science, Technology and Medicine  
Office of Technical Programs and Coordination Activities  
200 Constitution Ave., NW, Room N-3655  
Washington, D.C. 20210

- [Shipyard Hazard Information Prevention Sheets \(SHIPS\)](#). Shipyards often do not have the benefit of full-time, on-board safety and health specialists. To address this situation and help prevent injuries and illnesses, the shipyard community and OSHA have jointly developed Safety and Health Injury Prevention Sheets (SHIPS). SHIPS provide the end-user with specific guidance and "Do's and Don'ts" with accompanying photographs for various shipyard processes.
- [Safe Work Practices for Marine Hanging Staging; an OSHA Guidance Document](#). The purpose of this document is to help employers design, assemble, use, and dismantle marine hanging staging in a manner that is safe for employees. OSHA has published this guidance document to assist employers with their duty to ensure the safety of employees who install, use, and dismantle this type of staging.
- [Training and Outreach](#). Significant portions of OSHA's resources are directed to training OSHA and industry personnel in safety, health, and compliance procedures. Links are provided to State Consultation Programs that provide on-site consultation and training.

2. [Office of Maritime Enforcement \(OME\)](#). This office provides support for maritime employment (i.e., shipyard employment, marine terminals, and longshoring) including: comprehensive program guidelines, policies, procedures, technical assistance, and information dissemination. This involves, but is not limited to, the development of standards interpretations; management and administration of the 29 CFR Part 1919 maritime gear certification program; coordination of the activities of the Agency’s Maritime Steering Committee; and development and coordination of maritime enforcement programs. The OME web page provides electronic access to information such as compliance directives, standards interpretations, Review Commission and Administrative Law Judge Decisions, and the Maritime Crane Accreditation and Certification Program (program explanation, use of OSHA maritime crane and cargo gear certification forms, and a list of agencies accredited to certify maritime cranes and cargo gear). OME can be reached at (202) 693-2399.
  
3. [Inspection Data](#). Inspection data is accessible through OSHA’s web page. This link will take the user directly to the “Statistics and Data” page which allows the user to conduct searches by establishment, Standard Identification Classification (SIC) code, North American Industry Classification System (NAICS) code, OSHA inspection number, accidents, and frequently cited standards. The page also contains links to the Bureau of Labor Statistics (BLS) for injury and illness statistics. The NAICS codes that correspond to shipyard employment include but are not limited to:

336611 Shipbuilding and Repairing, except for floating dry docks not associated with shipyards (SIC codes 3731 and 3732)(See NOTE).

488390 Shipbuilding and Repairing at floating dry docks not associated with shipyards (SIC codes 3731 and 3732)(See NOTE).

NOTE: Boats are defined by NAICS code 336612 as watercraft not built in shipyards and typically of the type suitable or intended for recreational or personal use (such as dinghy manufacturing, motorboat building, rowboat manufacturing, and sailboat/yacht building that is not done in shipyards).

811490 Recreational Boat Repair (SIC code 3732) is part of “Other Personal and Household Goods Repair and Maintenance.” The repair of recreational boats is covered by the 29 CFR Part 1915 standard if performed on or adjacent to navigable waters.

336611 Shipbreaking at shipyards (SIC code 4499).

488390 Shipbreaking at floating dry docks (SIC code 4499).

423930 Shipbreaking, except at floating dry docks and shipyards (SIC code

4499).

NOTE: A complete list of NAICS codes is available on the [U.S. Census Bureau](#) website.

- B. [State Consultation Programs](#). Consultation assistance in all States is available from State Consultation Programs for employers who want help in establishing and maintaining a safe and healthful workplace. Priority scheduling is provided to small employers with 250 or fewer employees at the worksite. Consultants help employers identify and correct specific hazards and can assist in developing and implementing effective workplace safety and health programs with an emphasis on preventing employee injuries and illnesses. Employers also may receive training and education assistance, along with limited assistance away from the worksite. Serious hazards identified by the consultant must be corrected by a due date mutually agreed upon by the consultant and the employer. Links are provided to State Consultation Programs that provide on-site consultation and training.
- C. [Recognition Programs](#). OSHA's Strategic Management Plan Goal 2 requires OSHA to promote a safety and health culture through compliance assistance, cooperative programs, and strong leadership. In keeping with this goal, OSHA has developed recognition programs to assist and support employer safety and health activities:
1. [Safety and Health Achievement Recognition Program \(SHARP\)](#). This program, operated by the State Consultation entities, recognizes the achievement of employers who operate exemplary safety and health management systems at their worksites. SHARP participants are granted an exemption from programmed inspections (not from complaint or accident investigations) for a minimum of one year.
  2. [Voluntary Protection Programs \(VPP\)](#). The VPP represents OSHA's effort to extend employee protection beyond the minimum required by OSHA standards. These programs, along with others such as expanded on-site consultation services and compliance assistance provided by full-service area offices, are cooperative approaches which, when coupled with an effective enforcement program, expand employee protection to help meet the goals of the Occupational Safety and Health Act of 1970.

Qualified sites are approved by one of three programs: Star, Merit, and Star Demonstration (recognition for worksites that address unique safety and health issues). These programs recognize outstanding achievement of those employers who have successfully implemented comprehensive safety and health management systems. VPP strives to motivate employers to achieve excellent safety and health results in their companies. It also strives to establish a relationship based on cooperation between employers, employees, and OSHA.

[CSP 03-01-002](#), Voluntary Protection Programs (VPP): Policies and Procedures Manual, March 25, 2003.

- D. [OSHA Strategic Partnership Program \(OSPP\)](#). DOL's Strategic Plan Performance Goal 3.1 requires offices to develop partnerships and other cooperative efforts with industry to reduce workplace injuries, illnesses and fatalities.

OSPP moves away from traditional enforcement methods and embraces collaborative agreements. Through OSPP, OSHA and its partners agree to work cooperatively to address critical safety and health issues. This very different approach has proven to be an effective tool for reducing fatalities, injuries, and illnesses in the workplace.

Working together, OSHA, employers and employees identify the safety and health problems they will address and begin to craft a partnership agreement. The agreement may be national, regional, or local in scope. Partners set measurable goals and individual responsibilities, specify action plans and measurement systems, and provide procedures for verifying results. Other interested parties, including unions, trade associations, State/local governments, the Consultation Projects, and insurance companies, are often brought into the partnership to contribute their expertise and resources. The resulting agreement maximizes the use of non-OSHA resources to accomplish tasks such as training employees and developing site-appropriate safety and health management systems. OSHA serves mainly as the technical resource and facilitator.

- E. [OSHA Alliance Program](#). OSHA's Alliance Program enables organizations committed to workplace safety and health to collaborate with OSHA to prevent injuries and illnesses in the workplace. OSHA and its allies work together to reach out to, educate, and lead the nation's employers and their employees in improving and advancing workplace safety and health. OSHA's national alliance with the Shipbuilder's Council of America is one example of OSHA's shipyard alliances.
- F. [Other Shipyard Industry Resources](#). Although OSHA considers the entities below to be valuable resources for information concerning safe and healthful workplace practices in the shipyard industry, employers accessing such information are not absolved of their obligations to comply with the Occupational Safety and Health (OSH) Act and standards promulgated pursuant to the OSH Act. Applying the recommendations or practices offered by these entities does not necessarily constitute compliance with the OSH Act and OSHA standards. In addition, OSHA does not control the publication of information on the websites listed in this paragraph and cannot vouch for the accuracy, reliability, or timeliness of every piece of information contained in these websites.
1. [American Shipbuilding Association \(ASA\)](#). The ASA is the national trade association that represents shipbuilders who design and build some of the most technologically advanced ships in the world. More information can be obtained at the association's website.



2. [Shipbuilders Council of America \(SCA\)](#). The SCA is a national industry trade association of shipyards that develops industry consensus on issues important to the maritime industry. The SCA meets in conjunction with the American Waterways Operators (AWO), the national trade organization representing the inland/coastal barge and towing industry. The SCA is organized around four standing committees: Safety, Health and Human Resources; Repair; New Construction; and Cleaning Facilities. The SCA also provides training materials for the shipyard employment industry (such as crane safety, shipyard ergonomics, and shipyard safety orientation videos), and shipbuilding and ship repair best management practices (such as dry abrasive blasting, removal of hull biofoulants, metal grinding, metal arc welding, thermal metal cutting, and abrasive materials management). More information can be obtained at the SCA's website.
3. [National Shipbuilding Research Program \(NSRP\)](#). The National Shipbuilding Research Program is led by a collaboration of 11 major U.S. shipyards, working as a team with government, industry and academia. The stated mission of the NSRP is to manage and focus national shipbuilding research and development funding on technologies that will reduce the cost of warships to the U.S. Navy and will establish U.S. international competitiveness. Areas of focus by the NSRP include industry analysis and planning, common parts catalog, standards coordination, technology transfer, research and development programs, eBusiness solutions, and the lean shipbuilding initiative. The NSRP also provides a collaborative forum to improve business acquisition processes. More information can be obtained at the NSRP website.
4. [American Waterways Operators \(AWO\)](#). The American Waterways Operators (AWO) association represents the owners and operators of inland/coastal tugboats, towboats and barges. The AWO's mission is to promote the economic soundness of the industry, and to promote safe, efficient, and environmentally responsible transportation of goods and freight through advocacy, public information, and the establishment of safety standards. The AWO has developed lesson plans on a number of safety topics (such as slips, trips and fall prevention on vessels), and several vessel best practices (such as vessel boarding/departure protocol, and falling overboard prevention). More information can be obtained at the association's website.
5. [Crane Certification Association of America \(CCAA\)](#). The purpose of the CCAA is to promote crane safety, improve the crane inspection and certification profession, and address the subject of crane safety in governmental forums. The CCAA has developed numerous publications (such as crane testing and inspection procedures, and crane component technical guidance), and has compiled a comprehensive list of electronic links for the crane industry (includes crane safety, educational, below the hook components, overhead cranes, mobile cranes, tower cranes, barge mounted cranes, and industry publications). More information can be obtained at the CCAA website.

XV. Training. Training consists of both internal training for OSHA consultation and enforcement staff, and external training for shipyard industry employers and employees. Training sources include: OSHA Office of Training and Education, State Consultation and Training Programs, OSHA Area Offices, and recipients of State and federal training grants.

A. OSHA Office of Training & Education (OTE). OSHA's OTE develops, directs, oversees, manages and ensures implementation of OSHA's national education policies and procedures. The OSHA Training Institute (OTI) in Arlington Heights, IL, provides basic and advanced training and education in safety and health for federal and State compliance officers; State consultants; other federal agency personnel; and private sector employers, employees, and their representatives. OTI courses cover areas such as maritime standards, electrical hazards, health hazards, machine guarding, cranes, and rigging. The OTI facility includes classrooms, laboratories, a library, and an audiovisual unit. The OSHA Office of Training and Education also has established OSHA Training Education Centers to address the increased demand for its courses from the private sector and from other federal agencies. These centers are nonprofit colleges, universities, and other organizations that have been competitively selected to participate in the program. OSHA Training Education Centers are located in various parts of the United States.

Registration information and course schedules are available on the [OTE Registration Information/Course Schedule](#) web page.

NOTE: OTE offers a course that is specific to the shipyard employment industry titled, "Shipyard Processes and Standards," course number 2090.

B. State Consultation and Training Programs. State Consultation and Training Programs provide basic and advanced on-site training and education for private sector employers, employees, and their representatives. They offer a wide variety of both general and employer-specific courses that cover areas such as electrical hazards, machine guarding, ventilation, and ergonomics. Links are provided to State Consultation Programs that provide on-site consultation and training.

C. Federal Training Grants. OSHA offers funds to nonprofit organizations to train employers and employees to recognize, avoid, and prevent safety and health hazards in their workplaces.

XVI. Enforcement Programs. In order to carry out the purpose of the OSH Act, and the mandates in DOL's Strategic Plan and OSHA's Strategic Management Plan, OSHA compliance officers may enter places of shipyard employment to conduct programmed inspections or to investigate complaints, referrals, catastrophes (the hospitalization of three or more employees), and fatal incidents. General inspection criteria and contact information can be found in OSHA Instruction [CPL 02-00-103](#), OSHA Field Inspection Reference Manual.

A. Inspection Scheduling. The shipyard employment industry is made up of several industrial activities, and due to the unique differences among these activities, several scheduling methods are necessary. Consequently, shipyard employment inspections can be scheduled as National Emphasis Programs (NEPs), Site-Specific Targeting (SST), Local Emphasis Programs (LEPs), or from lists developed in accordance with [CPL 02-00-025](#). The NEP for lead, as well as the Special Emphasis Program (SEP) for silica, apply to shipyard employment. All other scheduled shipyard employment inspections would be conducted under LEPs that support OSHA's areas of emphasis.

1. Scheduling Priorities. OSHA's priority system for conducting inspections is designed to distribute available resources effectively to ensure that a high level of protection is provided to employees throughout the nation. The inspection order of priority is:

- Imminent danger, fatalities, and catastrophes;  
[CPL 02-00-137](#), Fatality/Catastrophe Investigation Procedures, April 14, 2005.
- Complaints/referrals;  
[CPL 02-00-140](#), Complaint Policies and Procedures, June 14, 1996.
- Programmed Inspections;  
[CPL 02-00-025](#), Scheduling System for Programmed Inspections, January 4, 1995.

2. National Emphasis Programs (NEPs). Guidance for conducting NEP inspections in shipyard employment follow:

- [CPL 02-00-136](#), OSHA's National Emphasis Program (NEP) on Shipbreaking, March 16, 2005.
- [CPL 02-00-130](#), National Emphasis Program: Lead, July 20, 2001.
- [Special Emphasis Program \(SEP\) for Silicosis](#), May 2, 1996.  
(see also [Safety and Health Topics: Silica, Crystalline](#))

All other scheduled shipyard employment inspections would be conducted under LEPs that support DOL's Strategic Plan and OSHA's Strategic Management Plan Goals.

3. Site-Specific Targeting (SST). SSTs are types of NEP inspections that will be conducted in accordance with the following directive or successor guidance:

- [06-01 \(CPL 02\)](#), Site-Specific Targeting 2006 (SST-06), June 12, 2006.

4. Local Emphasis Programs (LEPs). LEPs are a type of Special Emphasis Program as described in OSHA Instruction [CPL 02-00-025](#). One or more Area Offices in a region can participate. LEPs may be originated at the Area Office or Regional Office level.

- [CPL 04-00-001](#), Procedures for Approval of Local Emphasis Programs (LEPs), November 10, 1999.

LEPs are generally based on knowledge of local industry hazards or knowledge of local industry injury and illness rates. LEPs may include targeting of employers with 10 or fewer employees, as long as they do not conflict with restrictions under Congressional Appropriations Act riders described in OSHA Instruction [CPL 02-00-051](#) or successor guidance.

The most recent list of OSHA Local Emphasis Programs (LEPs) in effect is available at the Directorate of Enforcement Program's (DEP) Homepage (Intranet – accessible to OSHA only).

5. Enhanced Enforcement Program (EEP). This program is intended as a means to focus on employers who, despite OSHA's enforcement and outreach efforts, ignore their OSH Act obligations, thereby placing their employees at risk. Cases identified by the EEP are those in which at least one of the following criteria is met:

- A fatality inspection in which there is at least one high gravity serious (or willful or repeated) violation related to the death;
- An inspection that results in three or more high gravity serious violations classified as willful or repeated; or
- An inspection that results in two or more failure-to-abate penalty notices where the underlying violations were classified as high gravity serious.

Employers who have been the subject of an EEP case may receive one or more of the following:

- Enhanced follow-up inspections;
- Targeted inspections for other worksites of the employer;
- Increased company/corporate awareness of OSHA enforcement;
- Enhanced settlement provisions; or
- Federal court enforcement under Section 11(b) of the OSH Act.

If an unprogrammed inspection arises for an establishment that is to receive a follow-up inspection or additional targeted inspection as a result of the EEP, the two inspections may be conducted either concurrently or separately. The EEP does not affect in any way the conduct of unprogrammed inspections.

Some establishments may be selected for inspection under the EEP and also under other OSHA initiatives such as Site-Specific Targeting (SST), National Emphasis Programs (NEPs), or Local Emphasis Programs (LEPs). These other programs can be run concurrently with the EEP.

6. Inspection Lists. These lists consist of worksites from which shipyard employment inspections will be scheduled. Regional and area offices are responsible for generating establishment lists in accordance with [CPL 02-00-025](#). These lists are updated from sources such as the Navy, Department of Transportation's Maritime Administration (MARAD), and industry associations as the information becomes available.

Inspections may be conducted in various ways. Two ways that have been used successfully in scheduling shipyard inspections are:

- By Port Area. A list of shipyard sites by port areas may be prepared at the beginning of the fiscal year by the Area Office, using LEP inspection lists, local knowledge, and experience.
- By Employer. A list of all shipyard industry employers within the jurisdiction of the Area Office may be prepared, using LEP inspection lists, local knowledge, and experience.

- B. Inspection Procedures. General information on interventions and inspections can be found in OSHA Instruction [CPL 02-00-103](#), OSHA Field Inspection Reference Manual.

