

Oregon OSHA – Adopted Changes to  
Eye and Face Protection Consensus Standards in  
General Industry, Construction, and Maritime Activities

Oregon OSHA Administrative Order 3-2016  
Filed September 7, 2016, effective September 7, 2016

Text removed is in [~~brackets with line through~~].

Text added is in **bold and underline**.

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DIVISION 2, GENERAL INDUSTRY

Division 2/A, General

437-002-0005

Adoption by Reference. In addition to, and not in lieu of, any other safety and health codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, 29 CFR 1910, in the Federal Register:

- (1) 29 CFR 1910.1, Purpose and scope; published 6/27/74, Federal Register, vol. 39, no. 125, p. 23503.
- (2) 29 CFR 1910.2, Definitions; published 6/27/74, Federal Register, vol. 39, no. 125, p. 23503.
- (3) 29 CFR 1910.3, Petitions for the issuance, amendment, or repeal of a standard; published 6/27/74, Federal Register, vol. 39, no. 125, p. 23503.
- (4) 29 CFR 1910.4, Amendments to this part; published 6/27/74, Federal Register, vol. 39, no. 125, p. 23503.
- (5) 29 CFR 1910.5, Applicability of standards; published 6/30/93, FR vol. 58, no. 124, p. 35308.
- (6) 29 CFR 1910.6, Incorporation by reference; published ~~6/13/13, FR vol. 78, no. 114, p. 35559; 11/6/13, FR vol. 78, no. 215, p. 66641~~ **3/25/16, FR vol. 81, no. 58, p. 16085**.
- (7) 29 CFR 1910.7, Definition and requirements for a Nationally Recognized Testing Laboratory; published 5/11/88, FR vol. 53, no. 91, p. 16838.
- (8) 29 CFR 1910.9, Compliance duties owed to each employee; published 12/12/08, Federal Register, vol. 73, no. 240, pp. 75568-75589.

These standards are on file at the Oregon Occupational Safety and Health Division, Oregon Department of Consumer and Business Services, and the United States Government Printing Office.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stat. Implemented: ORS 654.001 through 654.295.

Hist: APD Admin. Order 17-1988, f. 11/10/88, ef. 11/10/88.

OR-OSHA Admin. Order 4-1997, f. 4/2/97, ef. 4/2/97.  
OR-OSHA Admin. Order 8-1999, f. 8/6/99, ef. 8/6/99.  
OR-OSHA Admin. Order 4-2005, f. 12/14/05, ef. 12/14/05.  
OR-OSHA Admin. Order 4-2007, f. 8/15/07, ef. 8/15/07.  
OR-OSHA Admin. Order 7-2008, f. 5/30/08, ef. 5/30/08.  
OR-OSHA Admin. Order 5-2009, f. 5/29/09, ef. 5/29/09.  
OR-OSHA Admin. Order 1-2010, f. 2/19/10, ef. 2/19/10.  
OR-OSHA Admin. Order 2-2010, f. 2/25/10, ef. 2/25/10.  
OR-OSHA Admin. Order 4-2011, f. 12/8/11, ef. 12/8/11.  
OR-OSHA Admin. Order 5-2012, f. 9/25/12, ef. 9/25/12.  
OR-OSHA Admin. Order 7-2012, f. 12/14/12, ef. 12/14/12.  
OR-OSHA Admin. Order 7-2013, f. 12/12/13, ef. 12/12/13.  
**OR-OSHA Admin. Order 3-2016, f. 9/7/16, ef. 9/7/16.**

1910.6 Incorporation by reference.

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~~[(69) ANSI Z87.1-2003, American National Standard Practice for Occupational and Educational Eye and Face Protection; IBR approved for §§ 1910.133(b)(1)(i) and 1910.252(b)(2)(ii)(I)(1). Copies of ANSI Z87.1-2003 are available for purchase only from the American Society of Safety Engineers, 1800 East Oakton Street, Des Plaines, IL 60018-2187; telephone: 847-699-2929; or from the International Safety Equipment Association (ISEA), 1901 North Moore Street, Arlington, VA 22209-1762; telephone: 703-525-1695; fax: 703-528-2148; Web site: <http://www.safetyequipment.org>.]~~

**(69) ANSI/ISEA Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices, Approved April 13, 2010; IBR approved for § 1910.133(b). In Oregon, OAR 437-002-0134 applies. Copies are available for purchase from:**

**(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642-4980; Web site:**

**<http://webstore.ansi.org/>;**

**(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413-5184; Web site: <http://global.ihs.com>; or**

**(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699-9277; Web site: <http://techstreet.com>.**

~~[(70) ANSI Z87.1-1989 (R-1998), American National Standard Practice for Occupational and Educational Eye and Face Protection; IBR approved for § 1910.133(b)(1)(ii). Copies of ANSI Z87.1-1989 (R-1998) are available for purchase only from the American Society of Safety Engineers, 1800 East Oakton Street, Des Plaines, IL 60018-2187; telephone: 847-699-2929.]~~

**(70) ANSI Z87.1-2003, Occupational and Educational Eye and Face Personal Protection Devices Approved June 19, 2003; IBR approved for §§ 1910.133(b). In Oregon, OAR 437-002-0134 applies. Copies available for purchase from the:**

**(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642-4980; Web site:**

**<http://webstore.ansi.org/>;**

- (ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413-5184; Web site: <http://global.ihs.com>; or**  
**(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699-9277; Web site: <http://techstreet.com>.**

~~[(71) ANSI Z87.1-1989, American National Standard Practice for Occupational and Educational Eye and Face Protection; IBR approved for § 1910.133(b)(1)(iii). Copies of ANSI Z87.1-1989 are available for purchase only from the American Society of Safety Engineers, 1800 East Oakton Street, Des Plaines, IL 60018-2187; telephone: 847-699-2929.]~~

**(71) ANSI Z87.1-1989 (R-1998), Practice for Occupational and Educational Eye and Face Protection, Reaffirmation approved January 4, 1999; IBR approved for § 1910.133(b). In Oregon, OAR 437-002-0134 applies. Copies are available for purchase from:**

- (i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642-4980; Web site: <http://webstore.ansi.org/>;**  
**(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413-5184; Web site: <http://global.ihs.com>; or**  
**(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699-9277; Web site: <http://techstreet.com>.**

## Division 2/I, Personal Protective Equipment

437-002-0134 Personal Protective Equipment.

Application. This rule applies to personal protective equipment and other protective equipment for the eyes, face, head, extremities and torso to include protective clothing, respiratory devices, and protective shields and barriers, wherever employees encounter hazardous processes or environments, chemical hazards, radiological hazards, or mechanical irritants that are capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

Note: The assessment for eyes, face, head, hands, and feet are currently in effect. The torso and extremities (e.g. arms and legs) element of the body assessment will not be enforced until July 1, 2012.

- (1) Hazard assessment and equipment selection.
- (a) The employer must assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE) or other protective equipment. If such hazards are present, or likely to be present, the employer must:
    - (A) Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment;
      - (i) All protective equipment must be of safe design and construction for the work to be performed.
      - (ii) Protective equipment must be worn and used in a manner which will make full use of its protective properties.

- (B) Communicate selection decisions to each affected employee; and,
- (C) Select PPE that properly fits each affected employee.

NOTE: Non-mandatory Appendix B contains an example of procedures that would comply with the requirement for a hazard assessment.

- (b) The employer must verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date(s) of the hazard assessment; and, which identifies the document as a certification of hazard assessment.

## (2) Equipment.

- (a) Where employees provide their own protective equipment, the employer is responsible to assure its adequacy, including proper maintenance, and sanitation of such equipment.
- (b) All personal protective equipment must be provided, used, and maintained in a sanitary and reliable condition.
- (c) Defective or damaged personal protective equipment must not be used.
- (d) Each employer must maintain a regular system of inspection and maintenance of personal protective equipment furnished to workers.

## (3) Training.

- (a) The employer must provide training to each employee who is required by this section to use PPE and each employee that is provided training must know at least the following:
  - (A) When PPE is necessary;
  - (B) What PPE is necessary;
  - (C) How to properly don, doff, adjust, and wear PPE;
  - (D) The limitations of the PPE; and,
  - (E) The proper care, maintenance, useful life and disposal of the PPE.
- (b) Each affected employee must demonstrate an understanding of the training specified in paragraph (3)(a) of this section, and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.
- (c) When the employer has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by paragraph (3)(b) of this section, the employer must retrain each such employee. Circumstances where retraining is required include, but are not limited to situations where:
  - (A) Changes in the workplace render previous training obsolete; or
  - (B) Changes in the types of PPE to be used render previous training obsolete; or
  - (C) Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill.

## (4) Payment for protective equipment.

- (a) Except as provided by paragraphs (4)(b) through (4)(f) of this section, the protective equipment, including personal protective equipment (PPE), used to comply with this part, must be provided by the employer at no cost to employees.
- (b) The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site.
- (c) When the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse the employee for the shoes or boots.
- (d) The employer is not required to pay for:

- (A) The logging boots required by OAR 437-007-0330 in Division 7.
- (B) Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or
- (C) Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.
- (e) The employer must pay for replacement PPE, except when the employee has lost or intentionally damaged the PPE.
- (f) Where an employee provides adequate protective equipment he or she owns pursuant to paragraph (2)(a) of this section, the employer may allow the employee to use it and is not required to reimburse the employee for that equipment. The employer must not require an employee to provide or pay for his or her own PPE, unless the PPE is excepted by paragraphs (4)(b) through (4)(e) of this section.

(5) Fall Protection.

- (a) All employees must be protected from fall hazards when working on unguarded surfaces more than 10 feet above a lower level or at any height above dangerous equipment.
- (b) The employer must ensure that fall protection systems are provided, installed, and used according to the criteria in 1926.502(d), and 437-003-0502 in Division 3/M, Construction/Fall Protection.

(6) Work Clothing.

- (a) Clothing must be worn which is appropriate to the work performed and conditions encountered.
- (b) Appropriate high temperature protective clothing must be worn by workers who are exposed to possible contact with molten metals or other substances that can cause burns.
- (c) Loose sleeves, ties, lapels, cuffs, or other loose clothing must not be worn near moving machinery.
- (d) Clothing saturated or impregnated with flammable liquids, corrosive or toxic substances, irritants, or oxidizing agents must be removed immediately and not worn again until properly cleaned.
- (e) Rings, wristwatches, earrings, bracelets, and other jewelry which might contact power driven machinery or electric circuitry, must not be worn.

(7) High Visibility Garments. Employees exposed to hazards caused by on highway type moving vehicles in construction zones and street/highway traffic must wear highly visible upper body garments. The colors must contrast with other colors in the area sufficiently to make the worker stand out. Colors equivalent to strong red, strong orange, strong yellow, strong yellow-green or fluorescent versions of these colors are acceptable. During hours of darkness, the garments must also have reflective material visible from all sides for 1000 feet.

(8) Eye And Face Protection.

- (a) The employer must ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.
- (b) The employer must ensure that each affected employee uses eye protection that provides side protection when there is a hazard from flying objects. Detachable side

protectors (e.g., clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable.

(c) The employer must ensure that each affected employee who wears prescription lenses while engaged in operations that involve eye hazards wears eye protection that incorporates the prescription in its design, or shall wear eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses.

(d) Eye and face PPE must be distinctly marked to facilitate identification of the manufacturer.

(e) The employer must ensure that each affected employee uses equipment with filter lenses that have a shade number appropriate for the work being performed for protection from injurious light radiation. The following is a listing of appropriate shade numbers for various operations.

Filter Lenses for Protection Against Radiant Energy

Operations	Electrode Size 1/32 in.	Arc Current (amps)	Minimum* Protective Shade
Shielded metal arc welding	Less than 3	Less than 60	7
	3-5	60-160	8
	5-8	160-250	10
	More than 8	250-550	11
Gas metal arc welding and flux cored arc welding		Less than 60	7
		60-160	10
		160-250	10
		250-500	10
Gas Tungsten arc welding		Less than 50	8
		50-150	8
		150-500	10
Air carbon Arc cutting	(Light)	Less than 500	10
	(Heavy)	500-1000	11
Plasma arc welding		Less than 20	6
		20-100	8
		100-400	10
		400-800	11
Plasma arc cutting	(Light) **	Less than 300	8
	(Medium) **	300-400	9
	(Heavy) **	400-800	10
Torch brazing		.....	3
Torch soldering		...	2
Carbon arc welding		.....	14
		...	
		.....	

### Filter Lenses for Protection Against Radiant Energy

Operations	Plate thickness – inches	Plate thickness – mm	Minimum* Protective Shade
<b>Gas Welding:</b>			
Light	Under 1/8	Under 3.2	4
Medium	1/8 to 1/2	3.2 to 12.7	5
Heavy	Over 1/2	Over 12.7	6
<b>Oxygen Cutting:</b>			
Light	Under 1	Under 25	3
Medium	1 to 6	25 to 150	4
Heavy	Over 6	Over 150	5

\* As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxy-fuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.

\*\* These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the workpiece.

(f) Protective eye and face protection devices must comply with any of the following consensus standards

**(A) ANSI/ISEA Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in 1910.6;**

~~[(A)]~~**(B)** ANSI Z87.1-2003, American National Standard Practice for Occupational and Educational Eye and Face Protection, which is incorporated by reference in 1910.6; **or**

~~[(B)]~~**(C)** ANSI Z87.1-1989 (R-1998), American National Standard Practice for Occupational and Educational Eye and Face Protection, which is incorporated by reference in 1910.6. ~~[- or]~~

~~[(C)]~~ ANSI Z87.1-1989, American National Standard Practice for Occupational and Educational Eye and Face Protection, which is incorporated by reference in 1910.6.]

(g) Protective eye and face protection devices that the employer demonstrates are at least as effective as protective eye and face protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

(h) Employees whose occupation or assignment requires exposure to laser beams shall be furnished laser safety goggles as required by Occupational Health Regulations which will protect for the specific wavelength of the laser and be of optical density adequate for the energy involved.

(9) Head Protection.

(a) The employer must ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling or flying objects.

(b) The employer must ensure that a protective helmet designed to reduce electrical shock hazard is worn by each such affected employee when near exposed electrical conductors which could contact the head.

(c) Head protection must comply with any of the following consensus standards:

- (A) ANSI Z89.1-2009, American National Standard for Industrial Head Protection, which is incorporated by reference in §1910.6;
- (B) ANSI Z89.1-2003, American National Standard for Industrial Head Protection, which is incorporated by reference in 1910.6; or
- (C) ANSI Z89.1-1997, American National Standard for Industrial Head Protection, which is incorporated by reference in 1910.6.

(d) Head protection devices that the employer demonstrates are at least as effective as head protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

(e) Employees who are exposed to power-driven machinery or to sources of ignition shall wear caps or other head covering which completely covers the hair.

(10) Foot Protection.

(a) The employer must ensure that each affected employee use protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee's feet are exposed to electrical hazards, such as static-discharge or electric-shock hazard, that remains after the employer takes other necessary protective measures.

(b) Protective footwear must comply with any of the following consensus standards:

- (A) ASTM F-2412-2005, Standard Test Methods for Foot Protection, and ASTM F-2413-2005, Standard Specification for Performance Requirements for Protective Footwear, which are incorporated by reference in 1910.6;
- (B) ANSI Z41-1999, American National Standard for Personal Protection – Protective Footwear, which is incorporated by reference in 1910.6; or
- (C) ANSI Z41-1991, American National Standard for Personal Protection – Protective Footwear, which is incorporated by reference in §1910.6.

(c) Protective footwear that the employer demonstrates is at least as effective as protective footwear that is constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

(d) Special types or designs of shoes or foot guards are required where conditions exist that make their use necessary for the safety of workers.

(11) Leg protection

(a) Leggings or high boots of leather, rubber, or other suitable material must be worn by persons exposed to hot substances or dangerous chemical spills.

(b) Employees using chain saws must wear chaps or leg protectors that cover the leg from the upper thigh to mid-calf. The protector must be material designed to resist cuts from the chain saw. Employers must provide this protection at no cost to the employee. NOTE to 437-002-0134(11)(b): Employees working in the tree and shrub services industry must follow rules on this subject in Subdivision 2/R instead of the above.

(12) Hand Protection.

(a) Employers must select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

(b) Employers must base the selection of the appropriate hand protection on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, and the hazards and potential hazards identified.

(c) Gloves must not be worn by persons whose hands are exposed to moving parts in which they could be caught.

(13) Skin protection. Where the need for their use is necessary, protective covering, ointments, gloves, or other effective protection must be provided for and used by persons exposed to materials which are hazardous to the skin.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 4-2011, f. 12/8/11, ef. 12/8/11.

OR-OSHA Admin. Order 2-2013, f. 2/15/13, ef. 4/1/13.

OR-OSHA Admin. Order 3-2015, f. 10/9/15, ef. 1/1/16.

**OR-OSHA Admin. Order 3-2016, f. 9/7/16, ef. 9/7/16.**

## Division 2/L, Fire Protection

437-002-0182 Oregon Rules for Firefighters.

(1) Scope and Application. These rules apply to public and private employers who engage in structural fire service activities, including emergency first response.

Note: Employers subject to 437-002-0182 must comply with provisions of other applicable Oregon OSHA safety and health rules.

(2) Exceptions. These rules do not apply to the following firefighting activities:

(a) Private industry fire brigades covered under 1910.156, Division 2/L, Fire Protection.

(b) Forest and uncultivated wildland firefighting covered under Division 7/N, Wildland Fire Suppression and Prescribed Fire.

(c) Marine firefighting and rescue covered under CFR title 33, Navigation and Navigable Waters.

(d) Aircraft firefighting and rescue covered under CFR title 49, Transportation.

Note: Structural fire protection services who engage in activities listed under 437-002-0182(2)(a) through (d), must also comply with the applicable standard for the activity.

(3) Definitions.

Aerial device – An aerial ladder, elevating platform, aerial ladder platform, or water tower that is designed to position personnel, handle materials, provide egress and discharge water.

ANSI – American National Standards Institute.

Apparatus – A mobile piece of firefighting equipment such as pumper, water tender, etc.

Certified – Attested or confirmed in a formal written statement, or someone or something officially recognized as possessing certain qualifications or meeting certain standards.

Confined space – A space that meets all of the following:

Large enough and so configured that an employee can fully enter the space and perform work; and  
Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and  
Is not designed for continuous occupancy.

Designee – A person who has been officially chosen to do or be something.

DOT – Department of Transportation.

DPSST – Department of Public Safety Standards and Training.

Drill tower – A structure, which may or may not be attached to the station, that is over two stories high and primarily used for non-classroom firefighter training in fire service techniques.

