

OAR 437, Oregon OSHA  
Changes Adopted in Division 2/L  
AO 3-2005, filed and effective 6/10/05

437-002-0182 Oregon Rules for Fire Fighters.

(1) Scope and Application.

(a) These rules shall apply to any and all activities, operations and equipment of employers and employees involved in providing fire protection services, and other emergency first response and related activities, which are subject to the provisions of the Oregon Safe Employment Act. These rules shall not apply to the following exempted fire fighting activities:

- (A) Aircraft fire fighting and rescue;
- (B) Forest and uncultivated, wildland fire fighting;
- (C) Private industry fire brigades.
- (D) Marine Fire Fighting and rescue.

EXCEPTION: When a public fire department elects to participate in one or more of the exempted fire fighting activities, that fire department shall comply with all of the provisions of OAR 437-002-0182.

(b) The provisions of OAR 437-002-0182 shall be supplemented by the provisions of other applicable safety and health rules of OR-OSHA.

(2) 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.

**Afterflame:** The time a test specimen continues to flame after the flame source has been removed.

**ANSI:** American National Standards Institute.

**Apparatus:** A mobile piece of fire fighting equipment such as pumper, water tender, etc.

Drill tower: A structure which may or may not be attached to the station and which is principally used for nonclassroom training of the fire fighters in fire service techniques, and which is over two stories in height.

Emergency incident: Any situation to which the fire department responds to deliver emergency services, including 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.

Fire chief: An employer representative responsible for managing the fire department's operation.

Fire fighter:

(1) A person involved in performing fire department duties and responsibilities, which include fire suppression.

(2) A fire fighter may be a career or volunteer member of a fire department and may occupy any position or rank within the fire department.

Fire retardant: A material to reduce, stop or prevent flame spread.

Fire training: Training received by fire fighters to maintain proficiency in the performance of their assigned duties.

Flame-resistance: The property of materials, or combinations of component materials, to retard ignition and restrict the spread of flame.

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

Helmet: A head protective device consisting of a rigid shell, energy absorption system, and chin strap intended to be worn to provide protection for the head or portions thereof, against impact, flying or falling objects, electric shock, penetration, heat and flame.

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

IFSTA: International Fire Service Training Association.

Lifeline: Length of rope to which employees are secured when in extremely hazardous areas.

Live fire training: Any fire set within a structure, tank, pipe, pan, etc., under controlled conditions to facilitate the training of fire fighters under actual fire conditions.

MSHA: Mine Safety and Health Administration.

NFPA: National Fire Protection Association.

Nondestructive testing: A test to determine the characteristics or properties of a material or substance that does not involve its destruction or deterioration.

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

Protective clothing: The clothing or equipment worn to protect the head, body and extremities from chemical, physical and health hazards.

Quick disconnect valve: A device which starts the flow of air by insertion of the hose which leads from the facepiece into the regulator of self-contained breathing apparatus, and stops the flow of air by disconnection of the hose from the regulator.

Rescue saw (Cutoff saw): A powered saw with a large circular cutting blade covered in part by a movable guard used to cut metal, wood, or concrete enclosures.

Respirators:

(1) Atmosphere-supplying respirators: May be self-contained in which a cylinder of air or oxygen or an oxygen generating chemical provides the necessary oxygen for breathing, or a hose-type respirator in which the air is supplied from an external source.

(2) Air-purifying respirators: Contain chemical cartridges and/or filters to remove the contaminant prior to breathing.

(3) Positive Pressure demand respirators (Positive pressure respirators): Types of respirators which constantly and automatically maintain a positive pressure in the mask by the introduction of air when a spring-loaded valve senses that the positive pressure has been lowered because of inhalation or the leakage of air from the mask.

Responding: The act of answering an emergency call or other alarm.

Scabbard: A guard which will prevent accidental injury and which covers the blade and pick of an axe or other sharp instrument when worn by the fire fighter.

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

Station (Fire station): Structure in which fire service apparatus and/or personnel are housed.

Tailboard: Standing space at rear of an engine or pumper apparatus where fire fighters ride.

Training: The process of making proficient through instruction and 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.

