

§ 1910.268

29 CFR Ch. XVII (7–1–07 Edition)

First-aid and CPR training shall be conducted using the conventional methods of training such as lecture, demonstration, practical exercise and examination (both written and practical). The length of training must be sufficient to assure that trainees understand the concepts of first aid and can demonstrate their ability to perform the various procedures contained in the outline below.

At a minimum, first-aid and CPR training shall consist of the following:

1. The definition of first aid.
2. Legal issues of applying first aid (Good Samaritan Laws).
3. Basic anatomy.
4. Patient assessment and first aid for the following:
 - a. Respiratory arrest.
 - b. Cardiac arrest.
 - c. Hemorrhage.
 - d. Lacerations/abrasions.
 - e. Amputations.
 - f. Musculoskeletal injuries.
 - g. Shock.
 - h. Eye injuries.
 - i. Burns.
 - j. Loss of consciousness.

- k. Extreme temperature exposure (hypothermia/hyperthermia)
 - l. Paralysis
 - m. Poisoning.
 - n. Loss of mental functioning (psychosis/hallucinations, etc.). Artificial ventilation.
 - o. Drug overdose.
5. CPR.
 6. Application of dressings and slings.
 7. Treatment of strains, sprains, and fractures.
 8. Immobilization of injured persons.
 9. Handling and transporting injured persons.
 10. Treatment of bites, stings, or contact with poisonous plants or animals.

APPENDIX C TO §1910.266—COMPARABLE ISO STANDARDS (NON-MANDATORY)

The following International Labor Organization (ISO) standards are comparable to the corresponding Society of Automotive Engineers (Standards that are referenced in this standard.)

Utilization of the ISO standards in lieu of the corresponding SAE standards should result in a machine that meets the OSHA standard.

SAE standard	ISO standard	Subject
SAE J1040	ISO 3471-1	Performance Criteria for Rollover Protective Structures (ROPS) for Construction, Earthmoving, Forestry and Mining Machines.
SAE J397	ISO 3164	Deflection Limiting Volume—ROPS/FOPS Laboratory Evaluation.
SAE J231	ISO 3449	Minimum Performance Criteria for Falling Object Protective Structures (FOPS).
SAE J386	ISO 6683	Operator Restraint Systems for Off-Road Work Machines.
SAE J185	ISO 2897	Access Systems for Off-Road Machines.

[59 FR 51741, Oct. 12, 1994, as amended at 60 FR 7449, Feb. 8, 1995; 60 FR 40458, Aug. 9, 1996; 60 FR 47035-47037, Sept. 8, 1995; 61 FR 9241, 9242, Mar. 7, 1996; 69 FR 18803, Apr. 9, 2004; 71 FR 16673, Apr. 3, 2006]

§ 1910.268 Telecommunications.

(a) *Application.* (1) This section sets forth safety and health standards that apply to the work conditions, practices, means, methods, operations, installations and processes performed at telecommunications centers and at telecommunications field installations, which are located outdoors or in building spaces used for such field installations. *Center* work includes the installation, operation, maintenance, rearrangement, and removal of communications equipment and other associated equipment in telecommunications switching centers. *Field* work includes the installation, operation, maintenance, rearrangement, and removal of conductors and other equipment used for signal or communication service,

and of their supporting or containing structures, overhead or underground, on public or private rights of way, including buildings or other structures.

~~(2) These standards do not apply: (i) To construction work, as defined in §1910.12, nor (ii) to installations under the exclusive control of electric utilities used for the purpose of communications or metering, or for generation, control, transformation, transmission, and distribution of electric energy, which are located in buildings used exclusively by the electric utilities for such purposes, or located outdoors on property owned or leased by the electric utilities or on public highways, streets, roads, etc., or outdoors by established rights on private property.~~

(3) Operations or conditions not specifically covered by this section are subject to all the applicable standards contained in this part 1910. See § 1910.5(c). Operations which involve construction work, as defined in § 1910.12 are subject to all the applicable standards contained in part 1926 of this chapter.

(b) *General*—(1) *Buildings containing telecommunications centers*—(i) *Illumination*. Lighting in telecommunication centers shall be provided in an adequate amount such that continuing work operations, routine observations, and the passage of employees can be carried out in a safe and healthful manner. Certain specific tasks in centers, such as splicing cable and the maintenance and repair of equipment frame lineups, may require a higher level of illumination. In such cases, the employer shall install permanent lighting or portable supplemental lighting to attain a higher level of illumination shall be provided as needed to permit safe performance of the required task.

(ii) *Working surfaces*. Guard rails and toe boards may be omitted on distribution frame mezzanine platforms to permit access to equipment. This exemption applies only on the side or sides of the platform facing the frames and only on those portions of the platform adjacent to equipped frames.

(iii) *Working spaces*. Maintenance aisles, or wiring aisles, between equipment frame lineups are working spaces and are not an exit route for purposes of 29 CFR 1910.34.

(iv) *Special doors*. When blastproof or power actuated doors are installed in specially designed hardsite security buildings and spaces, they shall be designed and installed so that they can be used as a means of egress in emergencies.

