

Occupational Health and Safety Act

R.R.O. 1990, REGULATION 851

INDUSTRIAL ESTABLISHMENTS

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DEFINITIONS

1. In this Regulation,

“adequate”, when used in relation to a procedure, plan, material, device, object or thing, means that it is,

(a) sufficient for both its intended and its actual use, and

(b) sufficient to protect a worker from occupational illness or occupational injury; (“adéquat”)

“adequately” has a meaning that corresponds to the meaning of “adequate”; (“adéquatement”)

“architect” means a member or licensee of the Ontario Association of Architects under the *Architects Act*; (“architecte”)

“boom” means the projecting part of a back-hoe, shovel, crane or similar lifting device from which a load is likely to be supported; (“flèche”)

“Building Code” means Regulation 61 of the Revised Regulations of Ontario, 1990 made under the *Building Code Act*; (“code du bâtiment”)

“fire-resistance rating” means the rating in hours or fraction thereof that a material or assembly of materials will withstand the passage of flame and the transmission of heat when exposed to fire, as established for the material or assembly of materials under the *Building Code Act*; (“indice de résistance au feu”)

“flammable liquid” means a liquid having a flash point below 37.8° Celsius, and a vapour pressure below 275 kilopascals absolute at 37.8° Celsius; (“liquide inflammable”)

“foundry” means the part of a building or premises or the workshop, structure, room or place in which base metals or their alloys are cast in moulds, other than permanent moulds, or where core-making, shakeout or cleaning or any casting or other dust-causing operation ancillary to the casting process is carried on; (“fonderie”)

“gangway” means a defined passageway between a metal melting unit and a metal pouring area; (“passage”)

“lifting device” means a device that is used to raise or lower any material or object and includes its rails and other supports but does not include a device to which Ontario Regulation 209/01 (Elevating Devices), made under the *Technical Standards and Safety Act, 2000*, applies; (“appareil de levage”)

“log” includes tree-length pulpwood and a pit prop, pole, post, tie or any similar product; (“bille”)

“pouring aisle” means a passageway leading from a gangway where metal is poured into a mould or box; (“allée de coulée”)

“prime mover” means an initial source of motive power; (“élément moteur”)

“professional engineer” means a member or licensee of the Association of Professional Engineers of Ontario under the *Professional Engineers Act*; (“ingénieur”)

“service room” means, in relation to a building, a room that accommodates building services and includes a boiler room, furnace room, incinerator room, garbage room, elevator machine room and a room that accommodates air conditioning or heating appliances, pumps, compressors or electrical services; (“local technique”)

“transmission equipment” means any object or objects by which the motion of a prime mover is transmitted to a machine that is capable of utilizing such motion and includes a shaft, pulley, belt, chain, gear, clutch or other device; (“organe de transmission”)

“working space” means any space where persons are engaged in the performance of work within a foundry but does not include offices, lunch rooms, locker rooms, change rooms, rest rooms, washrooms, shower rooms, toilet rooms, pattern shops, maintenance shops, laboratories, shipping areas, the storage space occupied by equipment or materials not regularly in use or the enclosed space where core sands and moulding sands are stored. (“aire de travail”) R.R.O. 1990, Reg. 851, s. 1; O. Reg. 516/92, s. 1; O. Reg. 629/05, s. 1; O. Reg. 420/10, s. 1.

EQUIVALENCY

2. In applying this Regulation, the composition, design, size and arrangement of any material, object, device or thing may vary from the composition, design, size or arrangement prescribed in this Regulation where the factors of strength, health and safety are equal to or greater than the factors of strength, health and safety in the composition, design, size or arrangement prescribed. R.R.O. 1990, Reg. 851, s. 2.

APPLICATION

3. This Regulation applies to all industrial establishments. R.R.O. 1990, Reg. 851, s. 3.

PART I SAFETY REGULATIONS

4. (1) Subject to subsection (2), the minimum age of,

- (a) a worker; or
- (b) a person who is permitted to be in or about an industrial establishment,

shall be,

- (c) sixteen years of age in a logging operation;
- (d) fifteen years of age in a factory other than a logging operation; and
- (e) fourteen years of age in a workplace other than a factory. R.R.O. 1990, Reg. 851, s. 4 (1).

(2) Clause (1) (b) does not apply to a person who,

- (a) while in the industrial establishment, is accompanied by a person who has attained the age of majority;
- (b) is being guided on a tour of the industrial establishment;
- (c) is in an area of the industrial establishment used for sales purposes; or
- (d) is in an area of the industrial establishment to which the public generally has access. R.R.O. 1990, Reg. 851, s. 4 (2).

(3) Clauses (1) (d) and (e) do not apply with respect to a worker who works as a performer in the entertainment and advertising industry. O. Reg. 179/07, s. 1.

(4) In subsection (3),

“entertainment and advertising industry” means the industry of producing,

- (a) live or broadcast performances, or

(b) visual, audio or audio-visual recordings of performances, in any medium or format; (“industrie du spectacle et de la publicité”)

“performance” means a performance of any kind, including theatre, dance, ice skating, comedy, musical productions, variety, circus, concerts, opera, modelling and voice-overs, and “performer” has a corresponding meaning. (“representation”) O. Reg. 179/07, s. 1.

NOTICE OF ACCIDENTS

5. (1) The written report required by section 51 of the Act shall include,

- (a) the name and address of the constructor and the employer;
- (b) the nature and the circumstances of the occurrence and of the bodily injury sustained;
- (c) a description of the machinery or equipment involved;
- (d) the time and place of the occurrence;
- (e) the name and address of the person who was killed or critically injured;
- (f) the names and addresses of all witnesses to the occurrence; and
- (g) the name and address of the physician or surgeon, if any, by whom the person was or is being attended for the injury. R.R.O. 1990, Reg. 851, s. 5 (1); O. Reg. 420/10, s. 2 (1).

(2) For the purposes of section 52 of the Act, notice of,

- (a) an accident, explosion or fire which disables a worker from performing his or her usual work; or
- (b) an occupational illness,

shall include,

- (c) the name, address and type of business of the employer;
- (d) the nature and the circumstances of the occurrence and of the bodily injury or illness sustained;
- (e) a description of the machinery or equipment involved;
- (f) the time and place of the occurrence;
- (g) the name and address of the person suffering the injury or illness;
- (h) the names and addresses of all witnesses to the occurrence;
- (i) the name and address of the physician or surgeon, if any, by whom the person was or is being attended for the injury or illness; and
- (j) the steps taken to prevent a recurrence or further illness. R.R.O. 1990, Reg. 851, s. 5 (2); O. Reg. 420/10, s. 2 (2, 3).

(3) A record of an accident, explosion or fire causing injury requiring medical attention but not disabling a worker from performing his or her usual work shall be kept in the permanent records of the employer and include particulars of,

- (a) the nature and circumstances of the occurrence and of the injury sustained;
- (b) the time and place of the occurrence; and
- (c) the name and address of the injured person. R.R.O. 1990, Reg. 851, s. 5 (3); O. Reg. 420/10, s. 2 (4).

(4) A record kept as prescribed by subsection (3) for the inspection of an inspector shall be notice to the Director. R.R.O. 1990, Reg. 851, s. 5 (4).