## GENERAL REQUIREMENTS

(3) Organizational statement. The employer shall prepare and maintain a statement or written policy which includes basic organizational structure and functions of the organization, in addition to the type, amount, and frequency of training to be provided to fire fighters. This statement shall be made available for inspection by the Administrator and by employees or their designated representatives.

(4) Personnel.

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

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

(5) Employer's Responsibility.

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

(b) It shall be 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; and

(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 shall maintain all equipment in a safe condition.

(d) The employer shall see that employees who participate in exempted fire fighting activities listed in OAR 437-002-0182(1) are properly trained, protected, clothed and equipped for the known hazards of that particular emergency operation.

The following note refers to the Respiratory Protection Standard, 1910.134(g)(3) and (4), Procedures for Interior Structural Fire Fighting ("two-in/two-out rule") adopted in Oregon July 7, 1998.

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

(6) Employee's Responsibility.

- (a) Each fire fighter shall comply with the provisions of OAR 437-002-0182 which are applicable to his/her own actions and conduct in the course of his/her employment.
- (b) Fire fighters shall notify the appropriate employer and/or safety committee representative of unsafe practices and of unsafe conditions of equipment apparatus or workplaces.
- (c) All fire fighters, at regularly scheduled times, shall attend required training and/or orientation programs designed to increase their competency in occupational safety and health.
- (d) Fire fighters and other employees shall apply the principles of accident prevention in their work. They shall use all required safety devices and protective equipment.
- (e) Each fire fighter shall take proper care of his/her protective equipment.
- (f) Fire fighters who are expected to perform fire fighting operations shall notify their employer when health conditions arise or are discovered that will limit their capability of performing those duties.

(7) Safety Committee.

(a) A fire department safety committee shall be established and administered by public or private employers in accordance with the requirements of OAR 437-001-0765 in Division 1, General Administrative Rules.

(b) When applicable, the representation on the safety committee shall include both career and volunteer fire fighters.

(8) Incident Management. An incident management system that meets the requirements of NFPA standard 1561, on Fire Department Incident Management, shall be established with written standard operating procedures, applying to all members involved in emergency operations. All members involved in emergency operations shall be familiar with the system.

(9) Accountability.

- (a) The fire department shall establish written standard operating procedures for a personnel accountability system in accordance with Section 2-6, 1995 of NFPA 1561, standard on Fire Department Incident Management System, by January 1, 1999, that provides for the tracking and inventory of all members operating at an emergency incident.
- (b) It shall be the responsibility of all members operating at an emergency incident to actively participate in the personnel accountability system.

(10) Fire Fighting Training and Education.

(a) The employer or employer representative shall establish and implement a policy for the delivery of education and training designed to develop and maintain an appropriate level of knowledge, skill, and ability throughout the fire fighting classifications (ranks). Such education and training shall be provided to fire fighters before they perform assigned duties on a continuing basis.

(b) Before fire fighters participate in structural fire fighting activities, or in live fire training in a structure, they shall meet the training levels prescribed by the Department of Public Safety Standards and Training's (DPSST) 'Entry-level Firefighter' or have equivalent training.

(c) When live fire training occurs, it ~~[shall]~~ **must** be conducted under the direction of the fire department training officer, or employer authorized representative. All live fire training ~~[shall]~~ **must** be conducted ~~[pursuant to General Requirements for Live Fire Training established by the State Fire Marshal under OAR 838-10-070(3)(b),(c) and (d), EXCEPT as follows or equivalent:]~~ **following the requirements of Appendix C of this standard.**

~~[Exceptions to the State Fire Marshal's Live Fire Training regulations:]~~

~~[(A) OAR 838-10-070(3)(b)(G) and (H) shall not apply,]~~

~~[(B) OAR 838-10-070(3)(c)(B), governing Water Supply, shall not apply. Instead, the following provisions shall govern water supply:]~~

~~[(i) Sufficient backup lines shall be provided to ensure adequate protection for personnel on training attack lines.]~~

~~[(ii) The instructor-in-charge of the live fire training evolutions shall determine, prior to each specific evolution, how many training attack lines and backup lines will be necessary. The instructor-in-charge shall then:]~~