For shipyard employment intervention and inspection work specifically, OSHA supervisors, team leaders and CSHOs are advised of the following:

1. Preparation. To conduct an effective shipyard employment inspection the CSHO must spend an adequate amount of time preparing. Supervisors or team leaders are responsible for ensuring that CSHOs are qualified by either training or experience to inspect/intervene in shipyard employment establishments.
2. Inspection Materials and Equipment. Prior to participating in any shipyard employment interventions or inspections, CSHOs must be properly equipped and attired. All necessary personal protective equipment (PPE) must be available for use and in proper operating condition. CSHOs must be trained in the uses and limitations of PPE before beginning the inspection. At the opening conference the CSHO will request a copy of the sites certification of hazard assessment

prepared pursuant to 29 CFR 1915.152(a) in order to be aware of the necessary PPE. The suggested minimum PPE for a CSHO are: hard hat, safety shoes, gloves, eye protection, and a high-visibility/retro-reflective vest. Additional PPE may be required, such as a respirator, if conditions warrant. All testing and monitoring equipment also must be calibrated (if necessary) and in good condition. CSHOs must be thoroughly trained in the proper use of all monitoring equipment before assignment to any shipyard employment inspection. It may be advisable for CSHOs to carry an O<sub>2</sub>-LEL (oxygen-lower explosive limit) meter when conducting vessel inspections.

3. Safety and Health Rules at the Shipyard. 29 CFR 1903.7(c) requires the CSHO to comply with all safety and health rules and practices at the shipyard or on a vessel, and to wear or use the safety clothing or protective equipment required by OSHA standards or by the employer for the protection of employees. The CSHO will request a copy of all site safety and health rules which he/she needs to be aware of and follow.
  4. Maritime Standard Alleged Violation Elements (SAVEs). Current Maritime SAVEs are available for CSHOs. In a joint effort by the Directorate of Enforcement Programs (DEP)/Office of Maritime Enforcement (OME) and selected OSHA field offices, Maritime SAVEs have been developed to provide 100 percent coverage of all enforceable standards for the maritime industries: shipyard employment, marine terminals, and longshoring. The Maritime SAVEs include their respective Alleged Violation Descriptions (AVDs) that have been specifically tailored for maritime applications. OME is responsible for maintaining the Maritime SAVEs.
- C. Multi-employer Worksites. For multi-employer worksites at shipyards, more than one employer may be liable for a hazardous condition that violates an OSHA standard. The process which must be followed in determining whether more than one employer is liable for employee safety and health conditions can be found in OSHA Instruction [CPL 02-00-124](#), Multi-Employer Citation Policy. The regional Solicitor's office is available to address issues concerning the application of the multi-employer worksite doctrine after approval from the respective Regional Administrator.
- D. Application of Shipyard Employment Standards (29 CFR Part 1915) and General Industry Safety and Health Standards (29 CFR Part 1910) to Ship and Boat Building, Repair and Breaking. This section offers guidance regarding the application of the shipyard standard (29 CFR Part 1915) and the general industry standard (29 CFR Part 1910) to ship and boat building, repair and breaking. The application of the standards varies by geographical location.
1. Ship and Boat Building, Repair and Breaking Operations Located On or Adjacent to Navigable Waterways. Employees performing ship or boat building, repairing, or breaking operations and related activities on or adjacent to a navigable waterway of the United States are covered by the shipyard standard and applicable provisions of the general industry standard. This includes dry docks,

graving docks, marine railways, and other facilities located on the water, or in close proximity to the water. Application of the 29 CFR Part 1910 general industry standard is addressed in Appendix A of this instruction.

When a shipyard standard is specifically applicable to a condition, practice, means, method, operation, or process, it takes precedence over any general industry standard provision which might otherwise be applicable. However, provisions of the Part 1910 general industry standard can be applied where coverage of a Part 1915 shipyard standard is absent (see Appendix A of this instruction). Nevertheless, the application of certain general industry standard provisions can be limited by their *Scope* and *Application* statements. In these cases, the General Duty Clause (Section 5(a)(1) of the OSH Act) can be used, where appropriate, to cite recognized hazards not covered by a specific standard.

Where a Part 1915 shipyard standard is applicable but the employer has complied with a Part 1910 general industry standard provision that provides equivalent protection for the same workplace condition or hazard, OSHA will consider the employer to be in *de minimis* violation of OSHA regulations. *De minimis* violations carry no penalties and do not require abatement, and OSHA does not issue citations. It is emphasized that this would not apply to a situation where the Part 1915 shipyard standard provides greater or additional employee protection. For example, 29 CFR 1915.132(c) requires the switch for a portable electric tool to be of a type that must be manually held in the closed position, while 29 CFR 1910.243(a)(2) allows a different type of switch with less stringent requirements. For shipyard employment, the more protective provisions of 29 CFR 1915.132(c) must be complied with.

2. Boat Building, Repair and Breaking that is Not On a Navigable Waterway. 29 CFR Part 1910 contains the applicable safety and health standards for boat building, repair and breaking, including recreational boat building and manufacturing facilities, that are not located on or adjacent to navigable waters of the United States.
  3. Marinas. Recreational boat building, repair or breaking operations that are performed at marina facilities located on or adjacent to a navigable waterway are covered by the 29 CFR Part 1915 shipyard standards. Marinas are classified under NAICS 713930 (SIC 4493), however, recreational boat repair and maintenance is classified under NAICS 811490 (SIC 3732).
- E. Violation Abatement Assistance Program. One of DOL's Strategic Plan performance goals is to reduce workplace injuries and illnesses in the shipyard industry by four percent each year. To help meet this goal, shipyard industry employers are encouraged to seek advice and off-site consultation. The employer should make these requests by writing, calling, or visiting the nearest OSHA office (see [www.osha.gov](http://www.osha.gov) for OSHA offices contact information).



XVII. Coordination. This instruction will be coordinated by the Directorate of Enforcement Programs (DEP). Questions and comments should be directed to the Office of Maritime Enforcement (OME).

XVIII. Program Evaluation. During interventions and inspections, area offices will continue to collect data and information such as OSHA 300 Log entries and calculate reductions in DART rates (see definition, section XI, paragraph B) to measure the effectiveness of OSHA's initiatives to improve shipyard employment safety and health. Area offices will forward this information to their respective regional offices. At the end of each fiscal year, after summarizing the data and information, the regional offices will forward the summary to the National Office, Directorate of Enforcement Programs (DEP). DEP will serve in a coordinating role, collecting information from regional offices on shipyard employment inspections and, after review and evaluation, disseminating relevant information to regional offices and the Office of Training & Education (OTE).



# **Appendix A: Application of the 29 CFR Part 1910 Standard When a 29 CFR Part 1915 Standard Does Not Address a Recognized Hazard in Shipyard Employment**

This appendix has been developed specifically to assist OSHA Area Office personnel during inspections of workplaces covered by 29 CFR Part 1915. The appendix identifies provisions of general industry safety and health standards (29 CFR Part 1910) that are applicable to shipyard employment; it also provides guidance regarding 29 CFR Part 1910 provisions that generally are preempted by corresponding 29 CFR Part 1915 provisions. As such, this appendix should clarify, under most circumstances, the specific occupational safety and health requirements for shipyard employment. However, this appendix cannot, and is not intended to, enlarge or diminish employer obligations under the OSH Act.

The 29 CFR Part 1915 standards apply to all ship repair, shipbuilding, and shipbreaking employments and related employments on the navigable waters of the United States (includes dry docks, graving docks and marine railways) or at facilities located adjacent to navigable waters. 29 CFR Part 1915, Subpart B – *Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment*, 29 CFR Part 1915, Subpart I – *Personal Protective Equipment*, and 29 CFR Part 1915, Subpart P – *Fire Protection in Shipyard Employment*, apply to shipyard employment work on vessels and vessel sections, and on land-side operations, regardless of geographic location. In addition, employers covered by the OSH Act generally are required to adhere to OSHA’s standards of general applicability (29 CFR Part 1910). Where coverage of a shipyard employment hazard by a 29 CFR Part 1915 standard is absent, 29 CFR Part 1910 standard provisions should be cited when applicable.

The relationship between the two existing sets of regulations is addressed by the Agency’s rule 29 CFR 1910.5(c), which states:

(c)(1) If a particular standard is specifically applicable to a condition, practice, means, method, operation, or process, it shall prevail over any different general standard that might otherwise be applicable to the same condition, practice, means, methods, operation, or process...

(c)(2) On the other hand, any standard shall apply according to its terms to any employment and place of employment in any industry, even though particular standards are also prescribed for the industry...to the extent that none of such particular standards applies.

The process for developing the table in this appendix included a side-by-side comparison of the 29 CFR Part 1915 shipyard employment standard provisions and the 29 CFR Part 1910 general industry standard provisions. The 29 CFR Part 1915 standard provisions are included in the “Remarks/Comments” column of the table, along with the 29 CFR Part 1910 standard provision(s) that they preempt. 29 CFR Part 1910 standard provisions were reviewed to determine whether their associated scope and applicability excluded their use in shipyard employment. For example, 1910.146 *Permit-required confined spaces* is prohibited from being

applied to “shipyard employment” (1910.146(a)), and 1910.147 *The control of hazardous energy (lockout/tagout)* is prohibited from being applied to “maritime employment” which includes shipyard employment (1910.147(a)).

The remaining 29 CFR Part 1910 standard provisions (those not preempted by Part 1915, or excluded from application to shipyard employment) were reviewed to determine whether they would apply when employees were exposed to the associated hazard(s) during shipyard employment. For example, stacked objects on the third tier of a scaffold present a hazard of being knocked over or tipping over and falling between the scaffold toeboard and guardrail; the 29 CFR Part 1915 standard does not have a requirement for a screen to be provided between the toeboard and the guardrail, so the general industry standard provisions that invoke 1910.28(a)(17) requirements for such screens are applicable when employees are exposed to this recognized hazard.

All 29 CFR Part 1915 and Part 1910 standard provisions that were determined to be applicable to shipyard employment, were reviewed to determine their applicability to work on vessels and to work on shore. Additionally, all standard provisions were reviewed to determine if additional clarification was needed to fully understand the use and intent of the provisions, and as required, explanatory language was included in the “Remarks/Comments” column as a “NOTE.”

Although every effort has been made to identify those 29 CFR Part 1910 provisions that are applicable to shipyard work, it is not possible to anticipate every occupational hazard related to shipyard employment, and there likely will be limited circumstances in which provisions from a 29 CFR Part 1910 standard, which are not identified below or which are identified as generally preempted by a corresponding 29 CFR Part 1915 provision, properly apply to shipyard employment. However, in order to assure consistent and deliberate enforcement of the OSH Act, no 29 CFR Part 1910 standard other than those designated in this appendix as applicable to shipyard employment will be cited without the approval of both the Regional Office and National Office (Director, Directorate of Enforcement Programs).

Alleged violations for hazardous conditions involving any identified 29 CFR Part 1910 standard provision will continue to be cited with the 29 CFR Part 1910 designations. The Area Director shall cite alleged violations involving externally referenced standards (e.g., ANSI, NEC, NFPA) to include the specification of the referenced standard in addition to the applicable provision of 29 CFR Part 1910 or 29 CFR Part 1915. The Area Director shall issue citations under the General Duty Clause in appropriate circumstances where employees are exposed to recognized hazards that are covered neither by shipyard employment (29 CFR Part 1915) nor applicable general industry safety and health regulations (29 CFR Part 1910).

When a new OSHA general industry standard (29 CFR Part 1910) that applies to shipyard employment is promulgated after the effective date of this directive, provisions from such standard may be cited without approval from Regional and National Offices, even though they are not listed in this appendix. The appendix will be revised to reflect changes as revisions of 29 CFR Part 1910 and 29 CFR Part 1915 are promulgated. As required, the Director, Directorate of Enforcement Programs, will provide interim guidance regarding the applicability of standards issued after the “Tool Bag” directive’s effective date.

As unforeseen or unconsidered workplace hazards are identified during inspections or through other reliable information available to the Agency, this appendix will be revised to correct any errors concerning the application of 29 CFR Part 1910 and 29 CFR Part 1915 standards to shipyard employment. Comments regarding this appendix should be forwarded via the respective OSHA Regional Office to the Directorate of Enforcement Programs. The office responsible for maintaining this appendix is the Office of Maritime Enforcement.

In this appendix, the applicability of each 29 CFR Part 1910 standard as it pertains to shipyard employment on vessels (including vessel sections) and shore-side operations (land-side operations, excluding vessels and vessel sections) is indicated with a “Yes”, “Yes\*” (partial coverage), or “No.” Additionally, “Remarks/Comments” are provided to further clarify the applicability of the 29 CFR Part 1910 standards, including a reference to any 29 CFR Part 1915 standards that generally take precedence pursuant to 29 CFR 1910.5, *Applicability of Standards*.

**29 CFR Part 1910, Subpart D: Walking-Working Surfaces**

| Part 1910 Standard | Applicability: |       | Remarks/Comments   |
|--------------------|----------------|-------|--|
|                    | Vessel         | Shore |  |
| .22                | Yes*           | Yes*  | 1910.22(b)(2) and (d) apply on vessels and on shore for walking and working surfaces general requirements. Also, 1910.22(c) applies on shore.<br>Generally preempted are:<br>1910.22(a) & (b)(1) by 1915.91 {aisles and passageways on vessels that are not in good repair and that pose a hazard to employees may be cited using 1910.22(b)(1)}.<br>1910.22(c) by 1915.73 on vessels only.  |
| .23                | Yes*           | Yes   | 1910.23 applies on shore for guarding of deck openings and edges; 1915.73 applies on vessels for guarding of deck openings and edges; 1910.23 applies to working conditions on vessels not addressed by 1915.73.<br>Generally preempted are:<br>1910.23(a)(8)&(a)(9) by 1915.73(b) on vessels only.<br>1910.23(c)(1) by 1915.73(d) on vessels only.<br><br>NOTE: For 1915.73(d) situations that prohibit the use or installation of guardrails (i.e., not feasible), fall protection in accordance with 1915.158, 1915.159 and 1915.160, as appropriate, is required.<br><br>NOTE: For shipbreaking operations 1915.73 does not apply to the guarding of deck openings and edges. Employee exposure to guarding hazards for shipbreaking operations shall be addressed by applying 1915.152(b), <i>Hazard Assessment and Equipment</i> . Fall protection in accordance with 1915.158, 1915.159 and 1915.160, as appropriate, also may be required. |

| Part 1910 Standard | Applicability: |       | Remarks/Comments   |
|--------------------|----------------|-------|--|
|                    | Vessel         | Shore |  |
| .24                | Yes*           | Yes   | <p>1910.24 applies on shore and on vessels to fixed industrial stairs that <i>are not</i> a permanent part of the vessel (i.e., stairs brought in and installed for use during vessel construction, repair or overhaul to support employee access to the vessel or within the vessel). Also, 1910.24(a), (b), (f) and (h) apply to the conditions and use of fixed stairs that <i>are</i> a permanent part of the vessel. The 1910.24(c), (d), (e), (g) and (i) design specifications do not apply to fixed stairs that <i>are</i> a permanent part of the vessel.</p> <p>NOTE: Design specifications for vessels (including fixed stairs) are addressed on U.S. “Inspected” vessels by Coast Guard regulations (46 CFR), on foreign flag vessels by foreign standards and various international vessel classification society rules (e.g., Bureau Veritas – France, Det Norske Veritas – Norway, Nippon Kaiji Kyokai – Japan, Lloyd’s Register of Shipping – England), and on “Un-inspected” vessels by a variety of standards, recommended guidelines, and established industry practice. Any hazardous conditions that employees are exposed to related to design will be cited using the standard, guidance, or practice under which the vessel fixed stairs were designed (verify by vessel drawings, documentation, publications, etc.) using the General Duty Clause.</p> |
| .25                | Yes*           | Yes*  | <p>1915.72 applies on vessels and on shore for portable wood ladders; 1910.25 applies to working conditions on vessels and on shore not addressed by 1915.72 as follows: 1910.25(a), (b)(1)(i), (c)(2), (c)(3)(ii)-(iv), (c)(4), (c)(5), (d)(1)(ii)-(iv), (d)(1)(x), (d)(1)(xi), (d)(2)(i)-(v), (d)(2)(ix)-(xv), (d)(2)(xvii), (d)(2)(xix), and (d)(2)(xx). Generally preempted are:<br/> 1910.25(c)(3)(v) by 1915.71(e)(1).<br/> 1910.25(d)(1)(i) by 1915.72(a)(1).<br/> 1910.25(d)(2)(viii) by 1915.72(a)(1).<br/> 1910.25(d)(2)(xv) by 1915.72(a)(3).</p>   |
| .26                | Yes*           | Yes*  | <p>1915.72 applies on vessels and on shore for portable metal ladders; 1910.26 applies to the working conditions of portable metal ladders on vessels and on shore not addressed by 1915.72 as follows: 1910.26(a)(1)-(c)(1), (c)(2)(vi), and (c)(3). Generally preempted are:<br/> 1910.26(c)(2)(iv) by 1915.72(a)(1).<br/> 1910.26(c)(2)(vii) by 1915.72(a)(1).</p>  |