RETENTION OF REPORTS AND RECORDS

6. Where, under section 5 or 51, a report or permanent record is prescribed to be kept, it shall be kept for,

- (a) a period of at least one year; or
- (b) such longer period as is necessary to ensure that at least the two most recent reports or records are kept. R.R.O. 1990, Reg. 851, s. 6; O. Reg. 629/05, s. 2.

PRE-START HEALTH AND SAFETY REVIEWS

7. (1) In this section,

“apparatus” means equipment or a machine or device; (“appareil”)

“protective element” means a shield, a guard, an operating control acting as a guard, a locking device or any other device preventing access; (“élément protecteur”)

“spray booth” means a spray booth as defined in Ontario Regulation 213/07 (Fire Code) made under the *Fire Protection and Prevention Act, 1997*; (“cabine de pulvérisation”)

“Table” means the Table to this section. (“tableau”) O. Reg. 528/00, s. 2; O. Reg. 420/10, s. 3 (1).

(2) Subject to subsections (5), (7), (8) and (9), a pre-start health and safety review is required if, in a factory other than a logging operation, a provision of this Regulation listed in the Table applies and the circumstances described in the Table will exist,

- (a) because a new apparatus, structure or protective element is to be constructed, added or installed or a new process is to be used; or
- (b) because an existing apparatus, structure, protective element or process is to be modified and one of the following steps must be taken to obtain compliance with the applicable provision:
 1. New or modified engineering controls are used.
 2. Other new or modified measures are used.
 3. A combination of new, existing or modified engineering controls and other new or modified measures is used. O. Reg. 528/00, s. 2.

(3) When a pre-start health and safety review is required, the owner, lessee or employer shall ensure that the apparatus, structure or protective element is not operated or used or that the process is not used, as the case may be, unless the review has been conducted, and,

- (a) all measures identified in the review as being required for compliance with the relevant provisions of this Regulation that are listed in the Table have been taken; or
- (b) if some or all of the measures specified in clause (a) are not taken, the owner, lessee or employer has provided written notice to the joint health and safety committee or the health and safety representative, if any, of what measures have been taken to comply with the relevant provisions of this Regulation that are listed in the Table. O. Reg. 528/00, s. 2.

(4) A pre-start health and safety review includes the preparation of a written report that is made to the owner, lessee or employer and contains,

- (a) details of the measures to be taken for compliance with the relevant provisions of this Regulation that are listed in the Table;
- (b) if testing is required before the apparatus or structure can be operated or used or before the process can be used, details of measures to protect the health and safety of workers that are to be taken before the testing is carried out; and
- (c) if item 3 or 7 of the Table applies, details of the structural adequacy of the apparatus or structure. O. Reg. 528/00, s. 2.

(5) When item 2 of the Table applies, a pre-start health and safety review is not required if,

- (a) the protective element was installed at the time the apparatus was manufactured and the conditions set out in paragraphs 1, 2 and 3 of subsection (6) are met; or
- (b) the protective element was not installed at the time the apparatus was manufactured and the conditions set out in paragraphs 1, 2, 3 and 4 of subsection (6) are met. O. Reg. 528/00, s. 2.

(6) The following are the conditions mentioned in clauses (5) (a) and (b):

1. The apparatus was manufactured in accordance with and meets current applicable standards, or it has been modified to meet current applicable standards.
2. The apparatus is installed in accordance with the manufacturer’s instructions and current applicable standards.
3. The protective element was manufactured in accordance with and meets current applicable standards, or it has been modified to meet current applicable standards.
4. The protective element is installed in accordance with the manufacturer’s instructions, and current applicable standards, if any. O. Reg. 528/00, s. 2.

(7) When item 3 of the Table applies, a pre-start health and safety review is not required if the rack or stacking structure is designed and tested for use in accordance with current applicable standards. O. Reg. 528/00, s. 2.

(8) When item 4 of the Table applies, a pre-start health and safety review is not required if the process is conducted inside a spray booth that is manufactured and installed in accordance with current applicable standards. O. Reg. 528/00, s. 2.

(9) When item 7 of the Table applies, a pre-start health and safety review is not required,

- (a) in the case of a lifting device or travelling crane, if it is in or on a supporting structure originally designed for it and its capacity does not exceed the capacity provided for in that original design;
- (b) in the case of an automobile hoist, if it is certified that it meets current applicable standards. O. Reg. 528/00, s. 2.

(10) If no pre-start health and safety review is required because subsection (5), (7), (8) or (9) applies, the owner, lessee or employer shall keep documents establishing the exemption readily accessible in the workplace for as long as the protective element, rack or stacking structure or lifting device, travelling crane or automobile hoist remains in the workplace or the process is used in the workplace, as the case may be. O. Reg. 528/00, s. 2.

(11) A pre-start health and safety review required under item 1, 2, 3, 4, 5, 6 or 7 of the Table shall be conducted by a professional engineer. O. Reg. 528/00, s. 2.

(12) A pre-start health and safety review required under item 8 of the Table shall be conducted by a professional engineer or by a person who in the opinion of the owner, lessee or employer possesses special, expert or professional knowledge or qualifications appropriate to assess any potential or actual hazards. O. Reg. 528/00, s. 2; O. Reg. 420/10, s. 3 (2).

(13) The person conducting a pre-start health and safety review shall,

- (a) date and sign the written report mentioned in subsection (4);
- (b) if the person is a professional engineer, affix his or her seal to the report; and
- (c) if the person is not a professional engineer, include in the report details of his or her special, expert or professional knowledge or qualifications. O. Reg. 528/00, s. 2; O. Reg. 420/10, s. 3 (3).

(14) Reports of pre-start health and safety reviews conducted under this section shall,

- (a) be kept readily accessible in the workplace together with any supporting documents; and
- (b) be provided to the joint health and safety committee or the health and safety representative, if any, before the apparatus, structure or protective element is operated or used or the process is used. O. Reg. 528/00, s. 2.

(15) Documents kept under subsection (10) may be reviewed, on request, by,

- (a) the joint health and safety committee or the health and safety representative, if any; or
- (b) an inspector. O. Reg. 528/00, s. 2.

TABLE

Item	Applicable provisions of this Regulation	Circumstances
1.	Subsections 22 (1), (2) and (4)	Flammable liquids are located or dispensed in a building, room or area.
2.	Sections 24, 25, 26, 28, 31 and 32	Any of the following are used as protective elements in connection with an apparatus: <ol style="list-style-type: none"> 1. Safeguarding devices that signal the apparatus to stop, including but not limited to safety light curtains and screens, area scanning safeguarding systems, radio frequency systems and capacitance safeguarding systems, safety mat systems, two-hand control systems, two-hand tripping systems and single or multiple beam systems. 2. Barrier guards that use interlocking mechanical or electrical safeguarding devices.
3.	Clause 45 (b)	Material, articles or things are placed or stored on a structure that is a rack or stacking structure.
4.	Section 63	A process involves a risk of ignition or explosion that creates a condition of imminent hazard to a person's health or safety.
5.	Section 65	The use of a dust collector involves a risk of ignition or explosion that creates a condition of imminent hazard to a person's health or safety.
6.	Sections 87.3, 87.4, 87.5 and 88, subsections 90 (1), (2) and (3), and sections 91, 92, 94, 95, 96, 99, 101 and 102	A factory produces aluminum or steel or is a foundry that melts material or handles molten material.
7.	Sections 51 and 53	The construction, addition, installation or modification relates to a lifting device, travelling crane or automobile hoist.
8.	Sections 127 and 128	A process uses or produces a substance that may result in the exposure of a worker in excess of any exposure limit set out in Regulation 833 of the Revised Regulations of Ontario, 1990 (Control of Exposure to Biological or Chemical Agents), Ontario Regulation 278/05 (Designated Substance — Asbestos on Construction Projects and in Buildings and Repair Operations) or Ontario Regulation 490/09 (Designated Substances) all made under the Act.