Emergency incident – Any situation where a fire department delivers emergency services, rescue, fire suppression, medical treatment, and other forms of hazard control and mitigation.

Emergency scene – The site where the suppression of a fire or the emergency exists.

Enclosed structure – A structure with a roof or ceiling and at least two walls which may present fire hazards to employees, such as accumulations of smoke, toxic gases and heat, similar to those found in buildings.

Firefighter – A person involved in performing fire department duties and responsibilities, including fire suppression, who may be a career or volunteer member of a fire department and may occupy any position or rank within the fire department.

Fire ground – An emergency scene or location where firefighting or live fire training activities occur.

Fire training – Training received by firefighters to maintain proficiency in performing their assigned duties.

Hazardous material incident – The accidental release of hazardous materials from their containers.

Helmet – An element of the protective ensemble designed to provide minimum protection to the user's head against impact, flying or falling objects, electric shock, penetration, heat, and flame.

Hose tower – A vertical structure where a hose is hung to dry.

IFSTA – International Fire Service Training Association.

IMS – Incident Management System. Also referred to as an Incident Command System (ICS).

Immediately dangerous to life or health (IDLH) –An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Incipient stage fire – A fire which is in the initial or beginning stage and which can be controlled or extinguished by portable fire extinguishers, Class II standpipe or small hose systems without the need for protective clothing or breathing apparatus.

Interior structural firefighting – The physical activity of fire suppression, rescue or both, inside of buildings or enclosed structures which are involved in a fire situation beyond the incipient stage.

Live fire training – Any fire set within a structure, tank, pipe, pan, etc., under controlled conditions to facilitate firefighter training under actual fire conditions.

NFPA – National Fire Protection Association.

NIOSH – National Institute of Occupational Safety and Health.

Private Industry Fire Brigades – A group of employees who are required to fight interior structural fires at their place of employment.

Protective ensemble – The clothing and personal protective equipment worn to provide limited protection to the user's head, body, and extremities from thermal, physical, chemical, and health hazards. Protective ensemble elements include firefighting coats and trousers, helmets, hoods, gloves, footwear, eye and face protection devices, and respirators.

Qualified – Certified as being trained to perform a particular job or activity.

Respirators –

Atmosphere-supplying respirator is a respirator that supplies the user with air from a source independent of the ambient atmosphere and includes supplied-air respirators (SARS) and self-contained breathing apparatus (SCBA) units.

Air-purifying respirator is a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Positive pressure demand respirator is a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

Pressure-demand respirator is a positive pressure atmosphere-supplying respirator that admits air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Self-Contained Breathing Apparatus SCBA is a self-contained breathing apparatus designed to provide the wearer with a supply of respirable air carried in and generated by the breathing apparatus. This apparatus requires no intake of oxygen from the outside atmosphere and can be designed to be a demand or pressure-demand type respirator.

Supplied-air respirator (SAR) or airline respirator is an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

Responder – A certified person who has the responsibility to respond to an emergency incident.

Station (Fire station) – Structure to house the fire service apparatus and personnel.

Tailboard – Standing space at rear of a fire apparatus where firefighters stand to access and reload hose and/or equipment.

Training – Instruction with hands-on practice in the operation of equipment, including respiratory protection equipment, that is expected to be used and in the performance of assigned duties.

Warning light – A flashing or rotating light.

(4) Organizational statement.

(a) The employer must develop and implement a written statement or policy that includes basic organizational structure, basic functions of the organization, and type, amount, and frequency of training to be provided.

(b) This statement must be made available for inspection by Oregon OSHA and by fire department employees or their designated representatives.

(5) Personnel.

(a) The employer must review and evaluate the physical capability of each firefighter annually to determine their ability to perform duties that may be assigned. The review and evaluation will be accomplished through physical examination, stress testing, or satisfactory performance demonstrated during the performance of their assigned duties.

(b) The employer must not permit a firefighter with a known medical condition that would significantly impair their ability to engage in fire suppression activities at the emergency scene unless a physician's certificate of the firefighter's fitness to participate in such activities is provided to the employer. This will not limit the employer's ability to assign firefighters to support activities (versus fire suppression activities).

(6) Employer's Responsibility.

(a) Each employer must comply with the provisions of this Division to protect the life, safety, and health of employees.

(b) It is the responsibility of the employer to establish and supervise:

(A) A safe and healthful working environment, as it applies to nonemergency conditions or to emergency conditions at the scene after the incident has been terminated, as determined by the officer in charge.

(B) Programs for training employees in the fundamentals of accident prevention.

(C) A safe and healthful working environment as it applies to live fire training exercises.

(c) The employer must maintain all equipment in a safe condition.

(d) The employer must ensure that firefighters who participate in exempted firefighting activities listed under 437-002-0182(2) are properly trained, protected, clothed, and equipped for the known hazards of that particular emergency operation.

(7) Employee's Responsibility.

(a) Each firefighter must comply with the requirements of 437-002-0182 that are applicable to their own actions and conduct in the course of their employment.

- (b) Firefighters must notify the appropriate employer or safety committee representative of unsafe practices, equipment, or workplace conditions.
- (c) All firefighters, at regularly scheduled times, must attend required training and orientation programs designed to increase their competency in occupational safety and health.
- (d) Firefighters and other employees must apply the principles of accident prevention in their work. They must use all required safety devices and protective equipment.
- (e) Each firefighter must take proper care of their protective equipment.
- (f) Firefighters who are expected to perform firefighting operations must notify their employer when health conditions arise that will limit their capability of performing those duties.

(8) Safety Committee.

- (a) Fire departments must have a separate safety committee or hold safety meetings according to the requirements of Division 1, 437-001-0765, Safety Committees and Safety Meetings.
- (b) When applicable, the representation on the safety committee must include both career and volunteer firefighters.

(9) Incident Management.

- (a) The employer must develop and implement written procedures for incident management that meets the requirement of NFPA 1561 (2008): Standard on Emergency Services Incident Management System.
- (b) These procedures must apply to all employees involved in emergency operations.
- (c) Each employee involved in emergency operations must be familiar with these procedures.

(10) Accountability. The employer must develop and implement written procedures for a personnel accountability system that meets the requirement of NFPA 1561 (2008): Standard on Emergency Services Incident Management System.

(11) Firefighting Education and Training.

- (a) The employer must develop and implement a policy for appropriately educating and training all department firefighting classifications (ranks) before they perform assigned duties.
- (b) Firefighters who participate in interior structural firefighting activities must be trained according to NFPA 1001 (2013): Standard for Fire Fighter Professional Qualifications (Fire Fighter I), or they must meet the training levels required under 437-002-0182(11)(c) and be under the direct supervision of a firefighter trained to NFPA Fire Fighter I or higher.

Note: Department of Public Safety Standards and Training (DPSST) certification for NFPA Fire Fighter I or higher satisfies the training requirement in 437-002-0182(11)(b) but is not required by these rules.

- (c) Firefighters who participate in live fire training in a structure, or only in structural firefighting activities not covered under 437-002-0182(11)(b), must be trained to meet the minimum job performance requirements for NFPA Fire Fighter I as prescribed by NFPA 1403 (2012): Standard on Live Fire Training Evolutions (Student Prerequisites).
- (d) All live fire training must be conducted following the requirements of NFPA 1403 (2012): Standard on Live Fire Training Evolutions, or Appendix A (Mandatory), Minimum Requirements for Live Fire Training, of this standard.

(e) Live fire training must be conducted under the direction of the fire department's training officer or employer authorized representative.

(12) General Requirements for Protective Ensembles.

(a) Protective ensembles must protect the user's head, body, and extremities. Protective ensembles consist of the following elements: body protection; head protection; hand protection; foot and leg protection; eye and face protection; and respiratory protection.

Note: Employees must be protected from noise that exceeds the levels in Division 2/G, 1910.95, Occupational Noise Exposure.

(b) The employer must provide employees all protective ensemble elements at no cost to employees. The employer must not allow employee-owned protective ensemble elements that do not comply with the requirements under 437-002-0182(13) through (18) to be used for structural firefighting. See Appendix B (Non-mandatory), General Information and Recommendations, of this standard.

(c) Employees must wear all appropriate protective ensemble elements that meet the requirements under 437-002-0182(13) through (18) when engaged in interior structural firefighting.

(d) In situations other than interior structural firefighting, employees must wear the appropriate protective ensemble elements for the known hazards of that particular emergency operation.

(13) Body Protection. All structural firefighting coats and trousers must be at least equivalent to the requirements of NFPA 1971 (1991): Standard on Protective Clothing for Structural Fire Fighting. Structural firefighting coats and trousers purchased on or after July 1, 2016, must be at least equivalent to the requirements of NFPA 1971 (2013): Standard on Protective Ensemble for Structural Fire Fighting.

(14) Head Protection.

(a) All structural firefighting helmets must be at least equivalent to the requirements of NFPA 1971 (2000): Standard on Protective Ensemble for Structural Firefighting. Structural firefighting helmets purchased on or after July 1, 2016, must be at least equivalent to the requirements of NFPA 1971 (2013): Standard on Protective Ensemble for Structural Fire Fighting.

(b) Structural firefighting helmets must consist of a rigid shell; an energy absorbing system; a retention system; florescent and retroreflective trim; ear covers; and either a faceshield or goggles, or both.

(c) Use, care, alterations, and maintenance instructions for protective headgear must be supplied for each helmet.

(d) Care, maintenance, and alteration of helmets must conform to the manufacturer's recommendations.

(e) During structural firefighting, helmet accessories designed to provide or maintain protection from health and safety hazards must be worn in the manufacturer's recommended position. See Appendix B (Non-mandatory), General Information and Recommendations, of this standard.

(f) All flame-resistant protective hoods must be at least equivalent to the requirements of NFPA 1971 (1997): Standard on Protective Ensembles for Structural Fire Fighting. Flame-resistant protective hoods purchased on or after July 1, 2016, must be at least equivalent to the requirements of NFPA 1971 (2013): Standard on Protective Ensemble for Structural Fire Fighting.

(g) A flame-resistant protective hood that will not adversely affect the seal of a respirator facepiece must be worn during interior structural firefighting operations to protect the sides of the face and hair.

(15) Hand Protection.

(a) All structural firefighting hand protection must be at least equivalent to the requirements of NFPA 1973 (1988): Standard on Gloves for Structural Fire Fighting. Structural firefighting hand protection purchased on or after July 1, 2016, must be at least equivalent to the requirements of NFPA 1971 (2013): Standard on Protective Ensemble for Structural Fire Fighting.

(b) Hand protection for structural firefighting activities must consist of protective gloves or glove system that will provide protection against cut, puncture, and heat penetration.

(16) Foot and Leg Protection.

(a) All structural firefighting protective footwear must be at least equivalent to the requirements of NFPA 1971 (1997): Standard on Protective Ensembles for Structural Fire Fighting. Structural firefighting protective footwear purchased on or after July 1, 2016, must be at least equivalent to the requirements of NFPA 1971 (2013): Standard on Protective Ensembles for Structural Fire Fighting.

(b) Resoled firefighting footwear must comply with the applicable NFPA standard under 437-002-0182(16)(a).

Note: Employees using chain saws for non-firefighting activities must wear chaps or leg protectors in accordance with Division 2/I, 437-002-0134, Personal Protective Equipment.

(17) Eye and Face Protection.

(a) Face protection must be used where there is a reasonable probability of injury that can be prevented by such protection. When face protection does not protect the eyes from foreign objects, additional protection for the eyes must be used.

(b) The employer must make available eye and face protection devices suitable for the work performed, and employees must use such protection devices as required by 437-002-0182(17)(a).

(c) Protection devices that can be worn over corrective lenses must be available for employees who need them.

(d) Eye and face protection devices worn by firefighters at the fire ground must comply with the following minimum requirements:

(A) They must comply with any of the following consensus standards:

**(i) ANSI/ISEA Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices;**

**(ii) ANSI Z87.1-2003, American National Standard Practice for Occupational and Educational Eye and Face Protection; or**

**(iii) ANSI Z87.1-1989 (R-1998), American National Standard Practice for Occupational and Educational Eye and Face Protection.**~~];-or]~~

~~[(iii) ANSI Z87.1-1989, American National Standard Practice for Occupational and Educational Eye and Face Protection.]~~

(B) They must be reasonably comfortable when worn under the designated conditions.

(C) They must be durable.

(D) They must be capable of being disinfected.

(E) They must be easy to clean.

(e) Faceshields, when used, must be an integral part of the firefighting helmet and may be installed in a fixed position or hinged allowing adjustment of the shields. Face shields must accommodate any of the following styles:

- (A) Clear transparent
- (B) Colored transparent

(f) Goggles, when used, must consist of a fully flexible frame, a lens holder or a rigid frame with integral lens or lenses, and a separate cushioned fitting surface on the full periphery of the facial contact area.

(A) Materials used for goggles must be chemical-resistant, nontoxic, nonirritating and slow-burning.

(B) There must be support on the face, such as an adjustable headband of suitable material or other appropriate support to hold the frame comfortably and snugly in front of the eyes.

Note: When NIOSH approved full face respiratory equipment is being used by firefighters, additional eye and face protection is not required.

(18) Respiratory Protection. The employer must develop and implement a respiratory protection program in accordance with Division 2/I, 1910.134, Respiratory Protection.

The following note refers to the Respiratory Protection Standards, 1910.134(g)(3) Procedures for IDLH atmospheres and 1910.134(g)(4) Procedures for interior structural firefighting, (“two-in/two-out rule”).

NOTE: If, upon arriving at the emergency scene, firefighters find an imminent life threatening situation where immediate action may prevent the loss of life or serious injury, the requirements for firefighters in the outside standby mode may be suspended, when notification is given by radio to incoming responders that they must provide necessary support and backup upon their arrival.

(19) Criteria for Approved Self-Contained Breathing Apparatus (SCBA).

(a) All compressed air cylinders used with approved SCBAs must meet DOT and NIOSH criteria.

(b) In emergency and lifesaving situations, approved SCBAs may be used with approved cylinders from other approved SCBAs provided that such cylinders are of the same capacity and pressure rating. Once the emergency is over, return SCBAs to their original approved condition.

(c) Approved SCBAs must be provided with at least one indicator that automatically sounds an alarm when the remaining air supply of the SCBA is reduced to within a range of 25 percent of its rated service time.

(20) Personal Alert Safety System (PASS).

(a) Each member involved in rescue, fire suppression, or other hazardous duties, must be provided with and must use a PASS device in the hazardous area when self-contained breathing apparatus is in use.

(b) All PASS devices must be at least equivalent to the requirements of NFPA 1982 (1983): Standard on Personal Alert Safety Systems (PASS). PASS devices purchased on or after July 1, 2016 must be at least equivalent to the requirements of NFPA 1982 (2013): Standard on Personal Alert Safety Systems (PASS).

(c) Each PASS device must be tested at least monthly and must be maintained according to the manufacturer’s instructions.

(21) Breathing Air Compressors and Cylinders.

- (a) In addition to the requirements contained in Division 2/I, 1910.134(i), breathing air quality and use, air samples must be taken every six months from the compressor and analyzed by the employer or an independent laboratory for Grade D breathing air.
- (b) Air samples must also be taken and analyzed when the system is installed or repaired.
- (c) Analysis required by 437-002-0182(21)(a) and (b) must be conducted according to ANSI/CGA Standard G7.1 (2011): Commodity Specification for Air.

(22) Hazardous Material Response Plan.

- (a) Fire departments that expect or plan to respond to hazardous material incidents must develop and implement a written response plan, and comply with additional requirements of Division 2/H, 1910.120(q), Emergency response to hazardous substance releases.
- (b) The written response plan must contain the policies and procedures for:
  - (A) Pre-emergency planning and coordination with outside parties,
  - (B) Personnel roles, lines of authority, training, and communication,
  - (C) Emergency recognition and prevention,
  - (D) Safe distances,
  - (E) Scene security and control,
  - (F) Evacuation procedures,
  - (G) Decontamination,
  - (H) Emergency medical treatment and first aid,
  - (I) Personnel withdrawal procedures,
  - (J) Critique of response and follow-up, and
  - (K) Personal protective equipment and emergency equipment and response procedures.
- (c) The incident commander must be responsible for:
  - (A) Identifying of the hazardous substance and condition,
  - (B) Implementing emergency operations,
  - (C) Ensuring personal protective equipment is worn,
  - (D) Limiting access of hot zone to those with a specific mission assignment,
  - (E) Implementing decontamination procedures,
  - (F) Designating a safety officer,
  - (G) Using appropriately trained personnel, and
  - (H) Providing on-scene medical surveillance for emergency responders.

(23) Fire Apparatus Area.

- (a) Walkways around apparatus must be kept free of obstructions.
- (b) The station's apparatus floors must be kept free of grease, oil, and tripping hazards.
- (c) Exhaust gases from apparatus within buildings must be maintained within the limits of Division 2/Z, 437-002-0382, Oregon Air Contaminant Rules. See Appendix B (Non-mandatory), General Information and Recommendations, of this standard.

(24) Fire Apparatus Design and Construction.

- (a) Employers who have acquired used fire apparatus or used military equipment prior to July 1, 1985 are not required to bring them under a more stringent code than the one in force at the time the apparatus was manufactured. The exceptions to 437-002-0182(24)(a) are:
  - (A) Restraint systems as required by 437-002-0182(25)(e); and
  - (B) Roll-over protective structures (ROPS) on all open top off-road vehicles as required by 437-002-0182(24)(f).

- (b) There must be steps, ladders or railing to allow safe access to and exit from areas on vehicles that employees access.
- (c) Vehicle tailboards must not project outboard of the vehicle sides or fenders and must be designed to provide safe footing.
- (d) Exhaust systems must be installed and properly maintained, and must be designed to minimize the exposure of exhausted gases by employees.
- (e) The loaded gross weight and empty height of the vehicle must be posted in the vehicle such that it can be clearly read by the driver.
- (f) Roll-over protective structures (ROPS) must be provided, installed and maintained on all open top off-road vehicles.
- (g) Vehicles with an obstructed view to the rear of the vehicle when backing must be equipped or provided with:
  - (A) An automatic back-up alarm that must sound when backing and can be heard over the surrounding noise;
  - (B) A video camera that provides the driver a full and clear view of the path of travel behind the vehicle; or
  - (C) A spotter who stands to the rear of the vehicle, is visible to the driver in the driver-side mirror and uses unassisted voice communication, portable radio communication or hand signal communication to guide the driver while backing.

(25) Fire Apparatus Operation.

