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Regulatory
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Proposed Regulation Agency Background Document

Agency name	Department of Labor and Industry/Safety and Health Codes Board
Virginia Administrative Code (VAC) citation	16 VAC 25 -75
Regulation title	General Industry Standard for Telecommunications, General, Approach Distances
Action title	Amendment to the General Industry Standard for Telecommunications, General, Approach Distances
Document preparation date	September 15, 2005

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 21 (2002) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

Brief summary

In a short paragraph, please summarize all substantive changes that are being proposed in this regulatory action.

The General Industry 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 an 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 nearby uninsulated live electrical parts in his work area, but only required to 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).

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly

chapter number(s), if applicable, and (2) promulgating entity, i.e., the agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

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”.

“However, such standards shall be at least as stringent as the standards promulgated by the Federal Occupational Safety and Health Act of 1970 (P.L. 91-596). In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws.”

Purpose

Please explain the need for the new or amended regulation by (1) detailing the specific reasons why this regulatory action is essential to protect the health, safety, or welfare of citizens, and (2) discussing the goals of the proposal and the problems the proposal is intended to solve.

Given the similarity of situational exposure in this instance between the General Industry Standard for Electrical Power General Transmission and Distribution, 16 VAC 25-90-1910.269(1)(2)(i), and General Industry Standard for Telecommunications, 16 VAC 25-90-1910.268(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 equivalent protection to telecommunication employees working in similar proximity to power lines as their counterparts under the electrical power generation, transmission and distribution standard.

Substance

Please briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. (More detail about these changes is requested in the “Detail of changes” section.)

This proposed regulatory amendment would replace the current regulatory language found in 16 VAC 25-90-1910.268(b)(7), Telecommunications, General, Approach Distances, and replace it with new language found in 16 VAC 25-75, Requirements for Telecommunications, General, Approach Distances. This new unique regulation will include

subsection A, which 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. The new subsection B, Approach Distances to Exposed Energized Overhead Power Lines and Parts, includes Table R-2, which covers voltage range and the corresponding minimum approach distances (inches).

The effect of the proposed regulatory amendment 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). 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.

Issues

Please identify the issues associated with the proposed regulatory action, including:

- 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions;*
- 2) the primary advantages and disadvantages to the agency or the Commonwealth; and*
- 3) other pertinent matters of interest to the regulated community, government officials, and the public.*

If the regulatory action poses no disadvantages to the public or the Commonwealth, please so indicate.

1) This proposed action would require employers to further ensure the safety of their employees during work on power lines. The regulation would necessitate telecommunications employers to implement protective measures for its electrical transmission workers equivalent to those afforded general industry and construction transmission workers.

Since telecommunication electrical transmission workers are already required to be trained on methods for de-energizing or isolating or insulating themselves from live electrical parts through the use of blankets and other protective measures already included in 16 VAC 25-90-1910.268, no significant additional cost or implementation impact for employers is anticipated.

The existing regulation allows an employee to be exposed to many uninsulated live electrical parts in the work area, but only actually be protected from touching them with hands and arms through the use of gloves with sleeves. The effect of the proposed regulation is that, except for the live electrical part the employee is working on, all other live or “hot” electrical parts and power lines would be insulated so an employee could not accidentally contact an energized part or power line with some other uninsulated part of his body, or other conductive object(s).

2) The primary advantage to the Department is the uniformity of the regulations for General Industry, Construction, and Telecommunication workers performing the same type of electrical transmission work in proximity to high voltage lines. There are no disadvantages to the Department.

3) There are no anticipated disadvantages to the public or the Commonwealth.

Economic impact

Please identify the anticipated economic impact of the proposed regulation.

Projected cost to the state to implement and enforce the proposed regulation, including (a) fund source / fund detail, and (b) a delineation of one-time versus on-going expenditures	No additional cost to the state is anticipated.
Projected cost of the regulation on localities	No additional cost is anticipated.
Description of the individuals, businesses or other entities likely to be affected by the regulation	Telecommunication electrical transmission companies and their employees.
Agency’s best estimate of the number of such entities that will be affected. Please include an estimate of the number of small businesses affected. Small business means a business entity, including its affiliates, that (i) is independently owned and operated and (ii) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.	Approximately 165 companies.
All projected costs of the regulation for affected individuals, businesses, or other entities. Please be specific. Be sure to include the projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses.	No additional financial impact is anticipated since telecommunications electrical transmission workers are already required to be trained on methods for de-energizing or isolating or insulating themselves from live electrical parts through the use of blankets and other protective measures.

Alternatives

Please describe any viable alternatives to the proposal considered and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the action.

As an alternative to promulgating a regulation for the General Industry Standard for Telecommunications, General, Approach Distances, the VOSH enforcement policy could remain identical to the federal OSHA standard but telecommunications employees would not have the same level of protection as their general industry and construction counterparts.

Public comment

Please summarize all comments received during public comment period following the publication of the NOIRA, and provide the agency response.

No comments were received from the public during the NOIRA comment period from July 11, 2005 through August 11, 2005.

Family impact

Please assess the impact of the proposed regulatory action on the institution of the family and family stability.

This proposed regulation will have a positive impact on the institution of the family and family stability. If wage earners are less likely to be injured or killed while engaged in work on power lines, there will be fewer disruptions to the family income and family life from work-related accidents or deaths.

Detail of changes

Please detail all changes that are being proposed and the consequences of the proposed changes. Detail all new provisions and/or all changes to existing sections.

If the proposed regulation is intended to replace an emergency regulation, please list separately (1) all changes between the pre-emergency regulation and the proposed regulation, and (2) only changes made since the publication of the emergency regulation.

For changes to existing regulations, use this chart:

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
16 VAC 25-90-1910.268(b)(7)	16 VAC 25-75	(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	<u>General. Approach Distances</u> <u>A. No employee shall be permitted to approach or take any conductive object without an approved insulating handle closer to exposed energized parts than shown in subsection B (Table R-2) unless:</u> <u>1. The employee is insulated or guarded from the energized parts (insulating gloves or</u>

		<p>the energized parts (insulating gloves rated for the voltage involved shall be considered adequate insulation), or</p> <p>(ii) The energized parts are insulated or guarded from the employee and any other conductive object at a different potential, or</p> <p>(iii) The power conductors and equipment are deenergized and grounded.</p>	<p><u>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</u></p> <p><u>2. The energized part is insulated or guarded from him and any other conductive object at a different potential, or</u></p> <p><u>3. The power conductors and equipment are deenergized and grounded.</u></p> <p><u>Rationale:</u> The proposed regulation would extend safety precautions for telecommunications employees from the many hazards associated with work on power lines.</p> <p><u>B. Approach Distances to Exposed Energized Overhead Power Lines and Parts</u></p>
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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.