O. Reg. 528/00, s. 2; O. Reg. 280/05, s. 1; O. Reg. 494/09, s. 1; O. Reg. 420/10, s. 3 (4).

8. REVOKED: O. Reg. 450/97, s. 3.

FEES AND FORMS

9. The fee for each copy of a report or each copy of an order furnished under section 64 of the Act is \$500. R.R.O. 1990, Reg. 851, s. 9.

10. A notice under subsection 57 (9) of the Act shall be in Form 2. R.R.O. 1990, Reg. 851, s. 10.

PREMISES

- 11.** A floor or other surface used by any worker shall,
- (a) be kept free of,
 - (i) obstructions,
 - (ii) hazards, and
 - (iii) accumulations of refuse, snow or ice; and
 - (b) not have any finish or protective material used on it that is likely to make the surface slippery. R.R.O. 1990, Reg. 851, s. 11.
- 12.** Clearances between a moving part of any machine or any material carried by the moving part of the machine and any other machine, structure or thing shall be adequate to ensure that the safety of any worker in the area is not endangered. R.R.O. 1990, Reg. 851, s. 12.
- 13.** (1) Subject to subsection (2), there shall be a guardrail,
- (a) around the perimeter of an uncovered opening in a floor, roof or other surface to which a worker has access;
 - (b) at an open side of,
 - (i) a raised floor, mezzanine, balcony, gallery, landing, platform, walkway, stile, ramp or other surface, or
 - (ii) a vat, bin or tank, the top of which is less than 107 centimetres above the surrounding floor, ground, platform or other surface; and
 - (c) around a machine, electrical installation, place or thing that is likely to endanger the safety of any worker. R.R.O. 1990, Reg. 851, s. 13 (1).
- (2) Subsection (1) does not apply to,
- (a) a loading dock;
 - (b) a roof to which access is required only for maintenance purposes; and
 - (c) a pit used for,
 - (i) work on an assembly line, or
 - (ii) maintenance of vehicles or similar equipment. R.R.O. 1990, Reg. 851, s. 13 (2).
- 14.** (1) A guardrail shall,
- (a) have a top rail located not less than 91 and not more than 107 centimetres above the surface to be guarded;
 - (b) have a mid rail;
 - (c) if tools or other objects may fall on a worker, have a toe-board that extends from the surface to be guarded to a height of at least 125 millimetres; and
 - (d) be free of splinters and protruding nails. R.R.O. 1990, Reg. 851, s. 14 (1).
- (2) A guardrail shall be constructed to meet the structural requirements for guards as set out in the Building Code. R.R.O. 1990, Reg. 851, s. 14 (2).
- 15.** A cover on an opening in a floor, roof or other surface shall be,
- (a) secured in place; and
 - (b) constructed to meet the structural requirements for loads due to the use of floors and roofs as set out in the Building Code. R.R.O. 1990, Reg. 851, s. 15.
- 16.** A door,
- (a) located or arranged so that it could be mistaken for an exit door; or
 - (b) leading to a hazardous, restricted or unsafe area,
- shall be identified by a warning sign posted on it. R.R.O. 1990, Reg. 851, s. 16.
- 17.** A fixed walkway, service stair or stile shall be at least fifty-five centimetres in width. R.R.O. 1990, Reg. 851, s. 17.
- 18.** (1) Subject to subsection (2), an access ladder fixed in position shall,
- (a) be vertical;
 - (b) have rest platforms at not more than nine metre intervals;
 - (c) be offset at each rest platform;

- (d) where the ladder extends over five metres, above grade, floor or landing, have a safety cage commencing not more than 2.2 metres above grade, floor or landing and continuing at least ninety centimetres above the top landing with openings to permit access by a worker to rest platforms or to the top landing;
- (e) have side rails that extend ninety centimetres above the landing; and
- (f) have rungs which are at least fifteen centimetres from the wall and spaced at regular intervals. R.R.O. 1990, Reg. 851, s. 18 (1); O. Reg. 420/10, s. 4.

(2) Subsection (1) does not apply to an access ladder on a tower, water tank, chimney or similar structure which has a safety device which will provide protection should a worker using the ladder fall. R.R.O. 1990, Reg. 851, s. 18 (2).

19. Where frequent access is required to equipment elevated above or located below floor level, permanent platforms shall be provided with access by a fixed,

- (a) stair; or
- (b) access ladder. R.R.O. 1990, Reg. 851, s. 19.

20. Barriers, warning signs or other safeguards for the protection of all workers in an area shall be used where vehicle or pedestrian traffic may endanger the safety of any worker. R.R.O. 1990, Reg. 851, s. 20.

LIGHTING

21. Where natural lighting is inadequate to ensure the safety of any worker, artificial lighting shall be provided and shadows and glare shall be reduced to a minimum. R.R.O. 1990, Reg. 851, s. 21.

FIRE PREVENTION — PROTECTION

22. (1) Subject to subsections (2), (3) and (4), where not required for immediate use, flammable liquids shall be,

- (a) in sealed containers; and
- (b) located,
 - (i) outdoors and remote from any means of egress,
 - (ii) in a building not used for any other purpose, or
 - (iii) in a room,
 - (A) separated from the rest of the building with partitions having,
 - 1. at least a one-hour fire-resistance rating, and
 - 2. self-closing doors, hinged to swing outwardly on their vertical axes,
 - (B) equipped with,
 - 1. a drain connected to a dry sump or holding tank, and
 - 2. liquid-tight seals between interior walls and floor and a liquid-tight ramped sill at any door opening, which is not in an exterior wall, and
 - (C) having natural ventilation to the outdoors by upper and lower exterior wall gravity louvres. R.R.O. 1990, Reg. 851, s. 22 (1); O. Reg. 420/10, s. 5.

(2) Where not required for immediate use, flammable liquids,

- (a) in opened containers; or
- (b) having a flash point below 22.8° Celsius and a boiling point below 37.8° Celsius,

shall,

- (c) comply with the requirements of clause (1) (b);
- (d) be stored in facilities having no potential source of ignition; and
- (e) when located in a room, be located in a room equipped with,
 - (i) explosion venting to the outdoors, and
 - (ii) a spark resistant floor. R.R.O. 1990, Reg. 851, s. 22 (2).
- (3) A maximum of 235 litres of flammable liquids may be stored,
 - (a) in sealed containers of not more than twenty-three litre capacity each; or
 - (b) in a metal cabinet of double walled construction with a 3-point door latch and a liquid-tight door sill raised at least fifty millimetres above the floor. R.R.O. 1990, Reg. 851, s. 22 (3).

- (4) An area where flammable liquids are dispensed shall have,
 - (a) mechanical ventilation from floor level to the outdoors at the rate of eighteen cubic metres per hour per square metre of floor area; and
 - (b) containers and dispensing equipment bonded and grounded when flammable liquid is dispensed. R.R.O. 1990, Reg. 851, s. 22 (4).
- 23.** A portable container used for dispensing flammable liquid in a work area shall be made of material suitable to provide for the safety of all workers and have,
 - (a) a spring-loaded cap; and
 - (b) a flame arrestor. R.R.O. 1990, Reg. 851, s. 23.

