

Oregon OSHA Proposed Changes to Division 2/L Oregon Rules for Fire Fighters

April 2009

Text to be added/adopted is in **bold and underlined**.

Text to be removed/repealed is in [~~brackets with line through~~].

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~~] **that** are subject to the provisions of the Oregon Safe Employment Act. These rules [~~shall~~] **do** 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~~] **must** comply with all of the provisions of OAR 437-002-0182.

(b) The provisions of OAR 437-002-0182 [~~shall~~] **must** be supplemented by the provisions of other applicable safety and health rules of O[~~R-~~]**regon** 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.

Confined space means a space that:

(1) Is large enough and so configured that a person can bodily enter and perform assigned work; and

(2) 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

(3) Is not designed for continuous occupancy.

Drill tower: A structure, which may or may not be attached to the station **that is over two stories high** and **primarily** [~~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~~] **where** the fire department [~~responds to~~] delivers 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[~~e~~]**ing** 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~~ **performing** 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 **a** hose is hung to dry.

Immediately dangerous to life or health (IDLH): Any condition that poses a threat to life, could cause irreversible adverse health effects, or could interfere with an individual's ability to escape unaided from a confined space.

IFSTA: International Fire Service Training Association.

Lifeline: ~~[Length of]~~ **The** rope ~~[to which]~~ **that secures** 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 respirator[s: 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.]~~ **is a respirator that supplies the respirator user with air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.**

(2) ~~Air-purifying respirator[s: Contain chemical cartridges and/or filters to remove the contaminant prior to breathing.]~~ **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.**

(3) ~~Positive Pressure demand respirator[s (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.]~~ **is a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.**

(4) 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.

(5) SCBA[?] is [A]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.

(6) 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.

Responding: ~~[The act of a]~~**A**nswering an emergency call or other alarm.

Scabbard: A guard ~~[which will]~~ **that** prevents ~~[accidental]~~ injury and ~~[which]~~ covers the blade and pick of an axe or other sharp instrument when worn by the fire fighter.

Station (Fire station): Structure ~~[in which]~~ **to house the** 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 i]~~**I**nstruction ~~[and]~~ **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.

GENERAL REQUIREMENTS

(3) Organizational statement. The employer ~~[shall]~~ **must** prepare and maintain a statement or written policy ~~[which]~~ **that** 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]~~ **must** be made available for inspection by the ~~[A]~~**a**dministrator and by employees or their designated representatives.

(4) Personnel.

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

(b) The employer ~~[shall]~~ **must** not permit an employee with known medical condition ~~[which]~~ **that** 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]~~ **will** not limit the employer's ability to assign personnel to support activities (versus fire suppression activities).

(5) Employer's Responsibility.

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

(b) It ~~[shall be]~~ **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~~[-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]~~ **must** maintain all equipment in a safe condition.

(d) The employer ~~[shall]~~ **must** 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 **on** 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]~~ **must** comply with the ~~[provisions]~~ **sections** of OAR 437-002-0182 ~~[which]~~ **that** are applicable to ~~[his/her]~~ **their** own actions and conduct in the course of ~~[his/her]~~ **their** employment.

(b) Fire fighters ~~[shall]~~ **must** 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]~~ **must** attend required training and~~/or~~ orientation programs designed to increase their competency in occupational safety and health.

(d) Fire fighters and other employees ~~[shall]~~ **must** apply the principles of accident prevention in their work. They ~~[shall]~~ **must** use all required safety devices and protective equipment.

(e) Each fire fighter ~~[shall]~~ **must** take proper care of ~~[his/her]~~ **their** protective equipment.

(f) Fire fighters who are expected to perform fire fighting operations ~~[shall]~~ **must** notify their employer when health conditions arise ~~[or are discovered]~~ that will limit their capability of performing those duties.

(7) Safety Committee.

(a) Fire departments must have a separate safety committee or hold safety meetings ~~[in accordance with]~~ **according to** the requirements of OAR 437-001-0765 in Division 1, General Administrative Rules.

(b) When applicable, the representation on the safety committee must 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]~~ **must** be established with written standard operating procedures, applying to all members involved in emergency operations. All members involved in emergency operations ~~[shall]~~ **must** be familiar with the system.

(9) Accountability.

(a) The fire department ~~[shall]~~ **must** establish written standard operating procedures for a personnel accountability system ~~[in accordance with]~~ **according to** 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]~~ **is** 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]~~ **must** 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]~~ **must** 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]~~ **must** 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 must be conducted under the direction of the fire department training officer, or employer authorized representative. All live fire training must be conducted following the requirements of Appendix C of this standard.

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

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

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

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

(h) The employer ~~[shall assure]~~ **must ensure** 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]~~ **must** provide~~[-to]~~ employees all required protective clothing, except that an employee **may** ~~[at the employee's] opt[ion-may]~~ **to** supply protective clothing. The employer ~~[shall]~~ **must** 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]~~ **must ensure** that new protective clothing intended for structural fire fighting ~~[which]~~ **that** 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]~~ **must ensure** that fire fighters wear this clothing when performing structural fire fighting.

