

connected to and supplied from another circuit of higher voltage (as in the case of an autotransformer), both are considered as of the higher voltage, unless the circuit of lower voltage is effectively grounded, in which case its voltage is not determined by the circuit of higher voltage. Direct connection implies electric connection as distinguished from connection merely through electromagnetic or electrostatic induction.

[40 FR 13441, Mar. 26, 1975, as amended at 43 FR 49751, Oct. 24, 1978; 47 FR 14706, Apr. 6, 1982; 52 FR 36387, Sept. 28, 1987; 54 FR 24334, June 7, 1989; 61 FR 9242, Mar. 7, 1996; 63 FR 33467, June 18, 1998; 67 FR 67965, Nov. 7, 2002; 69 FR 31882, June 8, 2004; 70 FR 1141, Jan. 5, 2005]

§ 1910.269 Electric power generation, transmission, and distribution.

NOTE: OSHA is staying the enforcement of the following paragraphs of § 1910.269 until November 1, 1994: (b)(1)(ii), (d) except for (d)(2)(i) and (d)(2)(iii), (e)(2), (e)(3), (j)(2)(iii), (l)(6)(iii), (m), (n)(3), (n)(4)(ii), (n)(8), (o) except for (o)(2)(i), (r)(1)(vi), (u)(1), (u)(4), (u)(5). OSHA is also staying the enforcement of paragraphs (n)(6) and (n)(7) of § 1910.269 until November 1, 1994, but only insofar as they apply to lines and equipment operated at 600 volts or less. Further, OSHA is staying the enforcement of paragraph (v)(11)(xiii) of § 1910.269 until February 1, 1996.

(a) *General*—(1) *Application*. (i) This section covers the operation and maintenance of electric power generation, control, transformation, transmission, and distribution lines and equipment. These provisions apply to:

(A) Power generation, transmission, and distribution installations, including related equipment for the purpose of communication or metering, which are accessible only to qualified employees;

NOTE: The types of installations covered by this paragraph include the generation, transmission, and distribution installations of electric utilities, as well as equivalent installations of industrial establishments. Supplementary electric generating equipment that is used to supply a workplace for emergency, standby, or similar purposes only is covered under subpart S of this part. (See paragraph (a)(1)(ii)(B) of this section.)

(B) Other installations at an electric power generating station, as follows:

(1) Fuel and ash handling and processing installations, such as coal conveyors,

(2) Water and steam installations, such as penstocks, pipelines, and tanks, providing a source of energy for electric generators, and

(3) Chlorine and hydrogen systems;

(C) Test sites where electrical testing involving temporary measurements associated with electric power generation, transmission, and distribution is performed in laboratories, in the field, in substations, and on lines, as opposed to metering, relaying, and routine line work;

(D) Work on or directly associated with the installations covered in paragraphs (a)(1)(i)(A) through (a)(1)(i)(C) of this section; and

(E) Line-clearance tree-trimming operations, as follows:

(1) Entire § 1910.269 of this part, except paragraph (r)(1) of this section, applies to line-clearance tree-trimming operations performed by qualified employees (those who are knowledgeable in the construction and operation of electric power generation, transmission, or distribution equipment involved, along with the associated hazards).

(2) Paragraphs (a)(2), (b), (c), (g), (k), (p), and (r) of this section apply to line-clearance tree-trimming operations performed by line-clearance tree trimmers who are not qualified employees.

(ii) Notwithstanding paragraph (a)(1)(i) of this section, § 1910.269 of this part does not apply:

(A) To construction work, as defined in § 1910.12 of this part; or

(B) To electrical installations, electrical safety-related work practices, or electrical maintenance considerations covered by subpart S of this part.

NOTE 1: Work practices conforming to §§ 1910.332 through 1910.335 of this part are considered as complying with the electrical safety-related work practice requirements of this section identified in Table 1 of appendix A-2 to this section, provided the work is being performed on a generation or distribution installation meeting §§ 1910.303 through 1910.308 of this part. This table also identifies provisions in this section that apply to work by qualified persons directly on or associated with installations of electric power generation, transmission, and distribution lines or

§ 1910.269

29 CFR Ch. XVII (7-1-09 Edition)

equipment, regardless of compliance with §§ 1910.332 through 1910.335 of this part.

NOTE 2: Work practices performed by qualified persons and conforming to § 1910.269 of this part are considered as complying with §§ 1910.333(c) and 1910.335 of this part.

(iii) This section applies in addition to all other applicable standards contained in this part 1910. Specific references in this section to other sections of part 1910 are provided for emphasis only.

(2) *Training.* (i) Employees shall be trained in and familiar with the safety-related work practices, safety procedures, and other safety requirements in this section that pertain to their respective job assignments. Employees shall also be trained in and familiar with any other safety practices, including applicable emergency procedures (such as pole top and manhole rescue), that are not specifically addressed by this section but that are related to their work and are necessary for their safety.

(ii) Qualified employees shall also be trained and competent in:

(A) The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment,

(B) The skills and techniques necessary to determine the nominal voltage of exposed live parts,

(C) The minimum approach distances specified in this section corresponding to the voltages to which the qualified employee will be exposed, and

(D) The proper use of the special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools for working on or near exposed energized parts of electric equipment.

NOTE: For the purposes of this section, a person must have this training in order to be considered a qualified person.

(iii) The employer shall determine, through regular supervision and through inspections conducted on at least an annual basis, that each employee is complying with the safety-related work practices required by this section.

(iv) An employee shall receive additional training (or retraining) under any of the following conditions:

(A) If the supervision and annual inspections required by paragraph

(a)(2)(iii) of this section indicate that the employee is not complying with the safety-related work practices required by this section, or

(B) If new technology, new types of equipment, or changes in procedures necessitate the use of safety-related work practices that are different from those which the employee would normally use, or

(C) If he or she must employ safety-related work practices that are not normally used during his or her regular job duties.

NOTE: OSHA would consider tasks that are performed less often than once per year to necessitate retraining before the performance of the work practices involved.

(v) The training required by paragraph (a)(2) of this section shall be of the classroom or on-the-job type.

(vi) The training shall establish employee proficiency in the work practices required by this section and shall introduce the procedures necessary for compliance with this section.

(vii) The employer shall certify that each employee has received the training required by paragraph (a)(2) of this section. This certification shall be made when the employee demonstrates proficiency in the work practices involved and shall be maintained for the duration of the employee's employment.

NOTE: Employment records that indicate that an employee has received the required training are an acceptable means of meeting this requirement.

(3) *Existing conditions.* Existing conditions related to the safety of the work to be performed shall be determined before work on or near electric lines or equipment is started. Such conditions include, but are not limited to, the nominal voltages of lines and equipment, the maximum switching transient voltages, the presence of hazardous induced voltages, the presence and condition of protective grounds and equipment grounding conductors, the condition of poles, environmental conditions relative to safety, and the locations of circuits and equipment, including power and communication lines and fire protective signaling circuits.