MACHINE GUARDING

- 24.** Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part. R.R.O. 1990, Reg. 851, s. 24.
- 25.** An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point. R.R.O. 1990, Reg. 851, s. 25.
- 26.** A machine shall be shielded or guarded so that the product, material being processed or waste stock will not endanger the safety of any worker. R.R.O. 1990, Reg. 851, s. 26.
- 27.** An emergency stop control on a power-driven machine shall,
 - (a) be conspicuously identified; and
 - (b) be located within easy reach of the operator. R.R.O. 1990, Reg. 851, s. 27.
- 28.** An operating control that acts as a guard for a machine not otherwise guarded shall,
 - (a) be in a location where the safety of the operator is not endangered by moving machinery;
 - (b) be arranged so that it cannot be operated accidentally; and
 - (c) not be made ineffective by a tie-down device or other means. R.R.O. 1990, Reg. 851, s. 28.
- 29.** A grinding wheel shall be,
 - (a) marked with the maximum speed at which it may be used;
 - (b) checked for defects before mounting;
 - (c) mounted in accordance with the manufacturer's specifications;
 - (d) operated at a speed which does not exceed the manufacturer's recommendations;
 - (e) provided with protective hoods that enclose the wheel as closely as the work will permit;
 - (f) operated only by workers protected by eye protection; and
 - (g) stored where it will not be subjected to,
 - (i) extreme heat or cold, or
 - (ii) damage from impact. R.R.O. 1990, Reg. 851, s. 29.
- 30.** A work rest for a grinding wheel shall,
 - (a) have a maximum clearance of three millimetres from the grinding wheel;
 - (b) be in a position above the centre line of the grinding wheel; and
 - (c) not be adjusted while the grinding wheel is in motion. R.R.O. 1990, Reg. 851, s. 30.
- 31.** A centrifugal extractor, separator or dryer shall have an interlocking device that will prevent,
 - (a) any lid or covering guard from being opened or removed while the rotating drum or basket is in motion; and
 - (b) the starting of the drum or basket while the lid or covering guard is open or removed. R.R.O. 1990, Reg. 851, s. 31.
- 32.** A tumbling mill or tumbling dryer shall have a locking device which prevents any movement of the mill or dryer that may endanger any worker during loading or unloading. R.R.O. 1990, Reg. 851, s. 32.
- 33.** Portions of conveyors or other moving machinery that are not visible from the control station, and where starting up may endanger any worker, shall be equipped with automatic start-up warning devices. R.R.O. 1990, Reg. 851, s. 33.
- 34.** Guards shall be provided beneath conveyors,

- (a) that pass over any worker; or
 - (b) from which falling material, including broken conveyor parts, may be a hazard to any worker. R.R.O. 1990, Reg. 851, s. 34.
- 35.** Overhead protection shall be provided where falling material may endanger any worker. R.R.O. 1990, Reg. 851, s. 35.
- 36.** (1) Subject to subsection (2), an explosive actuated fastening tool shall,
- (a) have a firing mechanism that will prevent the tool from being fired,
 - (i) while being loaded,
 - (ii) during preparation for firing, or
 - (iii) if dropped;
 - (b) be capable of being operated only when the muzzle end is held against a working surface with a force of at least twenty-two newtons greater than the weight of the tool;
 - (c) if required to be dismantled into separate parts for loading, be capable of being operated only when the separate parts are firmly locked together;
 - (d) be capable of being fired only after two separate and distinct actions have been carried out by the operator, with the firing movement separate from the operation of bringing the tool into the firing position;
 - (e) be used only when equipped with a protective guard or shield,
 - (i) suitable for the particular fastening operation being performed,
 - (ii) mounted at right angles to the barrel,
 - (iii) at least seventy-five millimetres in diameter, and
 - (iv) placed in a central position on the muzzle end of the tool except where the fastener is intended to be driven into a surface at a point within thirty-eight millimetres of another surface that is at an angle to the surface into which the fastener is intended to be driven;
 - (f) be capable of being operated when the guard prescribed by clause (e) is placed in the central position only when the bearing surface of the guard is tilted not more than eight degrees from the working surface;
 - (g) when not in use, be stored in a locked container;
 - (h) not be left unattended where it may be available to a person other than a worker having the qualifications set out in subclause (k) (i);
 - (i) whether loaded or unloaded, not be pointed directly at any person;
 - (j) not be loaded unless it is being prepared for immediate use;
 - (k) be used only,
 - (i) by a worker who has been instructed in the proper and safe manner of its use by the manufacturer or the manufacturer's authorized and qualified agent,
 - (ii) by a worker wearing both head protection and eye protection,
 - (iii) after it has been inspected by the worker referred to in subclause (i) to ensure that,
 - (A) the tool is clean,
 - (B) all moving parts operate freely,
 - (C) the barrel is free from any obstruction,
 - (D) the tool is adequately equipped for the intended use, and
 - (E) it is not defective,
 - (iv) in accordance with the instructions of the manufacturer,
 - (v) with an explosive load of a strength adequate to perform the intended work without excessive force, and
 - (vi) to drive a stud or other fastener suitable for insertion in the tool; and
 - (l) not be used in an atmosphere containing flammable vapours, gases or dusts. R.R.O. 1990, Reg. 851, s. 36 (1).
- (2) Clauses (1) (e) and (f) do not apply to an explosive actuated fastening tool if the velocity of the stud or other fastener does not exceed ninety metres per second measured at a distance of two metres from the muzzle end of the tool when propelled by the maximum commercially available explosive load that the tool is chambered to accept. R.R.O. 1990, Reg. 851, s. 36 (2).

(3) A misfired cartridge that has been removed from an explosive actuated fastening tool shall be placed in a water filled container until the cartridge may be properly disposed of after its safe removal from the industrial establishment. R.R.O. 1990, Reg. 851, s. 36 (3).

37. An explosive load for an explosive actuated fastening tool shall,

- (a) be so marked or labelled that the operator can readily identify its strength;
- (b) not be stored in a container where an explosive load of a different strength is stored;
- (c) not be left unattended where it may be available to a person other than a worker having the qualifications set out in subclause 36 (1) (k) (i); and
- (d) when not in use, be stored in a locked container. R.R.O. 1990, Reg. 851, s. 37.

38. A hand-held nailing gun or similar tool shall be,

- (a) capable of being operated only when in contact with the work surface; and
- (b) operated only,
 - (i) by a competent person, and
 - (ii) when the operator is wearing eye protection. R.R.O. 1990, Reg. 851, s. 38.

39. A chain saw shall,

- (a) have,
 - (i) a chain that minimizes the possibility of a kickback, and
 - (ii) a device which will effectively stop the chain in the event of a kickback;
- (b) be in safe operating condition;
- (c) when being started, be held firmly;
- (d) when being used, be held firmly by both hands; and
- (e) have the chain stopped when not actually cutting. R.R.O. 1990, Reg. 851, s. 39.

