



COMMONWEALTH of VIRGINIA

DEPARTMENT OF LABOR AND INDUSTRY

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VIRGINIA SAFETY AND HEALTH CODES BOARD

BRIEFING PACKAGE

FOR SEPTEMBER 15, 2005

**16 VAC 25-75, Proposed Regulation to Amend the General Industry Standard for Telecommunications,
General, Approach Distances, §1910.268(b)(7)(i)**

I. Action Requested.

The Virginia Occupational Safety and Health (VOSH) Program requests the Safety and Health Codes Board to consider for adoption as a proposed regulation of the Board VOSH's proposed amendments to the General Industry Standard for Telecommunications, General, Approach Distances, §1910.268(b)(7)(i), pursuant to the §40.1-22(5).

II. Sections of the Standard under Consideration for Amendment.

The less stringent, Telecommunications Standard language in §1910.268(b)(7)(i) specifies that the wearing of protective gloves will qualify as insulation for any live electrical part in the area where the employee is working. The standard requires no additional temporary blanketing or other means of insulation for nearby high voltage wires which might be inadvertently touched by other body parts of the employee. Under the current standard, the employee can be exposed to uninsulated live electrical parts in his work area, but only actually be protected from touching them with his hands (and possibly forearms) through the use of gloves.

In comparison, the Electric Power Generation, Transmission, and Distribution standard, §1910.269, specifies that the wearing of protective gloves and sleeves only qualifies as insulation for the live electrical part upon which the employee is actually working. All other nearby live or "hot" electrical parts and power lines in the work area are required to be insulated so that the likelihood of an employee accidentally or inadvertently contacting an energized part or power line with an uninsulated part of his body, or other conductive object(s) is greatly reduced.

The following boxes highlight the differences between the existing standards on this issue:

The General Industry Standard for Electric Power Generation Transmission, and Distribution

Section 1910.269(l)(2)(i) provides:

Working on or near exposed energized parts. This paragraph applies to work on exposed live parts, or near enough to them, to expose the employee to any hazard they present....

(2) Minimum approach distances. The employer shall ensure that no employee approaches or takes any conductive object closer to exposed energized parts than set forth in Table R-6 through Table R-10, unless:

(i) The employee is insulated from the energized part **(insulating gloves or insulating gloves and sleeves worn in accordance with paragraph (l)(3) of this section are considered insulation of the employee only with regard to the energized part upon which work is being performed)**,

or

(ii) The energized part is insulated from the employee and from any other conductive object at a different potential, or

(iii) The employee is insulated from any other exposed conductive object, as during live line bare-hand work. (Emphasis added).

The General Industry Standard for Telecommunications

Section 1910.268(b)(7) provides:

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. (Emphasis added).

III. Basis, Purpose and Impact of the Proposed Rulemaking.

A. Basis.

The need for this proposed rulemaking became evident to the Department during the investigation of a fatal accident in the Commonwealth. A telecommunications employee was fatally electrocuted when he apparently touched an uninsulated 7200-volt power line with his body. The victim had not put insulating material around the power line, nor was he wearing properly rated insulating gloves. Although the victim was not in compliance with any part of §1910.268(b)(7), the discrepancy between §§1910.268(b)(7)(i) and 1910.269(l)(2)(i) was identified during the legal review of the case.

Making §1910.268(b)(7)(i), General Industry Standard for Telecommunications, General, Approach Distances and §1910.269(l)(2)(i), General Industry Standard for Electric Power Generation Transmission and Distribution identical will provide safety protections for telecommunications workers equivalent to that already afforded general industry electrical transmission workers and more recently afforded the Construction industry.

The Safety and Health Codes Board is authorized by Title 40.1-22(5) to: "... adopt, alter, amend, or repeal rules and regulations to further, protect and promote the safety and health of employees in places of employment over which it has jurisdiction and to effect compliance with the federal OSH Act of 1970...as may be necessary to carry out its functions established under this title". "In making such rules and regulations to protect the occupational safety and health of employees, the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence that no employee will suffer material impairment of health or functional capacity".

NOTE: At its August 4, 2004 meeting, the Board adopted a similar change to the construction industry standard for power transmission and distribution workers which brought §1926.950(c)(1)(i) in line with §1910.269(l)(2)(i). The change to §1926.950(c)(1)(i) was recommended to the Board following a fatal accident that the VOSH Program investigated where a construction electrical transmission employee, who was wearing properly rated insulating gloves and sleeves, was fatally electrocuted when he apparently touched an uninsulated 7600-volt power line with his neck/shoulder.