~~[(I) Assign one instructor to each "backup line";]~~

~~[(II) Assign sufficient additional personnel to "backup lines" to provide mobility; and]~~

~~[(III) Assign one additional instructor for each additional functional assignment.]~~

~~[(iii) The water supply for live fire training shall be a total sustained water supply in gallons as calculated utilizing the lowa formula of fire area length, times width, times height divided by 100 and multiplied by 30.]~~

~~$$\frac{\text{Length} \times \text{Width} \times \text{Height} \times 30}{100}$$~~

~~[The required water supply shall be increased by 25 percent for each side of the structure which has an exposure to another structure under 50 feet away.]~~

~~[Any time the total available water supply drops below 50 percent of the required available supply all interior fire fighting operations shall cease.]~~

~~[(iv) Separate sources shall be utilized for supply of attack lines and backup lines in order to preclude the loss of both water supply sources at the same time.]~~

(d) During live fire training, fire fighters shall wear the protective equipment normally required for that type of fire fighting.

(e) When rope rescue training occurs, it shall be conducted under the direction of the fire department training officer or department-designated authority in accordance with the equipment manufacturers' recommendations. The training officer shall keep records of the manufacturers' training requirements, and shall comply with all such requirements.

(f) All fire hoses used by fire departments for training and fire combat shall meet the service testing requirements noted in Chapter 5 of NFPA 1962, 1993 edition.

(g) The employer shall provide training for the purpose, proper selection, fitting, use, and limitations of personal protective equipment.

(h) The employer shall assure that each employee is informed of the procedure of reporting unsafe work conditions or equipment.

**(11) General Requirements for Protective Clothing.**

- (a) The employer shall provide to employees all required protective clothing, except that an employee at the employee's option may supply protective clothing. The employer shall provide the protective clothing at no cost to employees. The protective clothing must meet the requirements in OAR 437-002-0182(11) through (16), whether supplied by the employer or employee.
- (b) The employer shall assure that new protective clothing intended for structural fire fighting which is ordered, used or purchased after the effective date of this division, meets the requirements contained in OAR 437-002-0182(11) through (16). The employer shall assure that fire fighters wear this clothing when performing structural fire fighting.
- (c) In situations other than structural fire fighting, the employer shall ensure that protective clothing appropriate for the known hazards of that particular emergency operation is worn.
- (d) Protective clothing currently in use which does not meet the requirements of OAR 437-002-0182(11) through (16) may continue to be used until October 1, 1998, if it was designed for fire fighting purposes and meets the manufacturer's original specifications and maintains the protective capabilities for which it was designed.
- (e) The employer shall assure that appropriate protective clothing protects the head, body, and extremities and consists of at least the following components: foot and leg protection, hand protection, body protection, and eye, face and head protection.

**(12) Body Protection.**

- (a)** Body protection shall be as follows to ensure full body protection for the wearer.
- (b)** Coats and trousers used by structural fire fighters shall be at least equivalent to the National Fire Protection Association (NFPA) standard, No. 1971, 1991 edition, entitled "Protective Clothing for Structural Fire Fighting." (See also Appendix A.)

**(13) Head Protection.**

- (a) Head protection shall consist of a protective head device, ear protection, flaps and chin strap which meet the requirements of NFPA Standard 1971-2000, Protective Ensemble for Structural Fire Fighting.
- (b) Use, care, alterations and maintenance instructions for protective headgear shall be supplied for each helmet.

- (c) Care, maintenance, and alteration of helmets shall conform to the manufacturer's recommendations.
- (d) During structural fire fighting helmet accessories designed to provide or maintain protection from health and safety hazards shall be worn in the manufacturer's recommended position. (See also Appendix A.)
- (e) A flame-resistant protective hood which will not adversely affect the seal of a respirator facepiece and meeting the requirements of NFPA Standard 1971, 1996 edition, after January 1, 1999 shall be worn during interior structural fire fighting operations to protect the sides of the face and hair.