(v) *Equipment, machinery and machine guarding*. When power plant machinery in telecommunication centers is operated with commutators and couplings uncovered, the adjacent housing shall be clearly marked to alert personnel to the rotating machinery.

(2) *Battery handling*. (i) Eye protection devices which provide side as well as frontal eye protection for employees shall be provided when measuring storage battery specific gravity or han-

dling electrolyte, and the employer shall ensure that such devices are used by the employees. The employer shall also ensure that acid resistant gloves and aprons shall be worn for protection against spattering. Facilities for quick drenching or flushing of the eyes and body shall be provided unless the storage batteries are of the enclosed type and equipped with explosion proof vents, in which case sealed water rinse or neutralizing packs may be substituted for the quick drenching or flushing facilities. Employees assigned to work with storage batteries shall be instructed in emergency procedures such as dealing with accidental acid spills.

(ii) Electrolyte (acid or base, and distilled water) for battery cells shall be mixed in a well ventilated room. Acid or base shall be poured gradually, while stirring, into the water. Water shall never be poured into concentrated (greater than 75 percent) acid solutions. Electrolyte shall never be placed in metal containers nor stirred with metal objects.

(iii) When taking specific gravity readings, the open end of the hydrometer shall be covered with an acid resistant material while moving it from cell to cell to avoid splashing or throwing the electrolyte.

(3) Employers must provide employees with readily accessible, adequate, and appropriate first aid supplies. A non-mandatory example of appropriate supplies is listed in Appendix A to 29 CFR 1910.151.

(4) *Hazardous materials*. Highway mobile vehicles and trailers stored in garages in accordance with § 1910.110 may be equipped to carry more than one LP-gas container, but the total capacity of LP-gas containers per work vehicle stored in garages shall not exceed 100 pounds of LP-gas. All container valves shall be closed when not in use.

(5) *Compressed gas*. When using or transporting nitrogen cylinders in a horizontal position, special compartments, racks, or adequate blocking shall be provided to prevent cylinder movement. Regulators shall be removed or guarded before a cylinder is transported.

(6) *Support structures*. No employee, or any material or equipment, may be

supported or permitted to be supported on any portion of a pole structure, platform, ladder, walkway or other elevated structure or aerial device unless the employer ensures that the support structure is first inspected by a competent person and it is determined to be adequately strong, in good working condition and properly secured in place.

(7) *Approach distances to exposed energized overhead power lines and parts.* The employer shall ensure that no employee approaches or takes any conductive object closer to any electrically energized overhead power lines and parts than prescribed in Table R-2, unless:

- (i) The employee is insulated or guarded from the energized parts (insulating gloves rated for the voltage involved shall be considered adequate insulation), or
- (ii) The energized parts are insulated or guarded from the employee and any other conductive object at a different potential, or
- (iii) The power conductors and equipment are deenergized and grounded.

TABLE R-2—APPROACH DISTANCES TO EXPOSED ENERGIZED OVERHEAD POWER LINES AND PARTS

Voltage range (phase to phase, RMS)	Approach distance (inches)
300 V and less	⁽¹⁾
Over 300V, not over 750V	12
Over 750V not over 2 kV	18
Over 2 kV, not over 15 kV	24
Over 15 kV, not over 37 kV	36
Over 37 kV, not over 87.5 kV	42
Over 87.5 kV, not over 121 kV	48
Over 121 kV, not over 140 kV	54

¹ Avoid contact.

(8) *Illumination of field work.* Whenever natural light is insufficient to adequately illuminate the worksite, artificial illumination shall be provided to enable the employee to perform the work safely.

(c) *Training.* Employers shall provide training in the various precautions and safe practices described in this section and shall insure that employees do not engage in the activities to which this section applies until such employees have received proper training in the various precautions and safe practices required by this section. However,

where the employer can demonstrate that an employee is already trained in the precautions and safe practices required by this section prior to his employment, training need not be provided to that employee in accordance with this section. Where training is required, it shall consist of on-the-job training or classroom-type training or a combination of both. The employer shall certify that employees have been trained by preparing a certification record which includes the identity of the person trained, the signature of the employer or the person who conducted the training, and the date the training was completed. The certification record shall be prepared at the completion of training and shall be maintained on file for the duration of the employee's employment. The certification record shall be made available upon request to the Assistant Secretary for Occupational Safety and Health. Such training shall, where appropriate, include the following subjects:

- (1) Recognition and avoidance of dangers relating to encounters with harmful substances and animal, insect, or plant life;
- (2) Procedures to be followed in emergency situations; and,
- (3) First aid training, including instruction in artificial respiration.

(d) *Employee protection in public work areas.* (1) Before work is begun in the vicinity of vehicular or pedestrian traffic which may endanger employees, warning signs and/or flags or other traffic control devices shall be placed conspicuously to alert and channel approaching traffic. Where further protection is needed, barriers shall be utilized. At night, warning lights shall be prominently displayed, and excavated areas shall be enclosed with protective barricades.

(2) If work exposes energized or moving parts that are normally protected, danger signs shall be displayed and barricades erected, as necessary, to warn other personnel in the area.

(3) The employer shall insure that an employee finding any crossed or fallen wires which create or may create a hazardous situation at the work area:

- (i) Remains on guard or adopts other