| Part 1910 Standard | Applicability:<br>Vessel Shore |      | Remarks/Comments  |
|--------------------|--------------------------------|------|---|
| .27                | Yes*                           | Yes  | <p>1910.27 applies on shore for fixed ladders; 1915.76 applies on vessels for fixed ladders in cargo holds and confined spaces, and 1910.27(f) applies to the conditions and use of all fixed ladders on vessels.</p> <p>NOTE: Design specifications for vessels (including fixed ladders) are addressed on U.S. “Inspected” vessels by Coast Guard regulations (46 CFR), on foreign flag vessels by foreign standards and various International Vessel Classification Society rules (e.g., Bureau Veritas – France, Det Norske Veritas – Norway, Nippon Kaiji Kyokai – Japan, Lloyd’s Register of Shipping – England), and on “Un-inspected” vessels by a variety of standards, recommended guidelines, and established industry practice. Any hazardous conditions that employees are exposed to related to design will be cited using the standard under which the vessel fixed ladders were designed (verify by vessel drawings, documentation, publications, etc.) using the General Duty Clause.</p>  |
| .28                | Yes*                           | Yes* | <p>1915.71 applies on vessels and on shore for scaffolding or staging; 1910.28 applies to working conditions on vessels and on shore not addressed by 1915.71 as follows: 1910.28(a)(1), (a)(2){for footings and anchorages carrying maximum intended load}, (a)(5){for preventing the altering or moving of scaffolds horizontally while in use or occupied}, (a)(7), (a)(9), (a)(10), (a)(11), (a)(14)-(24), (a)(26), (b)(3), (b)(4), (b)(6), (b)(10), (b)(11), (b)(12){for plank butt joints to be at centerline of a pole, and separate bearers for abutted ends}, (b)(13), (b)(14), (b)(15){for use of wire mesh between toeboard and guardrail}, (b)(16){for use of a registered professional engineer when scaffold is over 60 feet in height, and drawings and specifications availability}, (b)(17), (c)(1)-(5), (c)(7)-(13), (c)(14){for use of wire mesh between toeboard and guardrail}, (d)(1)-(6), (d)(7){for use of wire mesh between toeboard and guardrail}, (d)(8)-(14), (e), (f)(1)-(14), (f)(15){for use of wire mesh between toeboard and guardrail}, (f)(16), (f)(17), (g)(1)-(4), (g)(5){for use of wire mesh between toeboard and guardrail}, (g)(6)-(12), (h)(1)-(7), (h)(8){for use of wire mesh between toeboard and guardrail}, (h)(9), (h)(10), (i)(1)-(4), (i)(6)-(10), (j), (k)(1)-(4), (k)(5){for use of wire mesh between toeboard and guardrail}, (l), (m)(3)-(5), (m)(7){for use of wire mesh between toeboard and guardrail}, (n), (o)(1), (o)(2){for use of wire mesh between toeboard and guardrail}, (o)(3)-(4), (p)(2)-(6), (p)(7){for use of wire mesh between toeboard and guardrail}, (q), (r), (s), (t) and (u).</p> <p>Generally preempted are:<br/>1910.28(a)(2) by 1915.71(b)(6) {for the use of unstable objects to support scaffolds or planks}.</p> |

| Part 1910 Standard | Applicability:<br>Vessel    Shore |     | Remarks/Comments   |
|--------------------|-----------------------------------|-----|--|
| .28<br>(Cont')     |                                   |     | 1910.28(a)(4) by 1915.71(b)(1).<br>1910.28(a)(5) by 1915.71(b)(5) {for maintaining scaffolds and other devices in safe condition}.<br>1910.28(a)(6) by 1915.71(b)(5).<br>1910.28(a)(8) by 1915.71(b)(4) and 1915.71(i).<br>1910.28(a)(12) by 1915.71(k).<br>1910.28(a)(13) by 1915.71(i)(3).<br>1910.28(a)(25) by 1915.71(b)(3).<br>1910.28(a)(27) by 1915.71(b)(8).<br>1910.28(b)(1) by 1915.71(c)(1).<br>1910.28(b)(2) by 1915.71(c)(3).<br>1910.28(b)(5) by 1915.71(c)(4) & (c)(5).<br>1910.28(b)(7) by 1915.71(c)(4).<br>1910.28(b)(8) & (b)(9) by 1915.71(c)(6).<br>1910.28(b)(12) by 1915.71(i)(3){for plank lapping of end supports}.<br>1910.28(b)(15) by 1915.71(j)(1) {for guardrails}.<br>1910.28(b)(15) by 1915.71(j)(5) {for toeboards}.<br>1910.28(b)(16) by 1915.71(c)(7) {for scaffolds 60 feet or less in height}.<br>1910.28(c)(6) by 1915.71(b)(7).<br>1910.28(c)(14) by 1915.71(j)(1) {for guardrails}.<br>1910.28(c)(14) by 1915.71(j)(5) {for toeboards}.<br>1910.28(d)(7) by 1915.71(j)(1) {for guardrails}.<br>1910.28(d)(7) by 1915.71(j)(5) {for toeboards}.<br>1910.28(f)(15) by 1915.71(j)(1) {for guardrails}.<br>1910.28(f)(15) by 1915.71(j)(5) {for toeboards}.<br>1910.28(g)(5) by 1915.71(j)(1) {for guardrails}.<br>1910.28(g)(5) by 1915.71(j)(5) {for toeboards}.<br>1910.28(h)(8) by 1915.71(j)(1) {for guardrails}.<br>1910.28(h)(8) by 1915.71(j)(5) {for toeboards}.<br>1910.28(i)(5) by 1915.71(j)(1) & (j)(5).<br>1910.28(k)(5) by 1915.71(j)(1) {for guardrails}.<br>1910.28(k)(5) by 1915.71(j)(5) {for toeboards}.<br>1910.28(m)(1) & (m)(2) by 1915.71(g)(1).<br>1910.28(m)(6) by 1915.71(g)(4).<br>1910.28(m)(7) by 1915.71(g)(6) {for guardrails and toeboards}.<br>1910.28(o)(2) by 1915.71(j)(1) {for guardrails}.<br>1910.28(o)(2) by 1915.71(j)(5) {for toeboards}. |
| .29                | Yes                               | Yes | 1910.29 applies on vessels and on shore for manually propelled mobile ladder stands and scaffolds (towers); no applicable 1915 standard.   |
| .30                | No                                | Yes | 1910.30 applies on shore for other working surfaces; 1915.74 & 1915.75 apply on vessels.   |

**29 CFR Part 1910, Subpart E: Means of Egress**

| Part 1910 Standard | Applicability: |       | Remarks/Comments   |
|--------------------|----------------|-------|--|
|                    | Vessel         | Shore |  |
| .36                | No             | Yes   | 1910.36 applies on shore for design and construction requirements for exit/egress routes; 1910.34(a) prohibits the use of 29 CFR Part 1910, Subpart E, standards to vessels.<br>29 CFR Part 1915 standards related to access/egress include but are not limited to: 1915.51(c)(2) (Confined space access & ventilation), 1915.71(k) (Access to staging), 1915.74 (Access to vessels), 1915.75 (Access to and guarding of dry docks & marine railways), 1915.76 (Access to cargo spaces & confined spaces), 1915.91 (Access to aisles, passageways, walkways & exits), 1915.502 (Fire safety plan), and 1915.505 (Fire response).   |
| .37                | No             | Yes   | 1910.37 applies on shore for maintenance, safeguards, and operational features for exit/egress routes; 1910.36(a) prohibits the use of 29 CFR Part 1910, Subpart E standards to vessels.   |
| .38 & .39          | No             | Yes*  | 1910.38 applies on shore for emergency action plans other than fire prevention plans (covered by 29 CFR 1915, Subpart P); 1910.39(c) is the only 1910.39 provision that applies on shore for fire prevention; 1910.34(a) prohibits the use of 29 CFR Part 1910, Subpart E standards to vessels.<br><br>Fire Protection in shipyard employment is covered by 29 CFR Part 1915, Subpart P, on shore and on vessels; 1915.502 addresses fire safety plans, and 1915.505 addresses fire response. 1915.12(e) addresses shipyard rescue teams for confined and enclosed spaces and other dangerous atmospheres.<br><br>NOTE: 1910.39(c) contains provisions requiring employers to identify and control certain fire hazards. These provisions are not adequately addressed by 1915.502, so shipyard employers will continue to be required to comply with the 1910.39(c) provisions on shore (see preamble to 29 CFR Part 1915, Subpart P).<br><br>NOTE: Shipyard employers complying with 1910.38 and 1910.39 also are required to comply with the additional requirements of 1915.502. However, there is no need to produce three separate emergency plans. OSHA will accept one unified plan that meets all of the requirements of 1910.38, 1910.39 and 1915.502. |

**29 CFR Part 1910, Subpart F: Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms**

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .66                | No             | Yes   | 1910.66 applies on shore; 1910.66(a) limits the application of this standard to building maintenance. |

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .67                | Yes            | Yes   | 1910.67 applies on vessels and on shore for vehicle-mounted elevating & rotating work platforms; no applicable 1915 standard. |
| .68                | No             | No    | 1910.68 covered operations for manlifts are not known to occur in shipyard employment.  |

### 29 CFR Part 1910, Subpart G: Occupational Health and Environmental Control

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .94                | Yes*           | Yes*  | 1910.94 applies on vessels and on shore for ventilation; however, 1910.94(a)(2) and (a)(5) are generally preempted on vessels and on shore by 1915.34(c) and 29 CFR Part 1915, Subpart I - PPE. |
| .95                | Yes            | Yes   | 1910.95 applies on vessels and on shore for occupational noise exposure; no applicable 29 CFR Part 1915 standard.   |
| .97                | Yes            | Yes   | 1910.97 applies on vessels and on shore for non-ionizing radiation; this standard is not preempted by 1915.95, which addresses working aloft on ship radars.                                    |

### 29 CFR Part 1910, Subpart H: Hazardous Materials

| Part 1910 Standard | Applicability: |       | Remarks/Comments   |
|--------------------|----------------|-------|--|
|                    | Vessel         | Shore |  |
| .101               | Yes*           | Yes   | 1910.101 applies on vessels and on shore for compressed gases general requirements; except that on vessels 1915.55 applies to oxygen, acetylene and other fuel gas cylinders used for welding & cutting. Reference should also be made to applicable Compressed Gas Association (CGA) pamphlets. |
| .102               | No             | Yes   | 1910.102 applies on shore for the in-plant transfer, handling, storage, and utilization of acetylene; on vessels 1915.55 applies to acetylene cylinders used for welding & cutting. Reference should also be made to applicable Compressed Gas Association (CGA) pamphlets.                      |
| .103               | Yes            | Yes   | 1910.103 applies on vessels and on shore for liquefied & gaseous hydrogen systems; no applicable 1915 standard.  |
| .104               | No             | Yes   | 1910.104 applies on shore for bulk oxygen systems; 1915.55 applies on vessels to oxygen cylinders used for cutting & welding.  |
| .105               | No             | Yes   | 1910.105 applies on shore.<br><br>NOTE: 1910.105 is limited to in-plant use of nitrous oxide, which is only known to apply shore-side.   |



| Part 1910 Standard | Applicability: |       | Remarks/Comments   |
|--------------------|----------------|-------|--|
|                    | Vessel         | Shore |  |
| .106               | Yes            | Yes   | 1910.106 applies on vessels and on shore for covered flammable and combustible liquids operations.<br><br>NOTE: Not applied to fuel tanks and bulk cargo tanks that are part of the vessel.<br><br>NOTE: Also see 1915.13, Cleaning and other coldwork, for spaces containing or having last contained bulk quantities of combustible or flammable liquids or gases, or bulk quantities of liquids, gases or solids that are toxic, corrosive or irritating. |
| .107(b)            | Yes            | Yes   | 1910.107(b) applies on vessels and on shore for spray booths.<br><br>NOTE: Spray booths are usually located on shore in shipyards.   |
| .107(c)            | Yes            | Yes   | 1910.107(c) applies on vessels and on shore for electrical and other sources of ignition (such as electrostatic painting).   |
| .107(d)            | No             | Yes   | 1910.107(d) applies on shore; 1915.35 & 1915.36 apply on vessels for ventilation and exhaust systems.  |
| .107(e)            | Yes            | Yes   | 1910.107(e) applies on vessels and on shore for flammable and combustible liquids (storage and handling); the requirements of 1915.36 also apply but do not preempt any portion of 1910.107(e).  |
| .107(f)            | No             | Yes   | 1910.107(f) applies on shore for the protection of sprinklered buildings.  |
| .107(g)            | Yes*           | Yes   | 1910.107(g) applies on vessels and on shore for spray booth operations and maintenance; except for 1910.107(g)(2), which is generally preempted by 1915.35(b)(6) for non-sparking tools used in painting spaces; and 1910.107(g)(5), which is generally preempted by 1915.32 & 1915.33 for cleaning solvents and chemical removers.  |
| .107(h)            | Yes            | Yes   | 1910.107(h) applies on vessels and on shore for fixed electrostatic spraying equipment; no applicable 1915 standard.   |
| .107(i)            | Yes            | Yes   | 1910.107(i) applies on vessels and on shore for electrostatic hand spraying equipment; no applicable 1915 standard.  |
| .107(j)            | Yes            | Yes   | 1910.107(j) applies on vessels and on shore for drying, curing or fusion apparatus associated with spraying; no applicable 1915 standard.  |
| .107(k)            | No             | Yes   | 1910.107(k) applies on shore for the undercoating of vehicles in garages; is not known to occur in shipyards.  |
| .107(l)            | Yes            | Yes   | 1910.107(l) applies on vessels and on shore for powder coating; no applicable 1915 standard.   |
| .107(m)            | Yes            | Yes   | 1910.107(m) applies on vessels and on shore for organic peroxides and dual component coatings; no applicable 1915 standard.  |
| .109               | Yes            | Yes   | 1910.109 covered operations for explosives and blasting agents could be applied, but these operations are not known to occur on shore in shipyard employment. On vessels, the only known use of explosives occurs when divers use detonating cord to remove propellers during ship repair.   |

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .110               | Yes            | Yes   | 1910.110 applies on vessels and on shore for the storage and handling of liquefied petroleum gases; no applicable 1915 standard.<br><br>NOTE: 1910.110 cannot be applied to vessel systems and equipment that are a permanent part of the vessel; however, it can be applied to interchangeable portable tanks that supply gas to vessel systems. |
| .111               | Yes            | Yes   | 1910.111 applies on vessels and on shore for the storage and handling of anhydrous ammonia; per 1910.111(a)(1)(ii)(a), this standard does not apply to ammonia manufacturing plants or to refrigeration plants where ammonia is used solely as a refrigerant.   |
| .119               | Yes            | Yes   | 1910.119 applies on vessels and on shore for process safety management of highly hazardous chemicals; no applicable 1915 standard.  |
| .120               | Yes            | Yes   | 1910.120 applies on vessels and on shore for hazardous waste operations; no applicable 1915 standard.   |
| .122 to .126       | Yes            | Yes   | 1910.122-.126 applies on vessels and on shore for hazards associated with dip tanks; these standards are not preempted by 1915.32 & 1915.33.<br><br>NOTE: Dip tanks located in confined or enclosed spaces must meet the requirements of 29 CFR Part 1915, Subpart B.   |

### 29 CFR Part 1910, Subpart I: Personal Protective Equipment

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .132               | No             | No    | 1915.151(a) and 1915.152 apply on vessels and on shore, preempting this PPE general requirements standard in its entirety.  |
| .133               | No             | No    | 1915.151(a) and 1915.153 apply on vessels and on shore, preempting this eye and face protection standard in its entirety.   |
| .134               | Yes            | Yes   | 1910.134 applies on vessels and on shore for respiratory protection; 1910.134 is incorporated into 29 CFR Part 1915 by 1915.154.  |
| .135               | No             | No    | 1915.151(a) and 1915.155 apply on vessels and on shore, preempting this head protection standard in its entirety.   |
| .136               | No             | No    | 1915.151(a) and 1915.156 apply on vessels and on shore, preempting this foot protection standard in its entirety.   |
| .137(a)            | Yes            | Yes   | 1910.137(a) applies on vessels and on shore for electrical protective equipment design requirements; no applicable 1915 standard.   |
| .137(b)            | Yes            | Yes   | 1910.137(b) applies on vessels and on shore. This standard provides requirements to maintain electrical PPE in a safe, reliable condition, and is not preempted by 1915.157(c) since this standard only requires employees to wear electrical PPE if exposed to electrical hazards, and does not address the condition/maintenance of such equipment. |

| Part 1910 Standard | Applicability: |       | Remarks/Comments   |
|--------------------|----------------|-------|--|
|                    | Vessel         | Shore |  |
| .138               | No             | No    | 1915.151(a) and 1915.157(a) apply on vessels and on shore, preempting this hand protection standard in its entirety. |