**(14) Hand Protection.**

**(a)** Hand protection for fire fighting activities shall consist of protective gloves or glove system which will provide protection against cut, puncture, and heat penetration. Gloves or glove system shall meet the requirements of NFPA Standard 1973, 1988 edition, titled "Gloves for Structural Fire Fighting."

**(15) Foot and Leg Protection.**

(a) Foot and leg protection shall meet the requirements of OAR 437-002-0182(15)(a)(A) and (B) and may be achieved by either of the following methods:

(A) Fully extended boots which provide protection for the legs; or

(B) Protective shoes or boots worn in combination with protective trousers that meet the requirements of OAR 437-002-0182(12).

(b) Protective footwear shall meet the requirements of NAPA Standard 1974, 1992 edition, titled "Protective Footwear for Structural Fire Fighting."

(c) Fire fighters' boots may be resoled but must meet the requirements of this rule.

**(16) Eye and Face Protection.** Eye and face protection worn by fire fighters at the fire ground shall comply with the following regulations:

**(a)** General requirements. Face protection shall be required where there is a reasonable probability of injury that can be prevented by such protection, when such face protection does not protect the eyes from foreign objects additional eye protection shall be provided.

**(b)** When self-contained respiratory equipment is being utilized by fire fighters, additional eye and face protection will not be required.

Employers shall make conveniently available a type of protection suitable for the work to be performed, and employees shall use such protectors. Protectors shall meet the following minimum requirements.

**(A)** They shall provide adequate protection against the particular hazards for which they are designed.

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

**(C)** They shall be durable.

**(D)** They shall be capable of being disinfected.

**(E)** They shall be easily cleanable.

**(F)** Protectors that can be worn over corrective lenses shall be available for those who need them, and should be kept clean and in good repair.

**(c)** Face shields.

**(A)** Face shields shall accommodate any of the following styles;

**(i)** Clear transparent.

**(ii)** Colored transparent.

**(B)** Disinfection. When a person is assigned protective equipment, it is recommended that this equipment be cleaned and disinfected regularly.

**(C)** Face shields must be an integral part of the fire helmet and may be installed in a fixed position or hinged allowing adjustment of the shields.

**(D)** In the event breathing apparatus is being used which incorporates a face mask, the face mask will be considered an acceptable face shield.

**(d)** Goggles, flexible, or cushioned fitting. Goggles shall consist of a wholly flexible frame, forming a lens holder or a rigid frame with integral lens or lenses, having a separate, cushioned fitting surface on the full periphery of the facial contact area.

**(A)** Materials used shall be chemical-resistant, nontoxic, nonirritating and slow-burning.

**(B)** There shall be a positive means of support on the face, such as an adjustable headband of suitable material or other appropriate means of support to retain the frame comfortably and snugly in front of the eyes.

**(e)** Design, construction, testing, and use of devices for eye and face protection shall be in accordance with ANSI Z87.1, Occupational Eye and Face Protection (1979).

NOTE: Fire fighters shall be protected from the effects of noise exposures which exceed the noise levels deemed to be safe as provided in OAR 437, Division 2/G, 1910.95, Occupational Noise Exposure.

*(17)* Requirements for Respiratory Protection. See OAR 437, Division 2/I, 1910.134, Respiratory Protection.

*(18)* Criteria for Approved Self-Contained Breathing Apparatus.

**(a)** Approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating. All compressed air cylinders used with self-contained breathing apparatus shall meet DOT and NIOSH criteria.

**(b)** Self-contained breathing apparatus shall be provided with an indicator which automatically sounds an audible alarm when the remaining air supply of the apparatus is reduced to within a range of 20 to 25 percent of its rated service time.

*(19)* (Reserved)

*(20)* Personal Alert Safety System (PASS). Each member involved in rescue, fire suppression, or other hazardous duties after January 1, 2000, shall be provided with and shall use a PASS device in the hazardous area when self-contained breathing apparatus is in use. PASS devices shall meet the requirements of NFPA 1982, Standard on Personal Alert Safety Systems for Fire Fighters.

Each PASS device shall be tested at least monthly and shall be maintained in accordance with the manufacturer's instructions.

