



*COMMONWEALTH of VIRGINIA*

**DEPARTMENT OF LABOR AND INDUSTRY**

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**AGENDA**

**SAFETY AND HEALTH CODES BOARD**

**PUBLIC HEARING**

**Wednesday, April 21, 2004**

**State Corporation Commission  
Tyler Building  
1300 East Main Street, Second Floor  
Richmond, Virginia**

**Courtroom A**

**10:00 A.M.**

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- I. Call to Order
- II. Item for Discussion:  
  
16 VAC 25-155, Proposed Regulation for General Requirements for Clearances, Construction of Electric Transmission and Distribution Lines and Equipment, Construction Industry, Subpart V, §1926.950 (c)(1)(i), and Repeal of 16 VAC 25-175-1926.950 (c)(1)
- III. Opportunity for Public Comment on the Proposed Amendment
- IV. Adjournment



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SAFETY AND HEALTH CODES BOARD

PUBLIC HEARING

FOR APRIL 21, 2004

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**16 VAC 25-155, Proposed Regulation to Amend General Requirements for Clearances, Construction of Electric Transmission and Distribution Lines and Equipment, Construction Industry, Subpart V, and Repeal of 16 VAC 25-175-1926.950 (c)(1)**

**I. Summary of the Proposed Amendment.**

The VOSH Program has requested that the Board consider for adoption a unique regulation for the Construction Industry to provide identical safeguards as the General Industry standard counterpart, 16 VAC 25-90-1910.269(l)(2)(i). Making the two industry subparagraphs identical would 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.

In this hearing package, minor technical amendments were made in 16 VAC 25-175-1926.950 (c)(1) to more accurately reflect the regulatory reference. This change will be incorporated into the final regulation.

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

<b>The General Industry Standard</b>	<b>The Construction Industry Standard</b>
<p data-bbox="120 615 542 651"><b>Section 1910.269(1)(2)(i) provides:</b></p> <p data-bbox="120 682 646 814">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 data-bbox="120 850 673 1018">(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 data-bbox="120 1018 662 1281">(i) The employee is insulated from the energized part <b>(insulating gloves or insulating gloves and sleeves worn in accordance with paragraph (1)(3) of this section are considered insulation of the employee only with regard to the energized part upon which work is being performed),</b> or</p> <p data-bbox="120 1318 633 1417">(ii) The energized part is insulated from the employee and from any other conductive object at a different potential, or</p> <p data-bbox="120 1455 662 1554">(iii) The employee is insulated from any other exposed conductive object, as during live line bare-hand work. (Emphasis added).</p>	<p data-bbox="753 615 1153 651"><b>Section 1926.950(c)(1) provides:</b></p> <p data-bbox="753 682 1315 814">(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 data-bbox="753 1018 1333 1186">(i) The employee is insulated or guarded from the energized part <b>(gloves or gloves with sleeves rated for the voltage involved shall be considered insulation of the employee from the energized part)</b> or</p> <p data-bbox="753 1318 1295 1417">(ii) The energized part is insulated or guarded from him and any other conductive object at a different potential, or</p> <p data-bbox="753 1455 1295 1554">(iii) The employee is insulated from any other exposed conductive object, as during live-line bare-hand work. (Emphasis added).</p>

### **III. Basis, Purpose and Impact of this Proposed Amendment.**

#### **A. Basis.**

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 need for this proposed 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 which caused his death.

#### **B. Purpose.**

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 proposed change 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.

**C. Impact on Employers.**

This proposed action, if eventually finalized, 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 §1926.955(e), Live-line Bare-Hand Work on Overhead Lines, and contained in Table V-2.]*

**D. Impact on Employees.**

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 effect of the proposed regulation is that, except for the live electrical part the employee(s) is working on the employee(s) would have to now insulate, all other nearby live or “hot” electrical parts and power lines 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).

**E. Impact on the Department of Labor and Industry.**

No significant impact is anticipated on the Department.

**IV. Implementation Schedule. (if any)**

Not applicable. This change is being offered as a proposed regulation of the Board for public comment and is not being considered as final regulatory language at this time.

**Contact Person:**

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**16 VAC 25-155, Proposed Regulation to Amend General Requirements for Clearances,  
Construction of Electric Transmission and Distribution Lines and Equipment,  
Construction Industry, Subpart V, and Repeal of 16 VAC 25-175-1926.950 (c)(1)**

As Adopted by the  
Safety and Health Codes Board

Date: \_\_\_\_\_



**16 VAC 25-155, Proposed Regulation to Amend General Requirements for Clearances,  
Construction of Electric Transmission and Distribution Lines and Equipment,  
Construction Industry, Subpart V, and Repeal of 16 VAC 25-175-1926.950 (c)(1)**

When the regulations, as set forth in the Proposed Regulation to Amend General Requirements for Clearances, Construction of Electric Transmission and Distribution Lines and Equipment, Construction Industry, Subpart V, are applied to the Commissioner of the Department of Labor and Industry and/or to Virginia employers, the following federal terms shall be considered to read as below:

Federal Terms

VOSH Equivalent

29 CFR

VOSH Standard

Assistant Secretary

Commissioner of Labor and Industry

Agency

Department

**GENERAL REQUIREMENTS - CLEARANCES**  
**16 VAC 25-175-1926.950 (c)(1)**

(c) Clearances. The provisions of ~~paragraph (c)(1) or 16 VAC 25-155 or paragraph (2)~~ of this section shall be observed.

~~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:~~

~~———(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~~

~~———(ii) The energized part is insulated or guarded from him and any other conductive object at a different potential, or~~

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



**GENERAL REQUIREMENTS FOR CLEARANCES, CONSTRUCTION OF ELECTRIC TRANSMISSION AND DISTRIBUTION LINES AND EQUIPMENT, CONSTRUCTION INDUSTRY**  
**16 VAC 25-155**

16 VAC 25-155. General Requirements

- 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:
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
  2. The energized part is insulated or guarded from him and any other conductive object at a different potential, or
  3. The employee is isolated, insulated, or guarded from any other exposed conductive object(s), as during live-line bare-hand work.
- B. Alternating Current - Minimum Distance

**GENERAL REQUIREMENTS FOR CLEARANCES, CONSTRUCTION OF ELECTRIC TRANSMISSION AND DISTRIBUTION LINES AND EQUIPMENT, CONSTRUCTION INDUSTRY**  
**16 VAC 25-155**

**TABLE V-1 - ALTERNATING CURRENT - NIMUM DISTANCES**

Voltage range (phase to phase) (kilovolt)	Minimum working and clear hot stick distance
2.1 to 15 .....	2 ft. 0 in.
15.1 to 35 .....	2 ft. 4 in.
35.1 to 46 .....	2 ft. 6 in.
46.1 to 72.5 .....	3 ft. 0 in.
72.6 to 121 .....	3 ft. 4 in.
138 to 145 .....	3 ft. 6 in.
161 to 169 .....	3 ft. 8 in.
230 to 242 .....	5 ft. 0 in.
345 to 362 .....	(1)7 ft. 0 in.
500 to 552 .....	(1)11 ft. 0 in.
700 to 765 .....	(1)15 ft. 0 in.

Footnote (1) NOTE: For 345-362 kv., 500-552 kv., and 700-765 kv., minimum clear hot stick distance may be reduced provided that such distances are not less than the shortest distance between the energized part and the grounded surface.