40. Electrical equipment, insulating materials and conductors shall be,

- (a) suitable for their use; and
- (b) certified by,
 - (i) the Canadian Standards Association, or
 - (ii) the Electrical Safety Authority, as defined in the *Electricity Act, 1998*. R.R.O. 1990, Reg. 851, s. 40; O. Reg. 144/99, s. 2; O. Reg. 420/10, s. 6.

41. The entrance to a room or similar enclosure containing exposed live electrical parts shall have a conspicuous sign, warning of the danger, and forbidding entry by unauthorized persons. R.R.O. 1990, Reg. 851, s. 41.

42. (1) The power supply to electrical installations, equipment or conductors shall be disconnected, locked out of service and tagged before any work is done, and while it is being done, on or near live exposed parts of the installations, equipment or conductors. O. Reg. 630/94, s. 1.

(2) Before beginning the work, each worker shall determine if the requirements of subsection (1) have been complied with. O. Reg. 630/94, s. 1.

(3) Locking out is not required,

- (a) if the conductors are adequately grounded with a visible grounding mechanism; or
- (b) if the voltage is less than 300 volts and there is no locking device for the circuit breakers or fuses and procedures are in place adequate to ensure that the circuit is not inadvertently energized. O. Reg. 630/94, s. 1.

(4) If locking out is not required for the reason set out in clause (3) (b), the employer shall ensure that the procedures required by that clause are carried out. O. Reg. 630/94, s. 1.

(5) If more than one worker is involved in the work referred to in subsection (1), the worker who disconnected and locked out the power supply shall communicate the purpose and status of the disconnecting and locking out. O. Reg. 630/94, s. 1.

(6) If a tag is used as a means of communication, the tag,

- (a) shall be made of non-conducting material;
- (b) shall be secured to prevent its inadvertent removal;
- (c) shall be placed in a conspicuous location;

- (d) shall state the reason the switch is disconnected and locked out;
- (e) shall show the name of the worker who disconnected and locked out the switch; and
- (f) shall show the date on which the switch was disconnected and locked out. O. Reg. 630/94, s. 1.
- (7) The employer shall establish and implement written procedures for compliance with this section. O. Reg. 630/94, s. 1.

42.1 (1) This section applies and section 42 does not apply if it is not practical to disconnect electrical installations, equipment or conductors from the power supply before working on, or near, live exposed parts of the installations, equipment or conductors. O. Reg. 630/94, s. 1.

(2) The worker shall use rubber gloves, mats, shields and other protective equipment and procedures adequate to ensure protection from electrical shock and burns while performing the work. O. Reg. 630/94, s. 1.

(3) If the installation, equipment or conductor is operating at a nominal voltage of 300 volts or more, a suitably equipped competent person who is able to recognize the hazards and perform rescue operations, including artificial respiration, shall be available and able to see the worker who is performing the work. O. Reg. 630/94, s. 1.

(4) Subsection (3) does not apply to equipment testing and trouble-shooting operations. O. Reg. 630/94, s. 1.

42.2 Work performed on electrical transmission systems or outdoor distribution systems rated at more than 750 volts shall be performed in accordance with,

- (a) the *Rule Book, Electric Utility Operations* published in 1990 by the Electrical Utilities Association of Ontario, Incorporated; or
- (b) the *Ontario Hydro Corporate Safety Rules and Policies*, dated 1994. O. Reg. 630/94, s. 1; O. Reg. 144/99, s. 3.

43. Tools and other equipment that are capable of conducting electricity and endangering the safety of any worker shall not be used in such proximity to any live electrical installation or equipment that they might make electrical contact with the live conductor. R.R.O. 1990, Reg. 851, s. 43.

44. (1) Cord-connected electrical equipment and tools shall have a casing that is adequately grounded. O. Reg. 630/94, s. 2.

(2) Subsection (1) does not apply to cord-connected electrical equipment or tools that are adequately double-insulated and whose insulated casing shows no evidence of cracks or defects. O. Reg. 630/94, s. 2.

(3) Subsection (1) does not apply to a portable electrical generator in which the electrical equipment or tools are not exposed to an external electric power source if the casing of portable electrical equipment or tools connected to the generator is bonded to a non-current-carrying part of the generator. O. Reg. 420/10, s. 7.

44.1 When used outdoors or in wet locations, portable electrical tools shall be protected by a ground fault circuit interrupter installed at the receptacle or on the circuit at the panel. O. Reg. 630/94, s. 2.

44.2 A ground fault that may pose a hazard shall be investigated and removed without delay. O. Reg. 630/94, s. 2.

MATERIAL HANDLING

45. Material, articles or things,

- (a) required to be lifted, carried or moved, shall be lifted, carried or moved in such a way and with such precautions and safeguards, including protective clothing, guards or other precautions as will ensure that the lifting, carrying or moving of the material, articles or things does not endanger the safety of any worker;
- (b) shall be transported, placed or stored so that the material, articles or things,
 - (i) will not tip, collapse or fall, and
 - (ii) can be removed or withdrawn without endangering the safety of any worker; and
- (c) to be removed from a storage area, pile or rack, shall be removed in a manner that will not endanger the safety of any worker. R.R.O. 1990, Reg. 851, s. 45.

46. Machinery, equipment or material that may tip or fall and endanger any worker shall be secured against tipping or falling. R.R.O. 1990, Reg. 851, s. 46.

47. Cylindrical objects stored on their side shall be piled symmetrically with each unit in the bottom row chocked or wedged to prevent motion. R.R.O. 1990, Reg. 851, s. 47.

48. Barrels, drums or kegs that are piled on their ends shall have two parallel planks placed on top of each row before another row is added. R.R.O. 1990, Reg. 851, s. 48.

49. A storage cylinder for compressed gas shall,

- (a) have a valve connection that prevents an inadvertent connection which would result in a hazardous mixture of gases;
- (b) be secured in position during transportation, storage or use;

- (c) have the valve protection cap in position when the cylinder is not in use;
- (d) when containing acetylene, be in an upright position; and
- (e) be protected from physical damage. R.R.O. 1990, Reg. 851, s. 49.

50. A silo, bin, hopper, structure, container or thing that is not a confined space as defined in Ontario Regulation 632/05 (Confined Spaces) made under the Act and that is used for storing or containing bulk material may be entered only where,

- (a) the supply of material thereto is stopped and precautions are taken that will prevent any further supply;
- (b) the worker entering is wearing a safety harness or other similar equipment attached to a rope or lifeline such that the worker shall not be endangered by any collapse or shifting of material in the silo, bin, hopper, structure, container or thing; and
- (c) at least one other worker equipped with a suitable alarm and capable of rendering any necessary assistance is keeping watch nearby. R.R.O. 1990, Reg. 851, s. 50; O. Reg. 629/05, s. 3; O. Reg. 98/11, s. 1.

51. (1) A lifting device shall,

- (a) be so constructed, of such strength and be equipped with suitable ropes, chains, slings and other fittings so as to adequately ensure the safety of all workers;
- (b) be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated,
 - (i) prior to being used for the first time, and
 - (ii) thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year,
 and a permanent record shall be kept, signed by the competent person doing the examination;
- (c) be plainly marked with sufficient information so as to enable the operator of the device to determine the maximum rated load that the device is capable of lifting under any operating condition;
- (d) have a cab, screen, canopy guard or other adequate protection for the operator where the operator may be exposed to the hazard of falling material; and
- (e) when it is a pneumatic or hydraulic hoist, have controls that automatically return to their neutral position when released. R.R.O. 1990, Reg. 851, s. 51 (1); O. Reg. 420/10, s. 8 (1).