*(21)* (Reserved)

*(22)* (Reserved)

*(23)* (Reserved)

(24) Breathing Air Compressors and Cylinders. In addition to the requirements contained in 1910.134(i), air samples shall be taken every 6 months from the compressor and analyzed by the employer or an independent laboratory for Grade D breathing air. Air samples shall also be tested when the system is installed or repaired. Analysis shall be conducted according to ANSI/CGA Standard G7.1-1989 edition, Commodity Specification for Air.

(25) Identification of Hazardous Material Locations.

(a) A means shall be provided for identifying nonresidential premises where hazardous materials are stored, as defined in the Uniform Fire Code, 1991 edition, as amended by the State of Oregon, effective July 15, 1992, under Articles 4 and 80, and in quantities as set forth in the hazardous material permit required by Article 4 of the Uniform Fire Code.

(b) Hazardous chemicals required to be identified by this section are those defined in Article 9, Section 9.110, and Article 80, Section 80.101 of the Uniform Fire Code.

(26) Hazardous Material Response Plan.

(a) Fire department that expects to or plans to respond to hazardous material incidents shall develop a written response plan.

(b) The written response plan must contain the policies and procedures on:

(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,

(K) Personal protective equipment and emergency equipment and response procedures.

- (c)** The incident commander shall be responsible for:
- (A) Identification of the hazardous substance and condition,
  - (B) Implementing emergency operations,
  - (C) Ensuring personal protective equipment is worn,
  - (D) Limit access to hot zone to those with a specific mission assignment,
  - (E) Implementing decontamination procedures,
  - (F) Designating a safety officer,
  - (G) Using appropriately trained personnel,
  - (H) On scene medical surveillance for emergency responders.

## FIRE FIGHTING APPARATUS

### (27) Fire Apparatus Area.

- (a)** Walkways around apparatus shall be kept free of obstructions.
- (b)** The station's apparatus floors shall be so far as practical kept free of grease, oil, and tripping hazards.
- (c)** No Class I or II flammable liquids shall be used for cleaning purposes to remove grease or dirt from apparatus.
- (d)** Exhaust gases from diesel or gasoline apparatus within buildings shall be maintained within the limits of OAR 437, Division 2/Z, OAR 437-002-0382, Oregon Air Contaminant Rules.

### (28) Design and Construction of Fire Apparatus.

- (a)** All fire apparatus with the exception of specialized apparatus shall conform to OAR 437, Division 2/N, Oregon Rules for Commercial and Industrial Vehicles, OAR 437-002-0223.
- (b)** Employers who have purchased used fire apparatus or used military equipment prior to the effective date of this division shall not be required to bring them under a more stringent code than the one in force at the time the apparatus was manufactured. The exception to this rule would be seat belts and communication systems between the tailboard and driver compartment as required by OAR 437-002-0182(29) (Automotive Fire Apparatus Equipment) and roll bars on all open top off-road vehicles as required by OAR 437-002-0182(28)(f).

- (c) Fire fighters' vehicle tailboards shall not project outboard of the vehicle sides or fenders and shall be designed to provide safe footing.
- (d) Exhaust systems shall be installed and maintained in proper condition and shall be so designed as to minimize the exposure of the fire fighter to the exhaust gases.
- (e) The loaded gross weight and empty height of the vehicle shall be posted in the vehicle such that it can be clearly read by the driver.
- (f) Roll bars shall be in place on all open top off-road vehicles for rollover protection.

**(29) Automotive Fire Apparatus Equipment.**

- (a)** All equipment on a vehicle shall be adequately secured when the vehicle is in motion.
- (b)** Workers being transported by fire department vehicles shall ride only in designated secure positions. Safety restraints shall be provided for fire fighters riding the tailboard. (See also OAR 437, Division 2/N, Oregon Rules for Commercial and Industrial Vehicles, OAR 437-002-0223.)
- (c)** Vehicles with obstructed view to the rear of the vehicle when backing, shall be equipped with:
  - (A)** An automatic back-up alarm which shall be sounded immediately on backing;  
or
  - (B)** A fire fighter, who is visible in the driver's left-side mirror, shall stand to the rear of the truck to guide the driver while backing.
- (d)** Fire fighting vehicles shall be brought to a full stop before workers disembark.
- (e)** If workers are required to ride the tailboard, an electrical signal system or voice communication system shall be installed between the tailboard and the driver's compartment. A code of signals shall be used for controlling the movement of the vehicle.
- (f)** When traffic flow is inhibited or encroachment of the traffic lane occurs, vehicles equipped with emergency warning lights shall be used to control traffic at emergency scenes. The use of traffic cones, fire department personnel, police, or other traffic control measures shall be used as soon as practical.