### 29 CFR Part 1910, Subpart J: General Environmental Controls

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .141               | Yes*           | Yes*  | 1910.141 applies on vessels and on shore for sanitation including pest control.<br>Generally preempted is 1910.141(a)(3)(i) (Housekeeping) on vessels and on shore, by 1915.91(a).  |
| .142               | No             | Yes   | 1910.142 could apply on shore; however, temporary labor camps are not known to occur as part of shipyard employment.  |
| .144               | Yes            | Yes   | 1910.144 applies on vessels and on shore for safety color code for marking physical hazards; no applicable 1915 standard.   |
| .145               | Yes            | Yes   | 1910.145 applies on vessels and on shore for accident prevention signs and tags. 1915.16 applies on vessels and on shore for warning signs and labels posted to comply with 29 CFR Part 1915, Subpart B, requirements.<br><br>NOTE: These 1910.145 specifications for accident prevention signs and tags are not intended to cover safety signs for marine regulations such as US Coast Guard required placards (e.g., oil pollution, garbage, and life jackets). |
| .146               | No             | No    | 1910.146(a) prohibits the use of this permit-required confined space standard in shipyard employment. 29 CFR Part 1915, Subpart B, applies on vessels and on shore.   |
| .147               | No             | No    | 1910.147(a) prohibits the use of this control of hazardous energy standard (lockout/tagout) in maritime employment. Lockout/tagout requirements for vessels include 1915.162 (Ship's boilers), 1915.163 (Ship's piping systems), 1915.164 (Ship's propulsion machinery), 1915.165 (Ship's deck machinery), and 1915.181 (Electrical circuits and distribution boards).<br><br>NOTE: Also see 29 CFR Part 1910, Subpart S, Electrical.                             |

### 29 CFR Part 1910, Subpart K: Medical and First Aid

| Part 1910 Standard | Applicability: |       | Remarks/Comments   |
|--------------------|----------------|-------|--|
|                    | Vessel         | Shore |  |
| .151(a)            | Yes            | Yes   | 1910.151(a) applies on vessels and on shore for the availability of medical personnel for advice and consultation. |
| .151(b)            | No             | Yes   | 1915.98 applies on vessels for first aid. 1910.151(b) applies on shore for first aid.                              |
| .151(c)            | Yes            | Yes   | 1910.151(c) applies on vessels and on shore for medical services and first aid; no applicable 1915 standard.       |

**29 CFR Part 1910, Subpart L: Fire Protection**

| Part 1910 Standard | Applicability:<br>Vessel Shore |    | Remarks/Comments   |
|--------------------|--------------------------------|----|--|
| .155 to .165       | No                             | No | 29 CFR Part 1915, Subpart P, Fire Protection in Shipyard Employment, applies on vessels and on shore.<br><br>NOTE: 1910.155(b) prohibits the application of 29 CFR Part 1910, Subpart L – Fire Protection to maritime employment (i.e., shipyard employment, marine terminals, and longshoring). |

**29 CFR Part 1910, Subpart M: Compressed Gas and Compressed Air Equipment**

| Part 1910 Standard | Applicability:<br>Vessel Shore |      | Remarks/Comments  |
|--------------------|--------------------------------|------|---|
| .169(a)            | Yes*                           | Yes* | 1910.169(a) applies on vessels and on shore for <u>fixed</u> air receivers; 1910.169(a) applies on vessels or on shore for the installation and maintenance of pressure relief valves on <u>portable</u> air receivers; the remainder of 1910.169(a) is preempted by 1915.172(a) & 1915.172(b). |
| .169(b)            | Yes                            | Yes  | 1910.169(b) applies on vessels and on shore for air receivers.  |

**29 CFR Part 1910, Subpart N: Materials Handling and Storage**

| Part 1910 Standard | Applicability:<br>Vessel Shore |      | Remarks/Comments  |
|--------------------|--------------------------------|------|---|
| .176(a)            | Yes*                           | Yes* | 1910.176(a) generally applies on vessels and on shore for the use of mechanical equipment; 1910.176(a) is preempted by 1915.91 on vessels and on shore for keeping aisles and passageways clear and in good repair, with no obstruction across or in aisles that could create a hazard. |
| .176(b)            | Yes                            | Yes  | 1910.176(b) applies on vessels and on shore for material handling secure storage; no applicable 1915 standard.  |
| .176(c)            | No                             | No   | 1915.91 applies on vessels and on shore for material handling storage area housekeeping except for pest control; 1910.141 may be applied for sanitation including pest control.   |
| .176(e)            | Yes                            | Yes  | 1910.176(e) applies on vessels and on shore for material handling clearance limit signs; no applicable 1915 standard.   |
| .176(f)            | No                             | Yes  | 1910.176(f) applies on shore for material handling rolling railroad cars; no applicable 1915 standard.  |
| .176(g)            | No                             | No   | 1915.73(d) applies on vessels and on shore for material handling guarding, preempting this standard in its entirety.  |
| .177               | No                             | No   | 1910.177(a) prohibits the use of the servicing multi-piece and single piece rim wheels standard in shipyard employment; no applicable 1915 standard.  |

| Part 1910 Standard | Applicability: |       | Remarks/Comments   |
|--------------------|----------------|-------|--|
|                    | Vessel         | Shore |  |
| .178               | Yes*           | Yes*  | <p>1910.178 applies on vessels and on shore for powered industrial trucks; 1915.120 incorporates 1910.178(l).</p> <p>NOTE: 1915.136(b) states, “All exhaust line joints and connections shall be checked for tightness immediately upon starting the engine, and any leaks shall be corrected at once.”; 1915.136(b) applies to exhaust leaks but does not otherwise preempt 1910.178(p)(1) and 1910.178(q).</p>   |
| .179               | Yes*           | Yes   | <p>1910.179 applies on vessels and on shore; the certification requirements of 1915.115 also may be applicable (See <a href="#">CPL 02-01-039</a>).</p> <p>NOTE: On vessels, 1910.179 cannot be applied to design specifications for overhead and gantry cranes that are a permanent part of the vessel. Any hazardous conditions that employees are exposed to related to design will be cited using the standard under which the vessel crane(s) was designed (verify by vessel drawings, documentation, publications, etc.) using the General Duty Clause.</p>                                    |
| .180               | Yes            | Yes   | <p>1910.180 applies on vessels and on shore for mobile cranes.</p> <p>NOTE: For mobile cranes (e.g., crawler cranes, truck cranes) placed on vessels and used for shipyard employment, the certification requirements of 1915.115 also may be applicable (See <a href="#">CPL 02-01-039</a>).</p>  |
| .181               | Yes*           | Yes   | <p>1910.181 applies on vessels and on shore for derricks.</p> <p>NOTE: For derricks on vessels, the certification requirements of 1915.115 also may be applicable (See <a href="#">CPL 02-01-039</a>).</p> <p>NOTE: On vessels, 1910.181 cannot be applied to design specifications for derricks that are a permanent part of the vessel. Any hazardous conditions that employees are exposed to related to design will be cited using the standard under which the vessel derrick(s) was designed (verify by vessel drawings, documentation, publications, etc.) using the General Duty Clause.</p> |
| .183               | Yes            | Yes   | <p>1910.183 could apply on vessels and on shore if helicopter operations occur in shipyards.</p>   |

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .184               | Yes*           | Yes*  | <p>1915.111, 1915.112, 1915.115 and 1915.116 apply on vessels and on shore for slings; 1910.184 applies to working conditions on vessels and on shore not addressed by 29 CFR Part 1915 as follows: 1910.184(a), (b), (c)(2){for all slings except chain slings}, (c)(3){for all slings except chain slings}, (c)(5), (c)(6), (c)(8), (c)(10)-(12), (e)(1), (e)(2)(i), (e)(3)(i)&amp;(ii), (e)(6), (e)(9)(ii), (f)(2)-(5), (g), (h)(1){for synthetic fiber slings only}, (h)(2)-(6) and (i). Generally preempted are:</p> <p>1910.184(c)(1) by 1915.111(a).<br/> 1910.184(c)(2) by 1915.112(c)(7) {for chain slings}.<br/> 1910.184(c)(3) by 1915.112(c)(7) {for chain slings}.<br/> 1910.184(c)(4) by 1915.111(b).<br/> 1910.184(c)(7) by 1915.116(f).<br/> 1910.184(c)(9) by 1915.116(j).<br/> 1910.184(d) by 1915.111(a).<br/> 1910.184(e)(2)(ii) by 1915.112(c)(7).<br/> 1910.184(e)(3)(iii) by 1915.112(c)(2) &amp; (c)(4).<br/> 1910.184(e)(4) by 1915.112(c)(5).<br/> 1910.184(e)(5) by 1915.112(c)(1).<br/> 1910.184(e)(7) by 1915.112(c)(4) &amp; (c)(5).<br/> 1910.184(e)(8) by 1915.112(c)(3).<br/> 1910.184(e)(9)(i) by 1915.112(c)(4).<br/> 1910.184(f)(1) by 1915.112(b)(1).<br/> 1910.184(h)(1)(i) by 1915.112(a)(1){for natural fiber slings only}.</p> |

**29 CFR Part 1910, Subpart O: Machinery and Machine Guarding**

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .212               | Yes*           | Yes   | 1910.212 applies on vessels and on shore for general requirements for machines; 1915.131(d) and 1915.131(f), however, apply to the guarding of machinery on drydocks. |
| .213               | Yes*           | Yes   | 1910.213 applies on vessels and on shore for woodworking machinery; 1915.131(d), however, applies if the machinery is moved onto a drydock.                           |

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .215               | Yes*           | Yes*  | 1915.134 applies on vessels and on shore for abrasive wheel machinery; 1910.215 applies to hazards on vessels and on shore not addressed by 1915.134 as follows: 1910.215(b)(2), (b)(4)-(11), (c)(1)-(9), & (d)(3)-(6).<br>Generally preempted are:<br>1910.215(a)(1) by 1915.134(a) & 1915.134(c).<br>1910.215(a)(2) by 1915.134(e) & 1915.134(f).<br>1910.215(a)(3) by 1915.134(c)(1) and 1915.134(f).<br>1910.215(a)(4) by 1915.134(b).<br>1910.215(b)(1) by 1915.134(c).<br>1910.215(b)(3) by 1915.134(a).<br>1910.215(b)(12) by 1915.134(c).<br>1910.215(d)(1) by 1915.134(g) & 1915.134(i).<br>1910.215(d)(2) by 1915.134(h). |
| .216               | No             | No    | 1910.216 is limited in application to the rubber and plastics industries.   |
| .217               | Yes            | Yes   | 1910.217 applies on vessels and on shore for mechanical power presses.  |
| .218               | No             | Yes   | 1910.218 applies on shore for forging machines; 1910.218(a) limits application of the standard to forge and die shops, which are generally not located on vessels.  |
| .219               | Yes            | Yes   | 1910.219 applies on vessels and on shore for mechanical power-transmission apparatus.   |

**29 CFR Part 1910, Subpart P: Hand and Portable Powered Tools and Other Hand-Held Equipment**

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .242(a)            | No             | No    | 1915.133(a) applies on vessels and on shore for general requirements for hand and portable powered tools and equipment, preempting this standard in its entirety. |
| .242(b)            | Yes            | Yes   | 1910.242(b) applies on vessels and on shore to compressed air used for cleaning; no applicable 1915 standard.   |

| Part 1910 Standard | Applicability:<br>Vessel Shore |      | Remarks/Comments  |
|--------------------|--------------------------------|------|---|
| .243(a)-(d)        | Yes*                           | Yes* | <p>1915.34(a)(2), 1915.131, 1915.132, 1915.134 and 1915.135 apply on vessels and on shore for portable powered tool guarding requirements; 1910.243 applies to working conditions on vessels and on shore not addressed by 29 CFR Part 1915 as follows:<br/> 1910.243(a)(2)(i)-(iii)(a){for portable non-electric tools},<br/> (a)(2)(iii)(b)-(2)(v), (a)(3), (a)(4), (b), (c)(1), (c)(1)(i)(a),<br/> (c)(1)(i)(c), (c)(1)(ii)(a)-(c), (c)(3)&amp;(4), (c)(5)(iii)-(v), (c)(6),<br/> (d)(1)(i), (d)(2) &amp; (d)(3).</p> <p>Generally preempted are:<br/> 1910.243(a)(1)(i) by 1915.131(c).<br/> 1910.243(a)(2)(i)-(iii)(a) by 1915.132(c){portable electric tools}.<br/> 1910.243(a)(5) by 1915.132(a)&amp;(b).<br/> 1910.243(c)(1)(i)(b) by 1915.134(c)(2).<br/> 1910.243(c)(2) by 1915.134(c).<br/> 1910.243(c)(5)(i) by 1915.134(g)&amp;(i).<br/> 1910.243(c)(5)(ii) by 1915.134(h).<br/> 1910.243(d)(1)(ii) by 1915.135(b)(9).<br/> 1910.243(d)(4)(i) by 1915.135(c)(1).<br/> 1910.243(d)(4)(ii) by 1915.134(c)(2).<br/> 1910.243(d)(4)(iii) by 1915.135(c)(3) &amp; (c)(4).<br/> 1910.243(d)(4)(iv) by 1915.135(c)(3).<br/> 1910.243(d)(4)(v) by 1915.135(c)(5).<br/> 1910.243(d)(4)(vi) by 1915.135(c)(6).<br/> 1910.243(d)(4)(vii) by 1915.135(b)(4).<br/> 1910.243(d)(4)(viii) by 1915.135(b)(5).<br/> 1910.243(d)(4)(ix) by 1915.135(b)(6).<br/> 1910.243(d)(4)(x) by 1915.135(b)(7).<br/> 1910.243(d)(4)(xi) by 1915.135(b)(8).<br/> 1910.243(d)(4)(xii) by 1915.135(b)(2).<br/> 1910.243(d)(4)(xiii) by 1915.135(b)(3).<br/> 1910.243(d)(4)(xiv) by 1915.135(b)(1).</p> |
| .243(e)            | No                             | Yes  | 1910.243(e) applies on shore to lawn mowers.  |
| .244(a)            | Yes                            | Yes  | 1910.244(a) applies on vessels and on shore to jacks; no applicable 1915 standard.  |
| .244(b)            | No                             | No   | 1915.34(c) preempts this abrasive blast cleaning nozzle standard in its entirety.   |



**29 CFR Part 1910, Subpart Q: Welding, Cutting and Brazing**

| Part 1910 Standard | Applicability:<br>Vessel Shore |      | Remarks/Comments  |
|--------------------|--------------------------------|------|---|
| .252               | Yes*                           | Yes* | <p>29 CFR Part 1915, Subpart P, applies for all shipyard employment fire protection. 1915.51 applies on vessels and on shore for welding, cutting &amp; brazing general requirements.</p> <p>The following 1910.252 standards also apply since there are no applicable 29 CFR Part 1915 standards addressing the specific hazards: 1910.252(a)(3), (a)(4)(i), (b)(1), (b)(2)(ii), (b)(2)(iii) {for protecting welders from arc welding rays by an enclosed booth or noncombustible screens, and that booths and screens permit the circulation of air at floor level}, (c)(1)(i)-(ii), (c)(1)(iv), (c)(2)(ii), (c)(3)(i){for freely movable hoods intended to be placed by the welder near the work that have a rate of air-flow of 100 linear feet per minute}, (c)(3)(ii), (c)(4)(iii), (c)(4)(iv), (c)(5), (c)(6)-(10){on shore only}, (c)(11)-(13) and (d).</p> <p>Generally preempted are:<br/>           1910.252(a)(1)(i) by 1915.503(a).<br/>           1910.252(a)(1)(ii) by 1915.503(a)(2)(ii).<br/>           1910.252(a)(2)(ii) by 1915.505(f)(2)(i).<br/>           1910.252(a)(2)(vi)(C) by 1915.14(a)(1).<br/>           1910.252(a)(2)(vii) by 1915.503(a)(2)(ii).<br/>           1910.252(a)(2)(viii) by 1915.503(a)(2) and 1915.14.<br/>           1910.252(a)(2)(x) by 1915.503(a)(2) &amp; (b)(1), and 1915.14.<br/>           1910.252(a)(4)(ii) by 1915.503(b)(2).<br/>           1910.252(b)(2)(i) by 1915.51(f)(2).<br/>           1910.252(b)(2)(iii) by 1915.56(e) &amp; .51(a) &amp; (c) {for protecting employees or other persons from rays by noncombustible or flameproof screens or shields or the wearing of goggles}.<br/>           1910.252(b)(3) by 1915.51(e)(1) &amp; (f), 1915.152, and 1915.157.<br/>           1910.252(b)(4) by 1915.51(c).<br/>           1910.252(c)(1)(iii) by 1915.51(b)(1)(ii) &amp; (iii).<br/>           1910.252(c)(2)(i)(A)-(C) by 1915.51(f)(1).<br/>           1910.252(c)(3)(i) by 1915.51(b)(1)(ii) {for mechanical local exhaust ventilation}.<br/>           1910.252(c)(4)(i) by 1915.51(b)(1)(v) &amp; (c)(1).<br/>           1910.252(c)(4)(ii) by 1915.51(c)(3).<br/>           1910.252(c)(4)(v) by 1915.51(b)(1)(vi).<br/>           1910.252(c)(6)(i) by 1915.51(d)(1)(i) {vessels only}.<br/>           1910.252(c)(6)(ii) by 1915.51(d)(1) {vessels only}.<br/>           1910.252(c)(7)(i) by 1915.51(d)(1)(ii) {vessels only}.<br/>           1910.252(c)(7)(ii) by 1915.51(d)(1) {vessels only}.<br/>           1910.252(c)(7)(iii) by 1915.51(d)(2) {vessels only}.<br/>           1910.252(c)(8) by 1915.51(d)(2)(iv), (d)(3) &amp; (d)(4) {vessels only}.<br/>           1910.252(c)(9) by 1915.51(d)(1)(ii), (d)(2)(ii), (d)(3) &amp; (d)(4) {vessels only}.<br/>           1910.252(c)(10) by 1915.51(d)(2), (d)(3) &amp; (d)(4) {vessels only}.</p> |

