

WORKING CLOSE TO ENERGIZED HIGH VOLTAGE EQUIPMENT AND CONDUCTORS

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TREE PRUNING AND FALLING NEAR ENERGIZED CONDUCTOR

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R19.24-1

Working Close to Energized High Voltage Equipment and Conductors

BACKGROUND

1. Explanatory Notes

Section 19.24.1 requires, in part, that employers ensure that a specified minimum distance is maintained between high voltage electrical equipment and conductors and workplace equipment. If this specified minimum safe distance cannot be maintained, section 19.25 requires that an employer must obtain a written assurance of certain matters from a representative of the power system.

2. The OHSR

Section 19.24.1:

(1) Subject to section 19.24.2, or unless otherwise permitted by this Part, if exposed electrical equipment or conductors at a workplace have a voltage within a range set out in Column 1 of Table 19-1A, the following must remain at least the distance from the exposed electrical equipment and conductors that is set out in Column 2 opposite that range of voltage:

(a) a person working at the workplace;

(b) a tool, a machine, material or equipment at the workplace.

(2) If practicable, an employer must ensure that a tower crane operating at a workplace that has exposed electrical equipment or conductors that have a voltage within a range set out in column 1 of Table 19-1A is equipped with a zone-limiting device that prevents the crane from operating in the relevant minimum approach distance to the exposed electrical equipment or conductors set out opposite in column 2.

Table 19-1A

Column 1 Voltage	Column 2 Minimum approach distance for working close to exposed electrical equipment or conductors	
	Metres	Feet
Phase to phase		
Over 750 V to 75 kV	3	10
Over 75 kV to 250 kV	4.5	15
Over 250 kV to 550 kV	6	20

Section 19.25, in part:

(1) If the minimum distance in Table 19-1A cannot be maintained because of the circumstances of work or the inadvertent movement of persons or equipment, an assurance in writing on a form acceptable to the Board and signed by a representative of the owner of the power system, must be obtained.

(2) The assurance must state that while the work is being done the electrical equipment and conductors will be displaced or rerouted from the work area, if practicable.

(3) If compliance with subsection (2) is not practicable the assurance must state that the electrical equipment will be isolated and grounded, but if isolation and grounding is not practicable the assurance must state that the electrical equipment will be visually identified and guarded.

...

POLICY

The minimum distances specified in section 19.24.1 and Table 19-1A must be taken into account when planning the operation of a crane or other equipment close to overhead electrical conductors. If the operation is planned with due regard to the environmental conditions, the condition of the equipment, the capability of the operators, and the movement of material, so that no part of the equipment, workers, or material come within the stipulated minimum distance, an assurance in writing under section 19.25(1) is not required.

For the purposes of section 19.24.1, if it is not practicable to equip a tower crane with a zone-limiting device and no other effective means is provided to assist the operator of a tower crane in maintaining the minimum distance:

- the crane must have a marker placed at an appropriate position on the jib; and
- the employer must specifically instruct the operator that, when the jib is in a position such that the load line could enter within the minimum applicable distance, the trolley must be positioned only on the mast side of the marker.

EFFECTIVE DATE:	October 29, 2003
AUTHORITY:	Sections 19.24.1 and 19.25 of the <i>OHSR</i> .
CROSS REFERENCES:	
HISTORY:	<p>March 1, 2023 - Housekeeping changes to reflect regulation changes effective on that date.</p> <p>April 6, 2020 - Housekeeping changes.</p> <p>February 1, 2011 - Housekeeping changes to reflect regulation changes effective on that date.</p> <p>September 15, 2010 - Housekeeping changes to delete practice reference and make formatting changes.</p> <p>October 29, 2003 - The policy incorporated a paragraph from then Item R14.53-1 which was deleted in response to the duplication and redundancy package of regulatory amendments.</p> <p>April 1, 2001 - This Item replaced Policy No. 24.04(1) of the former Prevention Division <i>Policy and Procedure Manual</i>.</p>
APPLICATION:	This policy applies to all instances where workplace equipment comes in close proximity to high voltage electrical equipment and conductors on and after October 29, 2003.

R19.30-1
Tree Pruning and Falling Near Energized Conductor - Preliminary Inspection

BACKGROUND

1. Explanatory Notes

Section 19.30 sets out requirements for preliminary inspections to identify hazardous areas prior to commencing tree-pruning and falling near energized conductors. Included in the inspection is whether any part of the tree to be pruned or felled is, or may be, within the minimum distance specified in Section 19.24.1 and Table 19-1A.

2. The OHSR

Section 19.30:

- (1) Before commencing tree pruning or falling close to energized high voltage overhead conductors, the worksite must be inspected by a qualified person, authorized by the owner of the power system, to identify any hazardous areas, including situations where any part of a tree to be pruned or felled is within the applicable minimum distance from an energized conductor as specified in Table 19-1A, or may fall within that distance.
- (2) Immediately before commencing work, an inspection must be performed by a qualified person to verify the results of the initial inspection done under subsection (1) are still valid.

Section 19.24.1:

Subject to section 19.24.2, or unless otherwise permitted by this Part, if exposed electrical equipment or conductors at a workplace have a voltage within a range set out in Column 1 of Table 19-1A, the following must remain at least the distance from the exposed electrical equipment and conductors that is set out in Column 2 opposite that range of voltage:

- (a) a person working at the workplace;
- (b) a tool, a machine, material or equipment at the workplace.

Table 19-1A

Column 1 Voltage	Column 2 Minimum approach distance for working close to exposed electrical equipment or conductors	
	Metres	Feet
Phase to phase		
Over 750 V to 75 kV	3	10
Over 75 kV to 250 kV	4.5	15
Over 250 kV to 550 kV	6	20

POLICY

Tree trimmers intending to work close to energized high voltage lines must call the utility to request a qualified person to perform the preliminary inspection under section 19.30(1). The following guidelines are to be used in determining if tree-trimming is close to energized high voltage overhead conductors:

- any part of the tree, as it stands near an energized line, is within the general limits of approach specified in section 19.24.1;

- any branches are above an energized line in such a way that any severed portion may fall within the general limits of approach of section 19.24.1; or
- any contemplated topping operation will produce a cut length capable of extending from the tree to within the limits of approach of section 19.24.1.

EFFECTIVE DATE:	April 1, 2001
AUTHORITY:	Sections 19.24.1 and 19.30 of the <i>OHSR</i> .
CROSS REFERENCES:	
HISTORY:	April 6, 2020 - Housekeeping changes. February 1, 2011 - Housekeeping changes to reflect regulation changes effective on that date. September 15, 2010 - Housekeeping changes to delete practice reference and make formatting changes. Replaces Policy No. 24.08(1) of the Prevention Division <i>Policy and Procedure Manual</i> .
APPLICATION:	This Item results from the 2000/2001 "editorial" consolidation of all prevention policies into the <i>Prevention Manual</i> . The POLICY in this Item merely continues the substantive requirements of Policy No. 24.08(1), as they existed prior to the Effective Date, with any wording changes necessary to reflect legislative and regulatory changes since Policy No. 24.08(1) was issued.