- (a) Employees must be trained in the safe operation of each type of vehicle they are authorized to drive.
- (b) The employer must not allow an employee to drive a vehicle on a public highway or road unless they have a valid driver's license.
- (c) Any item found that may affect the safe operation of a vehicle must be reported immediately to the officer in charge or other appropriate person.
- (d) Employees must not drive or ride in any vehicle known to be unsafe.
- (e) Employees being transported by fire department vehicles must ride in designated seat-belted or safety-harnessed positions.
- (f) The employer must not allow employees to ride on tailboards, tail steps or running boards.
- (g) Vehicles must come to a full stop before employees disembark.
- (h) All equipment on a vehicle must be adequately secured when the vehicle is in motion.
- (i) When traffic flow is inhibited, vehicles equipped with emergency warning lights must be used to control traffic at emergency scenes. The use of traffic cones, fire department personnel, police, or other traffic control measures must be used as soon as practical.

(26) Fire Apparatus Maintenance and Repair. Each employer must establish written records and procedures whereby apparatus has:

- (a) At a minimum, a scheduled monthly maintenance check; or
- (b) A maintenance check each time the apparatus is returned to the station following an emergency response, drill, or test drive.

(27) Tires.

- (a) No motor vehicle must be operated on any tire that:
  - (A) Has body ply or belt material exposed through the tread or sidewall;
  - (B) Has any tread or sidewall separation;
  - (C) Is flat or has an audible leak; or
  - (D) Has a cut to the extent that the ply or belt material is exposed.

(b) Any tire on the front wheels of a bus, truck, or truck tractor must have a tread groove pattern depth of at least 4/32 of an inch when measured at any point on a major tread groove. The measurements must not be made where tie bars, humps, or fillets are located.

(c) Except as provided in 437-002-0182(27)(b), tires must have a tread groove pattern depth of at least 2/32 of an inch when measured in a major tread groove. The measurement must not be made where tie bars, humps or fillets are located.

(28) Aerial Devices.

(a) Aerial devices used for firefighting must be annually inspected and tested by a person qualified in performing such inspections and tests according to NFPA 1911 (2007): Standard for the Inspection, Maintenance, Testing, and Retirement of In-service Automotive Fire Apparatus.

(b) Where structural defects are found in critical components of an aerial device, the repairs must be tested and certified according to NFPA 1911 (2007): Standard for the Inspection, Maintenance, Testing, and Retirement of In-service Automotive Fire Apparatus, by a registered professional engineer, the manufacturer of the apparatus, or an American Welding Society (AWS) Certified Welding Inspector.

(c) A permanent record of tests and repairs under 437-002-0182(28)(b) must be maintained for each aerial device.

(29) Hose Drying Towers.

(a) Floor openings on hose tower platforms must be equipped with a guardrail meeting the requirements of Division 2/D, 1910.23, Guarding Floor and Wall Openings and Holes.

Note: The toeboard requirements for elevated work platforms in Division 2/D, 1910.23, do not apply to hose drying towers unless hand tools or objects other than hoses are carried onto the platforms.

(b) Fixed ladders must meet the requirements of Division 2/D, 437-002-0027, Fixed Ladders.

(c) Ropes used to hoist hose in the hose towers must have a working load limit that maintains a minimum safety factor of 3:1.

(30) Drill Towers. Permanent fixed ladders on the outside of drill towers and drill buildings are exempt from offset platform landings and ladder cage guards requirements of Division 2/D, 437-002-0027, Fixed Ladders.

(31) Testing, Maintenance and Inspection of Fire Service Equipment.

(a) The employer must inspect and maintain fire service equipment at least annually and perform all tests recommended by the manufacturer at the date of manufacture.

(b) When the manufacturer's recommendations required under 437-002-0182(31)(a) are not available from the manufacturer, the employer must identify and follow the recommendations of an applicable consensus standard or curriculum that is nationally recognized and generally accepted by the fire service industry.

Note: Examples of a consensus standard or curriculum under 437-002-0182(31)(b) include, but are not limited to, NFPA standards and IFSTA manuals.

(32) Confined spaces.

(a) Employers must comply with Division 2/J, 437-002-0146, Confined Spaces, for their own confined spaces.

(b) Employers must comply with Division 2/J, 437-002-0146, Confined Spaces, when they agree to serve as a designated rescue service provider.

(c) Employers that will respond to emergency calls for rescue from confined spaces must:

(A) Train responders to recognize inherent confined space hazards before assigning or attempting any related duties in confined space rescues.

(i) Provide responders with understanding, knowledge, and skills necessary for safe performance of confined space rescues.

(ii) Practice a confined space rescue operation at least once every year from a real or simulated confined space.

(B) Responders must be certified in writing to Department of Public Safety Standards and Training (DPSST) Firefighter 1 or equivalent.

(C) Use the Incident Management System (IMS) during confined space rescue incidents that meet the requirements of NFPA 1561 (2008): Standard on Emergency Services Incident Management System.

(D) Assess the situation and determine if it qualifies as a confined space incident.

(i) Classify the operation as a rescue or body recovery.

(ii) Assess and control physical hazards related to the incident or rescue.

(iii) Assess atmospheric hazards.

(I) Use calibrated direct-reading instruments to test the atmosphere in confined spaces for oxygen content, flammable gases and vapors, and toxic air contaminants.

(II) When calibrated direct-reading instruments are not available, the Incident Commander must assume the situation is IDLH and ensure that responders who enter are equipped with appropriate respiratory protective equipment that comply with Division 2/I, 1910.134, Respiratory Protection.

(iv) Determine if the space should be ventilated.

(v) Determine the precautions and procedures to follow for safe entry into the space.

(E) Provide the appropriate rescue, emergency, and personal protective equipment for safe entry into and rescue from confined spaces.

(F) Provide necessary equipment to facilitate non-entry retrieval for responders, unless the retrieval equipment would increase the overall risk or would not contribute to the rescue operations.

Note: For the reader's convenience, the following paragraphs are provided from Division 2/I, 1910.134(g)(3) and (g)(4), Respiratory Protection:

(g)(3) Procedures for IDLH atmospheres.

For all IDLH atmospheres, the employer shall ensure that:

(i) One employee or, when needed, more than one employee is located outside the IDLH atmosphere;

(ii) Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere;

(iii) The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue;

(iv) The employer or designee is notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue;

(v) The employer or designee authorized to do so by the employer, once notified, provides necessary assistance appropriate to the situation;

(vi) Employee(s) located outside the IDLH atmospheres are equipped with:

(A) Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either

(B) Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or

(C) Equivalent means for rescue where retrieval equipment is not required under paragraph (g)(3)(vi)(B).

(g)(4) Procedures for interior structural firefighting.

In addition to the requirements set forth under paragraph (g)(3), in interior structural fires, the employer shall ensure that:

(i) At least two employees enter the IDLH atmosphere and remain in visual or voice contact with one another at all times;

(ii) At least two employees are located outside the IDLH atmosphere; and

(iii) All employees engaged in interior structural firefighting use SCBAs.

Note 1 to paragraph (g): One of the two individuals located outside the IDLH atmosphere may be assigned to an additional role, such as incident commander in charge of the emergency or safety officer, so long as this individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any firefighter working at the incident.

Note 2 to paragraph (g): Nothing in this section is meant to preclude firefighters from performing emergency rescue activities before an entire team has assembled.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 14-1993, f. 8/27/93, ef. 11/1/93.

OR-OSHA Admin. Order 2-1998, f. 3/11/98, ef. 3/11/98.

OR-OSHA Admin. Order 2-2000, f. 1/28/00, ef. 1/28/00.

OR-OSHA Admin. Order 12-2001, f. 10/26/01, ef. 10/26/01.

OR-OSHA Admin. Order 3-2005, f. 6/10/05, ef. 6/10/05.

OR-OSHA Admin. Order 9-2008, f. 9/19/08, ef. 1/1/09.

OR-OSHA Admin. Order 8-2009, f. 7/9/09, ef. 10/1/09.

OR-OSHA Admin. Order 6-2012, f. 9/28/12, ef. 4/1/13.

OR-OSHA Admin. Order 4-2015, f. 10/23/15, ef. 7/1/16.

**OR-OSHA Admin. Order 3-2016, f. 9/7/16, ef. 9/7/16.**

## Appendix A (Mandatory) Minimum Requirements for Live Fire Training

This is a mandatory appendix as required by 437-002-0182(11)(d). Also see Student Prerequisites in NFPA 1403 (2012): Standard on Live Fire Training Evolutions. The following requirements must be met prior to live fire training:

### Training:

Prior to participating in live fire training, trainees must receive training to meet the minimum job performance requirements for Fire Fighter I in NFPA 1001 (2013): Standard for Fire Fighter Professional Qualifications, related to the following subjects:

- Safety
- Fire behavior
- Portable extinguishers
- Personal protective equipment
- Ladders
- Fire hose, appliances, and streams
- Overhaul
- Water supply
- Ventilation
- Forcible entry
- Building Construction

Employers must verify through written certification that firefighters trained by another department or jurisdiction meet the training requirements under 437-002-0182(11)(c) prior to participating in live fire training.

### Structures must be prepared for live fire training evolutions by:

- Removing or neutralizing all hazardous storage conditions that would present a safety problem during the live fire training evolution.
- Removing closed containers and highly combustible materials from the structure.
- Venting oil tanks and similar closed vessels that cannot be removed.
- Rendering inert, any hazardous or combustible atmosphere within any tank or vessel.
- Removing or repairing any structural conditions that could present a safety problem during the live fire training evolution.
- Covering all floor openings.
- Repairing or replacing missing treads and rails.
- Removing any dangerous portion of chimneys.
- Repairing or patching holes in walls and ceilings.
- Removing low-density combustible fiberboard and other unconventional combustible interior finished.
- Removing extraordinary weight above the training area.
- Removing debris that creates or contributes to an unsafe condition.
- Disconnecting all utilities.

- Protecting or removing utility services adjacent to the live burn site.
- Removing any toxic weeds, insect hives, or vermin that could present a potential hazard.
- Having a qualified asbestos removal contractor remove all forms of asbestos.
- Removing trees, brush and surrounding vegetation that creates a hazard to participants.

Qualified Safety Officer must:

- Be appointed for all live fire training evolutions and have no other duties that would interfere with safety responsibilities.
- Have the authority to intervene and control any aspect of the operation when a potential or actual danger, accident or unsafe condition exists.
- Be responsible for the prevention of unsafe acts and the elimination of unsafe conditions.
- Provide for safety of all persons on the scene to include students, instructors, visitors and spectators.
- Inspect all participants' protective equipment prior to entry into the live fire evolution.
- Post and use control measures such as ropes, signs and fire line markings to indicate the perimeter of the live fire operations area.
- Directly supervise the ignition of each live training fire.
- The safety officer may assign additional personnel in and around the structure to ensure the safety of personnel.

Training Officer or employer authorized representative must:

- Be qualified to deliver the live fire training.
- Allow the participating student-to-instructor ratio not to be greater than 5:1.
- Coordinate all fire ground activities to ensure correct levels of safety.
- Prior to each specific evolution, determine the number of training attack lines and backup lines that are necessary.
- Ensure that each hose line is capable of delivering at minimum 95 gpm.
- Provide backup lines to ensure protection for personnel on training attack lines.
- Determine the rate and duration of water flow necessary for each evolution to include extinguishing the training fire, backup lines to protect personnel and any water necessary to protect exposed property.
- Meet the criteria for minimum water supply and delivery for live fire training evolutions identified in NFPA 1142 (2012): Standard on Water Supplies for Suburban and Rural Fire Fighting.
- Have separate sources of water supply for attack lines and backup lines to preclude the loss of both sources at the same time.
- Assign, one instructor to each functional crew, one instructor to each backup line, additional personnel to backup lines for mobility and one additional instructor for each additional functional assignment.
- Assess the selected fire room environment for factors that can affect the growth, development and spread of the fire.
- Stop the training exercise immediately when a qualified individual, the safety officer or him/herself determines through an ongoing assessment that the combustible nature of the environment represents a potential hazard.

- Allow a stopped exercise to continue only when actions have been taken to mitigate the hazard.
- Establish a method for fire ground communication among incident command, interior and exterior Divisions or Groups, the safety officer and external request for assistance.
- Designate one qualified person, not a student, to ignite materials so as to control those materials being burned.
- Require the qualified designated ignition person wear necessary protective clothing to include SCBA when igniting any fire.
- Require a charged hose line to accompany the qualified ignition person when igniting any fire.
- Coordinate with the safety officer the decision to ignite each training fire.

The employer or an authorized/designated representative must:

- Be responsible for full compliance with this standard.
- Prepare a preburn plan to be used during the preburn briefing session.
- Have a preburn briefing session with all participants discussing all facets of each evolution, prior to the actual live fire training evolution.
- Conduct a walk-through with all participants, in order to provide knowledge and familiarity with the layout of the structure and to facilitate any necessary evacuation of the structure.
- Identify and evaluate exits from the structure prior to each training burn.
- Make participants aware of exits from the structure prior to each training burn.
- Establish a building evacuation plan to include an evacuation signal that is demonstrated to all participants of the interior live fire training evolutions.
- Designate an area for staging, operations and parking of fire apparatus being used in the evolution and those not being used in the evolution.
- Designate, identify and monitor ingress and egress routes to ensure their availability in the event of an emergency during the evolution.
- Restrict all spectators to a restricted area outside the operation perimeter.
- Remove from the operations area all possible sources of ignition, other than those that are under the direct supervision of the person responsible for the start of the training fire.
- Not use pressure-treated wood, rubber, plastic, straw or pesticide treated hay or harmful chemicals.
- Use fuels that have known burning characteristics that are as controllable as possible.
- Use only the amount of fuel materials necessary to create the desired fire size.
- Limit the fuel load to avoid conditions that could cause an uncontrolled flashover or backdraft.
- Have emergency medical services on site.
- Conduct a search of the space to ensure no unauthorized individuals or objects are present just prior to ignition.
- Permit only one fire within the structure at a time per evolution.
- Allow no fire in any designated exit route or path.
- Allow no person to play the role of a victim inside a structure.
- Cancel or postpone the training session in cases of extreme weather that could cause illness or injury.

- Equip all participants and require the use of all protective equipment necessary for the live fire training evolution.
- Require all personal protective equipment used during the live fire training evolution to meet the requirements of this section.
- Provide for rest and rehabilitation of participants at the scene to include necessary medical evaluations and treatment, food and fluid replenishment and relief from climate conditions.
- Ensure that all equipment is operated by a qualified person.
- Establish and maintain an incident management system (IMS) in accordance with 437-002-0182(9).
- Establish and maintain a personnel accountability system in accordance with 437-002-0182(10).

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 4-2015, f. 10/23/15, ef. 7/1/16.

## Appendix B (Non-mandatory) General Information and Recommendations

This non-mandatory appendix is for the reader's information only.

### Training:

- It is recommended that firefighters who participate in interior structural firefighting activities receive training in the New Science of the Underwrites Laboratory (UL) and the National Institute of Standards and Technology (NIST) as it pertains to controlling the flow paths and conditioning or softening fires prior to entry, or equivalent.

### Protective Ensembles:

- 437-002-0182(12) does not require all firefighters to wear protective ensembles. It is not the intention of these rules to require employers to provide a full ensemble of protective clothing for every firefighter without considering the types of hazardous environments where the firefighter might be exposed. These rules are intended to require adequate protection for those firefighters who might be exposed to smoke, toxic gases, high temperatures, and fires in an advanced state. Therefore, the protective ensemble requirements under 437-002-0182(12) only apply to firefighters who perform structural firefighting activities.
- The protective ensemble requirements under 437-002-0182 do not apply to protective clothing worn during activities other than structural firefighting operations (e.g., brush and forest fires, crash crew operations) or other specialized firefighting activities.
- Many head protective devices are equipped with face shields to protect the eyes and face. These face shields meet the eye and face protection requirements of this rule as long as they meet the requirements of [~~Division 2/1, Personal Protective Equipment and ANSI Z87.1-2003, Occupational Eye and Face Protection~~]**437-002-0182(17)(d)(A)**.
- It is recommended that protective clothing be thoroughly cleaned or washed every six months or as needed, following the recommendations of the clothing manufacturer and the cleaning requirements of NFPA 1971 (2013): Standard on Protective Ensemble for Structural Firefighting.
- The following recommendations are for fire departments who choose to use protective body armor:
  - The fire department should develop and implement written guidelines for the care, use and maintenance of the protective body armor in conjunction with the manufacturer's recommendations.
  - Protective body armor should meet or exceed National Institute of Justice NIF 0101.06, Threat Level II requirements, July 2008 edition.

- Body armor should be correctly fitted following the manufacturer's recommendations and should not be used beyond the manufacturer's warranty.

#### Exhaust gases from Apparatus:

Recommended practices to reduce exposure to apparatus gasoline and diesel exhaust gases:

- For vehicles with particularly high emissions that remain in service, locate them where their emissions are best controlled using natural or local exhaust ventilation.
- Minimize the engine idle time inside the fire station as much as possible, and perform regular shift engine run-ups outside the station.
- Position vehicles or redirect their exhaust emissions to prevent exhaust from blowing towards interior doorways and stairways.
- Seal interior doorways that lead to living areas to minimize the accumulation of vehicle exhaust emissions.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 4-2015, f. 10/23/15, ef. 7/1/16.

**OR-OSHA Admin. Order 3-2016, f. 9/7/16, ef. 9/7/16.**

## DIVISION 3, CONSTRUCTION

437-003-0001

Adoption by Reference. In addition to, and not in lieu of, any other safety and health codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, in the Federal Register:

(1) Subdivision A – GENERAL

(a) 29 CFR 1926.1 Purpose and Scope, published 4/6/79, FR vol. 44, p. 20940.

(b) 29 CFR 1926.2 Variances from safety and health standards, published 4/6/79, FR vol. 44, p. 20940.

(c) 29 CFR 1926.3 Inspections – right of entry, published 4/6/79, FR vol. 44, p. 20940.

(d) 29 CFR 1926.4 Rules of practice for administrative adjudications for enforcement of safety and health standards, published 4/6/79, FR vol. 44, p. 20940.

(e) 29 CFR 1926.6 Incorporation by reference, published [4/11/14, FR vol. 79, no. 70, p. 20316] **3/25/16, FR vol. 81, no. 58, p. 16085.**

(2) Subdivision B – GENERAL INTERPRETATIONS

(a) 29 CFR 1926.10 Scope of subpart, published 4/6/79, FR vol. 44, p. 20940.

(b) 29 CFR 1926.11 Coverage under section 103 of the act distinguished, published 4/6/79, FR vol. 44, p. 20940.

(c) 29 CFR 1926.12 Reorganization plan No. 14 of 1950, published 4/6/79, FR vol. 44, p. 20940.