**(30) Automotive Apparatus Maintenance and Repair.** Each employer shall establish written records and procedures whereby apparatus has:

- (a) A scheduled monthly maintenance check; or

(b) A maintenance check each time the apparatus is returned to the station following an emergency response, a drill, or any type of test drive.

(31) Tires. Tires which are excessively worn, cracked, deteriorated or damaged in any way shall not be used. All tires shall have a minimum tread depth of 2/32-inch.

(32) Aerial Devices.

(a) Aerial devices used for fire fighting shall be inspected and tested by a person competent in performing such tests and inspections in accordance with the recommendations of NFPA Standard 1914, 1991 edition, at least annually.

(b) Where defects are found in critical components of an aerial device, the repairs shall be tested and certified in accordance with NFPA Standard 1914, 1991 edition, by a registered professional engineer or manufacturer of the apparatus or an American Welding Society (AWS) Certified Welding Inspector. A permanent record of such tests and repairs shall be maintained for each unit.

## HOSE DRYING AND DRILL TOWERS

(33) Hose Drying Towers.

(a) Floor openings on hose tower platforms shall be equipped with a guardrail meeting the requirements of OAR 437, Division 2/D, 1910.23, Guarding Floor and Wall Openings and Holes.

(b) The toeboard requirements for elevated work platforms in hose drying towers shall not apply unless hand tools or objects other than hoses are carried onto the platforms.

(c) The requirements for ladders shall meet the requirements of OAR 437, Division 2/D, 437-002-0027, Fixed Ladders.

(d) Ropes used to hoist hose in the hose towers shall have a breaking strength to safe load strength (rated working load) ratio of 3 to 1.

(34) Drill Towers. Permanent fixed ladders on the outside of drill towers and drill buildings are exempt from the requirements of offset platform landings and ladder cage guards.

## FIRE SERVICE EQUIPMENT

(35) Testing, Maintenance and Inspection of Fire Service Equipment. The employer shall maintain and inspect fire service equipment at least annually and perform any tests recommended by the manufacturers at the date of manufacture, or the recommendations of NFPA or IFSTA.

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.**

## Appendix A – Protective Apparel and Respirators (Nonmandatory)

This appendix is for the code user's information; it is not mandatory.

### 1. Protective clothing.

(A) General. OAR 437-002-0182(11) does not require all fire fighters to wear protective clothing. It is not the intention of these rules to require employers to provide a full ensemble of protective clothing for every fire fighter without consideration given to the types of hazardous environments to which the fire fighter might be exposed. It is the intention of these rules to require adequate protection for those fire fighters who might be exposed to fires in an advanced state, smoke, toxic gases, and high temperatures. Therefore, the protective clothing requirements only apply to those fire fighters who perform structural fire fighting operation.

2. Additionally, the protective clothing requirements do not apply to the protective clothing worn during outside fire fighting operations (brush and forest fires, crash crew operations) or other special fire fighting activities. It is important that the protective clothing to be worn during these types of fire fighting operations reflect the hazards which are expected to be encountered by fire fighters.
3. Head protective devices are required to be provided with ear flaps so that the ear flaps will be available if need. It is recommended that ear protection always be used while fighting interior structural fires.
4. Many head protective devices are equipped with face shields to protect the eyes and face. These face shields are permissible as meeting the eye and face protection requirements of this rule as long as such face shields meet the requirements of OAR 437, Division 2/I, Personal Protective Equipment and ANSI Z87.1-1968, Eye and Face Protection.

