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Final Regulation Agency Background Document

Agency name	Safety and Health Codes Board/Department of Labor and Industry
Virginia Administrative Code (VAC) citation	16 VAC 25-155
Regulation title	General Requirements for Clearances, Construction of Electric Transmission and Distribution Lines and Equipment, Construction Industry, Subpart V
Action title	General Requirements for Clearances, Construction of Electric Transmission and Distribution Lines and Equipment, Construction Industry, Subpart V
Document preparation date	July 15, 2004

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

Please provide a brief summary (no more than 2 short paragraphs) of the proposed new regulation, proposed amendments to the existing regulation, or the regulation proposed to be repealed. Alert the reader to all substantive matters or changes. If applicable, generally describe the existing regulation.

The regulatory language, approved by the Board, will require the Construction Industry to provide safety protections for construction electrical transmission workers equivalent to those already afforded general industry electrical transmission workers.

While other aspects of the General Industry and Construction Industry requirements are very similar, the General Industry standard 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 General Industry standard then goes further by requiring that additional protection for all other live or “hot” electrical parts and power lines close to the immediate work area must also be insulated so an employee could not accidentally contact some other energized part or

power line with an uninsulated part of his body, or other conductive object(s). This second safety provision is lacking in the Construction Industry standard as it currently specifies that the wearing of protective gloves and sleeves alone will qualify as insulation for any live electrical part in the general area where the employee is working, not just the part being worked on.

The effect of the current less stringent Construction Industry standard is that the employee can be exposed to many uninsulated live electrical parts in his work area, but only actually be required to be protected from contact with them through the use of gloves with sleeves. There is no protection to prevent contact with other body parts or conductive objects.

The following boxes highlight the differences between the existing standards. The issue under discussion is subparagraph (i) in each standard.

<p>The General Industry Standard</p>	<p>The Construction Industry Standard</p>
<p>Section 1910.269(l)(2)(i) provides:</p> <p>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.</p> <p>(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:</p> <p>(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</p> <p>(ii) The energized part is insulated from the employee and from any other conductive object at a different potential, or</p> <p>(iii) The employee is insulated from any other exposed conductive object, as during live line bare-hand work. (Emphasis added).</p>	<p>Section 1926.950(c)(1) provides:</p> <p>(1) 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 Table V-1 unless:</p> <p>(i) The employee is insulated or guarded from the energized part (gloves or gloves with sleeves rated for the voltage involved shall be considered insulation of the employee from the energized part) or</p> <p>(ii) The energized part is insulated or guarded from him and any other conductive object at a different potential, or</p> <p>(iii) The employee is insulated from any other exposed conductive object, as during live-line bare-hand work. (Emphasis added).</p>

Statement of final agency action

Please provide a statement of the final action taken by the agency including (1) the date the action was taken, (2) the name of the agency taking the action, and (3) the title of the regulation.

On August 3, 2004, the Safety and Health Codes Board adopted as a final regulatory standard of the Board, 16 VAC 25-155, Amendment to General Requirements for Clearances, Construction of Electric Transmission and Distribution Lines and Equipment, Construction Industry, Subpart V, and Repealed 16 VAC 25-175-1926.950 (c)(1), Clearances, with an effective date of October 15, 2004.

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 numbers, if applicable, and (2) promulgating entity, i.e., 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 OSH 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 experiences gained under this and other health and safety laws."

The Office of the Attorney General has certified that the Board has the statutory authority to promulgate the proposed regulation and that it comports with applicable state and/or federal law.

The need for this rulemaking was made evident during a VOSH investigation of a fatal accident. 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. The victim was working on one energized electrical part, and was effectively insulated from it through the use of gloves with sleeves. However, he was not

protected from accidental contact with other live electrical parts in the immediate work area that caused his death.

Purpose

Please explain the need for the new or amended regulation. Describe the rationale or justification of the proposed regulatory action. Detail the specific reasons it is essential to protect the health, safety or welfare of citizens. Discuss the goals of the proposal and the problems the proposal is intended to solve.

The Department conducted a legal review of federal Occupational Safety and Health Review Commission cases involving facts very similar to the above-cited fatality. Those federal decisions concluded that no OSHA violation occurred as long as employees were wearing the appropriate gloves and sleeves, even though the employees were killed due to contact with other live parts of the power lines (*J & L Utilities Service Company (6 OSHC 1225 (1977); Sawnee Electric Membership Corporation (5 OSHC 1059 (1977); Utilities Line Construction Company, 4 OSHC 1681 (1976))*).

Given the similarity of situational exposure for both the General Industry and Construction Industry Standards, VOSH believes that equivalent safety precautions are both appropriate and necessary to eliminate greater construction employee exposure to the equivalent hazards.