(d) 29 CFR 1926.13 Interpretation of statutory terms, published 4/6/79, FR vol. 44, p. 20940.

(e) 29 CFR 1926.14 Federal contracts for 'mixed' types of performance, published 4/6/79, FR vol. 44, p. 20940.

(f) 29 CFR 1926.15 Relationship to the service contract act; Walsh-Healey Public Contracts Act, published 4/6/79, FR vol. 44, p. 20940.

(g) 29 CFR 1926.16 Rules of construction, published 4/6/79, FR vol. 44, p. 20940.

(3) Subdivision C – GENERAL SAFETY AND HEALTH PROVISIONS

(a) 29 CFR 1926.20 General safety and health provisions, published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589.

(b) 29 CFR 1926.21 Safety training and education, published 4/6/79, FR vol. 44, p. 20940; amended with Oregon OSHA AO 6-2012, repealed (b)(6), f. 9/28/12, ef. 4/1/13.

(c) 29 CFR 1926.22 Recording and reporting of injuries (Reserved)

(d) 29 CFR 1926.23 First aid and medical attention, published 4/6/79, FR vol. 44, p. 20940.

(e) 29 CFR 1926.24 Fire protection and prevention, published 4/6/79, FR vol. 44, p. 20940.

(f) 29 CFR 1926.25 Housekeeping, published 4/6/79, FR vol. 44, p. 20940.

(g) 29 CFR 1926.26 Illumination, published 4/6/79, FR vol. 44, p. 20940.

(h) 29 CFR 1926.27 Sanitation, published 4/6/79, FR vol. 44, p. 20940.

(i) 29 CFR 1926.28 Personal protective equipment. REPEALED with Oregon OSHA Admin. Order 2-2013, filed 2/15/13, effective 4/1/13. In Oregon, OAR 437-003-0134 applies.

(j) 29 CFR 1926.29 Acceptable certifications, published 4/6/79, FR vol. 44, p. 20940.

(k) 29 CFR 1926.30 Shipbuilding and ship repairing, published 3/7/96, FR vol. 61, no. 46, p. 9249.

(l) 29 CFR 1926.31 (Reserved).

(m) 29 CFR 1926.32 Definitions, published 6/30/93, FR vol. 58, no. 124, p. 35078.

(n) 29 CFR 1926.33 Access to employee exposure and medical records, published 6/20/96, FR vol. 61, no. 46, p. 31427.

(o) 29 CFR 1926.34 Means of egress, published 6/30/93, Federal Register, vol. 58, no. 124, p. 35083.

(4) Subdivision D – OCCUPATIONAL HEALTH AND ENVIRONMENTAL CONTROLS

- (a) 29 CFR 1926.50 Medical services and first aid, published 6/18/98, FR vol. 63, no. 117, p. 33469.
- (b) 29 CFR 1926.51 Sanitation, published 6/30/93, FR vol. 58, no. 124, p. 35084.
- (c) 29 CFR 1926.52 Occupational noise exposure, published 4/6/79, FR vol. 44, p. 20940.
- (d) 29 CFR 1926.53 Ionizing radiation, published 4/6/79, FR vol. 44, p. 20940.
- (e) 29 CFR 1926.54 Nonionizing radiation, published 4/6/79, FR vol. 44, p. 20940.
- (f) 29 CFR 1926.55 Gases, vapors, fumes, dusts, and mists, published 1/10/97, FR vol. 62, no. 7, p. 1619.
- (g) 29 CFR 1926.56 Illumination, published 4/6/79, FR vol. 44, p. 20940.
- (h) 29 CFR 1926.57 Ventilation, published 1/8/98, FR vol. 63, no. 5, p. 1295.
- (i) 29 CFR 1926.58 Reserved, §1926.58, Asbestos, tremolite, anthophyllite and actinolite is redesignated as §1926.1101, Asbestos, and §1926.58 is reserved (8/10/94, FR vol. 59, no. 153, pp. 41131-62).
- (j) 29 CFR 1926.59 Hazard Communication, published 6/20/96, FR vol. 61, p. 31427.
- (k) 29 CFR 1926.60 Methylenedianiline (MDA), published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589.
- (l) 29 CFR 1926.61 Retention of DOT markings, placards and labels, published 6/20/96, FR vol. 61, p. 31427.
- (m) 29 CFR 1926.62 Lead, published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589.  
NOTE: Cadmium has been redesignated as §1926.1127.
- (n) 29 CFR 1926.65 Hazardous Waste Operations and Emergency Response  
NOTE: Division 2/H, 1910.120, Hazardous Waste Operations and Emergency Response, applies to Construction.

(5) Subdivision E – PERSONAL PROTECTIVE AND LIFE SAVING EQUIPMENT

- (a) 29 CFR 1926.95 Criteria for personal protective equipment. REPEALED with Oregon OSHA Admin. Order 2-2013, filed 2/15/13, effective 4/1/13. In Oregon, OAR 437-003-0134 applies.
- (b) 29 CFR 1926.97 Electrical protective equipment, published 4/11/14, FR vol. 79, no. 70, p. 20316.
- (c) 29 CFR 1926.100 Head protection. REPEALED with Oregon OSHA Admin. Order 2-2013, filed 2/15/13, effective 4/1/13. In Oregon, OAR 437-003-0134 applies.
- (d) 29 CFR 1926.101 Hearing protection. REPEALED with Oregon OSHA Admin. Order 2-2013, filed 2/15/13, effective 4/1/13. In Oregon, OAR 437-003-0134 applies.
- (e) 29 CFR 1926.102 Eye and face protection. REPEALED with Oregon OSHA Admin. Order 2-2013, filed 2/15/13, effective 4/1/13. In Oregon, OAR 437-003-0134 applies.
- (f) 29 CFR 1926.103 Respiratory protection, published 1/8/98, FR vol. 63, no. 5, p. 1297.  
NOTE: 29 CFR 1926.104 Removed, 8/9/94, FR vol. 59, no. 152, p. 40729.
- (g) 29 CFR 1926.105 Reserved, 8/9/94, FR vol. 59, no. 152, p. 40729.
- (h) 29 CFR 1926.106 Working over or near water, published 4/6/79, FR vol. 44, p. 20940.
- (i) 29 CFR 1926.107 Definitions applicable to this subpart, published 8/9/94, FR vol. 59, no. 152, p. 40729.

(6) Subdivision F – FIRE PROTECTION AND PREVENTION

- (a) 29 CFR 1926.150 Fire protection, published 4/6/79, FR vol. 44, p. 20940.
- (b) 29 CFR 1926.151 Fire prevention, published 7/11/86, FR vol. 51, p. 25318.
- (c) 29 CFR 1926.152 Flammable and combustible liquids, published 6/30/93, FR vol. 58, no. 124, p. 35162.
- (d) 29 CFR 1926.153 Liquefied petroleum gas (LP-Gas), published 6/30/93, FR vol. 58, no. 124, p. 35170.
- (e) 29 CFR 1926.154 Temporary heating devices, published 4/6/79, FR vol. 44, p. 20940.
- (f) 29 CFR 1926.155 Definitions applicable to this subpart, published 4/6/79, FR vol. 44, p. 20940.

(7) Subdivision G – SIGNS, SIGNALS, AND BARRICADES

- (a) 29 CFR 1926.200 Accident prevention signs and tags, published 6/13/13, FR vol. 78, no. 114, p. 35559; 11/6/13, FR vol. 78, no. 215, p. 66641.
- (b) 29 CFR 1926.201 Signaling, REPEALED with OR-OSHA Admin. Order 2-2003, f. 1/30/03, ef. 1/30/03.
- (c) 29 CFR 1926.202 Barricades, REPEALED with OR-OSHA Admin. Order 2-2003, f. 1/30/03, ef. 1/30/03.
- (d) 29 CFR 1926.203 Definitions applicable to this subpart, published 4/6/79, FR vol. 44, p. 20940; amended with OR-OSHA Admin. Order 2-2003, f. 1/30/03, ef. 1/30/03.

(8) Subdivision H – MATERIALS HANDLING, STORAGE, USE AND DISPOSAL

- (a) 29 CFR 1926.250 General requirements for storage, published 6/30/93, FR vol. 58, no. 124, p. 35173.
  - (b) 29 CFR 1926.251 Rigging equipment for material handling, published 6/30/93, FR vol. 58, no. 124, p. 35173.
  - (c) 29 CFR 1926.252 Disposal of waste materials, published 4/6/79, FR vol. 44, p. 20940.
- (9) Subdivision I – TOOLS – HAND AND POWER
- (a) 29 CFR 1926.300 General requirements, published 3/7/96, FR vol. 61, no. 46, p. 9250.
  - (b) 29 CFR 1926.301 Hand tools, published 4/6/79, FR vol. 44, p. 20940.
  - (c) 29 CFR 1926.302 Power operated hand tools, published 6/30/93, FR vol. 58, no. 124, p. 35175.
  - (d) 29 CFR 1926.303 Abrasive wheels and tools, published 6/30/93, FR vol. 58, no. 124, p. 35175.
  - (e) 29 CFR 1926.304 Woodworking tools, published 3/7/96, FR vol. 61, no. 46, p. 9251.
  - (f) 29 CFR 1926.305 Jacks - lever and ratchet, screw, and hydraulic, published Federal Register vol. 58, no. 124, p. 35176.

(10) Subdivision J – WELDING AND CUTTING

- (a) 29 CFR 1926.350 Gas welding and cutting. Repealed. Oregon OSHA Admin. Order 6-2014, f. 10/28/14, ef. 5/1/15. In Oregon, OAR 437-002-2253 applies.
- (b) 29 CFR 1926.351 Arc welding and cutting, published 7/11/86, FR vol. 51, p. 25318.
- (c) 29 CFR 1926.352 Fire prevention, published 4/6/79, FR vol. 44, p. 20940.
- (d) 29 CFR 1926.353 Ventilation and protection in welding, cutting, and heating, published 6/30/93, FR vol. 58, no. 124, p. 35179.
- (e) 29 CFR 1926.354 Welding, cutting, and heating in way of preservative coatings, published 4/6/79, FR vol. 44, p. 20940.

(11) Subdivision K – ELECTRICAL

- (a) 29 CFR 1926.400 Introduction, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (b) 29 CFR 1926.401 (Reserved)
- (c) 29 CFR 1926.402 Applicability, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (d) 29 CFR 1926.403 General requirements, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (e) 29 CFR 1926.404 Wiring design and protection, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335; amended with AO 5-2002, repeal (b)(1), f. 6/28/02, ef. 10/1/03.
- (f) 29 CFR 1926.405 Wiring methods, components, and equipment for general use, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (g) 29 CFR 1926.406 Specific purpose equipment and installations, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (h) 29 CFR 1926.407 Hazardous (classified) locations, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (i) 29 CFR 1926.408 Special systems, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (j) 29 CFR 1926.409 (Reserved)
- (k) 29 CFR 1926.415 (Reserved)

- (l) 29 CFR 1926.416 General requirements, published 8/12/96, FR vol. 61, no. 156, p. 41738.
- (m) 29 CFR 1926.417 Lockout and tagging of circuits, published 8/12/96, FR vol. 61, no. 156, p. 41739.
- (n) 29 CFR 1926.418 (Reserved)
- (o) 29 CFR 1926.430 (Reserved)
- (p) 29 CFR 1926.431 Maintenance of equipment, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (q) 29 CFR 1926.432 Environmental deterioration of equipment, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (r) 29 CFR 1926.433 - 29 CFR 1926.440 (Reserved)
- (s) 29 CFR 1926.441 Battery locations and battery charging, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (t) 29 CFR 1926.442 - 29 CFR 1926.448 (Reserved)
- (u) 29 CFR 1926.449 Definitions applicable to this subpart, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
- (12) Subdivision L – SCAFFOLDING
  - (a) 29 CFR 1926.450 Scope, application and definitions applicable to this subpart, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (b) 29 CFR 1926.451 General requirements, published 11/25/96, FR vol. 61, no. 228, p. 59831.
  - (c) 29 CFR 1926.452 Additional requirements applicable to specific types of scaffolds, published 8/30/96, FR vol. 61, no. 170, p. 46113.
  - (d) 29 CFR 1926.453 Aerial lifts, published 11/25/96, FR vol. 61, no. 228, p. 59832.
  - (e) 29 CFR 1926.454 Training, published 8/30/96, FR vol. 61, no. 170, p. 46117.
  - (f) Appendix A to Subpart L Scaffold Specifications, published 8/30/96, FR vol. 61, no. 170, p. 46117.
  - (g) Appendix B to Subpart L Criteria for determining the feasibility of providing safe access and fall protection for scaffold erectors and dismantlers (Reserved), published 8/30/96, FR vol. 61, no. 170, p. 46122.
  - (h) Appendix C to Subpart L List of National Consensus Standards, published 8/30/96, FR vol. 61, no. 170, p. 46122.
  - (i) Appendix D to Subpart L List of training topics for scaffold erectors and dismantlers, published 8/30/96, FR vol. 61, no. 170, p. 46122.
  - (j) Appendix E to Subpart L Drawing and illustrations, published 11/25/96, FR vol. 61, no. 228, p. 59832.
- (13) Subdivision M – FALL PROTECTION
  - (a) 29 CFR 1926.500 Scope, application, and definitions applicable to this subpart, published 4/11/14, FR vol. 79, no. 70, p. 20316; amended with AO 1-2016, f. 3/1/16, ef. 1/1/17.
  - (b) 29 CFR 1926.501 Duty to have fall protection. REPEALED with AO 1-2016, f. 3/1/16, ef. 1/1/17. In Oregon, 437-003-1501 applies.
  - (c) 29 CFR 1926.502 Fall protection systems criteria and practices, published 8/9/94, FR vol. 59, no. 152, p. 40733-40738; amended with AO 6-2002, f. and ef. 7/19/02.
  - (d) 29 CFR 1926.503 Training requirements. REPEALED with AO 6-2002, f. and ef. 7/19/02, in Oregon, 437-003-0503 applies.
  - (e) Appendix A to Subpart M Determining Roof Widths, published 8/9/94, FR vol. 59, no. 152, p. 40738-40742.
  - (f) Appendix B to Subpart M Guardrail Systems, published 8/9/94, FR vol. 59, no. 152, p. 40743.
  - (g) Appendix C to Subpart M Personal Fall Arrest Systems, published 8/9/94, FR vol. 59, no. 152, p. 40743-40746.
  - (h) Appendix D to Subpart M Positioning Device Systems, published 8/9/94, FR vol. 59, no. 152, p. 40746.
- (14) Subdivision N – HELICOPTERS, HOISTS, ELEVATORS, AND CONVEYORS

- (a) 29 CFR 1926.550 (Reserved).
- (b) 29 CFR 1926.551 Helicopters, published 4/6/79, FR vol. 44, p. 20940.
- (c) 29 CFR 1926.552 Material hoists, personnel hoists, and elevators, published 4/6/79, FR vol. 44, p. 20940.
- (d) 29 CFR 1926.553 Base-mounted drum hoist, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (e) 29 CFR 1926.554 Overhead hoists, published 4/6/79, FR vol. 44, p. 20940.
- (f) 29 CFR 1926.555 Conveyors, published 4/6/79, FR vol. 44, p. 20940.
- (15) Subdivision O – MOTOR VEHICLES, MECHANIZED EQUIPMENT, AND MARINE OPERATIONS
  - (a) 29 CFR 1926.600 Equipment, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (b) 29 CFR 1926.601 Motor vehicles, REPEALED by OR-OSHA Admin. Order 6-2007, f. 9/26/07, ef. 9/26/07.
  - (c) 29 CFR 1926.602 Material handling equipment, published 12/1/98, FR vol. 63, no. 230, p. 66274; amended by AO 7-2003, f. 12/5/03, ef. 12/5/03.
  - (d) 29 CFR 1926.603 Pile driving equipment, published 4/6/79, FR vol. 44, p. 20940.
  - (e) 29 CFR 1926.604 Site clearing, published 7/22/77, FR vol. 42, p. 37674.
  - (f) 29 CFR 1926.605 Marine operations and equipment, published 4/6/79, FR vol. 44, p. 20940.
  - (g) 29 CFR 1926.606 Definitions applicable to this subpart, published 4/6/79, FR vol. 44, p. 20940.
- (16) Subdivision P – EXCAVATIONS
  - (a) 29 CFR 1926.650 Scope, application, and definitions applicable to this subdivision, published 10/31/89, FR vol. 54, no. 209, pp. 45959-45961.
  - (b) 29 CFR 1926.651 General requirements, published 8/9/94, FR vol. 59, no. 152, p. 40730.
  - (c) 29 CFR 1926.652 Requirements for protective systems, published 10/31/89, FR vol. 54, no. 209, pp. 45961-45962.
  - (d) Appendices A-F to Subdivision P, Excavations, published 10/31/89, FR vol. 54, no. 209, pp. 45962-45991.
- (17) Subdivision Q – CONCRETE AND MASONRY CONSTRUCTION
  - (a) 29 CFR 1926.700 Scope, application and definitions applicable to this subpart, published 10/18/90, FR vol. 55, no. 202, p. 42326.
  - (b) 29 CFR 1926.701 General requirements, published 8/9/94, FR vol. 59, no. 152, p. 40730.
  - (c) 29 CFR 1926.702 Requirements for equipment and tools, published 6/16/88, FR vol. 53, p. 22612.
  - (d) 29 CFR 1926.703 Requirements for cast-in-place concrete, published 6/16/88, FR vol. 53, p. 22612.
  - (e) 29 CFR 1926.704 Requirements for precast concrete, published 10/5/89, FR vol. 54, no. 192, p. 41088.
  - (f) 29 CFR 1926.705 Requirements for lift-slab construction operations, published 10/18/90, FR vol. 55, no. 202, p. 42326.
  - (g) Appendix A to 1926.705 Lift-slab operations, published 10/18/90, FR vol. 55, no. 202, p. 42326.
  - (h) 29 CFR 1926.706 Requirements for masonry construction, published 6/16/88, FR vol. 53, p. 22612; amended with OR-OSHA Admin. Order 1-2003, f. 1/30/03, ef. 4/30/03.
- (18) Subdivision R – STEEL ERECTION
  - (a) 29 CFR 1926.750 Scope, published 7/17/01, FR vol. 66, no. 137, p. 37137.
  - (b) 29 CFR 1926.751 Definitions, published 7/17/01, FR vol. 66, no. 137, p. 37137; amended with AO 6-2002, f. and ef. 7/19/02; amended with AO 8-2003, f. 12/30/03, ef. 1/1/04.
  - (c) 29 CFR 1926.752 Site layout, site-specific erection plan and construction sequence, published 7/17/01, FR vol. 66, no. 137, p. 37137.