| Part 1910 Standard | Applicability:<br>Vessel Shore |      | Remarks/Comments  |
|--------------------|--------------------------------|------|---|
| .253               | Yes*                           | Yes* | <p>1915.55 applies on vessels and on shore for gas welding and cutting. The following 1910.253 standards also apply since there are no applicable 1915 standards addressing the specific hazards: 1910.253(a)(1)-(4), (b)(1)(i)-(iv), (b)(2)(ii), (b)(3), (b)(4), (b)(5)(i), (b)(5)(ii)(L), (b)(5)(ii)(N), (b)(5)(ii)(Q)-(R)(2), (b)(5)(iii)(G)&amp;(H), (c), (d), (e)(1)-(4)(vi), (e)(4)(viii), (e)(5)(i), (e)(5)(iii)-(6)(iv), (f) and (g).</p> <p>Generally preempted are:</p> <p>1910.253(b)(2)(i) by 1915.55(b)(3).<br/> 1910.253(b)(2)(iii) by 1915.55(a)(8).<br/> 1910.253(b)(2)(iv) by 1915.55(a)(1).<br/> 1910.253(b)(5)(ii)(A) by 1915.55(a)(1) &amp; (a)(2).<br/> 1910.253(b)(5)(ii)(B) by 1915.55(a)(3).<br/> 1910.253(b)(5)(ii)(C) by 1915.55(a)(5).<br/> 1910.253(b)(5)(ii)(D) by 1915.55(a)(6).<br/> 1910.253(b)(5)(ii)(E) by 1915.55(d)(2).<br/> 1910.253(b)(5)(ii)(F)-(H) by 1915.55(a)(8).<br/> 1910.253(b)(5)(ii)(I) by 1915.55(b)(1).<br/> 1910.253(b)(5)(ii)(J) by 1915.55(b)(2).<br/> 1910.253(b)(5)(ii)(K) by 1915.55(c)(1).<br/> 1910.253(b)(5)(ii)(M) by 1915.55(c)(2).<br/> 1910.253(b)(5)(ii)(O) by 1915.55(a)(3).<br/> 1910.253(b)(5)(ii)(P) by 1915.55(d)(1).<br/> 1910.253(b)(5)(iii)(A) by 1915.55(b)(3).<br/> 1910.253(b)(5)(iii)(B) by 1915.55(a)(3).<br/> 1910.253(b)(5)(iii)(C) by 1915.55(d)(1).<br/> 1910.253(b)(5)(iii)(D) by 1915.55(d)(4).<br/> 1910.253(b)(5)(iii)(E) by 1915.55(e)(5).<br/> 1910.253(b)(5)(iii)(F) by 1915.55(d)(5).<br/> 1910.253(b)(5)(iii)(I) by 1915.55(d)(3).<br/> 1910.253(b)(5)(iii)(J)-(L) by 1915.55(d)(2).<br/> 1910.253(e)(4)(iii) by 1915.55(e)(4).<br/> 1910.253(e)(5)(ii) by 1915.55(f)(2).</p> |

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .254               | Yes*           | Yes*  | 1915.56 applies on vessels and on shore for arc welding and cutting. The following 1910.254 standards also apply since there are no applicable 1915 standards addressing the specific hazards: 1910.254(a)(1)&(2), (b), (c)(1), (c)(3)(i), (c)(3)(iv), (d)(1)&(2), (d)(4)-(6), and (d)(9)(ii).<br>Generally preempted are:<br>1910.254(a)(3) by 1915.56(d).<br>1910.254(c)(2) by 1915.56(c).<br>1910.254(c)(3)(ii) & (iii) by 1915.56(c)(1).<br>1910.254(d)(3) by 1915.56(c)(6).<br>1910.254(d)(7) by 1915.56(d)(1).<br>1910.254(d)(8) by 1915.56(b)(2) {for coiling or looping welding electrode cable around parts of an employees body}.<br>1910.254(d)(9)(i) by 1915.56(d)(4).<br>1910.254(d)(9)(iii) by 1915.56(b)(3). |
| .255               | Yes            | Yes   | 1910.255 applies on vessels and on shore for resistance welding; no applicable 1915 standard.   |

### 29 CFR Part 1910, Subpart R: Special Industries

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .261               | No             | No    | 1910.261(a)(1) limits the applicability of this standard to pulp, paper and paperboard mills.   |
| .262               | No             | No    | 1910.262(a)(1) limits the applicability of this standard to textile machinery.  |
| .263               | No             | Yes   | 1910.263(a)(1) limits the applicability of this standard to equipment in bakeries. The standard is applicable to any bakery located within a shipyard cafeteria.                        |
| .264               | No             | Yes   | 1910.264(b) limits the applicability of this standard to laundry facilities. The standard is applicable to laundry facilities located within a shipyard.                                |
| .265               | No             | Yes   | 1910.265(a) limits the applicability of this standard to saw mills. The standard is applicable to saw mill facilities located within a shipyard (usually found at wooden vessel yards). |
| .266               | No             | No    | 1910.266(b)(1) & (b)(2) limits the applicability of this standard to logging operations.  |
| .268               | No             | No    | 1910.268(a) limits the applicability of this standard to telecommunications centers and the installation of telecommunications equipment.   |
| .269               | Yes            | Yes   | 1910.269(a) limits the applicability of this standard to power generation, transmission and distribution.   |
| .272               | No             | No    | 1910.272(a) & (b) limit the scope and application of this standard to grain handling facilities.  |

**29 CFR Part 1910, Subpart S: Electrical**

| Part 1910 Standard | Applicability:<br>Vessel Shore |     | Remarks/Comments   |
|--------------------|--------------------------------|-----|--|
| .301 to .308       | Yes*                           | Yes | <p>1910.301-.308 applies on shore. On vessels, 29 CFR Part 1910, Subpart S, is applicable when shore-based electrical installations provide power for use aboard vessels (i.e., the power for the electrical system comes from shore or from portable electrical generators that are either ashore or placed on a vessel); commonly accepted industry practice may deviate from standard requirements without exposing employees to hazards; for example, it is established industry practice to use methods such as overhead “trees” to route electrical cables, pneumatic hoses, etc., in a manner that poses no hazards to employees, yet these practices may not fully comply with 29 CFR Part 1910, Subpart S, requirements. Thorough evaluation and analysis must be conducted regarding the application and feasibility of the 29 CFR Part 1910, Subpart S, standard to vessels. OSHA Regional offices and the OSHA National Office can provide assistance in making such determinations.</p> <p>NOTE: 29 CFR Part 1910, Subpart S, cannot be applied to a vessel’s permanently installed electrical system. Design specifications for vessels (including electrical systems) are addressed on U.S. “Inspected” vessels by Coast Guard regulations (46 CFR Parts 110 to 113), on foreign flag vessels by foreign standards and various International Vessel Classification Society rules (e.g., Bureau Veritas – France, Det Norske Veritas – Norway, Nippon Kaiji Kyokai – Japan, Lloyd’s Register of Shipping – England), and on “Un-inspected” vessels by a variety of standards, recommended guidelines, and established industry practices. Any hazardous conditions that employees are exposed to related to <i>design</i> must be cited using the standards/rules (such as: Coast Guard, American Bureau of Shipping, Bureau Veritas, Nippon Kaiji Kyokai, American Yacht &amp; Boat Council) under which the vessel’s permanently installed electrical system was designed (verify by vessel drawings, documentation, publications, etc.) and applying the General Duty Clause.</p> |

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .331 to .335       | Yes*           | Yes   | <p>1910.331-.335 apply on shore for both <u>qualified</u> persons (those who have training in avoiding the electrical hazards of working on or near exposed energized parts) and <u>unqualified</u> persons (those with little or no such training). On vessels, these provisions cover all electrical safety-related work practices for <u>unqualified</u> persons, including temporary electrical systems and the vessel’s permanently installed electrical systems. On vessels, these provisions apply to electrical safety-related work practices for <u>qualified</u> persons when shore-based electrical installations provide power for use aboard vessels; these provisions do not apply to <u>qualified</u> persons working on the vessel’s permanently installed electrical system.</p> <p>NOTE: There are additional electrical requirements in 1915.132, <i>Portable electric tools</i>; 1915.152, <i>(PPE) General requirements</i>; 1915.155(a)(2), <i>Head protection</i>; 1915.157(c), <i>Hand and body protection</i>; and 1915.181, <i>Electrical circuits and distribution boards</i>.</p> |

**29 CFR Part 1910, Subpart T: Commercial Diving Operations**

| Part 1910 Standard | Applicability: |       | Remarks/Comments   |
|--------------------|----------------|-------|--|
|                    | Vessel         | Shore |  |
| .401 to .441       | Yes            | Yes   | <p>29 CFR Part 1910, Subpart T, Commercial Diving Operations, is incorporated into 29 CFR Part 1915 by 1915.6.</p> <p>NOTE: Diving conducted <u>from</u> inspected vessels (i.e., vessels with a Coast Guard “Certificate of Inspection”) including mobile offshore drilling units, at a deepwater port or within its safety zone, or from any artificial island, or installation or other device on the Outer Continental Shelf is covered by the Coast Guard (46 CFR Chapter I, Part 197, Subpart B – Commercial Diving Operations).</p> |

**29 CFR Part 1910, Subpart Z: Toxic and Hazardous Substances**

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .1000              | No             | No    | 1915.1000 applies on vessels and on shore for air contaminants, preempting this standard in its entirety.       |
| .1001              | No             | No    | 1915.1001 applies on vessels and on shore for asbestos, preempting this standard in its entirety.               |
| .1002              | Yes            | Yes   | 1910.1002 applies on vessels and on shore for coal tar pitch volatiles; is incorporated into 1915 by 1915.1002. |
| .1003              | Yes            | Yes   | 1910.1003 applies on vessels and on shore for 13 carcinogens; is incorporated into 1915 by 1915.1003.           |
| .1004              | Yes            | Yes   | 1910.1004 applies on vessels and on shore for alpha-Naphthylamine; is incorporated into 1915 by 1915.1004.      |

| Part 1910 Standard | Applicability: |       | Remarks/Comments   |
|--------------------|----------------|-------|--|
|                    | Vessel         | Shore |  |
| .1006              | Yes            | Yes   | 1910.1006 applies on vessels and on shore for Methyl chloromethyl ether; is incorporated into 1915 by 1915.1006.                       |
| .1007              | Yes            | Yes   | 1910.1007 applies on vessels and on shore for 3,3'-Dichlorobenzidine; is incorporated into 1915 by 1915.1007.                          |
| .1008              | Yes            | Yes   | 1910.1008 applies on vessels and on shore for bis-Chloromethyl ether; is incorporated into 1915 by 1915.1008.                          |
| .1009              | Yes            | Yes   | 1910.1009 applies on vessels and on shore for beta-Naphthylamine; is incorporated into 1915 by 1915.1009.                              |
| .1010              | Yes            | Yes   | 1910.1010 applies on vessels and on shore for Benzidine; is incorporated into 1915 by 1915.1010.                                       |
| .1011              | Yes            | Yes   | 1910.1011 applies on vessels and on shore for 4-Aminodiphenyl; is incorporated into 1915 by 1915.1011.                                 |
| .1012              | Yes            | Yes   | 1910.1012 applies on vessels and on shore for Etyleneimine; is incorporated into 1915 by 1915.1012.                                    |
| .1013              | Yes            | Yes   | 1910.1013 applies on vessels and on shore for beta-Propiolactone; is incorporated into 1915 by 1915.1013.                              |
| .1014              | Yes            | Yes   | 1910.1014 applies on vessels and on shore for 2-Acetylaminofluorene; is incorporated into 1915 by 1915.1014.                           |
| .1015              | Yes            | Yes   | 1910.1015 applies on vessels and on shore for 4-Dimethylaminoazobenzene; is incorporated into 1915 by 1915.1015.                       |
| .1016              | Yes            | Yes   | 1910.1016 applies on vessels and on shore for N-Nitrosodimethylamine; is incorporated into 1915 by 1915.1016.                          |
| .1017              | Yes            | Yes   | 1910.1017 applies on vessels and on shore for vinyl chloride; is incorporated into 1915 by 1915.1017.                                  |
| .1018              | Yes            | Yes   | 1910.1018 applies on vessels and on shore for inorganic arsenic; is incorporated into 1915 by 1915.1018.                               |
| .1020              | Yes            | Yes   | 1910.1020 applies on vessels and on shore for access to employee exposure and medical records; is incorporated into 1915 by 1915.1020. |
| .1025              | Yes            | Yes   | 1910.1025 applies on vessels and on shore for lead; is incorporated into 1915 by 1915.1025.  |
| .1027              | Yes            | Yes   | 1910.1027 applies on vessels and on shore for cadmium; is incorporated into 1915 by 1915.1027.   |
| .1028              | Yes            | Yes   | 1910.1028 applies on vessels and on shore for benzene; is incorporated into 1915 by 1915.1028.   |
| .1029              | Yes            | Yes   | 1910.1029 applies on vessels and on shore for coke oven emissions; no applicable 1915 standard.  |
| .1030              | Yes            | Yes   | 1910.1030 applies on vessels and on shore for bloodborne pathogens; is incorporated into 1915 by 1915.1030.                            |
| .1043              | No             | No    | 1910.1043(a) limits the applicability of this standard to employee exposure to cotton dust in manufacturing.                           |
| .1044              | Yes            | Yes   | 1910.1044 applies on vessels and on shore for 1, 2-dibromo-3-chloropropane; is incorporated into 1915 by 1915.1044.                    |

| Part 1910 Standard | Applicability: |       | Remarks/Comments  |
|--------------------|----------------|-------|---|
|                    | Vessel         | Shore |   |
| .1045              | Yes            | Yes   | 1910.1045 applies on vessels and on shore for acrylonitrile; is incorporated into 1915 by 1915.1045.  |
| .1047              | Yes            | Yes   | 1910.1047 applies on vessels and on shore for ethylene oxide; is incorporated into 1915 by 1915.1047.   |
| .1048              | Yes            | Yes   | 1910.1048 applies on vessels and on shore for formaldehyde; is incorporated into 1915 by 1915.1048.   |
| .1050              | Yes            | Yes   | 1910.1050 applies on vessels and on shore for methylenedianiline; is incorporated into 1915 by 1915.1050.   |
| .1051              | Yes            | Yes   | 1910.1051 applies on vessels and on shore for 1,3-Butadiene; no applicable 1915 standard.   |
| .1052              | Yes            | Yes   | 1910.1052 applies on vessels and on shore for methylene chloride; is incorporated into 1915 by 1915.1052.   |
| .1096              | Yes*           | Yes   | 1910.1096 applies on vessels and on shore for ionizing radiation, except for work in the vicinity of vessel radars, for which 1915.95 preempts this standard. |
| .1200              | Yes            | Yes   | 1910.1200 applies on vessels and on shore for hazard communication; is incorporated into 1915 by 1915.1200.   |
| .1450              | Yes            | Yes   | 1910.1450 applies on vessels and on shore for occupational exposure to hazardous chemicals in laboratories; is incorporated into 1915 by 1915.1450.           |

## Appendix B: Answers to Common Questions Regarding Shipyard Employment

This appendix consolidates OSHA interpretations related to shipyard employment that have been issued and remain valid as of the date of this instruction. Interpretations previously issued by OSHA were reviewed to determine their current validity and accuracy. Interpretations for which standard references have changed were updated to reflect the current standard reference.

OSHA requirements are set by statute, standards, and regulations. Our interpretations explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. These responses constitute OSHA's interpretations of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

**Question 1: As a result of the April 6, 1994 revisions to the general industry *Personal Protective Equipment* (PPE) standards, are 29 CFR 1910.132 through .138 applicable to shipyards?**

Answer: The general industry standards for PPE, 29 CFR 1910.132 through .138, cannot be applied in shipyard employment, with the exception of 29 CFR 1910.134, *Respiratory protection*. The applicable PPE requirements for shipyard employment are:

- 29 CFR 1915.152, *General requirements*.
- 29 CFR 1915.153, *Eye and face protection*.
- 29 CFR 1915.154, *Respiratory protection* (covered by 29 CFR 1910.134).
- 29 CFR 1915.155, *Head protection*.
- 29 CFR 1915.156, *Foot protection*.
- 29 CFR 1915.157, *Hand and body protection*.