(2) A lifting device shall be operated,

- (a) only by,
 - (i) a competent person, or
 - (ii) a worker being instructed who is accompanied by a competent person; and
- (b) in such a way that,
 - (i) no part of the load passes over any worker,
 - (ii) where a worker may be endangered by the rotation or uncontrolled motion of a load, one or more guide ropes is used to prevent rotation or other uncontrolled motion, and
 - (iii) subject to subsection (3), when its load is in a raised position the controls are attended by an operator. R.R.O. 1990, Reg. 851, s. 51 (2).

(3) Subclause (2) (b) (iii) does not apply to,

- (a) a hydraulic hoist that supports the load from below and is fixed in one location; and
- (b) an assembly line hoist temporarily unattended during a stoppage of the assembly line. R.R.O. 1990, Reg. 851, s. 51 (3).

(4) Hoisting controls operated from other than a cab or cage shall,

- (a) be located so that they can be operated at a safe distance from a load being lifted; and
- (b) automatically return to their neutral position when released. R.R.O. 1990, Reg. 851, s. 51 (4).

(5) Where a lifting device is equipped with one or more limit switches,

- (a) each limit switch shall automatically cut off the power and apply the brake when the limit is reached; and
- (b) no limit switch shall be used as an operating control unless,
 - (i) the limit switch is designed for such use, and
 - (ii) the lifting device has a second limit switch in addition to the control limit switch. O. Reg. 420/10, s. 8 (2).

- 52.** A crane, lift truck or similar equipment shall be used to support, raise or lower a worker only when,
- (a) the worker is on a platform,
 - (i) equipped with adequate safety devices that will automatically prevent the platform and load from falling if the platform's normal support fails,
 - (ii) suspended from a boom that does not move, and the person is attached to a separate lifeline suspended from the boom or a fixed support capable of supporting at least four times the weight of the worker, or
 - (iii) attached to a mast or boom which,
 - (A) is hydraulically or pneumatically operated, and
 - (B) is equipped with a safety device that will prevent free fall of the platform in the event of a pressure line failure;
 - (b) where the equipment is not designed for the specific purpose of hoisting personnel, the load applied to the crane, lift truck or similar equipment is less than one half the maximum rated load;
 - (c) the platform has a sign indicating the load that may be applied to the crane, lift truck or similar equipment under clause (b);
 - (d) where controls are provided at more than one location,
 - (i) each control station is provided with means whereby the operator can shut off power to the equipment, and
 - (ii) interlocks have been provided so that only one station can be operative at any time; and
 - (e) except when the controls are operated from the platform, the controls are attended and operated by another worker. R.R.O. 1990, Reg. 851, s. 52; O. Reg. 420/10, s. 9.
- 53.** Where a travelling crane is operated on a crane runway, there shall be,
- (a) rail stops or bumpers extending at least as high as the centre of the wheels at both ends of the crane runway; and
 - (b) where applicable, similar rail stops at the ends of the crane bridge. R.R.O. 1990, Reg. 851, s. 53.
- 54.** (1) Mobile equipment shall,
- (a) when lighting conditions are such that its operation may be hazardous, have head lights and tail lights that provide adequate illumination;
 - (b) when exposed to the hazard of falling material, have a screen or canopy guard adequate to protect the operator;
 - (c) be used to transport a person, other than the operator, only when that worker is seated in a permanently installed seat; and
 - (d) subject to subsection (2), be operated only by a competent person.
- (2) Clause (1) (d) does not apply to mobile equipment operated by a worker while the worker is being instructed and accompanied by a competent person. R.R.O. 1990, Reg. 851, s. 54.
- 55.** A vehicle used to transport structural steel, logs or similar loads shall have a bulkhead between the operator's cab and the load that is reasonably capable of resisting any impact caused by the shifting of the load under emergency stop conditions. R.R.O. 1990, Reg. 851, s. 55.
- 56.** Where the operator of a vehicle, mobile equipment, crane or similar material handling equipment does not have a full view of the intended path of travel of the vehicle, mobile equipment, crane or similar material handling equipment or its load, the vehicle, mobile equipment, crane or similar material handling equipment shall only be operated as directed by a signaller who is a competent person and who is stationed,
- (a) in full view of the operator;
 - (b) with a full view of the intended path of travel of the vehicle, mobile equipment, crane or similar material handling equipment and its load; and
 - (c) clear of the intended path of travel of the vehicle, mobile equipment, crane or similar material handling equipment and its load. R.R.O. 1990, Reg. 851, s. 56.
- 57.** A vehicle left unattended shall be immobilized and secured against accidental movement. R.R.O. 1990, Reg. 851, s. 57.
- 58.** Powered equipment shall not be left unattended unless forks, buckets, blades and similar parts are in the lowered position or solidly supported. R.R.O. 1990, Reg. 851, s. 58.
- 59.** Except for the purpose of a test of the material handling equipment, no material handling equipment shall be loaded in excess of its maximum rated load. R.R.O. 1990, Reg. 851, s. 59.

60. (1) Except as prescribed by section 42.2, where a vehicle, crane or similar equipment is operated near a live power line carrying electricity at more than 750 volts, every part of the equipment shall be kept at least the minimum distance from the live power line set out in Column 2 of the Table for the particular voltage set out opposite thereto in Column 1 of the Table:

TABLE

Minimum distance from live power lines for electricity	
Column 1	Column 2
Voltage of live power line	Minimum Distance
750 to 150,000 volts	3 metres
150,001 to 250,000 volts	4.5 metres
250,001 volts and over	6 metres

R.R.O. 1990, Reg. 851, s. 60 (1); O. Reg. 630/94, s. 3 (1).

(2) Subject to section 42.2, where a vehicle, crane or similar equipment is operated near a live power line, and it is possible for any part of the vehicle, crane or similar equipment or its load to make contact with the live power line,

- (a) a worker shall be stationed within the view of the operator to warn the operator when any part of the equipment is approaching the minimum distance from the live power line; and
- (b) clearance shall be allowed for any change in boom angle and for any swing of the hoisting cable and load. R.R.O. 1990, Reg. 851, s. 60 (2); O. Reg. 630/94, s. 3 (2).

61. Gasoline engines on mobile or portable equipment shall be refuelled,

- (a) outdoors;
- (b) with the engine on the equipment stopped;
- (c) with no source of ignition, within three metres of the dispensing point; and
- (d) with an allowance made for expansion of the fuel should the equipment be exposed to a higher ambient temperature. R.R.O. 1990, Reg. 851, s. 61.

62. (1) Subject to subsection (2), a piping system containing a substance which, because of its toxicity, temperature, pressure, flammability or other property, is hazardous, shall have its contents and direction of flow positively identified,

- (a) at valves and fittings;
- (b) where a pipe passes through a wall or floor; and
- (c) where circumstances may make such contents or direction of flow doubtful. R.R.O. 1990, Reg. 851, s. 62 (1); O. Reg. 420/10, s. 10.

(2) Subsection (1) does not apply to a piping system in a petro-chemical plant where processing and maintenance are carried out by a competent person under controlled conditions so as to provide for the protection of all workers. R.R.O. 1990, Reg. 851, s. 62 (2).