- (d) 29 CFR 1926.753 Hoisting and rigging, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (e) 29 CFR 1926.754 Structural steel assembly, published 4/3/06, FR vol. 71, no. 63, p. 16669.
- (f) 29 CFR 1926.755 Column anchorage, published 7/17/01, FR vol. 66, no. 137, p. 37137.
- (g) 29 CFR 1926.756 Beams and columns, published 7/17/01, FR vol. 66, no. 137, p. 37137.
- (h) 29 CFR 1926.757 Open web steel joists, published 7/17/01, FR vol. 66, no. 137, p. 37137; amended with AO 8-2003, f. 12/30/03, ef. 1/1/04.
- (i) 29 CFR 1926.758 Systems-engineered metal buildings, published 7/17/01, FR vol. 66, no. 137, p. 37137.
- (j) 29 CFR 1926.759 Falling object protection, published 7/17/01, FR vol. 66, no. 137, p. 37137.
- (k) 29 CFR 1926.760 Fall protection, published 7/17/01, FR vol. 66, no. 137, p. 37137; amended with AO 8-2003, f. 12/30/03, ef. 1/1/04.
- (l) 29 CFR 1926.761 Training, published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589.
- (m) Appendix A to Subpart R Guidelines for establishing the components of a site-specific erection plan: Nonmandatory Guidelines for Complying with §1926.752(e), published 7/17/01, FR vol. 66, no. 137, p. 37137.
- (n) Appendix B to Subpart R Reserved.
- (o) Appendix C to Subpart R Illustrations of bridging terminus points: Nonmandatory Guidelines for Complying with §1926.757(a)(10) and §1926.757(c)(5), published 7/17/01, FR vol. 66, no. 137, p. 37137.
- (p) Appendix D to Subpart R Illustration of the use of control lines to demarcate controlled decking zones (CDZs): Nonmandatory Guidelines for Complying with §1926.760(c)(3), REPEALED with AO 6-2002, f. and ef. 7/19/02; amended with AO 8-2003, f. 12/30/03, ef. 1/1/04.
- (q) Appendix E to Subpart R Training: Nonmandatory Guidelines for Complying with §1926.761, published 7/17/01, FR vol. 66, no. 137, p. 37137.
- (r) Appendix F to Subpart R Perimeter columns: Nonmandatory Guidelines for Complying with §1926.756(e) to Protect the Unprotected Side or Edge of a Walking/Working Surface, published 7/17/01, FR vol. 66, no. 137, p. 37137.
- (s) Appendix G to Subpart R Fall protection systems criteria and practices from §1926.502: Nonmandatory Guidelines for Complying with §1926.760(d), REPEALED with AO 6-2002, f. and ef. 7/19/02; amended with AO 8-2003, f. 12/30/03, ef. 1/1/04.
- (t) Appendix H to Subpart R Double connections: Illustration of a clipped end connection and a staggered connection: Non-Mandatory Guidelines for Complying with §1926.756(c)(1), published 7/17/01, FR vol. 66, no. 137, p. 37137.
- (19) Subdivision S – UNDERGROUND CONSTRUCTION, CAISSONS, COFFERDAMS, AND COMPRESSED AIR
  - (a) 29 CFR 1926.800 Underground construction, published 4/23/13, FR vol. 78, no. 78, p. 23837.
  - (b) 29 CFR 1926.801 Caissons, published 4/6/79, FR vol. 44, p. 20940.
  - (c) 29 CFR 1926.802 Cofferdams, published 4/6/79, FR vol. 44, p. 20940.
  - (d) 29 CFR 1926.803 Compressed air, published 7/11/86, FR vol. 51, p. 25318.
  - (e) 29 CFR 1926.804 Definitions applicable to this subpart, published 4/6/79, FR vol. 44, p. 20940.
  - (f) Appendix A to Subpart S Decompression Tables, published 4/6/79, FR vol. 44, p. 20940.
- (20) Subdivision T – DEMOLITION
  - (a) 29 CFR 1926.850 Preparatory operations, published 4/6/79, FR vol. 44, p. 20940.
  - (b) 29 CFR 1926.851 Stairs, passageways, and ladders, published 4/6/79, FR vol. 44, p. 20940.
  - (c) 29 CFR 1926.852 Chutes, published 4/6/79, FR vol. 44, p. 20940.
  - (d) 29 CFR 1926.853 Removal of materials through floor openings, published 4/6/79, FR vol. 44, p. 20940.

- (e) 29 CFR 1926.854 Removal of walls, masonry sections, and chimneys, published 4/6/79, FR vol. 44, p. 20940.
- (f) 29 CFR 1926.855 Manual removal of floors, published 4/6/79, FR vol. 44, p. 20940.
- (g) 29 CFR 1926.856 Removal of walls, floors, and materials with equipment, published 4/23/13, FR vol. 78, no. 78, p. 23837.
- (h) 29 CFR 1926.857 Storage, published 4/6/79, FR vol. 44, p. 20940.
- (i) 29 CFR 1926.858 Removal of steel construction, published 4/23/13, FR vol. 78, no. 78, p. 23837.
- (j) 29 CFR 1926.859 Mechanical demolition, published 4/6/79, FR vol. 44, p. 20940.
- (k) 29 CFR 1926.860 Selective demolition by explosives, published 4/6/79, FR vol. 44, p. 20940.
- (21) Subdivision U – BLASTING AND USE OF EXPLOSIVES
  - (a) 29 CFR 1926.900 General provisions, published 4/6/79, FR vol. 44, p. 20940.
  - (b) 29 CFR 1926.901 Blaster qualifications, published 4/6/79, FR vol. 44, p. 20940.
  - (c) 29 CFR 1926.902 Surface transportation of explosives, published 6/30/93, FR vol. 58, no. 124, p. 35311.
  - (d) 29 CFR 1926.903 Underground transportation of explosives, published 4/6/79, FR vol. 44, p. 20940.
  - (e) 29 CFR 1926.904 Storage of explosives and blasting agents, published 6/30/93, FR vol. 58, no. 124, p. 35311.
  - (f) 29 CFR 1926.905 Loading of explosives or blasting agents, published 6/30/93, FR vol. 58, no. 124, p. 35184.
  - (g) 29 CFR 1926.906 Initiation of explosive charges – electric blasting, published 6/18/98, FR vol. 63, no. 117, p. 33469.
  - (h) 29 CFR 1926.907 Use of safety fuse, published 4/6/79, FR vol. 44, p. 20940.
  - (i) 29 CFR 1926.908 Use of detonating cord, published 4/6/79, FR vol. 44, p. 20940.
  - (j) 29 CFR 1926.909 Firing the blast, published 4/6/79, FR vol. 44, p. 20940.
  - (k) 29 CFR 1926.910 Inspection after blasting, published 4/6/79, FR vol. 44, p. 20940.
  - (l) 29 CFR 1926.911 Misfires, published 4/6/79, FR vol. 44, p. 20940.
  - (m) 29 CFR 1926.912 Underwater blasting, published 4/6/79, FR vol. 44, p. 20940.
  - (n) 29 CFR 1926.913 Blasting in excavation work under compressed air, published 4/6/79, FR vol. 44, p. 20940.
  - (o) 29 CFR 1926.914 Definitions applicable to this subpart, published 6/30/93, FR vol. 58, no. 124, p. 35184, 35311.
- (22) Subdivision V – POWER TRANSMISSION AND DISTRIBUTION
 

29 CFR 1926.950 through 1926.960 are repealed with Oregon OSHA Admin. Order 3-2015, f. 10/9/15, ef. 1/1/16. In Oregon, Division 2/RR applies.
- (23) Subdivision W – ROLLOVER PROTECTIVE STRUCTURES: OVERHEAD PROTECTION
  - (a) 29 CFR 1926.1000 Rollover protective structures (ROPS) for material handling equipment, published 4/6/79, FR vol. 44, p. 20940.
  - (b) 29 CFR 1926.1001 Minimum performance criteria for rollover protective structure for designated scrapers, loaders, dozers, graders, and crawler tractors, published 4/6/79, FR vol. 44, p. 20940.
  - (c) 29 CFR 1926.1002 Protective frame (ROPS) test procedures and performance requirements for wheel-type agricultural and industrial tractors used in construction, published 7/20/06, FR vol. 71, no. 139, p. 41127.
  - (d) 29 CFR 1926.1003 Overhead protection for operators of agricultural and industrial tractors, published 2/28/06, FR vol. 71, no. 39, p. 9909.
- (24) Subdivision X – STAIRWAYS AND LADDERS
  - (a) 29 CFR 1926.1050 Scope, application and definitions applicable to this Subdivision, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.

- (b) 29 CFR 1926.1051 General requirements, published 11/14/90, FR vol. 55, no. 220, p. 47688.
  - (c) 29 CFR 1926.1052 Stairways, published 8/23/91, FR vol. 56, no. 164, pp. 41793-41794.
  - (d) 29 CFR 1926.1053 Ladders, published 4/11/14, FR vol. 79, no. 70, p. 20316.
  - (e) 29 CFR 1926.1054 (Reserved)
  - (f) 29 CFR 1926.1055 (Reserved)
  - (g) 29 CFR 1926.1056 (Reserved)
  - (h) 29 CFR 1926.1057 (Reserved)
  - (i) 29 CFR 1926.1058 (Reserved)
  - (j) 29 CFR 1926.1059 (Reserved)
  - (k) 29 CFR 1926.1060 Training requirements, published 11/14/90, FR vol. 55, no. 220, p. 47691.
- (25) Subdivision Z – TOXIC AND HAZARDOUS SUBSTANCES
- (a) 29 CFR 1926.1101 Asbestos, published 2/8/13, FR vol. 78, no. 27, p. 9311.
  - (b) 29 CFR 1926.1126 Chromium (VI), published 3/17/10, FR vol. 75, no. 51, pp. 12681-12686.
  - (c) 29 CFR 1926.1127 Cadmium, published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589.
  - (d) 29 CFR 1926.1152 Methylene Chloride, published 12/18/97, FR vol. 62, no. 243, p. 66275.
- (26) Subdivision AA – (Reserved)
- (27) Subdivision BB – (Reserved)
- (28) Subdivision CC – Cranes and Derricks in Construction
- (a) 29 CFR 1926.1400 Scope, published 4/11/14, FR vol. 79, no. 70, p. 20316.
  - (b) 29 CFR 1926.1401 Definitions, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (c) 29 CFR 1926.1402 Ground conditions, published 8/9/10, FR vol. 75, no. 152. Pp. 47906-48177.
  - (d) 29 CFR 1926.1403 Assembly/Disassembly – selection of manufacturer or employer procedures, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (e) 29 CFR 1926.1404 Assembly/Disassembly – general requirements (applies to all assembly and disassembly operations), published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (f) 29 CFR 1926.1405 Disassembly – additional requirements for dismantling of booms and jibs (applies to both the use of manufacturer procedures and employer procedures), published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (g) 29 CFR 1926.1406 Assembly/Disassembly – employer procedures – general requirements, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (h) 29 CFR 1926.1407 Power line safety (up to 350 kV) – assembly and disassembly, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (i) 29 CFR 1926.1408 Power line safety (up to 350 kV) – equipment operations, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (j) 29 CFR 1926.1409 Power line safety (over 35 kV), published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (k) 29 CFR 1926.1410 Power line safety (all voltages) – equipment operations closer than the Table A zone, published 4/11/14, FR vol. 79, no. 70, p. 20316.
  - (l) 29 CFR 1926.1411 Power line safety – while traveling, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (m) 29 CFR 1926.1412 Inspections, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (n) 29 CFR 1926.1413 Wire rope – inspection, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (o) 29 CFR 1926.1414 Wire rope – selection and installation criteria, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (p) 29 CFR 1926.1415 Safety devices, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
  - (q) 29 CFR 1926.1416 Operational aids, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.

- (r) 29 CFR 1926.1417 Operation, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (s) 29 CFR 1926.1418 Authority to stop operation, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (t) 29 CFR 1926.1419 Signals – general requirements, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (u) 29 CFR 1926.1420 Signals – radio, telephone or other electronic transmission of signals, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (v) 29 CFR 1926.1421 Signals – voice signals – additional requirements, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (w) 29 CFR 1926.1422 Signals – hand signal chart, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (x) 29 CFR 1926.1423 Fall protection, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (y) 29 CFR 1926.1424 Work area control, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (z) 29 CFR 1926.1425 Keeping clear of the load, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (aa) 29 CFR 1926.1426 Free fall and controlled load lowering, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (bb) 29 CFR 1926.1427 Operator qualification and certification, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (cc) 29 CFR 1926.1428 Signal person qualifications, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (dd) 29 CFR 1926.1429 Qualifications of maintenance & repair employees, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (ee) 29 CFR 1926.1430 Training, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (ff) 29 CFR 1926.1431 Hoisting personnel, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (gg) 29 CFR 1926.1432 Multiple-crane/derrick lifts – supplemental requirements, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (hh) 29 CFR 1926.1433 Design, construction and testing, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (ii) 29 CFR 1926.1434 Equipment modifications, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (jj) 29 CFR 1926.1435 Tower cranes, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (kk) 29 CFR 1926.1436 Derricks, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (ll) 29 CFR 1926.1437 Floating cranes/derricks and land cranes/derricks on barges, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (mm) 29 CFR 1926.1438 Overhead & gantry cranes, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (nn) 29 CFR 1926.1439 Dedicated pile drivers, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (oo) 29 CFR 1926.1440 Sideboom cranes, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (pp) 29 CFR 1926.1441 Equipment with a rated hoisting/lifting capacity of 2,000 pounds or less, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (qq) 29 CFR 1926.1442 Severability, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (rr) Appendix A to Subdivision CC of 1926 – Standard Hand Signals, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
- (ss) Appendix B to Subdivision CC of 1926 – Assembly/Disassembly – Sample Procedures for Minimizing the Risk of Unintended Dangerous Boom Movement, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.

(tt) Appendix C to Subdivision CC of 1926 – Operator Certification – Written Examination – Technical Knowledge Criteria, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177. These standards are available at the Oregon Occupational Safety and Health Division, Oregon Department of Consumer and Business Services, and the United States Government Printing Office.

Stat. Auth.: ORS 654.025(2) and 656.726(4).  
Stats. Implemented: ORS 654.001 through 654.295.  
Hist: APD Admin. Order 5-1989, f. 3/31/89, ef. 5/1/89 (temp).  
APD Admin. Order 8-1989, f. 7/7/89, ef. 7/7/89 (perm).  
APD Admin. Order 14-1989, f. 7/20/89, ef. 8/1/89 (temp).  
APD Admin. Order 15-1989, f. 9/13/89, ef. 9/13/89 (perm).  
APD Admin. Order 16-1989 (temp), f. 9/13/89, ef. 9/13/89.  
OR-OSHA Admin. Order 2-1989, f. 10/17/89, ef. 10/17/89.  
OR-OSHA Admin. Order 3-1990, f. 1/19/90, ef. 1/19/90 (temp).  
OR-OSHA Admin. Order 7-1990, f. 3/2/90, ef. 3/2/90 (perm).  
OR-OSHA Admin. Order 8-1990, f. 3/30/90, ef. 3/30/90.  
OR-OSHA Admin. Order 13-1990, f. 6/28/90, ef. 8/1/90 (temp).  
OR-OSHA Admin. Order 19-1990, f. 8/31/90, ef. 8/31/90 (perm).  
OR-OSHA Admin. Order 27-1990, f. 12/12/90, ef. 2/1/91.  
OR-OSHA Admin. Order 6-1991, f. 3/18/91, ef. 4/15/91.  
OR-OSHA Admin. Order 7-1991, f. 4/25/91, ef. 4/25/91.  
OR-OSHA Admin. Order 15-1991, f. 12/13/91, ef. 12/13/91.  
OR-OSHA Admin. Order 16-1991, f. 12/16/91, ef. 1/1/92.  
OR-OSHA Admin. Order 6-1992, f. 5/18/92, ef. 5/18/92.  
OR-OSHA Admin. Order 11-1992, f. 10/9/92, ef. 10/9/92.  
OR-OSHA Admin. Order 1-1993, f. 1/22/93, ef. 1/22/93.  
OR-OSHA Admin. Order 16-1993, f. 11/1/93, ef. 11/1/93 (Lead).  
OR-OSHA Admin. Order 1-1994, f. 4/27/94, ef. 4/27/94.  
OR-OSHA Admin. Order 4-1994, f. 8/4/94, ef. 8/4/94 (HazCom).  
OR-OSHA Admin. Order 6-1994, f. 9/30/94, ef. 9/30/94.  
OR-OSHA Admin. Order 1-1995, f. 1/19/95, ef. 1/19/95 (DOT markings, placards & labels).  
OR-OSHA Admin. Order 3-1995, f. 2/22/95, ef. 2/22/95 (Haz Waste).  
OR-OSHA Admin. Order 4-1995, f. 3/29/95, ef. 3/29/95 (Asbestos).  
OR-OSHA Admin. Order 5-1995, f. 4/6/95, ef. 4/6/95 (HazCom).  
OR-OSHA Admin. Order 6-1995, f. 4/18/95, ef. 6/1/95 (Fall Protection).  
OR-OSHA Admin. Order 8-1995, f. 8/25/95, ef. 8/25/95 (Asbestos).  
OR-OSHA Admin. Order 5-1996, f. 11/29/96, ef. 11/29/96.  
OR-OSHA Admin. Order 6-1996, f. 11/29/96, ef. 11/29/96.  
OR-OSHA Admin. Order 2-1997, f. 3/12/97, ef. 3/12/97.  
OR-OSHA Admin. Order 4-1997, f. 4/2/97, ef. 4/2/97.  
OR-OSHA Admin. Order 6-1997, f. 5/2/97, ef. 5/2/97.  
OR-OSHA Admin. Order 7-1997, f. 9/15/97, ef. 9/15/97 (Fall Protection).  
OR-OSHA Admin. Order 8-1997, f. 11/14/97, e. 11/14/97 (Methylene Chloride).  
OR-OSHA Admin. Order 1-1998, f. 2/13/98, e. 2/13/98 (Methylene Chloride).  
OR-OSHA Admin. Order 3-1998, f. 7/7/98, ef. 7/7/98 (Respiratory Protection).  
OR-OSHA Admin. Order 6-1998, f. 10/15/98, ef. 10/15/98 (Slings 3/H).  
OR-OSHA Admin. Order 7-1998, f. 12/28/98, ef. 12/28/98 (Asbestos).  
OR-OSHA Admin. Order 1-1999, f. 3/22/99, e. 3/22/99 (Methylene Chloride).  
OR-OSHA Admin. Order 4-1999, f. 4/30/99, ef. 4/30/99.  
OR-OSHA Admin. Order 6-1999, f. 5/26/99, ef. 5/26/99.  
OR-OSHA Admin. Order 3-2000, f. 2/8/00, ef. 2/8/00.  
OR-OSHA Admin. Order 3-2001, f. 2/5/01, ef. 2/5/01 (Fall Protection/Oregon Exceptions).  
OR-OSHA Admin. Order 3-2002, f. 4/15/02, ef. 4/18/02 (Steel Erection).  
OR-OSHA Admin. Order 5-2002, f. 6/28/02, ef. 10/1/03 (GFCI 3/K).  
OR-OSHA Admin. Order 6-2002, f. 7/19/02, ef. 7/19/02 (Fall Protection/Steel Erection).  
OR-OSHA Admin. Order 1-2003, f. 1/30/03, ef. 4/30/03 (3/Q Masonry Wall Bracing).  
OR-OSHA Admin. Order 2-2003, f. 1/30/03, ef. 1/30/03 (3/G).  
OR-OSHA Admin. Order 7-2003, f. 12/5/03, ef. 12/5/03 (3/O).  
OR-OSHA Admin. Order 8-2003, f. 12/30/03, ef. 1/1/04 (3/R).  
OR-OSHA Admin. Order 1-2005, f. 4/12/05, ef. 4/12/05 (3/D and 3/Z).