**Question 2: An “uninspected” tugboat employer is required to follow 29 CFR Part 1915, Subpart B, *Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment*, when performing ship repair functions. Does this same employer need to implement 29 CFR 1910.146, *Permit-required confined spaces*, when employees enter confined spaces on the same vessel for non-repair reasons (such as for retrieving ropes)?**

Answer: An employer operating an “uninspected” tugboat (i.e. a tugboat which is not a seagoing motor vessel 300 gross tons or more and is not a steam vessel) is required to follow and comply with 29 CFR Part 1915, Subpart B, *Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment*, when performing ship repair functions (such as alterations, conversions, installations, cleaning, painting, and maintenance). This same tugboat employer is required to follow and comply with the 29 CFR 1910.146 confined space standard



when employees are performing various routine tasks (such as retrieving ropes from confined spaces). Moreover, situations regularly occur on tugboats that require compliance with both standards at the same time. Requiring a single employer to implement two confined space entry procedures at the same site simultaneously can lead to confusion, inadvertent errors, and possibly reduced employee safety. Therefore, an “uninspected” tugboat employer may be allowed to comply with 29 CFR Part 1915 requirements for all confined space work aboard the tugboat. Any violation of an applicable 29 CFR 1910.146 requirement would be treated as a *de minimis* violation and not cited.

NOTE 1: Under Coast Guard regulations in effect prior to August 9, 2004, the only towing vessels classified by the Coast Guard as “inspected vessels” were seagoing motor vessels that were 300 or more gross tons or were steam vessels (see 46 CFR 90.05-1(a), Table 90.05-1(a)). The Coast Guard continues to have the authority to regulate these towing vessels because they are seagoing motor vessels or steam vessels. Thus, pursuant to section 4(b)(1) of the OSH Act, OSHA has no authority to protect seamen on these vessels because they are “inspected vessels,” as defined by Coast Guard regulations. Effective August 9, 2004, “towing vessels” were added to the list of vessels for which the Coast Guard has the authority to prescribe and enforce regulations (see 46 U.S.C. 3301(15)). At the time of the publication of this directive the Coast Guard was conducting rule making to determine which additional towing vessels should be covered by its inspected vessels regulations and which of these regulations should apply. However, until any new Coast Guard regulations on towing vessels are in effect all working conditions, including confined space hazards, of seamen on a towing vessel which are not an “inspected vessel” (i.e., “uninspected” vessel) are covered by OSHA, except for the few conditions covered by the Coast Guard’s uninspected vessel regulations (see 46 CFR Part 24 and [CPL 02-01-020](#), *OSHA/U.S. Coast Guard Authority over Vessels*, November 8, 1996).

NOTE 2: If the workplace being inspected or the principal office of the employer is in the 3<sup>rd</sup>, 5<sup>th</sup>, 9<sup>th</sup> or 11<sup>th</sup> Circuit, there is case law that may affect the applicability of Part 1915. For clarification regarding applicable case law contact the appropriate Regional Solicitor's Office.

**Question 3: Would OSHA cite an employer who chooses to follow the procedures contained in 29 CFR 1910.146, *Permit-required confined spaces*, when facility employees enter wing, bow, and/or stern tanks?**

Answer: OSHA would not issue citations to an employer that considers wing, bow, and/or stern tanks to be permit-required confined spaces, provided that the entry is in compliance with 29 CFR 1910.146 and does not involve hot work.

**Question 4: Do OSHA regulations, specifically 29 CFR 1910.24, apply to vessels?**

Answer: Although all of the provisions of 29 CFR 1910.24 apply to fixed industrial stairs on vessels, OSHA exercises its enforcement discretion with respect to the design specification provisions when inspecting permanent fixed stairs on vessels. Thus, OSHA will enforce all of the provisions of 29 CFR 1910.24 with respect to fixed industrial stairs that *are not* a permanent part of the vessel (i.e., stairs brought in and installed for use during vessel construction, repair or overhaul to support employee access to the vessel or within the vessel). In addition, OSHA will enforce 29 CFR 1910.24(a), (b), (f) and (h) with respect to fixed stairs that *are* a permanent part

of the vessel, since these provisions address the condition and use of fixed stairs. However, if fixed stairs that *are* a permanent part of the vessel comply with the design specifications discussed below, OSHA will not issue citations regarding design specification provisions in 29 CFR 1910.24(c), (d), (e), (g) and (i).

Design specifications for vessels (including fixed stairs) are addressed on U.S. "Inspected" vessels by Coast Guard regulations (46 CFR), on foreign flag vessels by foreign standards and various international vessel classification society rules (e.g., Bureau Veritas-France, Nippon Kaiji Kyokai-Japan, Lloyd's Register of Shipping-England), and on "Uninspected" vessels by a variety of standards, recommended guidelines, and established industry practice. Any hazardous conditions that employees are exposed to related to design will be evaluated using the standard, guidance or practice under which the vessel's fixed stairs were designed.

**Question 5: Are there any circumstances where 29 CFR 1910.147, *Control of Hazardous Energy (Lockout/Tagout)*, would apply and be enforceable in shipyard operations? My question pertains to shore-side shipbuilding, ship repairing, or shipbreaking, as well as work done on the water.**

Answer: 29 CFR 1910.147(a)(1)(ii)(A) exempts maritime employment from coverage by the standard. Maritime employment under 29 CFR includes *Part 1915 – Occupational Safety and Health Standards for Shipyard Employment, Part 1917 – Marine Terminals, and Part 1918 – Safety and Health Regulations for Longshoring*. The shipyard standards are applicable to all shipyard operations located adjacent to or on the navigable waters of the United States. In addition, shipyard employers covered by the OSH Act are also required by the Agency's rule, 29 CFR 1910.5(c), to adhere to OSHA's general industry standards in 29 CFR Part 1910, unless specifically exempted. Since 29 CFR 1910.147 specifically exempts maritime employment from coverage, the standard cannot be applied to shipyard employment either afloat or ashore.

NOTE: If the workplace being inspected or the principal office of the employer is in the 3<sup>rd</sup>, 5<sup>th</sup>, 9<sup>th</sup> or 11<sup>th</sup> Circuit, there is case law that may affect the applicability of Part 1915. For clarification regarding applicable case law contact the appropriate Regional Solicitor's Office.

**Question 6: 29 CFR 1915.2(b), *Scope and Application*, states, "This part does not apply to matters under the control of the United States Coast Guard, ...including, but not restricted to, the master, ship's officers, crew members, design, construction and maintenance of the vessel, its gear and equipment." Does the scope and application of 29 CFR 1915.2(b) limit OSHA's authority in shipyard employment?**

Answer: The provisions in 29 CFR Part 1915 are there because of the coverage provisions of the Longshoring and Harbor Workers' Compensation Act (LHWCA), which, along with the OSH Act, provides OSHA with rulemaking authority over shipyard employment. However, since OSH Act coverage, which extends to anyone engaged in a business affecting interstate commerce, is much broader than LHWCA coverage, OSHA is not bound by these limitations in the shipyard standard. In fact, it has been OSHA policy that the LHWCA limitations on coverage that appear in the maritime standards were not adopted when the maritime standards were promulgated in the early 1970's under Section 6(a) of the OSH Act. Also, OSHA's

jurisdiction is limited by Section 4(b)(1) of the Occupational Safety and Health Act, which states, “Nothing in this Act shall apply to working conditions of employees with respect to which other Federal agencies..., exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health.”

NOTE: If the workplace being inspected or the principal office of the employer is in the 3<sup>rd</sup>, 5<sup>th</sup>, 9<sup>th</sup> or 11<sup>th</sup> Circuit, there is case law that may affect the applicability of Part 1915. For clarification regarding applicable case law contact the appropriate Regional Solicitor's Office.

**Question 7: Is the application of OSHA’s shipyard standards limited by the definition of employer and employee?**

Answer: These provisions are in 29 CFR Part 1915 only because of the coverage provisions of the Longshoring and Harbor Workers’ Compensation Act (LHWCA), which, along with the OSH Act, provides OSHA with rulemaking authority over shipyards. However, since OSH Act coverage, which extends to anyone engaged in a business affecting interstate commerce, is much broader than LHWCA coverage, OSHA is not bound by these limitations in the shipyard standard. It has been OSHA policy from the beginning that the LHWCA limitations on coverage that appear in the maritime standards (i.e., 29 CFR Parts 1915, 1917, and 1918) were not adopted when the maritime standards were promulgated in the early 1970’s under Section 6(a) of the OSH Act. This brings these definitions into line with 29 CFR 1915.11(a), *Scope and application*, and 29 CFR 1915.11(b), *Definitions*.

**Question 8: What are the 29 CFR Part 1915 shipyard employment requirements for a shipyard competent person to perform confined space entry and monitoring?**

Answer: Confined space entry requirements are addressed by OSHA Instruction [CPL 02-01-042](#), *29 CFR Part 1915, Subpart B, Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment – Inspection Procedures and Interpretive Guidance*, dated September 7, 2005. In addition to providing current policy, inspection procedures, information, and guidance to ensure uniform enforcement, this instruction includes six flow charts that delineate 29 CFR Part 1915, Subpart B procedures for: Documentation and Training, Precautions Before Entering, Combustible/Flammable Checks, Cold Work Checks, Hot Work Checks, and Maintenance of Safe Conditions.

The OSHA confined space standard for shipyard employment became effective on October 24, 1994. This revised standard extended the scope and applicability of the confined space shipyard employment standard (29 CFR 1915.11), to cover all shipyard employment both on vessels and land-side operations regardless of geographic location. The only exception to the applicability of 29 CFR Part 1915, Subpart B, within a shipyard, is that construction activities covered by 29 CFR Part 1926 are not subject to the provisions of 29 CFR Part 1915, Subpart B.

The revised standard deleted the requirement for employers to specifically use and maintain the Form OSHA 73, *Designation of Competent Person*. Employers now have the option of using the Form OSHA 73, maintaining a written roster of designated employees, or issuing a written statement that a Marine Chemist will always be used for the required inspections and tests (29 CFR 1915.7(b)(2)(i)). When the roster is used, it must contain the following information as a

minimum: employers' name, the designated competent person's name, and the date the employee was trained as a competent person (29 CFR 1915.7(b)(2)(iii)).

The revised standard also deleted the requirement for employers to specifically use and maintain the Form OSHA 74, *Log of Inspections and Tests by Competent Person*. Employers must still maintain a record of inspections and tests, but they now have the option of choosing the form or format. Such records must be posted in the immediate vicinity of the affected operations while work is in progress and be maintained for a period of at least three months from the completion date of the specific job for which they were generated (29 CFR 1915.7(d)(2)).

The revised standard continued the previous requirement that the employer designate at least one competent person for the purpose of testing work space atmospheres in shipyard employment, unless all of the employer's testing under 29 CFR Part 1915, Subpart B is performed by a Marine Chemist (29 CFR 1915.7(b)(1)). A Coast Guard authorized person cannot be substituted for the competent person required by 29 CFR 1915.7(b)(1), because the Coast Guard authorized person may not have been trained to have all the skills and knowledge of a competent person.

The criterion of 29 CFR 1915.7(c) requires the shipyard competent person to have the skill and knowledge necessary to perform atmospheric testing. 29 CFR 1915.7(c)(1) requires that the competent person be able to understand and carry out the written or oral instructions left by a Marine Chemist, Coast Guard authorized person, or Certified Industrial Hygienist. 29 CFR 1915.7(c)(2) requires competent persons to have a knowledge of 29 CFR Part 1915, Subparts B, C, D, and H. 29 CFR 1915.7(c)(3) requires that competent persons have a familiarity with the structure, location, and designation of spaces where work is done. 29 CFR 1915.7(c)(4) continues to require competent persons to have the ability to use and interpret the readings of oxygen, combustible gas, and carbon dioxide indicators. Competent persons also must be able to calibrate all the testing equipment they use. 29 CFR 1915.7(c)(5) continues the requirement for a competent person to have the ability to perform all required tests and inspections as set forth in 29 CFR Part 1915, Subparts B, C, D and H. 29 CFR 1915.7(c)(6) requires competent persons to have the ability to evaluate spaces after a test to determine the need for further testing by a Marine Chemist, Certified Industrial Hygienist, or Coast Guard authorized person. 29 CFR 1915.7(c)(7) requires that a competent person have the capability to maintain the records required by the standard.

**Question 9: 29 CFR 1915.11, *Scope, application, and definitions applicable to this subpart, states, "This subpart applies to work in confined and enclosed spaces and other dangerous atmospheres in shipyard employment, including vessels, vessel sections, and on land-side operations regardless of geographic location."* Does 29 CFR Part 1915, Subpart B, apply to grain facility employees who enter wing, bow, and/or stern tanks to perform repairs or other maintenance work, even if those employees were originally engaged in loading the barge?**

Answer: 29 CFR Part 1915, Subpart B, applies to any employee who enters enclosed or confined spaces aboard a vessel to perform repairs or other maintenance work.

A grain facility employer must follow and comply with the 29 CFR Part 1915, Subpart B, confined space standard when performing ship repair functions (such as altering, converting,

installing, cleaning, painting, and maintenance work). This same grain facility employer must follow and comply with the 29 CFR 1910.146 confined space standard when employees are performing various routine tasks (such as retrieving ropes from confined spaces). Moreover, situations regularly occur on vessels that require compliance with both standards at the same time. Requiring a single site employer to implement two confined space entry procedures simultaneously can lead to confusion, inadvertent errors and possibly reduced employee safety. Therefore, a grain facility employer may be allowed to follow and comply with the 29 CFR Part 1915 requirements for all confined space work aboard a vessel, provided that there is also full compliance with the 29 CFR Part 1915 requirements. Any violation of an arguably applicable 29 CFR 1910.146 requirement would be treated as a *de minimis* violation and not cited.

**Question 10: Which standard, 29 CFR 1915.12(b)(1) or 29 CFR 1910.1028(e), is applicable if benzene monitoring on a ship is not conducted by a qualified person?**

Answer: When benzene monitoring is conducted on a ship, both 29 CFR 1915.12(b) and 29 CFR 1910.1028(e) apply. Test and inspection requirements are delineated under 29 CFR 1915.12(b) for inspector qualifications, situations requiring testing of spaces, and recording of results. Exposure monitoring requirements for benzene are addressed under 29 CFR 1910.1028(e) and are applicable per 29 CFR 1910.1028(a) for all occupational exposures to benzene except as noted under 29 CFR 1910.1028(a)(2). Specific attention is called to 29 CFR 1910.1028(a)(3), which excludes the cleaning and repair of barges and tankers that have contained benzene from 29 CFR 1910.1028(e)(1), 1910.1028(e)(6), and 1910.1028(f), and requires establishing engineering and work practice controls that keep exposures below 10 parts per million (ppm).

**Question 11: 29 CFR 1915.14(a)(1)(iv), *Hot work requiring testing by a Marine Chemist or Coast Guard authorized person*, states, “The employer shall ensure that hot work is not performed in or on any of the following confined and enclosed spaces and other dangerous atmospheres, boundaries or spaces or pipelines until the work area has been tested and certified by a Marine Chemist or a U.S. Coast Guard Authorized Person as ‘safe for hot work’.” Is there ever a circumstance where the shipyard competent person can certify a space as “safe for hot work?”**

Answer: The exemption in 29 CFR 1915.14(a)(1)(iv) means that a Marine Chemist certificate is not required to perform hot work within spaces adjacent to spaces in which the flammable gases or liquids have a flash point above 150 degrees Fahrenheit, and the distance between such spaces and the work is greater than 25 feet. The competent person also can certify dry cargo holds, bilges, engine rooms, boiler spaces, other vessel sections, and land-side operations as “safe for hot work” as long as the space, and the immediately adjacent spaces, have not contained combustible or flammable liquids or gases. Additional guidance can be found in [CPL 02-01-042](#), *29 CFR Part 1915, Subpart B, Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment – Inspection Procedures and Interpretive Guidance*, dated September 7, 2005.

**Question 12: Is abrasive blasting on the hull of a vessel for paint preparation considered to be “hot work?”**

Answer: Abrasive blasting of a vessel hull for paint preparation is not always regarded as hot work and therefore may not require pumping and cleaning the tanks of the vessel. However, OSHA regards abrasive blasting on an internal space or void of a vessel to be hot work. Additionally, physical isolation from any atmosphere containing more than 10 percent of the LEL of a flammable or combustible substance does not include bulkheads that are part of the space that contains the flammable or combustible substance.

**Question 13: 29 CFR 1915.15(a), *Maintenance of safe conditions*, states, “Pipelines that carry hazardous materials into spaces that have been certified ‘Safe for Workers’ or ‘Safe for Hot Work’ shall be disconnected, blanked off, or otherwise blocked by a positive method to prevent hazardous materials from being discharged into the space.” Can carbon dioxide (CO<sub>2</sub>) fixed fire extinguishing systems on vessels and in spaces where employees are working be left activated while the vessel is in the shipyard for repair?**

Answer: Carbon dioxide (CO<sub>2</sub>) is considered a hazardous substance as defined in 29 CFR 1915.4(n); pipelines that convey the gas must be disconnected, blanked off, or otherwise secured to prevent accidental discharge while repairs are undertaken in spaces where the CO<sub>2</sub> fixed fire extinguishing system is designed to discharge. Specific guidance is provided in 29 CFR 1915.506, *Hazards of fixed extinguishing systems on board vessels and vessel sections*.

**Question 14: What are the appropriate OSHA standards related to painting activities in the shipyard environment?**

Answer: For applications involving surface preparation and preservation of vessels (ships) and vessel sections, whether the vessel is located in a large enclosed area or a dry-dock facility, the requirements of 29 CFR Part 1915, Subpart C, *Surface Preparation and Preservation* (i.e., 29 CFR 1915.31/.32/.33/.34/.35/.36) are applicable. Additionally, 29 CFR Part 1915, Subpart B, *Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment* may be applicable depending on the location of the work.