The purpose of the final regulation is to promulgate a unique regulation for the construction industry to provide a same degree of protection to construction employees doing similar job tasks on power lines as their counterparts in general industry.

Substance

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. A more detailed discussion is required under the "All changes made in this regulatory action" section.

16 VAC 25-175-1926.950 (c)(1), Clearances, will be repealed and replaced with the new Virginia unique regulation, 16 VAC 25-155, General Requirements for Clearances, Construction of Electric Transmission and Distribution Lines and Equipment, Construction Industry – Subpart V (1926.950 (c)(1)(i)). 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, Alternating Current – Minimum Distance, includes Table V-1, which covers the voltage range and the corresponding minimum working and clear hot stick distance.

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 there are no disadvantages to the public or the Commonwealth, please indicate.

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

Since construction 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, no significant additional cost or implementation impact for employers is anticipated.

[Note: The proposed action would not affect the minimum approach distances in the Construction Standard referenced in §1926.950(c)(1) and contained in Table V-1; or the minimum distance requirements referenced in 16 VAC 25-175-1926.955(e), Live-line Bare-Hand Work on Overhead Lines, and contained in Table V-2.]

Construction employees would benefit from increased protection while engaged in work on power lines equivalent to that of workers in General Industry engaged in the same activity.

The existing standard allows that the employee could be exposed to many uninsulated live electrical parts in his work area, but only actually be protected from touching them with his 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 have to 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 agency is the uniformity of the regulations for General Industry and Construction Industry workers performing the same type of electrical transmission work. There are no disadvantages to the agency.

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

Changes made since the proposed stage

Please describe all changes made to the text of the proposed regulation since the publication of the proposed stage. For the Registrar’s office, please put an asterisk next to any substantive changes.

Section number	Requirement at proposed stage	What has changed	Rationale for change
16 VAC 25-175-1926.950 (c)(1)	(c), Clearances. The provisions of paragraph (2) of this section shall be observed.	(c), Clearances. The provisions of 16 VAC 25-155 or paragraph (2) of this section shall be observed	Minor technical amendments were made in the introductory paragraph of 16 VAC 25-175-1926.950 (c)(1) to more accurately reflect the regulatory reference. This change has been incorporated into the final regulation.

Public comment

Please summarize all comments received during the public comment period following the publication of the proposed stage, and provide the agency response. If no comment was received, please so indicate.

No comments were received from the public during the proposed regulatory comment period of February 23, 2004 through April 23, 2004, nor were any public comments received by the Board during the April 21, 2004 public hearing.

All changes made in this regulatory action

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

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
16 VAC 25-175-1926.950 (c)(1)	16 VAC 25-155	<p>16 VAC 25-175-1926.950 (c)-- Clearances</p> <p>(1) 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 Table V-1 unless:</p> <p>(i) The employee is insulated or guarded from the energized part (gloves or gloves with sleeves rated for the voltage involved shall be considered insulation of the employee from the energized part) or</p>	<p><u>16 VAC 25-155-- General Requirements</u></p> <p>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 V-1) unless:</p> <p>1. The employee is insulated or guarded from the energized part (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</p> <p>Rationale: The proposed regulation will require all live or “hot” electrical parts and power lines in the work area to be insulated so an employee cannot accidentally contact an energized part of a power line with some other uninsulated part of his body or other conductive objects. The wearing of protective gloves and sleeves will only qualify as insulation for the live electrical part upon which the employee is actually working. The</p>

		<p>(ii) The energized part is insulated or guarded from him and any other conductive object at a different potential, or</p> <p>(iii) The employee is insulated from any other exposed conductive object, as during live-line bare-hand work.</p> <p><u>B. Alternating Current – Minimum Distance</u></p>	<p>proposed change will strengthen the protection for construction workers who are working on live electrical parts and power lines.</p> <p>The current federal identical regulation 16 VAC 25-175-1926.950 (c)(1)(i) will be repealed. The current regulation only requires the wearing of protective gloves and sleeves to qualify a insulation for any live electrical part in the general area where the employee is working. It does not provide as much protection for the worker as the proposed regulation will provide.</p> <p>2. The energized part is insulated or guarded from him and any other conductive object at a different potential, or</p> <p>3. The employee is isolated, insulated, or guarded from any other exposed conductive object(s), as during live-line bare-hand work.</p> <p><u>B. Alternating Current – Minimum Distance</u></p> <p>Rationale: The current Table V-1—<u>Alternating Current – Minimum Distance</u> will be retained in the proposed regulation to provide guidance for construction employers and employees working in the areas covered by this proposed regulation.</p>
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Family impact

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

This 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 less disruptions to the family income and family life from work-related accidents or deaths.