5. Additionally, full facepieces, helmets or hoods of approved breathing apparatus which meet the requirements of OAR 437, Division 2/I, 1910.134, Respiratory Protection, and 437-002-0182 (11), (12), and (16), are also acceptable as meeting the eye and face protection requirements.
6. It is recommended that protective clothing be thoroughly cleaned or washed each 6 months or as needed, following the recommendations of the clothing manufacturer and the cleaning requirements of NFPA Standard 1500 and 1571, 1996 editions.
7. Respiratory protective devices. See OAR 437, Division 2/I, 1910.134, Respiratory Protection.

Stat. Auth.: ORS 654.025(2) and 656.726([3] **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.

#### Appendix B – Apparatus Operation Signal Communication (Nonmandatory)

This is not a mandatory appendix. The signal system described here is only an example.

The following set of signals could be used for communication between the driver and a tiller or between the driver and fire fighters riding the tailboard:

- (a) One long buzz means “Stop.”
- (b) Two buzzes means “Forward.”
- (c) Three buzzes means “Reverse.”

Before any of the above functions are undertaken, with the exception of stopping, the same appropriate signal must be received from the tailboard. Example: If driver is responding to an alarm before starting out, two beeps is responding to an alarm before starting out, two beeps on the horn will be sounded. Driver will not advance, however, until the same signal is sounded from the tailboard or tiller.

Stat. Auth.: ORS 654.025(2) and 656.726([3] **4**).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: WCD Admin. Order, Safety 11-1985, f. 7/10/85, ef. 10/1/85.

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

**Appendix C**

**Minimum Requirements for Live Fire Training**  
**This is a mandatory appendix as required by**  
**OAR 437-002-0182(10)(c)**

**The following requirements must be met prior to live fire training:**

**Training:**

\_\_\_\_ **All personnel are trained to the requirements of DPSST Entry level firefighter or the educational requirements of the assigned position;**

**or**

\_\_\_\_ **Participants who have received training from another department or jurisdiction have provided written documentation that they meet the requirements of DPSST.**

\_\_\_\_ **Instructors are adequately trained to appropriately perform their tasks.**

**Pre-Burn planning for acquired structure:**

**A written plan:**

\_\_\_\_ **Is prepared by the Chief, or their designee.**

\_\_\_\_ **Will be maintained and available for review by Oregon OSHA until the next live-fire training exercise.**

\_\_\_\_ **A pre-burn briefing has been conducted with all personnel involved in the exercise including:**

\_\_\_\_ **A walk through of the structure, with an emphasis on exits.**

\_\_\_\_ **A discussion of the evacuation plan, including any signals for evacuation.**

\_\_\_\_ **Methods of communication i.e., radio channels.**

\_\_\_\_ **Where to locate medical treatment, rehabilitation, and the safety officer or Incident Command (IC).**

\_\_\_\_ **Any limitations of the exercise or hazards that cannot be removed, but are protected.**

\_\_\_\_ **Personal protective equipment that is required.**

\_\_\_\_ Personal protective equipment that is available (must include all required PPE).

\_\_\_\_ Adequate first aid treatment is available for injuries.

\_\_\_\_ No personnel will be allowed to simulate a victim in live fire exercises.

\_\_\_\_ No fire will be set that will intentionally block an exit.

\_\_\_\_ Adequate food and fluids is available, as well as protection from extreme weather conditions.

Acquired Structures:

\_\_\_\_ Remove or contain all hazardous materials.

\_\_\_\_ Remove combustible material not intended for use in the training.

\_\_\_\_ Remove oil tanks or similar containers, or protect them from exploding or becoming over-pressurized.

\_\_\_\_ Only one fire is allowed inside a structure at a time.

\_\_\_\_ Remove or repair hazardous structural conditions to not pose a hazard to personnel.

\_\_\_\_ Disconnect all utilities to the training structure.

\_\_\_\_ Remove or protect utilities adjacent to the training structure prior to live fire training.

\_\_\_\_ Remove extraordinary weight overhead and/or debris in the training area that poses a hazard to personnel.

\_\_\_\_ Protect or remove adjacent buildings and/or property.

\_\_\_\_ All forms of asbestos have been addressed as per Division 2, Subdivision Z, OAR 1910.1001.