OR-OSHA Admin. Order 2-2006, f. 4/28/06, ef. 4/28/06 (3/R).  
OR-OSHA Admin. Order 4-2006, f. 7/24/06, ef. 7/24/06.  
OR-OSHA Admin. Order 5-2006, f. 8/7/06, ef. 1/1/07.  
OR-OSHA Admin. Order 6-2006, f. 8/30/06, ef. 8/30/06.  
OR-OSHA Admin. Order 10-2006, f. 11/30/06, ef. 11/30/06.  
OR-OSHA Admin. Order 6-2007, f. 9/26/07, ef. 9/26/07 (3/O).  
OR-OSHA Admin. Order 5-2008, f. 5/1/08, ef. 5/15/08 (PPE).  
OR-OSHA Admin. Order 5-2009, f. 5/29/09, ef. 5/29/09.  
OR-OSHA Admin. Order 3-2010, f. 6/10/10, ef. 6/15/10.  
OR-OSHA Admin. Order 1-2011, f. 2/9/11, ef. 2/9/11.  
OR-OSHA Admin. Order 4-2011, f. 12/8/11, ef. 12/8/11.  
OR-OSHA Admin. Order 5-2011, f. 12/8/11, ef. 7/1/12.  
OR-OSHA Admin. Order 1-2012, f. 4/10/12, ef. 4/10/12.  
OR-OSHA Admin. Order 5-2012, f. 9/25/12, ef. 9/25/12.  
OR-OSHA Admin. Order 1-2013, f. 2/14/13, ef. 2/14/13.  
OR-OSHA Admin. Order 2-2013, f. 2/15/13, ef. 4/1/13.  
OR-OSHA Admin. Order 4-2013, f. 7/19/13, ef. 7/19/13.  
OR-OSHA Admin. Order 5-2013, f. 9/13/13, ef. 9/13/13.  
OR-OSHA Admin. Order 6-2013, f. 10/9/13, ef. 10/9/13.  
OR-OSHA Admin. Order 7-2013, f. 12/12/13, ef. 12/12/13.  
OR-OSHA Admin. Order 6-2014, f. 10/28/14, ef. 5/1/15.  
OR-OSHA Admin. Order 3-2015, f. 10/9/15, ef. 1/1/16.  
OR-OSHA Admin. Order 1-2016, f. 3/1/16, ef. 1/1/17.  
**OR-OSHA Admin. Order 3-2016, f. 9/7/16, ef. 9/7/16.**

## Division 3/A, General

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(31) [~~ANSI Z87.1-1968, Practice for Occupational and Educational Eye and Face Protection, IBR approved for § 1926.102(a).~~] **ANSI/ISEA Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices, Approved April 3, 2010; IBR approved for § 1926.102(b). In Oregon, OAR 437-003-0134 applies. Copies are available for purchase from:**

**(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642-4980; Web site:**

**<http://webstore.ansi.org/>;**

**(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413-5184; Web site: <http://global.ihs.com>; or**

**(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699-9277; Web site: <http://techstreet.com>.**

**(32) ANSI Z87.1-2003, Occupational and Educational Personal Eye and Face Protection Devices, Approved June 19, 2003; IBR approved for § 1926.102(b). In Oregon, OAR 437-003-0134 applies. Copies available for purchase from the:**

**(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642-4980; Web site: <http://webstore.ansi.org/>;**

**(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413-5184; Web site: <http://global.ihs.com>; or**

**(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699-9277; Web site: <http://techstreet.com>.**

**(33) ANSI Z87.1-1989 (R-1998), Practice for Occupational and Educational Eye and Face Protection, Reaffirmation approved January 4, 1999; IBR approved for § 1926.102(b). In Oregon, OAR 437-003-0134 applies. Copies are available for purchase from:**

**(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642-4980; Web site: <http://webstore.ansi.org/>;**

**(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413-5184; Web site: <http://global.ihs.com>; or**

**(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699-9277; Web site: <http://techstreet.com>.**

(3[2]4) American National Standards Institute (ANSI) Z89.1-2009, American National Standard for Industrial Head Protection, approved January 26, 2009; IBR approved for Sec. 1926.100(b)(1)(i). **In Oregon, OAR 437-003-0134 applies.** Copies of ANSI Z89.1-2009 are available for purchase only from the International Safety Equipment Association, 1901 North Moore Street, Arlington, VA 22209-1762; telephone: 703-525-1695; fax: 703-528-2148; Web site: [www.safetysafetyequipment.org](http://www.safetysafetyequipment.org).

(3[3]5) American National Standards Institute (ANSI) Z89.1-2003, American National Standard for Industrial Head Protection; IBR approved for Sec. 1926.100(b)(1)(ii). **In Oregon, OAR 437-003-0134 applies.** Copies of ANSI Z89.1-2003 are available for purchase only from the International Safety Equipment Association, 1901 North Moore Street, Arlington, VA 22209-1762; telephone: 703-525-1695; fax: 703-528-2148; Web site: [www.safetysafetyequipment.org](http://www.safetysafetyequipment.org).

(3[4]6) American National Standards Institute (ANSI) Z89.1-1997, American National Standard for Personnel Protection--Protective Headwear for Industrial Workers--Requirements; IBR approved for Sec. 1926.100(b)(1)(iii). **In Oregon, OAR 437-003-0134 applies.** Copies of ANSI Z89.1-1997 are available for purchase only from the International Safety Equipment Association, 1901 North Moore Street, Arlington, VA 22209-1762; telephone: 703-525-1695; fax: 703-528-2148; Web site: [www.safetysafetyequipment.org](http://www.safetysafetyequipment.org).

## Division 3/E, Personal Protective and Life Saving Equipment

### 437-003-0134 Personal Protective Equipment

Application. This rule applies to personal protective equipment and other protective equipment for the eyes, face, head, extremities and torso to include protective clothing, respiratory devices, and protective shields and barriers, wherever employees encounter hazardous processes or environments, chemical hazards, radiological hazards, or mechanical irritants that are capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

(1) Hazard assessment and equipment selection. ~~[(a)]~~ The employer must assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE) or other protective equipment. If such hazards are present, or likely to be present, the employer must:

~~[(A)]~~**a**) Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment;

~~[(i)]~~**A**) All protective equipment must be of safe design and construction for the work to be performed.

~~[(ii)]~~**B**) Protective equipment must be worn and used in a manner which will make full use of its protective properties.

~~[(B)]~~**b**) Communicate selection decisions to each affected employee; and,

~~[(C)]~~**c**) Select PPE that properly fits each affected employee.

NOTE: Non-mandatory Appendix B to Subdivision 2/I, contains an example of procedures that would comply with the requirement for a hazard assessment.

(2) Equipment.

(a) Where employees provide their own protective equipment, the employer is responsible to assure its adequacy, including proper maintenance, and sanitation of such equipment.

(b) All personal protective equipment must be provided, used, and maintained in a sanitary and reliable condition.

(c) Defective or damaged personal protective equipment must not be used.

(d) Each employer must maintain a regular system of inspection and maintenance of personal protective equipment furnished to workers.

(3) Training.

(a) The employer must provide training to each employee who is required by this section to use PPE and each employee that is provided training must know at least the following:

(A) When PPE is necessary;

(B) What PPE is necessary;

(C) How to properly don, doff, adjust, and wear PPE;

(D) The limitations of the PPE; and,

(E) The proper care, maintenance, useful life and disposal of the PPE.

(b) Each affected employee must demonstrate an understanding of the training specified in paragraph (3)(a) of this section, and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

(c) When the employer has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by paragraph (3)(b) of this section, the employer must retrain each such employee. Circumstances where retraining is required include, but are not limited to situations where:

- (A) Changes in the workplace render previous training obsolete; or
- (B) Changes in the types of PPE to be used render previous training obsolete; or
- (C) Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill.

(4) Payment for protective equipment.

(a) Except as provided by paragraphs (4)(b) through (4)(f) of this section, the protective equipment, including personal protective equipment (PPE), used to comply with this part, must be provided by the employer at no cost to employees.

(b) The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site.

(c) When the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse the employee for the shoes or boots.

(d) The employer is not required to pay for:

- (A) The logging boots required by OAR 437-007-0330 in Division 7.
- (B) Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or
- (C) Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.

(e) The employer must pay for replacement PPE, except when the employee has lost or intentionally damaged the PPE.

(f) Where an employee provides adequate protective equipment he or she owns pursuant to paragraph (2)(a) of this section, the employer may allow the employee to use it and is not required to reimburse the employee for that equipment. The employer must not require an employee to provide or pay for his or her own PPE, unless the PPE is excepted by paragraphs (4)(b) through (4)(e) of this section.

(5) Fall Protection.

(a) All employees must be protected from fall hazards when working on unguarded surfaces more than 10 feet above a lower level or at any height above dangerous equipment.

(b) The employer must ensure that fall protection systems are provided, installed, and used according to the criteria in 1926.502(d), and 437-003-0502 in Division 3/M, Construction/Fall Protection.

(6) Work Clothing.

(a) Clothing must be worn which is appropriate to the work performed and conditions encountered.

(b) Appropriate high temperature protective clothing must be worn by workers who are exposed to possible contact with molten metals or other substances that can cause burns.

(c) Loose sleeves, ties, lapels, cuffs, or other loose clothing must not be worn near moving machinery.

(d) Clothing saturated or impregnated with flammable liquids, corrosive or toxic substances, irritants, or oxidizing agents must be removed immediately and not worn again until properly cleaned.

(e) Rings, wristwatches, earrings, bracelets, and other jewelry which might contact power driven machinery or electric circuitry, must not be worn.

(7) High Visibility Garments. Employees exposed to hazards caused by on highway type moving vehicles in construction zones and street/highway traffic must wear highly visible upper body garments. The colors must contrast with other colors in the area sufficiently to make the worker stand out. Colors equivalent to strong red, strong orange, strong yellow, strong yellow-green or fluorescent versions of these colors are acceptable. During hours of darkness, the garments must also have reflective material visible from all sides for 1000 feet.

(8) Eye And Face Protection.

(a) The employer must ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

(b) The employer must ensure that each affected employee uses eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors (e.g., clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable.

(c) The employer must ensure that each affected employee who wears prescription lenses while engaged in operations that involve eye hazards wears eye protection that incorporates the prescription in its design, or shall wear eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses.

(d) Eye and face PPE must be distinctly marked to facilitate identification of the manufacturer.

(e) The employer must ensure that each affected employee uses equipment with filter lenses that have a shade number appropriate for the work being performed for protection from injurious light radiation.

Table 1 - Filter Lenses for Protection Against Radiant Energy

Operations	Electrode Size 1/32 in.	Arc Current (amps)	Minimum* Protective Shade
Shielded metal arc welding	Less than 3	Less than 60	7
	3-5	60-160	8
	5-8	160-250	10
	More than 8	250-550	11
Gas metal arc welding and flux cored arc welding		Less than 60	7
		60-160	10
		160-250	10
		250-500	10
Gas Tungsten arc welding		Less than 50	8
		50-150	8
		150-500	10
Air carbon Arc cutting	(Light)	Less than 500	10
	(Heavy)	500-1000	11
Plasma arc welding		Less than 20	6
		20-100	8
		100-400	10
		400-800	11
Plasma arc cutting	(Light) **	Less than 300	8
	(Medium) **	300-400	9
	(Heavy) **	400-800	10
Torch brazing			3
Torch soldering			2
Carbon arc welding			14

Table 2 - Filter Lenses for Protection Against Radiant Energy

Operations	Plate thickness – inches	Plate thickness – mm	Minimum* Protective Shade
Gas Welding:			
Light	Under 1/8	Under 3.2	4
Medium	1/8 to 1/2	3.2 to 12.7	5
Heavy	Over 1/2	Over 12.7	6
Oxygen Cutting:			
Light	Under 1	Under 25	3
Medium	1 to 6	25 to 150	4
Heavy	Over 6	Over 150	5

\* As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.

\*\* These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the work piece.

(f) Protective eye and face protection devices must comply with any of the following consensus Standards.

**(A) ANSI/ISEA Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in 1926.6;**

~~[(A)]~~ **(B) ANSI Z87.1-2003, American National Standard Practice for Occupational and Educational Eye and Face Protection, which is incorporated by reference in 19[40]26.6; or**

~~[(B)]~~ **(C) ANSI Z87.1-1989 (R-1998), American National Standard Practice for Occupational and Educational Eye and Face Protection, which is incorporated by reference in 19[40]26.6; or**

~~[(C) ANSI Z87.1-1989, American National Standard Practice for Occupational and Educational Eye and Face Protection, which is incorporated by reference in 1910.6.]~~

(g) Protective eye and face protection devices that the employer demonstrates are at least as effective as protective eye and face protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

(h) Employees whose occupation or assignment requires exposure to laser beams shall be furnished laser safety goggles as required by Occupational Health Regulations which will protect for the specific wavelength of the laser and be of optical density adequate for the energy involved.

(9) Head Protection.

(a) The employer must ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling or flying objects.

(b) The employer must ensure that a protective helmet designed to reduce electrical shock hazard is worn by each such affected employee when near exposed electrical conductors which could contact the head.

- (c) Head protection must comply with any of the following consensus standards:
  - (A) ANSI Z89.1-2009, American National Standard for Industrial Head Protection, which is incorporated by reference in 19[40]26.6;
  - (B) ANSI Z89.1-2003, American National Standard for Industrial Head Protection, which is incorporated by reference in 19[40]26.6;
  - (C) ANSI Z89.1-1997, American National Standard for Industrial Head Protection, which is incorporated by reference in 19[40]26.6; or
- (d) Head protection devices that the employer demonstrates are at least as effective as head protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.
- (e) Employees who are exposed to power-driven machinery or to sources of ignition shall wear caps or other head covering which completely covers the hair.

(10) Foot Protection.

- (a) The employer must ensure that each affected employee use protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee's feet are exposed to electrical hazards.
- (b) Protective footwear must comply with any of the following consensus standards:
  - (A) ASTM F-2412-2005, Standard Test Methods for Foot Protection, and ASTM F-2413-2005, Standard Specification for Performance Requirements for Protective Footwear, which are incorporated by reference in 19[40]26.6;
  - (B) ANSI Z41-1999, American National Standard for Personal Protection – Protective Footwear, which is incorporated by reference in 19[40]26.6; or
  - (C) ANSI Z41-1991, American National Standard for Personal Protection – Protective Footwear, which is incorporated by reference in §19[40]26.6.
- (c) Protective footwear that the employer demonstrates is at least as effective as protective footwear that is constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.
- (d) Special types or designs of shoes or foot guards are required where conditions exist that make their use necessary for the safety of workers.

(11) Leg protection.

- (a) Leggings or high boots of leather, rubber, or other suitable material must be worn by persons exposed to hot substances or dangerous chemical spills.
- (b) Employees using chain saws must wear chaps or leg protectors that cover the leg from the upper thigh to mid-calf. The protector must be material designed to resist cuts from the chain saw. Employers must provide this protection at no cost to the employee.

(12) Hand Protection.

- (a) Employers must select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.
- (b) Employers must base the selection of the appropriate hand protection on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, and the hazards and potential hazards identified.
- (c) Gloves must not be worn by persons whose hands are exposed to moving parts in which they could be caught.

(13) Skin protection. Where the need for their use is necessary, protective covering, ointments, gloves, or other effective protection must be provided for and used by persons exposed to materials which are hazardous to the skin.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 2-2013, f. 2/15/13, ef. 4/1/13.

**OR-OSHA Admin. Order 3-2016, f. 9/7/16, ef. 9/7/16.**

## DIVISION 5, MARITIME ACTIVITIES

### PART 1915 – OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR SHIPYARD EMPLOYMENT

437-005-0001

Adoption by Reference. In addition to, and not in lieu of, any other safety and health codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, 29 CFR 1915, in the Federal Register:

(1) Subdivision A

(a) 29 CFR 1915.1. Purpose and authority, published 4/20/82, Federal Register (FR) vol. 47, p. 16984.

(b) 29 CFR 1915.2. Scope and application, published 4/20/82, FR vol. 47, p. 16984.

(c) 29 CFR 1915.3. Responsibility, published 4/20/82, FR vol. 47, p. 16984.

(d) 29 CFR 1915.4. Definitions, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(e) 29 CFR 1915.5. Incorporation by reference, published ~~5/2/11, Federal Register vol. 76, no. 84, p. 24576~~ **3/25/16, FR vol. 81, no. 58, p. 16085.**

(f) 29 CFR 1915.6. Commercial diving operations, published 4/20/82, FR vol. 47, p. 16984.

(g) 29 CFR 1915.7. Competent person, published 7/25/94, FR vol. 59, p. 37856.

(h) 29 CFR 1915.9. Compliance duties owed to each employee, published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589.

(2) Subdivision B

(a) 29 CFR 1915.11. Scope, application and definitions applicable to this Subpart, published 7/25/94, FR vol. 59, p. 37857.

(b) 29 CFR 1915.12. Precautions before entering confined and enclosed spaces and other dangerous atmospheres, published 3/16/95, FR vol. 60, no. 51, p. 14218.

(c) 29 CFR 1915.13. Cleaning and other cold work, published 7/25/94, FR vol. 59, p. 37859.