63. A process that is likely to produce a gas, vapour, dust or fume, to such an extent as to be capable of forming an explosive mixture with air shall be carried out in an area which has provision for safe disposal by burning under controlled conditions or in an area which,

- (a) is isolated from other operations;
- (b) has a system of ventilation adequate to ensure that the gas, vapour, dust or fume does not reach a hazardous concentration;
- (c) has no potential sources of ignition;
- (d) has provision for explosion venting; and
- (e) has, where applicable, baffles, chokes or dampers to reduce the effects of any explosion. R.R.O. 1990, Reg. 851, s. 63.

64. Where the hazard of a dust explosion may be created by the entry of foreign particles into equipment, the equipment shall have separators which prevent such entry. R.R.O. 1990, Reg. 851, s. 64.

65. (1) Subject to subsection (2), a collector that collects aluminum, magnesium or other fine dust of an easily ignitable nature shall be located,

- (a) outdoors; or
- (b) in a room used solely for the housing of dust-collecting equipment which is,
 - (i) separated from the rest of the building by a dust-tight partition having a minimum fire-resistance rating of one hour, and

(ii) constructed to provide explosion venting to the outdoors.

(2) Subsection (1) does not apply to a collector,

(a) that uses an inert liquid as a medium to collect dust;

(b) that is used for a wood-working operation other than wood flour manufacturing and having less than 0.47 cubic metres per second capacity;

(c) that will safely contain explosions; or

(d) that will resist explosions and is equipped with effective explosion venting to the outdoors. R.R.O. 1990, Reg. 851, s. 65.

66. A compressed air or other compressed gas blowing device shall not be used for blowing dust or other substances,

(a) from clothing worn by a worker except where the device limits increase in pressure when the nozzle is blocked; or

(b) in such a manner as to endanger the safety of any worker. R.R.O. 1990, Reg. 851, s. 66.

67.-71. REVOKED: O. Reg. 629/05, s. 4.

MAINTENANCE AND REPAIRS

72. (1) Where a structure is damaged to the extent that a collapse of the structure or any part of the structure is likely to occur and cause injury to a worker,

(a) the structure shall be braced and shored to prevent the collapse of the structure; or

(b) effective safeguards shall be provided to prevent access to the area. R.R.O. 1990, Reg. 851, s. 72 (1).

(2) The bracing and shoring or other safeguards prescribed by subsection (1) shall be installed progressively to ensure that a worker installing the bracing and shoring or other safeguards is not in danger. R.R.O. 1990, Reg. 851, s. 72 (2).

73. A portable ladder shall,

(a) be free from broken or loose members or other faults;

(b) have non-slip feet;

(c) be placed on a firm footing;

(d) where it,

(i) exceeds six metres in length and is not securely fastened, or

(ii) is likely to be endangered by traffic,

be held in place by one or more workers while being used; and

(e) when not securely fastened, be inclined so that the horizontal distance from the top support to the foot of the ladder is not less than 1/4 and not more than 1/3 of the length of the ladder. R.R.O. 1990, Reg. 851, s. 73.

74. Machinery, equipment or material that is temporarily elevated and under which a worker may pass or work shall be securely and solidly blocked to prevent the machinery, equipment or material from falling or moving. R.R.O. 1990, Reg. 851, s. 74.

75. A part of a machine, transmission machinery, device or thing shall be cleaned, oiled, adjusted, repaired or have maintenance work performed on it only when,

(a) motion that may endanger a worker has stopped; and

(b) any part that has been stopped and that may subsequently move and endanger a worker has been blocked to prevent its movement. R.R.O. 1990, Reg. 851, s. 75.

76. Where the starting of a machine, transmission machinery, device or thing may endanger the safety of a worker,

(a) control switches or other control mechanisms shall be locked out; and

(b) other effective precautions necessary to prevent any starting shall be taken. R.R.O. 1990, Reg. 851, s. 76; O. Reg. 230/95, s. 1.

77. Safety chains, cages or other protection against blown-off side or lock rings shall be used when inflating a tire mounted on a rim. R.R.O. 1990, Reg. 851, s. 77.

78. (1) Subject to subsection (2), where repairs or alterations are to be made on a drum, tank, pipeline or other container, the drum, tank, pipeline or other container shall,

(a) have internal pressures adjusted to atmospheric pressure before any fastening is removed;

(b) be drained and cleaned or otherwise rendered free from any explosive, flammable or harmful substance; and

- (c) not be refilled while there is any risk of vaporising or igniting the substance that is being placed in the drum, tank, pipeline or other container. R.R.O. 1990, Reg. 851, s. 78 (1); O. Reg. 420/10, s. 11.
- (2) Clauses (1) (a) and (b) do not apply to a pipeline where hot-tapping and boxing-in are carried out by a competent person under controlled conditions so as to provide for the protection of all workers. R.R.O. 1990, Reg. 851, s. 78 (2).

PROTECTIVE EQUIPMENT

79. A worker required to wear or use any protective clothing, equipment or device shall be instructed and trained in its care and use before wearing or using the protective clothing, equipment or device. R.R.O. 1990, Reg. 851, s. 79; O. Reg. 420/10, s. 12.

80. A worker exposed to the hazard of head injury shall wear head protection appropriate in the circumstances. R.R.O. 1990, Reg. 851, s. 80.

81. A worker exposed to the hazard of eye injury shall wear eye protection appropriate in the circumstances. R.R.O. 1990, Reg. 851, s. 81; O. Reg. 420/10, s. 13.

82. A worker exposed to the hazard of foot injury shall wear foot protection appropriate in the circumstances. R.R.O. 1990, Reg. 851, s. 82.

83. (1) Long hair shall be suitably confined to prevent entanglement with any rotating shaft, spindle, gear, belt or other source of entanglement.

(2) Jewellery or clothing that is loose or dangling or rings shall not be worn near any rotating shaft, spindle, gear, belt or other source of entanglement. R.R.O. 1990, Reg. 851, s. 83.

84. A worker exposed to the hazard of injury from contact of the worker's skin with,

- (a) a noxious gas, liquid, fume or dust;
- (b) a sharp or jagged object which may puncture, cut or abrade the worker's skin;
- (c) a hot object, hot liquid or molten metal; or
- (d) radiant heat,

shall be protected by,

- (e) wearing apparel sufficient to protect the worker from injury; or
- (f) a shield, screen or similar barrier,

appropriate in the circumstances. R.R.O. 1990, Reg. 851, s. 84.

85. Where a worker is exposed to the hazard of falling and the surface to which he or she might fall is more than three metres below the position where he or she is situated,

- (a) the worker shall wear a serviceable safety belt or harness and lifeline that is adequately secured to a fixed support and so arranged that the worker cannot fall freely for a vertical distance of more than 1.5 metres; and
- (b) the fall arrest system described in clause (a) shall,
 - (i) have sufficient capacity to absorb twice the energy and twice the load that under the circumstances of its use may be transmitted to it, and
 - (ii) be equipped with a shock absorber or other devices to limit the maximum arresting force to 8.0 kilonewtons to the worker. R.R.O. 1990, Reg. 851, s. 85; O. Reg. 420/10, s. 14.

86. Where a worker is exposed to the hazard of falling into liquid that is of sufficient depth for a life jacket to be effective as protection from the risk of drowning, there shall be an alarm system and rescue equipment, appropriate in the circumstances, to ensure the worker's rescue from the liquid and,

- (a) the worker shall wear a life jacket; or
- (b) the employer shall develop written measures and procedures to prevent the worker from drowning and shall implement them. O. Reg. 284/99, s. 1.