(c) In situations other than structural fire fighting, the employer ~~[shall]~~ **must** 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]~~ **must ensure** that appropriate protective clothing protects the head, body, and extremities. ~~[and]~~ **It must** consist[s] 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) C]~~ 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]~~ **must** 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]~~ **must** be supplied for each helmet.

(c) Care, maintenance, and alteration of helmets ~~[shall]~~ **must** 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]~~ **must** be worn in the manufacturer's recommended position. (See also Appendix A.)

(e) A flame-resistant protective hood ~~[which]~~ **that** 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]~~ **must** 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]~~ **must** consist of protective gloves or glove system ~~[which]~~ **that** will provide protection against cut, puncture, and heat penetration. Gloves or glove system ~~[shall]~~ **must** 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]~~ **must** 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]~~ **must** meet the requirements of NAPA Standard ~~[1974]~~ **1971**, ~~[1992]~~ **1996** edition, titled "Protective ~~[Footwear]~~ **Ensembles** for Structural Fire Fighting **and Proximity 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]~~ **must** comply with the following regulations:

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

(b) When self-contained respiratory equipment is being ~~[utilized]~~ **used** by fire fighters, additional eye and face protection will not be required. Employers ~~[shall]~~ **must** make conveniently available a type of protection suitable for the work ~~[to be]~~ performed, and employees ~~[shall]~~ **must** use such protectors. Protectors ~~[shall]~~ **must** meet the following minimum requirements.

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

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

(C) They ~~[shall]~~ **must** be durable.

(D) They ~~[shall]~~ **must** be capable of being disinfected.

(E) They ~~[shall]~~ **must** be eas~~[#]~~**y to** clean~~[able]~~.

(F) Protectors that can be worn over corrective lenses ~~[shall]~~ **must** 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;]~~ **must be** ~~[(i) C]clear transparent[-]~~ **or** ~~[(ii) C]colored transparent.~~

(B) Disinfection. When a person is assigned protective equipment, ~~[it is recommended that]~~ this equipment **must** 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 **a** breathing apparatus **within a face mask** 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]~~ **must** consist of a ~~[wholly]~~ **fully** flexible frame, ~~[forming]~~ a lens holder or a rigid frame with integral lens or lenses, ~~[having]~~ **and** a separate~~[,]~~ cushioned fitting surface on the full periphery of the facial contact area.

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

(B) There ~~[shall]~~ **must** 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]~~ **hold** the frame comfortably and snugly in front of the eyes.

(e) Design, construction, testing, and use of ~~[devices for]~~eye and face protection ~~[shall]~~ **must** be ~~[in]~~ accord~~[ance]~~**ing** ~~[with]~~ **to** ANSI Z87.1, Occupational Eye and Face Protection (1979).

NOTE: Fire fighters ~~[shall]~~ **must** be protected from ~~[the effects of]~~noise ~~[exposures which]~~ **that** exceeds 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]~~ **All** compressed air ~~[breathing apparatus may be]~~ **cylinders** 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]~~ **must** meet **Department Of Transportation** and NIOSH criteria. **In emergency and lifesaving situations, 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. Once the emergency is over, return SCBA's to their original approved condition.**

(b) Self-contained breathing apparatus ~~[shall]~~ **must** be provided with an indicator ~~[which]~~ **that** 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]~~ **must** be provided with and ~~[shall]~~ **must** use a PASS device in the hazardous area when self-contained breathing apparatus is in use. PASS devices ~~[shall]~~ **must** meet the requirements of NFPA 1982, Standard on Personal Alert Safety Systems for Fire Fighters. Each PASS device ~~[shall]~~ **must** be tested at least monthly and ~~[shall]~~ **must** be maintained ~~[in]accord[ance]~~**ing** ~~[with]~~ **to** 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]~~ **must** be taken every ~~[6]~~ **six** months from the compressor and analyzed by the employer or an independent laboratory for Grade D breathing air. Air samples ~~[shall]~~ **must** also be tested when the system is installed or repaired. Analysis ~~[shall]~~ **must** 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]~~ **must** 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 departments ~~s~~ that expect~~[s to]~~ or plan~~[s]~~ to respond to hazardous material incidents ~~[shall]~~ **must** 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~~] **must** be responsible for:

- (A) Identif[ication of] **ying** the hazardous substance and condition,
- (B) Implementing emergency operations,
- (C) Ensuring personal protective equipment is worn,
- (D) Limit**ing** access [~~to~~] **of** hot zone to those with a specific mission assignment,
- (E) Implementing decontamination procedures,
- (F) Designating a safety officer,
- (G) Using appropriately trained personnel,
- (H) **Providing** [O]n-scene medical surveillance for emergency responders.

FIRE FIGHTING APPARATUS

(27) Fire Apparatus Area.

- (a) Walkways around apparatus [~~shall~~] **must** be kept free of obstructions.

(b) The station's apparatus floors ~~[shall]~~ **must** be ~~[so far as practical]~~ kept free of grease, oil, and tripping hazards.

(c) ~~[No]~~ Class I or II flammable liquids ~~[shall]~~ **must not** be used ~~[for cleaning purposes]~~ to remove grease or dirt from apparatus.

