CANADIAN STANDARDS ASSOCIATION

Z462-08

Workplace electrical safety

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Preface

This is the first edition of CSA Z462, *Workplace electrical safety.*

This Standard is based on NFPA 70E, *Standard for Electrical Safety for the Workplace,* and has been harmonized with Parts I, II, and III of the *Canadian Electrical Code;* CAN/CSA-Z460, *Control of hazardous energy — Lockout and other methods*; and CAN/CSA-M421, *Use of electricity in mines*. This revised edition of NFPA 70E has been developed by the Canadian Standards Association from the original edition as promulgated by the National Fire Protection Association. In addition to its initial source, it includes significant revisions by CSA. This revised edition is fully the responsibility of CSA. The NFPA, holder of the copyright in this edition, takes no responsibility for any portion thereof.

This Standard specifies requirements for and provides guidance on safety management systems, safe work procedures, and selection of personal protective equipment and other safety devices for persons exposed to hazards associated with energized electrical equipment. In addition, this Standard sets out criteria for the identification and training of qualified electrical workers and for determination of hazardous work to be performed only by those qualified individuals.

By permission of the National Fire Protection Association, many of the clauses, tables, and figures in this Standard have been copied from NFPA 70E. CSA wishes to thank NFPA for its support throughout the development of this Standard.

CSA acknowledges that the development of this Standard was made possible, in part, by the financial support of the Canadian Electricity Association, the Electrical & Utilities Safety Association of Ontario, EnCana Corporation, Husky Oil Operations Ltd., Lenco Training & Technical Services, Magna IV Engineering Ltd., Ontario Power Generation, Schneider Canada Inc., and Syntech Enerflex.

This Standard was prepared by the Technical Committee on Workplace Electrical Safety, under the jurisdiction of the Strategic Steering Committee on Occupational Health and Safety, and has been formally approved by the Technical Committee. It will be submitted to the Standards Council of Canada for approval as a National Standard of Canada.

December 2008

Notes:

(1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*

(2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*

(3) *This publication was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this publication.*

(4) *CSA Standards are subject to periodic review, and suggestions for their improvement will be referred to the appropriate committee.*

(5) *All enquiries regarding this Standard, including requests for interpretation, should be addressed to Canadian Standards Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.*

Requests for interpretation should

(a) define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;

(b) provide an explanation of circumstances surrounding the actual field condition; and

(c) be phrased where possible to permit a specific "yes" or "no" answer.

Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are published in CSA's periodical* Info Update*, which is available on the CSA Web site at www.csa.ca.*

Z462-08
Workplace electrical safety

1 Scope

1.1 Subjects and workplaces included

This Standard specifies electrical safety requirements for workplaces that are necessary for the practical safeguarding of workers during activities such as the installation, operation, maintenance, and demolition of electric conductors, electric equipment, signalling and communications conductors and equipment, and raceways for the following:

(a) public and private premises, including buildings, structures, mobile homes, recreational vehicles, and floating buildings;
(b) yards, lots, parking lots, carnivals, and industrial substations;
(c) installations of conductors and equipment that connect to the supply of electricity; and
(d) installations used by the electric utility, e.g., office buildings, warehouses, garages, machine shops, and recreational buildings, that are not an integral part of a generating plant, substation, or control centre.

1.2 Workplaces excluded

This Standard does not cover the following:

(a) installations in ships, watercraft other than floating buildings, railway rolling stock, aircraft, and automotive vehicles other than mobile homes and recreational vehicles;
(b) installations of railways for the generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signalling and communications;
(c) installations of communications equipment under the exclusive control of communications utilities located outdoors or in building spaces used exclusively for such installations; and
(d) installations under the exclusive control of an electric utility when such installations
    (i) consist of service drops or service laterals, and associated metering;
    (ii) are located in legally established easements or rights-of-way designated or recognized by public service commissions, utility commissions, or other regulatory agencies having jurisdiction for such installations; or
    (iii) are on property owned or leased by the electric utility for communications or for metering, generation, control, transformation, transmission, or distribution of electric energy.

1.3 Purpose

The purpose of this Standard is to specify requirements for a practical safe working area for workers relative to the hazards arising from the use of electricity.

1.4 Use with related Standards and regulations

This Standard is intended for use with Parts I, II, and III of the *Canadian Electrical Code* and other related Canadian workplace electrical safety Standards (e.g., CAN/CSA-M421 and CAN/CSA-Z460), and should be used with such Standards. In addition, users of this Standard should always refer to provincial/territorial and federal safety regulations that have jurisdiction over their work facility, contract job site, or profession.

1.5 Organization of this Standard

The requirements of this Standard are divided into three main clauses, as shown in Figure 1.

Notes:

(1) *Clause 4 specifies general requirements for safety-related work practices.*