For applications involving the surface preparation and preservation of small removable/portable vessel components, appendages, assemblies, equipment, etc., when using spray booths, the requirements of 29 CFR 1910.94 and 29 CFR 1910.107 would be applicable.

**Question 15: If a building of several hundred thousand cubic feet is constructed exclusively for vessel spray painting operations, would the operation be considered a “spray area,” a “spray room” or a “spray booth?” Could this operation be classified as a “spray room” under NFPA 33? If the vessel spray painting operation complies with the requirements for a “spray room” that are set forth in NFPA 33, will OSHA consider that to be in compliance with 29 CFR 1910.94 and 29 CFR 1910.107? Will OSHA insist on a specific rate of ventilation for the constructed facility or will it be sufficient for the operator to show that levels of flammable or combustible vapors do not exceed the safe levels set forth by OSHA in 29 CFR 1926.57?**

Answer: 29 CFR Part 1915 contains occupational safety and health standards specific to shipyard employment. However, where coverage of a hazard by a 29 CFR Part 1915 standard is absent, the 29 CFR Part 1910 standards may be applied to address the hazard. The facility that you have described would be considered a “spray room” under 29 CFR 1910.94(c)(1)(iii) and NFPA 33-1969. Although 29 CFR Part 1915 addresses spray painting operations, it does not specifically address “spray rooms.” Therefore, the requirements of 29 CFR 1910.94(c) apply to associated hazards not covered by a 29 CFR Part 1915 standard. For shipyard applications involving surface preparation and preservation of vessels and vessel sections, whether the vessel is located in a large enclosed area (such as a “spray room”) or in a drydock facility, the requirements of 29 CFR Part 1915, Subpart C – *Surface Preparation and Preservation* (i.e., 29 CFR 1915.31/.32/.33/.34/.35/.36), apply. Additionally, other 29 CFR Part 1915 standards, such as 29 CFR Part 1915, Subpart B – *Confined and Enclosed Spaces and Other Dangerous Atmospheres*, may apply. With respect to specific rates of ventilation required to prevent the accumulation of flammable or combustible vapors, the OSHA shipyard employment standards do not establish ventilation rates for spray painting facilities. Instead, the 29 CFR Part 1915 standards require that levels of flammable and combustible vapors be maintained within 10% of the respective substance’s LEL. The 29 CFR 1926.57 standards for construction do not apply to shipyard employment activities.

It is the employer’s responsibility to evaluate the spray finishing operation and determine that the appropriate hazard classification (such as Class I or Class II) is used, as well as to ensure that appropriate equipment that is approved for the specific location is used.

**Question 16: 29 CFR 1915.34(a)(2), *Mechanical paint removers*, states, “All portable rotating tools used for the removal of paints, preservatives, rusts or other coatings shall be adequately guarded to protect both the operator and nearby workers from flying missiles.” Does this regulation apply to disc sanders?**

Answer: A shipyard employer using portable disc sanders for paint, preservative, rust, or other coatings removal would have to guard the operation. This could be accomplished by guarding either the sander or the complete operation.

**Question 17: 29 CFR 1915.55(f)(5), *Gas cutting and welding*, states, “Hose couplings shall be of the type that cannot be unlocked or disconnected by means of a straight pull without rotary motion.” Do Hansen® Quick Disconnect (QD) Coupling Sets provide protection that is at least equivalent to that provided by the use of coupling sets that comply with paragraph (f)(5) of 29 CFR 1915.55?**

Answer: OSHA is generally precluded from approving or endorsing specific products. The variable working conditions at job sites and possible alteration or misapplication of an otherwise safe piece of equipment could easily create a hazardous condition beyond the control of the equipment manufacturer. However, where appropriate, we try to give some guidance to help employers assess whether products are appropriate to use in light of OSHA requirements.

The Hansen® QD couplings for oxyacetylene service consist of two coupling series. The 600-Series couplings are manufactured for oxygen service and the female end is color-coded green. The 700-Series couplings are manufactured for acetylene service and the female end is color-

coded red. The 600- and 700-Series couplings are distinguishable from each other by feel (oxygen female sleeve is smooth, acetylene female sleeve is textured), and, through design, the male-to-female coupling ends are not interchangeable between coupling series.

The Hansen® QD couplings are designed to be installed so that the coupling female end is on the gas supply side of the hose. The QD couplings are connected by rotating the female sleeve alignment mark to line up with the retaining ball, pulling back the spring-loaded female sleeve, fully inserting the male end into the female end, releasing the female sleeve, and rotating the sleeve alignment mark ¼ to ½ turn from the retaining ball.

If the female sleeve is aligned to the releasing position during use, it is possible for the coupling to inadvertently become disconnected by means of a straight pull. Should this event occur, the only gas discharged from the hose would be from the hose coupling male end; there would be no danger of the hose whipping around because the female end is fitted with a spring-loaded valve that immediately closes when the male coupling end is removed. Therefore, with the male coupling end removed, no gas can flow through the female coupling end from the gas supply.

The Hansen® 600- and 700-Series QD couplings are in compliance with OSHA standards when properly installed for use. Proper installation includes having the female coupling end on the gas supply side and the female sleeve rotated so that the coupling cannot be disconnected by means of a straight pull.

**Question 18: 29 CFR 1915.71(j)(2), *Scaffolds or staging*, states, “When used with rigid supports, taut wire, or fiber rope of adequate strength may be used.” What is the definition of “taut” as used in the standard?**

Answer: “Taut” means that when a load of 200 pounds is applied in any direction at any point on the top rail, the maximum deflection will not exceed three inches in one direction including the free hanging sag in the rope or chain, and the top edge cannot drop below the minimum height required (42 to 45 inches).

**Question 19: 29 CFR 1915.72(a)(3), *Ladders*, states, “Portable ladders shall be lashed, blocked, or otherwise secured to prevent their being displaced.” What are OSHA’s requirements for “stack or scaling ladders?”**

Answer: By definition, stack or scaling ladders are portable ladders. Therefore, stack or scaling ladders would have to comply with all the requirements for portable ladders, including 29 CFR 1915.72(a)(3), and be lashed, blocked, or otherwise secured to prevent their being displaced.

**Question 20: What is the history of “U” bar guards, and can they be used to temporarily guard flush manholes opened during shipbuilding or ship repair operations?**

Answer: According to 29 CFR 1915.73(b), “When employees are working in the vicinity of flush manholes and other small openings of comparable size in the deck and other working surfaces, such openings shall be suitably covered or guarded to a height of not less than 30 inches, except where the use of such guards is made impractical by the work actually in progress.” The “U” bar guard has been widely used throughout the ship repair and shipbuilding



industry since the early 1960s as an accepted and suitable method for guarding open flush manholes when permanent guards would be impractical or when the use of a permanent guard would in itself constitute or contribute to a hazard. “U” bars and similar guards have proven to be a practical and suitable solution to various deck opening guarding problems and there have been no known serious injuries attributed to their use. OSHA continues to consider the “U” bar guard as a suitable method for temporarily guarding flush manholes opened during shipbuilding and ship repair operations.

To further clarify the use and suitable applications of “U” bar guards, the following information is provided:

- On certain vessels, particularly tankers and bulk liquid barges, there are a considerable number of manholes, inspection plates, and other deck openings such as Butterworth holes. These openings are used during construction and repair for the entry of men and materials as well as for ventilation, either forced or natural. Uncovered openings may exist for very short periods of time, such as for inspection, or may exist for longer periods of time, as during shipbuilding or major ship repairs. “U” bar guards are designed to allow for immediate installation, whereas a welded guard may take longer to fabricate than the time a manhole would be uncovered for work or for inspection.
- The “U” bar guard provides a substantial hand hold for employees entering or leaving the tank or compartment and results in a safer entry and exit, whereas a fixed periphery guard necessitates climbing over the upper rail, which contributes to the hazardous condition.
- Unsecured portable type periphery guards, similar to those used in guarding street utility manholes, would be subject to slipping and sliding on the steel deck when struck by materials or men working in the vicinity.
- A portable or fixed periphery guard would have to be removed to permit materials to be lowered or hoisted into the space, during which time no protection would be provided. In most cases, a “U” bar guard does not require removal for similar operations, thus providing the greatest amount of protection to the employee.
- In tanker and liquid barge repair, where manhole access is necessary into those tanks classified by the Marine Chemist as “Safe for Workers, Not Safe for Hot Work,” and where no hot work is permitted, the “U” bar guard is particularly suitable in that no hot work is required for its installation.
- Due to the configuration and standardization of the “U” bar guard, safe storage and handling is achieved, reducing the likelihood of injury.
- Recognizing that manholes are generally of standard size, as are bolt and thread sizes, “U” bar guards designed and fabricated in conformity with general manhole size standards can be used consistently from vessel to vessel, thereby heightening their acceptability and ready use.

**Question 21: Are there safety rules or regulations outlining the safety of personnel while using rolling gangways?**

Answer: Gangways are covered by OSHA regulations for shipyard employment under 29 CFR 1915.74, *Access to vessels*.

The following documents contain useful safety and design information pertaining to rolling gangways on vessels:

- International Labor Organization (ILO) Publication – *ILO Code of Practice, “Safety and Health in Ports,” 2005-Section 3.4, Shore Side Access to Ships*;
- Det Norske Veritas (DNV) Standard - NS 6249;
- International Standards Organization - ISO 5488; and
- [U.S. Coast Guard Safety Alert – Gangplanks A Vital Area For Safety.](#)

**Question 22: Are employees required to use fall protection while erecting, dismantling, or making alterations to scaffolds in excess of five feet in height in ship repairing or shipbuilding operations?**

Answer: Yes. According to 1915.71(b)(7), “No scaffold shall be erected, moved, dismantled or altered except under the supervision of competent persons.” Therefore, a competent person must be capable of recognizing and evaluating an employee’s exposure to the hazards involved and be capable of specifying when and how protective measures must be taken to protect against a fall.

The intent of 1915.71(b)(7) is to require employees engaged in erecting, moving, dismantling, or altering scaffolds to be secured at all times by wearing a safety harness and lifeline when feasible. The approval of the scaffold manufacturer should be obtained prior to allowing a lifeline to be secured to the scaffold frame.

**Question 23: Are Ground-Fault Circuit Interrupters (GFCIs) required on temporary lighting circuits on vessels?**

Answer: Temporary lighting circuits are covered by 29 CFR Part 1915 and some aspects of the 29 CFR Part 1910, General Industry Standard, including 29 CFR Part 1910, Subpart S, Electrical. Neither of these standards requires the employer to use a ground-fault circuit interrupter. However, proper adherence to the grounding requirements in this standard would prevent employee exposure to electrocution hazards.

**Question 24: 29 CFR 1915.94, *Work in confined or isolated spaces*, states, “When any work is performed in a confined space...or when an employee is working alone in a isolated location, frequent checks shall be made to ensure the safety of the employees.” Can an electronic device that monitors the employee in a confined space or an isolated location by sending a periodic “check-in” tone that the employee must respond to, along with satellite tracking of the employee’s location, qualify as a frequent check?**

Answer: Yes. Such a system would meet the intent of the standard. (NOTE: The preferred method is a physical check.)

**Question 25: 29 CFR 1915.98(b) states, “The first aid kit shall consist of a weatherproof container with individual sealed packages for each type of item.” “Unit-type kits” have all items in the first aid kit individually wrapped, sealed, and packaged in comparable size packages. “Commercial or cabinet-type kits” require only those items that must be kept sterile to be individually wrapped and sealed. The items in the commercial or cabinet-type kit are not necessarily of uniform size. Are commercial or cabinet-type first aid kits acceptable for compliance with 29 CFR 1915.98(b)?**

Answer: Items such as scissors, tweezers, tubes of ointment, or adhesive tape need not be individually wrapped, sealed, or disposed of after a single application. Individual packaging and sealing should be required only for those items that must be kept sterile in a first aid kit as recommended by a consulting physician. Commercial or cabinet-type first aid kits, as well as unit-type first aid kits, meet the requirements of 29 CFR 1915.98(b).

**Question 26: Section 1915.111(a) states, “All gear and equipment provided by the employer for rigging and materials handling shall be inspected before each shift and when necessary, at intervals during its use to ensure that it is safe. Defective gear shall be removed and repaired or replaced before further use.” When conducting a visual inspection of a sheave on a crane or derrick, how is this done and what needs to be looked at? Should the wire rope also be looked at during the visual inspection of the sheaves? When should a sheave be replaced?**

If a visual inspection of a sheave on a crane or derrick identifies a condition that has not been previously assessed by the employer, such as corrugation or an unusual wear pattern on the sheave, then a sheave gauge (groove gauge) must be used to accurately assess the wear pattern and the amount of wear to the sheave. Although corrugation (in and of itself as a surface condition) may only cause accelerated wear of the wire rope, it is an indicator that more significant and possibly unsafe sheave component wear conditions may be present.

When excessive component wear is found to exist on a sheave, particular attention should be given to inspecting for distortion and damage to the core of the wire rope. For instance, a wear pattern that is deep and narrow (resulting in a smaller diameter groove) can pinch the wire rope, cause permanent wire rope distortion, and crush the wire rope core. Also, a sheave wear pattern that forms a progressively larger groove diameter may provide insufficient groove contour support (groove diameter too large for the wire rope diameter), cause the wire rope to flatten and become distorted, and result in an increase in the bending fatigue of the wire rope.

Core failure can be checked by diameter measurement (diameter is reduced with core deterioration), or by length of lay measurement (core damage can result in an increase in lay length). Wire ropes that do not meet applicable requirements must be immediately removed from service. A sheave with excessive component wear must be replaced or reconditioned when the wire rope is replaced.

**Question 27: 29 CFR 1915.112(b)(4) states, “Wire rope shall not be secured by knots.” Is it ever acceptable in shipyard employment to secure a wire rope by the use of knots?**

Answer: No. Securing a wire rope by the use of knots is strictly prohibited in shipyard employment.

**Question 28: What are the certification requirements for cranes located in a shipyard, both floating and shore-based?**

Answer: As stated in 29 CFR 1915.115(a)(1), “Derricks and cranes which are part of, or regularly placed aboard barges, other vessels, or on the wingwalls of floating drydocks, and are used to transfer materials or equipment from or to a vessel or drydock, shall be tested and certificated in accordance with the standards provided in 29 CFR Part 1919 by persons accredited for the purpose.” Consequently, all shipyard *floating* derricks and cranes that service a vessel or drydock are subject to certification under 29 CFR 1915.115(a)(1). These certifications must be performed by persons accredited for this purpose (i.e., accredited for “full-function vessels” or “floating cranes and derricks” as appropriate) and conducted in accordance with the requirements of 29 CFR Part 1919, *Gear Certification*.

Shipyard *shore-based* derricks and cranes are not required to be certificated in accordance with 29 CFR Part 1919. However, OSHA has a longstanding policy of encouraging shipyard employers to certify shore-based derricks and cranes in accordance with 29 CFR Part 1919, particularly those that service vessels and vessel sections.

Additional guidance regarding 29 CFR Part 1919 accreditation and certification requirements can be found in [CPL 02-01-039](#), *Enforcement of Cargo Gear Regulations and the Requirements for Gear Certification in the Maritime Program*, dated March 24, 2003.

**Question 29: What are the acceptable methods for reconditioning wire rope sheaves on cranes and derricks? Can defective sheaves be reconditioned using portable hand tools?**

Answer: For sheave grooves that can be reconditioned (such as iron, steel, and manganese steel), such reconditioning must be performed within the design tolerances allowed for by the manufacturer. The method of reconditioning must provide for the proper groove size, correct groove contour, proper surface condition, and consistent roundness (concentricity) of the sheave. Turning sheave grooves (re-machining) is an acceptable method of reconditioning, provided that the original manufacturer’s repair procedures and specifications are followed. Grinding defective sheave grooves with portable hand tools is not an acceptable method of reconditioning sheaves.

**Question 30: Can slings other than those specifically mentioned in 29 CFR 1915.112 and 29 CFR 1915.118 be used?**

Answer: The shipyard standard contains requirements for manila rope, wire rope, and chain slings. The use of other types of slings is not prohibited. When other types of slings are used, the employer must adhere to the manufacturer’s ratings and use recommendations and have such ratings available for inspection.

**Question 31: 29 CFR 1915.135, *Powder actuated fastening tools*, does not appear to address tools that are fed by a magazine. When are magazine-fed, powder-actuated fastening tools considered safe for inspection?**

Answer: In developing and promulgating the standard, the magazine- or clip-fed explosive powder load was not considered. A magazine contains several explosive powder loads and is inserted into the tool; single loads are fed into the ram (firing chamber) as needed. When magazine-fed tools are inspected, the tool is not considered loaded until the magazine feeds an explosive powder load into the tool. A magazine-fed powder-actuated fastening tool is considered safe for inspection when the tool is not loaded, and the magazine is not attached to the tool or has been verified to be empty.