(d) Exhaust gases from diesel or gasoline apparatus within buildings ~~[shall]~~ **must** 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]~~ **must** 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]~~ **are** 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]~~ **is regarding** 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]~~ **must** not project out~~[board]~~ of the vehicle sides or fenders and ~~[shall]~~ **must** be designed to provide safe footing.

(d) Exhaust systems ~~[shall]~~ **must** be installed and **properly** maintained ~~[in proper condition]~~ and ~~[shall]~~ **must** be ~~[so]~~ designed ~~[as]~~ to minimize the exposure of **exhaust gases by** the fire fighter~~[to the exhaust gases]~~.

(e) The loaded gross weight and empty height of the vehicle ~~[shall]~~ **must** be posted in the vehicle such that it can be clearly read by the driver.

(f) Roll bars ~~[shall]~~ **must** 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]~~ **must** be adequately secured when the vehicle is in motion.

(b) Workers being transported by fire department vehicles ~~[shall]~~ **must** ride only in designated secure positions. Safety restraints ~~[shall]~~ **must** 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]~~ **must** be equipped with:

(A) An automatic back-up alarm ~~[which shall be]~~ **that must** sound~~[ed immediately on]~~ **when** backing; or

(B) A fire fighter, who is visible in the driver's left-side mirror, ~~[shall]~~ **must** stand to the rear of the truck to guide the driver while backing.

(d) Fire fighting vehicles ~~[shall be brought]~~ **must come** 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]~~ **must** be installed between the tailboard and the driver's compartment. A code of signals ~~[shall]~~ **must** 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]~~ **must** be used to control traffic at emergency scenes. The use of traffic cones, fire department personnel, police, or other traffic control measures ~~[shall]~~ **must** be used as soon as practical.

(30) Automotive Apparatus Maintenance and Repair. Each employer ~~[shall]~~ **must** 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]~~ **that** are excessively worn, cracked, deteriorated or damaged in any way ~~[shall]~~ **must** not be used. All tires ~~[shall]~~ **must** have a minimum tread depth of 2/32-inch.

(32) Aerial Devices.

(a) Aerial devices used for fire fighting ~~[shall]~~ **must** be inspected and tested by a person competent in performing such tests and inspections ~~[in]~~ accord~~ance with~~ **ing to** 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]~~ **must** be tested and certified ~~[in]~~ accord~~ance with~~ **ing to** 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]~~ **must** be maintained for each unit.

HOSE DRYING AND DRILL TOWERS

(33) Hose Drying Towers.

(a) Floor openings on hose tower platforms ~~[shall]~~ **must** 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]~~ **must** not apply unless hand tools or objects other than hoses are carried onto the platforms.

(c) The requirements for ladders ~~[shall]~~ **must** 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]~~ **must** 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]~~ **must** 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.

(36) Confined Space Rescue

(a) Employers subject to this section must comply with 1910.146 for their own confined spaces.

(b) Employers subject to this section must comply with 1910.146(k)(2) when they agree to serve as a designated rescue service provider.

(c) Employers subject to this section 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) Certify responders in writing to Department of Public Safety Standards and Training (DPSST) Fire Fighter 1 levels or equivalent.

(C) Use the Incident Management System during confined space rescue incidents that meet the requirements of the NFPA Standard 1561, Fire Department Incident Management.

(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 secure 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 immediately dangerous to life and health (IDLH) and assure that responders who enter are equipped with appropriate respiratory protective equipment.

(iv) Determine if the space should be ventilated.

(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.

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 X-2009, f. X/XX/09, ef. X/XX/09.

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~~ing the types of hazardous environments ~~[to which]~~ **where** the fire fighter might be exposed. ~~[It is the intention of t]~~These rules **are intended** to require adequate protection for those fire fighters who might be exposed to ~~[fires in an advanced state,~~ smoke, toxic gases, ~~and]~~ high temperatures, **and fires in an advanced state**. 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]~~ **that** 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]~~ **that** 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]~~ **every six** 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(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 X-2009, f. X/XX/09, ef. X/XX/09.

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(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~~ **has** 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[er] 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.~~] **e.g.**, radio channels.
- ___ [~~Where to~~] **Location for** 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~~] **are** 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~~] **prevent** 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~~] **according to** Division 2, Subdivision Z, OAR 1910.1001.
- ___ Remove all environmental hazards, such as toxic weeds, insects, or vermin that could [~~pose~~] **be** a hazard to personnel.
- ___ Remove vegetation that [~~poses~~] **is** 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~~] **is** 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)]~~**2224(12)** 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]~~ **are** 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 **a** match[es], fusee[s], or [a-]drip torch to ignite an acquired structure.

___ Use **a** match[es], fusee[s], [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~~]accord[~~ance with~~]**ing to** 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~~]accord[~~ance with~~]**ing to** 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~~]accord[~~ance~~]**ing** to OAR Division 2, Subdivision I, 1910.134.

___ Use hearing protection [~~in~~]accord[~~ance with~~]**ing to** 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.

OR-OSHA Admin. Order X-2009, f. X/XX/09, ef. X/XX/09.