\_\_\_\_ Remove all environmental hazards, such as toxic weeds, insects, or vermin that could pose a hazard to personnel.

\_\_\_\_ Remove vegetation that poses a threat.

\_\_\_\_ Personnel exposed to on-road vehicle traffic will wear highly visible upper body garments that comply with OAR 437-002-0128.

An inspection has been made by the Chief or their designee prior to the live fire exercise to ensure the provisions of this and all applicable standards are met.

**Permanent Burn Structures:**

Buildings used for training burns have been visually inspected by a qualified person prior to training activities.

Any damage that poses a hazard has been corrected.

All equipment used in live fire training buildings has been inspected, and repaired if necessary, prior to use.

All equipment is operated by a qualified person.

A designated parking area is established for apparatus not used in the training.

Follow traffic control requirements of OAR 437-002-0223(23)(c) if personnel are exposed to on-road vehicle traffic.

Keep persons not directly involved with the training behind designated fire lines.

**Exterior Props:**

Areas around props are free of obstructions or vegetation that pose a hazard.

Props have been visually inspected by the Chief or their designee prior to the live fire exercise.

Defects have been repaired prior to use.

**Vehicles used for live fire training:**

All containers on or in the vehicle that contain flammables, oxidizers, or other gases are emptied or ventilated to prevent explosion or unexpected burning.

All batteries are removed.

Equipment and material is secured to prevent unexpected movement.

All split rims have been removed prior to ignition.

**Water Supply:**

**The Chief or their designee has documented the minimum water supply necessary based on the criteria identified in NFPA 1142 Standard on Water Supplies, 2001 edition.**

**A reserve of 50 percent of the documented fire flow is available to protect surrounding structures.**

**Separate sources of water will be maintained for attack lines and backup lines.**

**Hydrants that will supply backup lines are identified and gated.**

**Areas around the structure will be maintained clear of non essential equipment or personnel to allow for ease of deployment of hose lines.**

**Fuels:**

**Use only fuels with known burning characteristics that are readily identifiable.**

**Maintain fuel load at a level that is controllable and readily predictable.**

**Do not use flammable or combustible liquids unless the structure has been specifically designed to use those liquids as fuel.**

**The Chief or their designee has certified the fuel load and any factors that would affect growth, development, or spread of fire in each room of the structure being burned prior to live fire evolutions.**

**Immediately halt training if any hazard is noted.**

**Ignition Sources:**

**Use matches, fusees, or a drip torch to ignite an acquired structure.**

**Use matches, fusees, a drip torch, or flammable gas to ignite a permanent burn structure.**

**Other ignition/fuel sources (with known characteristics) are used only for arson investigation and fire-cause determination training when:**

**The attack and back-up plans take into consideration the ignition/fuel source in providing for continued safety of all personnel.**

**Live fire training activities are limited to back-up, control, and extinguishing the fire.**

**Incident Command Station (ICS):**

**Establish and maintain an ICS in accordance with OAR 437-002-0182(8).**

**Establish and maintain accountability in accordance with OAR 437-002-0182(9).**

**Establish and maintain a safety officer, independent from the IC (and not given other assignments) until the training is concluded.**

**Authorize the safety officer to halt the exercise at any time and for any reason.**

**Investigate all injuries by the Chief or their designee.**

**Halt training in cases of extreme weather.**

**Adequately train the safety officer for the position.**

**The safety officer may assign additional personnel in and around the structure to ensure the safety of personnel.**

**Only one ignition officer is designated who reports directly to the safety officer.**

**The ignition officer has a charged hose line when igniting the structure.**

**Ignition takes place under the direct supervision of the safety officer.**

**Personal Protective Equipment:**

**Appropriate PPE, in accordance with OAR 437-002-0182, is worn by all participants, including instructors.**

**Inspect all PPE for proper fit and maintenance prior to entering the structure.**

**Wear SCBA in accordance to OAR Division 2, Subdivision I, 1910.134.**

**Use hearing protection in accordance with OAR Division 2, Subdivision G, 1910.95.**

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

**Stats. Implemented: ORS 654.001 through 654.295.**

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