NOTE: The Department's staff has conducted a review of both the general industry and construction industry standards to ensure that there are no other such discrepancies in the regulations.

The Notice of Intended Regulatory Action was approved by the Board for this action at its December 14, 2004 regular meeting. The 30-day public comment period extended from July 11, 2005 through August 11, 2005. No comments were received.

B. Purpose.

Given the similarity of situational exposure between §§1910.269(1)(2)(i) and 1910.268(b)(7), equivalent safety precautions are appropriate to eliminate employee exposure to the equivalent hazards. The purpose of the proposed change is to amend the telecommunication standard to provide the same degree of protection to telecommunication employees working in similar proximity to power lines as their counterparts under the electrical power generation, transmission and distribution standard.

The extensive use of insulating equipment to cover energized parts in the employee work area should prevent employee upper arms and shoulders from contacting live parts. Moreover, if every energized part within reach of the employee were insulated, electrical contacts involving other parts of the body, such as the employees head or back would be averted as well.

C. Impact on Employers.

The proposed amendment would enable employers to further assure the safety of their employees while working in close proximity to power lines. It would require telecommunications employers to implement protective measures for its workers equivalent to those afforded general industry and construction workers under the electrical power generation, transmission and distribution standard.

Telecommunications workers are currently required to be trained on methods for isolating or insulating themselves from live electrical parts through the use of gloves and blankets (see §§1910.268(c) and (f)). The use of blankets and other protective measures is already included in §1910.268. It is anticipated that there should be no significant additional cost or implementation impact placed on employers for complying with the requested changes to the regulation.

NOTE: The requested proposed amendment would not affect the minimum approach distances referenced in §1910.268(b)(7) and contained in Table R-2.

D. Impact on Employees.

Telecommunications employees would benefit from increased protection while engaged in work near power lines. Under the current standard, the qualifying language specifies that the wearing of protective gloves will serve as insulation for any live electrical part in the area where the employee is working. The effect of the current telecommunications language is that the employee may be exposed to many uninsulated live electrical parts in his work area, but only actually be protected from touching them with his hands (and possibly forearms) through the use of gloves.

The effect of the requested change is that, in addition to the live electrical part the employee is working on, all other nearby live or “hot” electrical parts and power lines must be insulated so

an employee cannot accidentally contact an energized part or power line with some other uninsulated part of his body, or other conductive object(s).

E. Impact on the Department of Labor and Industry.

No significant impact is anticipated on the Department.

Contact Person:

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RECOMMENDED ACTION

Staff of the Department of Labor and Industry recommends that the Safety and Health Codes Board consider for adoption the proposed regulation to amend §1910.268(b)(7)(i), General Industry Standard for Telecommunications, General, Approach Distances, as authorized by Virginia Code §40.1-22(5).

The Department also recommends that the Board state in any motion it may make to amend this regulation that it will receive, consider and respond to petitions by any interested person at any time with respect to reconsideration or revision of this or any other regulation.

**16 VAC 25-75, Proposed Regulation to Amend the General Industry Standard for Telecommunications,
General, Approach Distances, §1910.268(b)(7)**

**As Adopted by the
Safety and Health Codes Board**

Date: _____



**TELECOMMUNICATIONS, GENERAL, APPROACH DISTANCES
16VAC25-90-1910.268(b)(7)**

~~(b) General.~~

~~(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.~~

**REQUIREMENTS FOR TELECOMMUNICATIONS, GENERAL,
APPROACH DISTANCES
16 VAC 25-75**

16 VAC 25-75. General. Approach Distances

- A. No employee shall be permitted to approach or take any conductive object without an approved in insulating handle closer to exposed energized parts than shown in subsection B (Table R-2) unless:
1. The employee is insulated or guarded from the energized parts (insulating gloves or insulating gloves and sleeves worn in accordance with 16 VAC 25-90-1910.269(1)(3) are considered insulation of the employee only with regard to the energized part upon which work is being performed), or
 2. The energized part is insulated or guarded from him and any other conductive object at a different potential, or
 3. The power conductors and equipment are deenergized and grounded.
- B. Approach Distances to Exposed Energized Overhead Power Lines and Parts

**REQUIREMENTS FOR TELECOMMUNICATIONS, GENERAL,
APPROACH DISTANCES
16 VAC 25-75**

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 300 V, not over 750V	12
Over 750 V 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 140kV	54

1. Avoid contact.