(d) 29 CFR 1915.14. Hot work, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(e) 29 CFR 1915.15. Maintenance of safe conditions, published 6/22/12, FR vol. 77, no. 121, p. 37587.

(f) 29 CFR 1915.16. Warning signs and labels, published 7/25/94, FR vol. 59, p. 37861.

Appendix A to Subpart B published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.

Appendix B to Subpart B published 7/25/94, FR vol. 59, p. 37816.

(3) Subdivision C

(a) 29 CFR 1915.31. Scope & application of subdivision, published 4/20/82, FR vol. 47, p. 16984.

(b) 29 CFR 1915.32. Toxic cleaning solvents, published 5/24/96, FR vol. 61, no. 102, p. 26351.

(c) 29 CFR 1915.33. Chemical paint & preservative remover, published 5/24/96, FR vol. 61, no. 102, p. 26351.

(d) 29 CFR 1915.34. Mechanical paint removers, published 5/24/96, FR vol. 61, no. 102, p. 26351.

(e) 29 CFR 1915.35. Painting, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(f) 29 CFR 1915.36. Flammable liquids, published 4/20/82, FR vol. 47, p. 16984.

(4) Subdivision D

(a) 29 CFR 1915.51. Ventilation & protection in welding, cutting and heating, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(b) 29 CFR 1915.52. Fire prevention. REMOVED 9/15/04, FR vol. 69, p. 55667.

- (c) 29 CFR 1915.53. Welding, cutting and heating of hollow metal containers & structure not covered by 1915.12, published 7/3/02, FR vol. 67, no. 128, p. 44541.
- (d) 29 CFR 1915.55. Gas welding & cutting, published 4/20/82, FR vol. 47, p. 16984.
- (e) 29 CFR 1915.56. Arc welding and cutting, published 4/20/82, FR vol. 47, p. 16984.
- (f) 29 CFR 1915.57. Uses of fissionable material in ship repairing and shipbuilding, published 4/20/82, FR vol. 47, p. 16984.
- (5) Subdivision E
  - (a) 29 CFR 1915.71. Scaffolds or staging, published 7/3/02, FR vol. 67, no. 128, p. 44541.
  - (b) 29 CFR 1915.72. Ladders, published 7/3/02, FR vol. 67, no. 128, p. 44541.
  - (c) 29 CFR 1915.73. Guarding of deck openings and edges, published 7/3/02, FR vol. 67, no. 128, p. 44541.
  - (d) 29 CFR 1915.74. Access to vessels, published 7/3/02, FR vol. 67, no. 128, p. 44541.
  - (e) 29 CFR 1915.75. Access to and guarding of dry docks and marine railways, published 7/3/02, FR vol. 67, no. 128, p. 44541.
  - (f) 29 CFR 1915.76. Access to cargo spaces and confined spaces, published 4/20/82, FR vol. 47, p. 16984.
  - (g) 29 CFR 1915.77. Working surfaces, published amended 7/3/02, FR vol. 67, no. 128, p. 44541.
- (6) Subdivision F
  - (a) 29 CFR 1915.80 Scope, application, definitions and effective dates, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (b) 29 CFR 1915.81 Housekeeping, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (c) 29 CFR 1915.82 Lighting, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (d) 29 CFR 1915.83 Utilities, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (e) 29 CFR 1915.84 Working alone, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (f) 29 CFR 1915.85 Vessel radar and communication systems, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (g) 29 CFR 1915.86 Lifeboats, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (h) 29 CFR 1915.87 Medical services and first aid, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (i) 29 CFR 1915.88 Sanitation, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (j) 29 CFR 1915.89 Control of hazardous energy (lockout/tagout), published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (k) 29 CFR 1915.90 Safety color code for marking physical hazards, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (l) 29 CFR 1915.91. Accident prevention signs and tags, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (m) 29 CFR 1915.92. Retention of DOT markings, placards, and labels, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (n) 29 CFR 1915.93. Motor vehicle safety equipment, operation, and maintenance, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (o) 29 CFR 1915.94. Servicing of multi-piece and single-piece rim wheels, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
- (7) Subdivision G
  - (a) 29 CFR 1915.111. Inspection, published 4/20/ 82, FR vol. 47, p. 16984.
  - (b) 29 CFR 1915.112. Ropes, chains and slings, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.
  - (c) 29 CFR 1915.113. Shackles and hooks, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.

- (d) 29 CFR 1915.114. Chain falls and pull-lifts, published 4/20/82, FR vol. 47, p. 16984.
- (e) 29 CFR 1915.115. Hoisting and hauling equipment, published 7/3/02, FR vol. 67, no. 128, p. 44541.
- (f) 29 CFR 1915.116. Use of gear, published 7/3/02, FR vol. 67, no. 128, p. 44541.
- (g) 29 CFR 1915.117. Qualifications of operators, published 4/20/82, FR vol. 47, p. 16984.
- (h) 29 CFR 1915.118. Tables, published 7/3/02, FR vol. 67, no. 128, p. 44541.
- (8) Subdivision H
  - (a) 29 CFR 1915.131. General precautions, published 7/3/02, FR vol. 67, no. 128, p. 44541.
  - (b) 29 CFR 1915.132. Portable electric tools, published 4/20/82, FR vol. 47, p. 16984.
  - (c) 29 CFR 1915.133. Hand tools, published 4/20/ 82, FR vol. 47, p. 16984.
  - (d) 29 CFR 1915.134. Abrasive wheels, published 7/3/02, FR vol. 67, no. 128, p. 44541.
  - (e) 29 CFR 1915.135. Powder actuated fastening tools, published 5/24/96, FR vol. 61, no. 102, p. 26351.
  - (f) 29 CFR 1915.136. Internal combustion engines other than ship's equipment, published 4/20/82, FR vol. 47, p. 16984.
- (9) Subdivision I
  - (a) 29 CFR 1915.151. Scope, application and definitions, published 5/24/96, FR vol. 61, no. 102, p. 26352.
  - (b) 29 CFR 1915.152. General requirements, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.
  - (c) 29 CFR 1915.153. Eye and face protection, published ~~9/9/09, FR vol. 74, no. 173, pp. 46350-46361~~ **3/25/16, FR vol. 81, no. 58, p. 16085.**
  - (d) 29 CFR 1915.154. Respiratory protection, published 5/24/96, FR vol. 61, no. 102, p. 26354.
  - (e) 29 CFR 1915.155. Head protection, published 6/22/12, FR vol. 77, no. 121, p. 37587.
  - (f) 29 CFR 1915.156. Foot protection, published 9/9/09, FR vol. 74, no. 173, pp. 46350-46361.
  - (g) 29 CFR 1915.157. Hand and body protection, published 5/24/96, FR vol. 61, no. 102, p. 26354.
  - (h) 29 CFR 1915.158. Lifesaving equipment, published 7/3/02, FR vol. 67, no. 128, p. 44541.
  - (i) 29 CFR 1915.159. Personal fall arrest systems (PFAS), published 7/3/02, FR vol. 67, no. 128, p. 44541.
  - (j) 29 CFR 1915.160. Positioning device systems, published 7/3/02, FR vol. 67, no. 128, p. 44541.
- Appendix A to Subpart I, published 7/3/02, FR vol. 67, no. 128, p. 44541.
- Appendix B to Subpart I, published 7/3/02, FR vol. 67, no. 128, p. 44541.
- (10) Subdivision J
  - (a) 29 CFR 1915.161. Scope and application of subdivision, published 4/20/ 82, FR vol. 47, p. 16984.
  - (b) 29 CFR 1915.162. Ship's boilers, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (c) 29 CFR 1915.163. Ship's piping systems, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (d) 29 CFR 1915.164. Ship's propulsion machinery, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.
  - (e) 29 CFR 1915.165. Ship's decking machinery, published 7/3/02, FR vol. 67, no. 128, p. 44541.
- (11) Subdivision K
  - (a) 29 CFR 1915.171. Scope and application of subdivision, published 4/20/ 82, FR vol. 47, p. 16984.
  - (b) 29 CFR 1915.172. Portable air receiver and other unfired pressure vessels, published 7/3/02, FR vol. 67, no. 128, p. 44541.
  - (c) 29 CFR 1915.173. Drums and containers, published 4/20/82, FR vol. 47, p. 16984.

(12) Subdivision L

(a) 29 CFR 1915.181. Electrical circuits and distribution boards, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(13) Subdivisions M-O (Reserved)

(14) Subdivision P

(a) 29 CFR 1915.501. General provisions, published 9/15/04, FR vol. 69, p. 55667.

(b) 29 CFR 1915.502. Fire safety plan, published 9/15/04, FR vol. 69, p. 55667.

(c) 29 CFR 1915.503. Precautions for hot work, published 9/15/04, FR vol. 69, p. 55667.

(d) 29 CFR 1915.504. Fire watches, published 9/15/04, FR vol. 69, p. 55667.

(e) 29 CFR 1915.505. Fire response, published 10/17/06, FR vol. 71, no. 200, p. 60843.

(f) 29 CFR 1915.506. Hazards of fixed extinguishing systems on board vessels and vessel sections, published 9/15/04, FR vol. 69, p. 55667.

(g) 29 CFR 1915.507. Land-side fire protection systems, published 10/17/06, FR vol. 71, no. 200, p. 60843.

(h) 29 CFR 1915.508. Training, published 9/15/04, FR vol. 69, p. 55667.

(i) 29 CFR 1915.509. Definitions applicable to this subpart, published 9/15/04, FR vol. 69, p. 55667.

Appendix A to Subpart P, published 9/15/04, FR vol. 69, p. 55667.

(15) Subdivision Q-Y (Reserved)

(16) Subdivision Z

(a) 29 CFR 1915.1000. Air Contaminants, published 12/27/11, FR vol. 76, no. 248, p. 80735.

(b) 29 CFR 1915.1001. Asbestos, published 2/8/13, FR vol. 78, no. 27, p. 9311.

Appendix A to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

Appendix B to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

Appendix C to 1915.1001, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.

Appendix D to 1915.1001, published 8/10/94, FR vol. 59, p. 40964.

Appendix E to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

Appendix F to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

Appendix G to 1915.1001, published 8/10/94, FR vol. 59, p. 40964.

Appendix H to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

Appendix I to 1915.1001, published 8/10/94, FR vol. 59, p. 40964.

Appendix J to 1915.1001, published 8/10/94, FR vol. 59, p. 40964.

Appendix K to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

Appendix L to 1915.1001, published 8/23/96, FR vol. 61, p. 43454.

(c) 29 CFR 1915.1002. Coal tar pitch volatiles; interpretation of term, published 6/20/96, FR vol. 61, p. 31427.

(d) 29 CFR 1915.1003. 13 Carcinogens (4-Nitrobiphenyl, etc.), published 6/20/96, FR vol. 61, p. 31427.

(e) 29 CFR 1915.1004. alpha-Naphthylamine, published 6/20/96, FR vol. 61, p. 31427.

(f) 29 CFR 1915.1005. (Reserved)

(g) 29 CFR 1915.1006. Methyl chloromethyl ether, published 6/20/96, FR vol. 61, p. 31427.

(h) 29 CFR 1915.1007. 3,3'Dichlorobenzidene (and its salts), published 6/20/96, FR vol. 61, p. 31427.

(i) 29 CFR 1915.1008. bis-Chloromethyl ether, published 6/20/96, FR vol. 61, p. 31427.

(j) 29 CFR 1915.1009. beta-Naphthylamine, published 6/20/96, FR vol. 61, p. 31427.

(k) 29 CFR 1915.1010. Benzidine, published 6/20/96, FR vol. 61, p. 31427.

(l) 29 CFR 1915.1011. 4-Aminodiphenyl, published 6/20/96, FR vol. 61, p. 31427.

(m) 29 CFR 1915.1012. Ethyleneimine, published 6/20/96, FR vol. 61, p. 31427.

(n) 29 CFR 1915.1013. beta-Propiolactone, published 6/20/96, FR vol. 61, p. 31427.

(o) 29 CFR 1915.1014. 2-Acetylaminofluorene, published 6/20/96, FR vol. 61, p. 31427.

(p) 29 CFR 1915.1015. 4-Dimethylaminoazobenzene, published 6/20/96, FR vol. 61, p. 31427.

- (q) 29 CFR 1915.1016. N-Nitrosodimethylamine, published 6/20/96, FR vol. 61, p. 31427.
  - (r) 29 CFR 1915.1017. Vinyl chloride, published 6/20/96, FR vol. 61, p. 31427.
  - (s) 29 CFR 1915.1018. Inorganic arsenic, published 6/20/96, FR vol. 61, p. 31427.
  - (t) 29 CFR 1915.1020 Access to employee exposure and medical records, published 6/20/96, FR vol. 61, p. 31427.
  - (u) 29 CFR 1915.1025. Lead, published 6/20/96, FR vol. 61, p. 31427.
  - (v) 29 CFR 1915.1026 Chromium (VI), published 3/26/12, FR vol. 77, no. 58, p. 17574.
  - (w) 29 CFR 1915.1027. Cadmium, published 6/20/96, FR vol. 61, p. 31427.
  - (x) 29 CFR 1915.1028. Benzene, published 6/20/96, FR vol. 61, p. 31427.
  - (y) 29 CFR 1915.1030. Bloodborne pathogens, published 6/20/96, FR vol. 61, p. 31427.
  - (z) 29 CFR 1915.1044. 1,2 dibromo-3-chloropropane, published 6/20/96, FR vol. 61, p. 31427.
  - (aa) 29 CFR 1915.1045. Acrylonitrile, published 6/20/96, FR vol. 61, p. 31427.
  - (bb) 29 CFR 1915.1047. Ethylene oxide, published 6/20/96, FR vol. 61, p. 31427.
  - (cc) 29 CFR 1915.1048. Formaldehyde, published 6/20/96, FR vol. 61, p. 31427.
  - (dd) 29 CFR 1915.1050. Methylenedianiline, published 6/20/96, FR vol. 61, p. 31427.
  - (ee) 29 CFR 1915.1052 Methylene Chloride, published 1/10/97, Federal Register, vol. 62, no. 7, p. 1619.
  - (ff) 29 CFR 1915.1120 Access to employee exposure and medical records has been redesignated to §1915.1020.
- (Note: 29 CFR 1915.99, Hazard Communication was redesignated as 1915.1200 on 7/1/93, FR vol. 58, no. 125, p. 35514.)
- (gg) 29 CFR 1915.1200. Hazard communication, published 6/20/96, FR vol. 61, p. 31427.
  - (hh) 29 CFR 1915.1450. Occupational exposure to hazardous chemicals in laboratories, published 6/20/96, FR vol. 61, p. 31427.

Stat. Auth.: ORS 654.025(2) and 656.726(4).  
 Stats. Implemented: ORS 654.001 to 654.295.  
 Hist: OR-OSHA Admin. Order 9-1992, f. 9/24/92, ef. 11/1/92.  
 OR-OSHA Admin. Order 1-1993, f. 1/22/93, ef. 1/22/93.  
 OR-OSHA Admin. Order 19-1993, f. 12/29/93, ef. 12/29/93.  
 OR-OSHA Admin. Order 4-1994, f. 8/4/94, ef. 8/4/94.  
 OR-OSHA Admin. Order 1-1995, f. 1/19/95, ef. 1/19/95.  
 OR-OSHA Admin. Order 2-1995, f. 1/25/95, ef. 1/25/95.  
 OR-OSHA Admin. Order 4-1995, f. 3/29/95, ef. 3/29/95.  
 OR-OSHA Admin. Order 5-1995, f. 4/6/95, ef. 4/6/95.  
 OR-OSHA Admin. Order 8-1995, f. 8/25/95, ef. 8/25/95.  
 OR-OSHA Admin. Order 5-1996, f. 11/29/96, ef. 18/29/96.  
 OR-OSHA Admin. Order 6-1996, f. 11/29/96, ef. 11/29/96.  
 OR-OSHA Admin. Order 3-1997, f. 3/28/97, ef. 3/28/97.  
 OR-OSHA Admin. Order 4-1997, f. 4/2/97, ef. 4/2/97.  
 OR-OSHA Admin. Order 6-1997, f. 5/2/97, ef. 5/2/97.  
 OR-OSHA Admin. Order 7-1998, f. 12/28/98, ef. 12/28/98.  
 OR-OSHA Admin. Order 4-2001, f. 2/5/01, ef. 2/5/01.  
 OR-OSHA Admin. Order 4-2003, f. 5/6/03, ef. 5/6/03.  
 OR-OSHA Admin. Order 8-2004, f. 12/30/04, ef. 12/30/04.  
 OR-OSHA Admin. Order 1-2005, f. 4/12/05, ef. 4/12/05.  
 OR-OSHA Admin. Order 4-2006, f. 7/24/06, ef. 7/24/06.  
 OR-OSHA Admin. Order 6-2006, f. 8/30/06, ef. 8/30/06.  
 OR-OSHA Admin. Order 10-2006, f. 11/30/06, ef. 11/30/06.  
 OR-OSHA Admin. Order 1-2007, f. 1/9/07, ef. 1/16/07.  
 OR-OSHA Admin. Order 5-2008, f. 5/1/08, ef. 5/15/08.  
 OR-OSHA Admin. Order 5-2009, f. 5/29/09, ef. 5/29/09.  
 OR-OSHA Admin. Order 2-2010, f. 2/25/10, ef. 2/25/10.  
 OR-OSHA Admin. Order 3-2010, f. 6/10/10, ef. 6/15/10.  
 OR-OSHA Admin. Order 3-2011, f. 11/1/11, ef. 11/1/11.  
 OR-OSHA Admin. Order 4-2011, f. 12/8/11, ef. 12/8/11.  
 OR-OSHA Admin. Order 1-2012, f. 4/10/12, ef. 4/10/12.

OR-OSHA Admin. Order 5-2012, f. 9/25/12, ef. 9/25/12.  
OR-OSHA Admin. Order 7-2012, f. 12/14/12, ef. 12/14/12.  
OR-OSHA Admin. Order 4-2013, f. 7/19/13, ef. 7/19/13.  
**OR-OSHA Admin. Order 3-2016, f. 9/7/16, ef. 9/7/16.**

## 29 CFR 1917 – MARINE TERMINALS

437-005-0002

Adoption by Reference.

In addition to, and not in lieu of, any other safety and health codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, 29 CFR 1917, in the Federal Register:

(1) Subdivision A

(a) 29 CFR 1917.1 Scope and applicability, published 2/28/06, FR vol. 71, no. 39, p. 10100.

(b) 29 CFR 1917.2 Definitions, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.