**Question 32: Can boatyards follow OSHA’s General Industry *Permit-Required Confined Spaces* standard, 29 CFR 1910.146, for employee entry into confined or enclosed spaces on vessels that previously contained diesel fuel, to do hot work?**

Answer: No. The *Scope and application* section of OSHA’s General Industry *Permit-Required Confined Spaces* standard, 29 CFR 1910.146(a), prohibits the application of this standard to shipyard (and boatyard) employment. The requirements for entry into a confined or enclosed space on a vessel for the purpose of doing hot work are found in 29 CFR Part 1915, Subpart B. This standard requires, in part, testing and certification of the confined or enclosed spaces by a Marine Chemist or Coast Guard authorized person as “Safe for Hot Work.”

**Question 33: Protective clothing is required for welders by the 29 CFR 1910.252(b)(3) *General Industry* standard and the 29 CFR 1926.350(j) *Construction* standard. What standard applies for welders in shipyard employment with respect to protective clothing?**

Answer: The applicable standard provisions in shipyard employment that require protective clothing are 29 CFR 1915.152, *General requirements*, 1915.157, *Hand and body requirements*, 1915.51(e), *Inert-gas metal-arc welding*, and 1915.51(f), *General welding, cutting, and heating*. Paragraph 29 CFR 1915.152(a) requires that the employer provide and ensure that each affected employee uses the appropriate personal protective equipment (PPE). Paragraph 29 CFR 1915.152(b) also requires that the employer assess the work activity to determine whether there are hazards present, or likely to be present, which necessitate employee use of PPE and select the type of PPE that will protect the affected employee(s), communicate selection decisions to affected employees, select PPE that fits each affected employee, and verify that the required occupational hazard assessment has been performed and documented. Paragraph 29 CFR 1915.157, *Hand and body protection*, requires the use of protective clothing including protection for “thermal burns.”

**Question 34: Can individual employees engaged in shipyard employment be exempt from the requirement to wear head protection in areas where there is a hazard from falling objects for religious reasons?**

Answer: OSHA will grant an exemption from citations to employers of employees in all industries who, for reasons of personal religious convictions, object to wearing hardhats in the

workplace. However, there could be circumstances that would involve a hazard sufficiently grave to raise a compelling government interest for requiring the wearing of hardhats, notwithstanding an individual employee's personal religious convictions. Specific guidance is provided by [STD 01-06-005](#), *Exemption for Religious Reason from Wearing Hard Hats*, dated June 20, 1994.

**Question 35: 29 CFR 1915.158(a)(1), *Personal flotation devices (PFDs)*, states, “PFDs (life preservers, life jackets, and work vests) worn by each affected employee shall be United States Coast Guard (USCG) approved pursuant to 46 CFR Part 160 (Type I, II, III, or V PFD) and marked for use as a work vest, for commercial use, or for use on vessels.” Can a Type V hybrid life belt, which is equivalent to a Type III PFD, meet the requirements of the standard?**

Answer: All hybrid PFDs that are approved by the U.S. Coast Guard have specific restrictions with respect to their approved use. For Type V hybrid PFDs, the USCG can grant type approval as either a recreational hybrid or a commercial hybrid. A recreational hybrid PFD is approved for use for recreational purposes. A commercial hybrid PFD is approved for use on commercial vessels and occupational purposes.

Each PFD is specifically marked with text that includes the type of approval for use and any restrictions which apply. OSHA accepts USCG devices approved as a Type I PFD, Type II PFD, Type III PFD, or Type V PFD, or their equivalent if the restrictions marked on the PFD do not preclude its use. A Type V hybrid PFD marked as a “Recreational Hybrid” or “For Recreational Use” would not be in compliance with federal OSHA standards since the PFD is approved only for recreational use, and not for commercial use or use as a work vest. A Type V hybrid PFD marked for “Commercial Use,” “Use as a Work Vest,” “Approved for All Vessels,” or “Approved for Merchant Service” would be recognized as being in compliance with federal OSHA standards.

**Question 36: 29 CFR 1915.181 contains provisions for the control of electrical energy sources during shipbuilding and ship repair, but not shipbreaking. What electrical energy control regulations would be specifically applicable to shipbreaking?**

Answer: With the exception of 29 CFR Part 1910, Subpart S, as applicable (see next reply), there are no energy control regulations specifically applicable to shipbreaking, other than the grounding and overcurrent protection requirements in 29 CFR 1915.93 *Utilities*, and 29 CFR 1915.132 *Portable electric tools*.

**Question 37: Do the *General Industry* standards, 29 CFR 1910.302 through 1910.308, and 29 CFR 1910.331 through 1910.335, apply to shipyard work?**

Answer: OSHA standards 29 CFR 1910.302 through 1910.308 are applicable to shipyard employment on shore. On vessels, these standards are applicable when shore-based electrical installations provide power for use aboard vessels (i.e., the power for the electrical system comes from shore or from portable electrical generators that are either ashore or placed on a vessel); these standards do not apply to wiring permanently installed in vessels. OSHA standards 29 CFR 1910.331 through 1910.335 apply on shore for both “qualified” persons (those who have

training in avoiding the electrical hazards of working on or near exposed energized parts) and “unqualified” persons (those with little or no such training). On vessels, these provisions cover all electrical safety-related work practices for “unqualified” persons, including temporary electrical systems and the vessel’s permanently installed electrical systems. Also, on vessels, these provisions apply to electrical safety-related work practices for “qualified” persons when shore-based electrical installations provide power for use aboard vessels; these provisions do not apply to “qualified” persons working on the vessel’s permanently installed electrical system. Additional guidance related to 29 CFR Part 1910, Subpart S, standards can be found in Appendix A of this directive.

**Question 38: On September 15, 2004, OSHA published in the Federal Register, 29 CFR Part 1915 – Fire Protection in Shipyard Employment; Final Rule. This final rule became effective on December 14, 2004. Does the Burning Hose Identification & Security Device (BHISD) comply with the provisions stated in 29 CFR 1915.503(b)(2)(iv)?**

Answer: OSHA is generally precluded from approving or endorsing specific products. The variable working conditions at job sites and possible alteration or misapplication of an otherwise safe piece of equipment could easily create a hazardous condition beyond the control of the equipment manufacturer. However, where appropriate, we try to give some guidance to help employers assess whether products are appropriate to use in light of OSHA requirements.

Based on the information submitted, our evaluation of the BHISD sample and the manufacturers’ Safety Operating Procedure (MCS-003) dated June 22, 2004, this device, if used in accordance with the MCS-003 procedure, would appear to satisfy OSHA’s provisions stated in 29 CFR 1915.503(b)(2)(iv).

**Question 39: Has OSHA provided any interpretations related to the 29 CFR Part 1915 – Fire Protection in Shipyard Employment; Final Rule, other than Question #38 of this directive?**

Answer: Yes. In addition to Question 38 above, additional interpretations related to shipyard fire protection are provided in Appendix C of this directive, *Fire Protection in Shipyard Employment* (29 CFR Part 1915, Subpart P).

**Question 40: 29 CFR 1915.1001(a), Scope and application, states, “This section regulates asbestos exposure in all shipyard employment work as defined in 29 CFR Part 1915.” What guidance is available for OSHA compliance officers and industry employers to assist with the application and enforcement of this standard?**

Answer: Assistance with the application and enforcement of the requirements of 29 CFR 1915.1001 can be found in [CPL 02-02-063](#), *Inspection Procedures for Occupational Exposure to Asbestos Final Rule, 29 CFR Parts 1910.1001, 1926.1101, and 1915.1001*, November 3, 1995.

**Question 41: Does OSHA view wallboard panels and joint compound as a composite building system as does the Environmental Protection Agency (thus allowing for a composite of the bulk sample analysis of the multiple layers)?**



Answer: In interpreting the definition of asbestos-containing material (ACM) presented at 29 CFR 1915.1001(b), OSHA regards each of these items used to construct wall shells from wallboard panels as separate materials. Each of the materials that may contain asbestos must be analyzed separately for its asbestos content. If any of these materials contain more than 1 percent asbestos, then the work practices specified in the standard must be followed if the wallboard panels are removed.

**Question 42: What class of asbestos work would be involved if the only material containing asbestos greater than 1 percent is the joint compound?**

Answer: Removal of [interior] wall shells constructed with sheet rock panels is Class II asbestos work. OSHA does not consider joint compound to be a surfacing material. As indicated on page 41032 of Federal Register [59:40964 – 59:41162](#), August 10, 1994, joint compound is finishing material. Note that if surfacing material containing more than 1 percent asbestos was applied to the sheet rock panels, removal of the panels would be considered Class I asbestos work.

**Question 43: Does the 60-x-60 inch glove bag limit apply to Class I asbestos abatement work?**

Answer: There are glove bags available that are larger than the 60-x-60 inch size listed in the definition section of the standard. The 60-x-60 inch limit is intended for Class III abatement work only. Class III abatement work includes glove bags for which the debris area cannot exceed that which normally fits into a 60-x-60 inch disposal bag. A repair activity that involves the “disturbing” of ACM that cannot be contained in one standard glove bag must be considered Class I work. For Class I work there is no size limitation for glove bags. The standard does allow for the use of glove bags for various job classes. See pages C-12 and C-13 of [CPL 02-02-063](#), *Inspection Procedures for Occupational Exposure to Asbestos Final Rule, 29 CFR Parts 1910.1001, 1926.1101, and 1915.1001*, November 3, 1995.

**Question 44: Are controls available for monitoring a recirculation system as specified under 29 CFR 1910.1025(e)(4)(ii) of OSHA’s lead standard?**

Answer: Various devices are available that monitor the effectiveness of a system for recirculating air in a workplace where there is lead exposure.

**Question 45: 29 CFR 1915.1027, *Cadmium*, states at 29 CFR 1910.1027(l) *Medical surveillance*, “Biological monitoring that includes the following tests: (1) Cadmium in urine (CdU), standardized to grams of creatinine (g/Cr); (2) Beta-2 microglobulin in urine (B2-M), standardized to grams of creatinine (g/Cr), with pH specified, as described in appendix F of this section; and (3) Cadmium in blood (CdB), standardized to liters of whole blood (lab).” What urine sampling issues can be expected to affect accuracy for the detection of cadmium exposures?**

Answer: Standard medical practice specifies that when specific gravity is low (for example, less than 1.008), urine samples are too dilute for accurate laboratory analysis. Epidemiological studies of cadmium-induced renal damage, summarized in the preamble to the final cadmium standards, specify that Beta-2 microglobulin (B2-M) will degrade in acidic urine, with pH less



than 5.5. Since both cadmium in urine (CdU) and B2-M are standardized to grams of creatinine (CRT), artificially low CRT will inflate CdU and B2-M calculations.

**Question 46: Do shipyard employers need to maintain Material Safety Data Sheets (MSDSs) for welders working on vessels?**

Answer: Any process, including welding, capable of resulting in employee exposure to hazardous chemicals is covered by the *Hazard Communication* standard. Welders in shipyards must have access to an MSDS for each type of metal and welding rod used, and any other chemical to which they are or may be exposed.

**Question 47: When temporary employees are procured from a temporary employment agency, what are the shipyard employer's obligations under the OSH Act?**

Answer: In general, situations where a temporary employment agency maintains a continuing relationship with its employees, but the shipyard (the client) creates and controls the hazards, there is a shared responsibility for assuring that the temporary employees are protected from the hazards under the OSH Act. Since the shipyard (the client) creates and controls the hazards, the shipyard has the primary responsibility for such protection. These situations are heavily fact-based; much of the interpretation depends upon the specific facts and circumstances of a particular situation and workplace.

The shipyard may specify what qualifications are required for employees supplied by the temporary employment agency, including medical screening (for respirator use), fit testing, and training in specific chemicals or personal protective equipment (PPE). The shipyard would be responsible for providing PPE for site-specific hazards to which employees may be exposed. However, again, the shipyard may specify the service it wants the temporary employment agency to supply, including provision of PPE for the placed employees.

Where temporary employees are assigned tasks that require medical monitoring, the shipyard must ensure that the required medical surveillance or evaluation is performed, either as part of the shipyard's program or by the temporary employment agency. The temporary employment agency must ensure that the required medical surveillance or evaluation records are maintained in accordance with appropriate OSHA standards.

As for the recordkeeping requirements, shipyards that use employees from temporary employment agencies are responsible for recording those employees' occupational injuries and illnesses when the shipyard provides day-to-day supervision. Otherwise, the temporary employment agency is responsible for maintaining the log of work-related injuries and illnesses.

# **Appendix C: Fire Protection in Shipyard Employment (29 CFR Part 1915, Subpart P)**

## **Answers to Frequently Asked Questions (FAQs) Regarding the Application of 29 CFR Part 1915, Subpart P**

The purpose of OSHA's *Fire Protection in Shipyard Employment* standard, 29 CFR Part 1915, Subpart P, is to increase the protection of shipyard employment employees from fire hazards. Such employees are exposed to a high risk of injury and death from fires and explosions during ship repair, shipbuilding, shipbreaking and related firefighting work activities. The final rule was published on September 15, 2004 and became effective December 14, 2004. This final rule and the associated *Preamble* (provides detailed explanation of the rule) is available at Federal Register [69:55667 – 69:55708](#), September 15, 2004.

OSHA requirements are set by statute, standards, and regulations. Our interpretations explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. These responses constitute OSHA's interpretations of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

This appendix provides additional guidance, in a question and answer format, about OSHA's *Fire Protection in Shipyard Employment* standard, 29 CFR Part 1915, Subpart P. The FAQs are divided into three sections: general questions, fire watch questions, and questions about fuel gas and oxygen supply lines.

### A. General Questions

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

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

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

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

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

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

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

Yes. However, under OSHA's *de minimis* policy, where OSHA has adopted an earlier consensus standard, employers who are in compliance with the updated version will not be cited for a violation of the old version as long as the new one is at least equally protective (OSHA Field Inspection Reference Manual, [CPL 02-00-103](#)). OSHA has reviewed the newer NFPA standards in the following table and found that they all provide equal or greater protection than the NFPA standards incorporated in the OSHA rule. Therefore, employers will not be cited for using the newer NFPA standards in the table. OSHA is updating the shipyard fire protection standard to incorporate these newer NFPA standards.

| Section                      | Paragraph | NFPA Standards Currently Incorporated by Reference in Subpart P of 29 CFR Part 1915                    | Latest Version of NFPA Standard   |
|------------------------------|-----------|--|---|
| 1915.505<br>Fire<br>Response | (e)(3)(v) | NFPA 1981-1997 <i>Standard on Open-Circuit Self-Contained Breathing Apparatus for the Fire Service</i> | NFPA 1981-2002 <i>Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services</i> |

|  |        |   |   |
|--|--------|---|---|
| 1915.507<br>Land-side<br>fire<br>protection<br>systems | (b)(1) | NFPA 10-1998 <i>Standard for Portable Fire Extinguishers</i>                                      | NFPA 10-2002 <i>Standard for Portable Fire Extinguishers</i>                    |
|  | (c)(6) | NFPA 72-1999 <i>National Fire Alarm Code</i>  | NFPA 72-2002 <i>National Fire Alarm Code</i>                                    |
|  | (d)(1) | NFPA 14-2000 <i>Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems</i> | NFPA 14-2003 <i>Standard for the Installation of Standpipe and Hose Systems</i> |
|  | (d)(2) | NFPA 13-1999 <i>Standard for the Installation of Sprinkler Systems</i>                            | NFPA 13-2002 <i>Standard for the Installation of Sprinkler Systems</i>          |
|  |        | NFPA 750-2000 <i>Standard on Water Mist Fire Protection Systems</i>                               | NFPA 750-2003 <i>Standard on Water Mist Fire Protection Systems</i>             |
|  | (d)(3) | NFPA 11-1998 <i>Standard for Low-Expansion Foam</i>   | NFPA 11-2005 <i>Standard for Low-, Medium-, and High-Expansion Foam Systems</i> |
|  |        | NFPA 11A-1999 <i>Standard for Medium- and High-Expansion Foam Systems</i>                         |   |
|  | (d)(5) | NFPA 12A-1997 <i>Standard on Halon 1301 Fire Extinguishing Systems</i>                            | NFPA 12A-2004 <i>Standard on Halon 1301 Fire Extinguishing Systems</i>          |
|  |        | NFPA 12-2000 <i>Standard on Carbon Dioxide Extinguishing Systems</i>                              | NFPA 12-2005 <i>Standard on Carbon Dioxide Extinguishing Systems</i>            |
|  |        | NFPA 2001-2000 <i>Standard on Clean Agent Fire Extinguishing Systems</i>                          | NFPA 2001-2004 <i>Standard on Clean Agent Fire Extinguishing Systems</i>        |

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

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

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

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

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

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

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

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

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

The standard requires four levels of training that become more complex for employees who are expected to perform more sophisticated fire response and suppression. The training that must be performed includes evacuation procedures for all employees, basic firefighting for employees who may be called upon to fight incipient stage fires,

additional firefighting training for fire watch employees, and advanced training for fire response employees. The details of each type of training can be found in 1915.508.

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

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

### B. Fire Watch Questions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

No. If the charged hose line (any hose line that is connected to the manifold and filled with gas) is going to be left unattended for more than 15 minutes, the employer can either roll back the hose lines to open air or disconnect the lines at the manifold to allow the gas to discharge. If the hose lines are left in place and disconnected at the manifold, then the employer is required to make sure that the hose lines are given a positive means of identification to keep them from being improperly reconnected. When the hose lines are reconnected, they must be tested to ensure their integrity before the work can resume.

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

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

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

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

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