(c) 29 CFR 1917.3 Incorporation by reference, published [6/22/12, FR vol. 77, no. 121, p. 37587] **3/25/16, FR vol. 81, no. 58, p. 16085.**

(d) 29 CFR 1917.5 Compliance duties owed to each employee, published 12/12/08, FR vol. 73, no. 240, pp.75568-75589

(2) Subdivision B

(a) 29 CFR 1917.11 Housekeeping, published 7/25/97, FR vol. 62, no. 143, p. 40196.

(b) 29 CFR 1917.12 Slippery conditions, published 7/5/83, FR vol. 48, p. 30909.

(c) 29 CFR 1917.13 Slinging, published 7/25/97, FR vol. 62, no. 143, p. 40197.

(d) 29 CFR 1917.14 Stacking of cargo and pallets, published 7/5/83, FR vol. 48, p. 30909.

(e) 29 CFR 1917.15 Coopering, published 7/5/83, FR vol. 48, p. 30909.

(f) 29 CFR 1917.16 Line handling, published 7/5/83, FR vol. 48, p. 30909.

(g) 29 CFR 1917.17 Railroad facilities, published 7/25/97, FR vol. 62, no. 143, p. 40197.

(h) 29 CFR 1917.18 Log handling, published 7/5/83, FR vol. 48, p. 30909.

(i) 29 CFR 1917.19 Movement of barges and rail cars, published 7/5/83, FR vol. 48, p. 30909.

(j) 29 CFR 1917.20 Interference with communications, published 7/25/97, FR vol. 62, no. 143, p. 40197.

(k) 29 CFR 1917.21 Open fires, published 7/5/83, FR vol. 48, p. 30909.

(l) 29 CFR 1917.22 Hazardous cargo (see 1917.2(p)), published 7/5/83, FR vol. 48, p. 30909.

(m) 29 CFR 1917.23 Hazardous atmospheres and substances (see 1917.2(p)), published 6/30/00, FR vol. 65, no. 127, p. 40938.

(n) 29 CFR 1917.24 Carbon monoxide, published 7/25/97, FR vol. 62, no. 143, p. 40197.

(o) 29 CFR 1917.25 Fumigants, pesticides, insecticides and hazardous preservatives (see 1917.2(p)), published 6/30/00, FR vol. 65, no. 127, p. 40938.

(p) 29 CFR 1917.26 First aid and lifesaving facilities, published 6/30/00, FR vol. 65, no. 127, p. 40938.

(q) 29 CFR 1917.27 Personnel, published 6/30/00, FR vol. 65, no. 127, p. 40938.

(r) 29 CFR 1917.28 Hazard communication (see also §1917.1(a)(2)(vi)), published 7/25/97, FR vol. 62, no. 143, p. 40198.

(s) 29 CFR 1917.29 Retention of DOT markings, placards and labels, published 7/19/94, Federal Register, vol. 59, no. 137, p. 36700.

(t) 29 CFR 1917.30 Emergency action plans, published 6/30/00, FR vol. 65, no. 127, p. 40938.

(3) Subdivision C

(a) 29 CFR 1917.41 House falls, published 7/5/83, FR vol. 48, p. 30909.

(b) 29 CFR 1917.42 Miscellaneous auxiliary gear, published 6/30/00, FR vol. 65, no. 127, p. 40938.

- (c) 29 CFR 1917.43 Powered industrial trucks, published 6/30/00, FR vol. 65, no. 127, p. 40938.
- (d) 29 CFR 1917.44 General rules applicable to vehicles, published 6/30/00, FR vol. 65, no. 127, p. 40938.
- (e) 29 CFR 1917.45 Cranes and derricks (see also §1917.50), published 6/30/00, FR vol. 65, no. 127, p. 40938.
- (f) 29 CFR 1917.46 Load indicating devices, published 7/25/97, FR vol. 62, no. 143, p. 40199.
- (g) 29 CFR 1917.47 Winches, published 7/5/83, FR vol. 48, p. 30909.
- (h) 29 CFR 1917.48 Conveyors, published 7/25/97, FR vol. 62, no. 143, p. 40200.
- (i) 29 CFR 1917.49 Spouts, chutes, hoppers, bins, and associated equipment, published 7/5/83, FR vol. 48, p. 30909.
- (j) 29 CFR 1917.50 Certification of marine terminal material handling devices (see also Mandatory Appendix IV, Part 1918 of this chapter), published 6/30/00, FR vol. 65, no. 127, p. 40938.
- (k) 29 CFR 1917.51 Hand tools, published 7/5/83, FR vol. 48, p. 30909.
- (4) Subdivision D
  - (a) 29 CFR 1917.70 General, published 7/5/83, FR vol. 48, p. 30909.
  - (b) 29 CFR 1917.71 Terminals handling intermodal container or roll-on roll-off operations, published 4/21/14, FR vol. 79, no. 76, p. 22018.
  - (c) 29 CFR 1917.72 (Reserved)
  - (d) 29 CFR 1917.73 Terminal facilities handling menhaden and similar species of fish (see also §1917.2, definition of hazardous cargo, materials, substance, or atmosphere), published 6/30/00, FR vol. 65, no. 127, p. 40938.
- (5) Subdivision E
  - (a) 29 CFR 1917.91 Eye and face protection, published ~~9/9/09, FR vol. 74, no. 173, pp. 46350-46364~~**3/25/16, FR vol. 81, no. 58, p. 16085.**
  - (b) 29 CFR 1917.92 Respiratory protection, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (c) 29 CFR 1917.93 Head protection, published 6/22/12, FR vol. 77, no. 121, p. 37587.
  - (d) 29 CFR 1917.94 Foot protection, published 9/9/09, FR vol. 74, no. 173, pp. 46350-46361.
  - (e) 29 CFR 1917.95 Other protective measures, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (f) 29 CFR 1917.96 Payment for protective equipment, published 11/15/07, FR vol. 72, no. 220, p. 64342.
- (6) Subdivision F
  - (a) 29 CFR 1917.111 Maintenance and load limits, published 7/5/83, FR vol. 48, p. 30909.
  - (b) 29 CFR 1917.112 Guarding of edges, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (c) 29 CFR 1917.113 Clearance heights, published 7/5/83, FR vol. 48, p. 30909.
  - (d) 29 CFR 1917.114 Cargo doors, published 7/5/83, FR vol. 48, p. 30909.
  - (e) 29 CFR 1917.115 Platforms and skids, published 7/5/83, FR vol. 48, p. 30909.
  - (f) 29 CFR 1917.116 Elevators and escalators, published 7/13/84, FR vol. 49, p. 28551.
  - (g) 29 CFR 1917.117 Manlifts, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (h) 29 CFR 1917.118 Fixed ladders, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (i) 29 CFR 1917.119 Portable ladders, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (j) 29 CFR 1917.120 Fixed stairways, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (k) 29 CFR 1917.121 Spiral stairways, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (l) 29 CFR 1917.122 Employee exits, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (m) 29 CFR 1917.123 Illumination, published 7/25/97, FR vol. 62, no. 143, p. 40201.
  - (n) 29 CFR 1917.124 Dockboards (car and bridge plates), published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (o) 29 CFR 1917.125 Guarding temporary hazards, published 7/5/83, FR vol. 48, p. 30909.
  - (p) 29 CFR 1917.126 River banks, published 7/25/97, FR vol. 62, no. 143, p. 40201.
  - (q) 29 CFR 1917.127 Sanitation, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.

- (r) 29 CFR 1917.128 Signs and marking, published 7/5/83, FR vol. 48, p. 30909.
  - (7) Subdivision G
  - (a) 29 CFR 1917.151 Machine guarding, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (b) 29 CFR 1917.152 Welding, cutting and heating (hot work) (see also §1917.2, definition of hazardous cargo, materials, substance, or atmosphere), published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (c) 29 CFR 1917.153 Spray painting (see also §1917.2, definition of hazardous cargo, materials, substance, or atmosphere), published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (d) 29 CFR 1917.154 Compressed air, published 7/5/83, FR vol. 48, p. 30909.
  - (e) 29 CFR 1917.155 Air receivers, published 7/5/83, FR vol. 48, p. 30909.
  - (f) 29 CFR 1917.156 Fuel handling and storage, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (g) 29 CFR 1917.157 Battery charging and changing, published 7/5/83, FR vol. 48, p. 30909; 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (h) 29 CFR 1917.158 Prohibited operations, published 7/5/83, FR vol. 48, p. 30909.
- These standards are available at the Department of Consumer and Business Services, Oregon Occupational Safety and Health Division, and the United States Government Printing Office.

Stat. Auth.: ORS 654.025(2) and 656.726(4).  
 Stats. Implemented: ORS 654.001 to 654.295.  
 Hist: OR-OSHA Admin. Order 9-1992, f. 9/24/92, ef. 11/1/92.  
 OR-OSHA Admin. Order 4-1994, f. 8/4/94, ef. 8/4/94.  
 OR-OSHA Admin. Order 1-1995, f. 1/19/95, ef. 1/19/95.  
 OR-OSHA Admin. Order 5-1995, f. 4/6/95, ef. 4/6/95.  
 OR-OSHA Admin. Order 9-1997, f. 12/31/97, ef. 12/31/97.  
 OR-OSHA Admin. Order 9-2000, f. 10/10/00, ef. 10/10/00.  
 OR-OSHA Admin. Order 6-2006, f. 8/30/06, ef. 8/30/06.  
 OR-OSHA Admin. Order 5-2008, f. 5/1/08, ef. 5/15/08.  
 OR-OSHA Admin. Order 5-2009, f. 5/29/09, ef. 5/29/09.  
 OR-OSHA Admin. Order 6-2009, f. 6/5/09, ef. 6/5/09.  
 OR-OSHA Admin. Order 2-2010, f. 2/25/10, ef. 2/25/10.  
 OR-OSHA Admin. Order 4-2011, f. 12/8/11, ef. 12/8/11.  
 OR-OSHA Admin. Order 7-2012, f. 12/14/12, ef. 12/14/12.  
 OR-OSHA Admin. Order 4-2014, f. 10/17/14, ef. 10/17/14.  
**OR-OSHA Admin. Order 3-2016, f. 9/7/16, ef. 9/7/16.**

## PART 1918 - SAFETY AND HEALTH REGULATIONS FOR LONGSHORING

437-005-0003

Adoption by Reference.

In addition to, and not in lieu of, any other safety and health codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, 29 CFR 1918, in the Federal Register:

- (1) Subdivision A
- (a) 29 CFR 1918.1 Scope and application, published 2/28/06, FR vol. 71, no. 39, p. 10100.
- (b) 29 CFR 1918.2 Definitions, published 6/8/11, Federal Register, vol. 76, no. 110, 33590.
- (c) 29 CFR 1918.3 Incorporation by reference, published ~~[6/22/12, FR vol. 77, no. 121, p. 37587]~~**3/25/16, FR vol. 81, no. 58, p. 16085.**
- (d) 29 CFR 1918.5 Compliance duties owed to each employee, published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589.

- (2) Subdivision B
  - (a) 29 CFR 1918.11 Gear certification (see also §§1918.2 and 1918.51), published 7/25/97, FR vol. 62, no. 143, p. 40202.
- (3) Subdivision C
  - (a) 29 CFR 1918.21 General requirements, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (b) 29 CFR 1918.22 Gangways , published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (c) 29 CFR 1918.23 Jacob's ladders, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (d) 29 CFR 1918.24 Fixed and portable ladders, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (e) 29 CFR 1918.25 Bridge plates and ramps (see also §1918.86), published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (f) 29 CFR 1918.26 Access to barges and river towboats, published 7/25/97, FR vol. 62, no. 143, p. 40202.
- (4) Subdivision D
  - (a) 29 CFR 1918.31 Hatch coverings, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (b) 29 CFR 1918.32 Stowed cargo and temporary landing surfaces, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (c) 29 CFR 1918.33 Deck loads, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (d) 29 CFR 1918.34 Other decks, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (e) 29 CFR 1918.35 Open hatches, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (f) 29 CFR 1918.36 Weather deck rails, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (g) 29 CFR 1918.37 Barges, published 6/30/00, FR vol. 65, no. 127, p. 40938.
- (5) Subdivision E
  - (a) 29 CFR 1918.41 Coaming clearances, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (b) 29 CFR 1918.42 Hatch beam and pontoon bridles, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (c) 29 CFR 1918.43 Handling hatch beams and covers, published 6/30/00, FR vol. 65, no. 127, p. 40938.
- (6) Subdivision F
  - (a) 29 CFR 1918.51 General requirements (see also §1918.11 and Appendix III of this part), published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (b) 29 CFR 1918.52 Specific requirements, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (c) 29 CFR 1918.53 Cargo winches, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (d) 29 CFR 1918.54 Rigging gear, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (e) 29 CFR 1918.55 Cranes (see also §1918.11), published 7/25/97, FR vol. 62, no. 143, p. 40202.
- (7) Subdivision G
  - (a) 29 CFR 1918.61 General (see also Appendix IV of this part), published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (b) 29 CFR 1918.62 Miscellaneous auxiliary gear, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (c) 29 CFR 1918.63 Chutes, gravity conveyors and rollers, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (d) 29 CFR 1918.64 Powered conveyors, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (e) 29 CFR 1918.65 Mechanically-powered vehicles used aboard vessels, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (f) 29 CFR 1918.66 Cranes and derricks other than vessel's gear, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (g) 29 CFR 1918.67 Notifying ship's officers before using certain equipment, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (h) 29 CFR 1918.68 Grounding, published 7/25/97, FR vol. 62, no. 143, p. 40202.

- (i) 29 CFR 1918.69 Tools, published 6/30/00, FR vol. 65, no. 127, p. 40938.
- (j) 29 CFR 1918.70 - 1918.80 (Reserved)
- (8) Subdivision H
  - (a) 29 CFR 1918.81 Slings, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (b) 29 CFR 1918.82 Building drafts, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (c) 29 CFR 1918.83 Stowed cargo, tiering and breaking down, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (d) 29 CFR 1918.84 Bulling cargo, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (e) 29 CFR 1918.85 Containerized cargo operations, published 12/10/08, FR vol. 73, no. 238, pp. 75246-75290.
  - (f) 29 CFR 1918.86 Roll-on roll-off (Ro-Ro) operations (see also §1918.25), published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (g) 29 CFR 1918.87 Ship's cargo elevators, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (h) 29 CFR 1918.88 Log operations, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (i) 29 CFR 1918.89 Handling hazardous cargo (see also §§1918.2 and 1918.99), published 7/25/97, FR vol. 62, no. 143, p. 40202.
- (9) Subdivision I
  - (a) 29 CFR 1918.90 Hazard communication (see also §1918.1(b)(4)), published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (b) 29 CFR 1918.91 Housekeeping, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (c) 29 CFR 1918.92 Illumination, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (d) 29 CFR 1918.93 Hazardous atmospheres and substances (see also §1918.2(j)), published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (e) 29 CFR 1918.94 Ventilation and atmospheric conditions (see also §1918.2), published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (f) 29 CFR 1918.95 Sanitation , published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.
  - (g) 29 CFR 1918.96 Maintenance and repair work in the vicinity of longshoring operations, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (h) 29 CFR 1918.97 First aid and lifesaving facilities (see also Appendix V of this part), published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (i) 29 CFR 1918.98 Qualifications of machinery operators and supervisory training, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (j) 29 CFR 1918.99 Retention of DOT markings, placards and labels, published 7/25/97, FR vol. 62, no. 143, p. 40202.
  - (k) 29 CFR 1918.100 Emergency action plans, published 6/30/00, FR vol. 65, no. 127, p. 40938.
- (10) Subdivision J
  - (a) 29 CFR 1918.101 Eye and face protection, published ~~9/9/09, FR vol. 74, no. 173, pp. 46350-46361~~**3/25/16, FR vol. 81, no. 58, p. 16085.**
  - (b) 29 CFR 1918.102 Respiratory protection, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (c) 29 CFR 1918.103 Head protection, published 6/22/12, FR vol. 77, no. 121, p. 37587.
  - (d) 29 CFR 1918.104 Foot protection, published 9/9/09, FR vol. 74, no. 173, pp. 46350-46361.
  - (e) 29 CFR 1918.105 Other protective measures, published 6/30/00, FR vol. 65, no. 127, p. 40938.
  - (f) 29 CFR 1918.106 Payment for protective equipment, published 11/15/07, FR vol. 72, no. 220, p. 64342.
- (11) Appendix I – Cargo Gear Register and Certificates (Non-Mandatory), published 7/25/97, FR vol. 62, no. 143, p. 40202.
- (12) Appendix II – Tables for Selected Miscellaneous Auxiliary Gear (Mandatory), published 6/30/00, FR vol. 65, no. 127, p. 40938.
- (13) Appendix III – The Mechanics of Conventional Cargo Gear (Non-Mandatory), published 7/25/97, FR vol. 62, no. 143, p. 40202.

(14) Appendix IV – Special Cargo Gear (Mandatory), published 6/30/00, FR vol. 65, no. 127, p. 40938.

(15) Appendix V – Basic Elements of a First Aid Training Program (Non-Mandatory), published 7/25/97, FR vol. 62, no. 143, p. 40202.

These standards are available at the Department of Consumer and Business Services, Oregon Occupational Safety and Health Division, and the United States Government Printing Office.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 to 654.295.

Hist: OR-OSHA Admin. Order 9-1992, f. 9/24/92, ef. 11/1/92.

OR-OSHA Admin. Order 4-1994, f. 8/4/94, ef. 8/4/94.

OR-OSHA Admin. Order 1-1995, f. 1/19/95, ef. 1/19/95.

OR-OSHA Admin. Order 5-1995, f. 4/6/95, ef. 4/6/95.

OR-OSHA Admin. Order 9-1997, f. 12/31/97, ef. 12/31/97.

OR-OSHA Admin. Order 9-2000, f. 10/10/00, ef. 10/10/00.

OR-OSHA Admin. Order 6-2006, f. 8/30/06, ef. 8/30/06.

OR-OSHA Admin. Order 5-2008, f. 5/1/08, ef. 5/15/08.

OR-OSHA Admin. Order 5-2009, f. 5/29/09, ef. 5/29/09.

OR-OSHA Admin. Order 6-2009, f. 6/5/09, ef. 6/5/09.

OR-OSHA Admin. Order 2-2010, f. 2/25/10, ef. 2/25/10.

OR-OSHA Admin. Order 4-2011, f. 12/8/11, ef. 12/8/11.

OR-OSHA Admin. Order 7-2012, f. 12/14/12, ef. 12/14/12.

**OR-OSHA Admin. Order 3-2016, f. 9/7/16, ef. 9/7/16.**