MOLTEN MATERIAL

87. Sections 87.1 to 87.6 apply to foundries. O. Reg. 230/95, s. 2.

87.1 An employer who is required to develop and implement measures and procedures under sections 87.2 to 87.6 shall consult with the committee or health and safety representative, if any, in the development of the measures and procedures. O. Reg. 230/95, s. 2.

87.2 (1) Every employer shall develop and implement measures and procedures to prevent molten material from coming into contact with damp, rusty or cold surfaces, moisture or water, or other substances, if the contact might endanger the health or safety of workers.

- (2) A worker shall work in compliance with the measures and procedures developed under subsection (1).
- (3) The employer shall ensure that a device used to contain molten material is,
 - (a) examined immediately before each use; and
 - (b) not used if found to be defective or contaminated by a substance that, on contact with molten material, might endanger the health or safety of workers. O. Reg. 230/95, s. 2.

87.3 (1) In this section,

“spillage” refers to the spillage of molten material that could endanger the health or safety of workers. O. Reg. 230/95, s. 2.

(2) The employer shall use engineering controls, to the fullest extent that is reasonably possible in the circumstances, to prevent spillage. O. Reg. 230/95, s. 2.

(3) If spillage cannot be prevented by the use of engineering controls alone, the employer shall also develop and implement other measures and procedures to be used in combination with the engineering controls to prevent spillage. O. Reg. 230/95, s. 2.

(4) If the use of engineering controls is not reasonably possible in the circumstances, the employer shall develop and implement other measures and procedures to prevent spillage. O. Reg. 230/95, s. 2.

(5) The measures and procedures referred to in subsections (3) and (4) may include the use of personal protective equipment and the exclusion of workers from locations where they might be exposed to spillage. O. Reg. 230/95, s. 2.

87.4 The employer shall provide adequate means of egress from all locations where workers may be exposed to molten material. O. Reg. 230/95, s. 2.

87.5 (1) Subsections (2) to (4) apply to a location if the following conditions are met:

- 1. The location is a runout, pouring or moulding pit or other working space that is,
 - i. more than 60 centimetres below the adjacent floor level, or
 - ii. surrounded by a wall that is more than 60 centimetres high and that a person must pass over to leave the working space.
- 2. The location was constructed or altered after May 1, 1995.
- 3. Workers may be exposed to molten material at the location. O. Reg. 230/95, s. 2.

(2) Egress shall be provided by means of doorways, ramps or stairs of non-combustible material. O. Reg. 230/95, s. 2.

(3) Egress ramps and stairs shall be made of slip-resistant material. O. Reg. 230/95, s. 2.

(4) If the location is more than 15 square metres in area, or if any point within the location is more than 5 metres from an egress doorway, ramp or stair,

- (a) at least two doorways, ramps or stairs shall be provided, situated at a distance from each other that is at least three-quarters of the greatest diagonal dimension of the location, measured on the horizontal plane; and
- (b) a doorway, ramp or stair shall be provided within 25 metres of any point within the location. O. Reg. 230/95, s. 2.

87.6 The employer shall develop and implement measures and procedures for communicating to workers the existence of emergency situations relating to molten material. O. Reg. 230/95, s. 2.

88. (1) A clear space adequate for safe operating and maintenance purposes shall be provided between the outer shell of any cupola or other melting unit and any wall, structure, equipment or operation. R.R.O. 1990, Reg. 851, s. 88 (1).

(2) Subject to subsection (5), the width of any passageway or aisle adjacent to a melting unit shall not be less than 1.2 metres. R.R.O. 1990, Reg. 851, s. 88 (2).

(3) The firing portion and fuel supply controls of each melting unit shall be accessible from an aisle or be in a location remote from a melting unit. R.R.O. 1990, Reg. 851, s. 88 (3).

(4) Subject to subsection (5), the dimensions of the working space at any melting unit shall not be less than 1.8 metres measured horizontally from the furnace shell or pouring spout or such additional clearance as is required for safe working. R.R.O. 1990, Reg. 851, s. 88 (4).

(5) Subsections (2) and (4) do not apply to a melting unit installed before the 31st day of July, 1964. R.R.O. 1990, Reg. 851, s. 88 (5).

89. Permanent gangways shall be clearly marked. R.R.O. 1990, Reg. 851, s. 89.

90. (1) Subject to subsections (2) and (3), where molten metal is conveyed, the minimum width of a gangway for one-way traffic shall be as specified in the following Table:

TABLE

Type of Metal Container	Number of Workers Conveying Metal	Minimum Width
Hand shank ladles and crucibles	2 or less	90 centimetres
Hand shank ladles and crucibles	More than 2	120 centimetres
Ladle or crucible on truck, buggy or overhead track		60 centimetres wider than greatest width of ladle, crucible, truck, buggy or container support

R.R.O. 1990, Reg. 851, s. 90 (1).

(2) Where a gangway is used for traffic in both directions but molten metal is conveyed in one direction only, the width required by subsection (1) shall be increased by at least ninety centimetres. R.R.O. 1990, Reg. 851, s. 90 (2).

(3) Where a gangway is used for carrying molten metal in both directions, the width required by subsection (1) shall be doubled. R.R.O. 1990, Reg. 851, s. 90 (3).

(4) Where a ladle is carried by an overhead crane,

(a) adequate warning shall be given before the ladle is moved; and

(b) the danger area over which it is transported shall be clear of any worker. R.R.O. 1990, Reg. 851, s. 90 (4).

91. Where a hand shank ladle or crucible is used to pour metal, the minimum width of a pouring aisle shall be as specified in the following Table:

TABLE

Height of Mould Above Aisle Level	Number of Workers Allocated to the Pouring Operation	Minimum Width of a Pouring Aisle
Less than 50 centimetres	Not more than 2	40 centimetres
50 centimetres or greater	Not more than 2	60 centimetres
Any height	More than 2	90 centimetres

R.R.O. 1990, Reg. 851, s. 91; O. Reg. 420/10, s. 15.

92. Where molten metal is poured from a crane, trolley or truck ladle, the minimum width of a pouring aisle shall not be less than thirty centimetres greater than the greatest width of the ladle equipment, except where a bottom-pour ladle is used, in which case the aisle width shall be ninety centimetres or more. R.R.O. 1990, Reg. 851, s. 92.

93. Where a worker is engaged in the handling of molten metal, gaiter-type boots shall be worn together with leggings or other protective clothing such that the tops of the boots are overlapped to protect the worker from injury due to molten metal. R.R.O. 1990, Reg. 851, s. 93.

94. A tilting ladle for molten metal shall be secured against accidental overturning. R.R.O. 1990, Reg. 851, s. 94.

95. A cupola shall have,

(a) legs and supports protected from damage by molten metal;

(b) doors on the top hinged to act as explosion vents to the outdoors when equipped with a closed top;

(c) a positive means of preventing the accumulation of combustible gases in the air supply system when the air supply fails; and

(d) a continuous open flame or other means of ignition maintained above the charging level of the cupola while the cupola is in operation and until all combustible material in the cupola is consumed. R.R.O. 1990, Reg. 851, s. 95.

96. (1) Subject to subsection (2), the bottom of a cupola shall be supported by one or more adequate metal props with metal bases and wedges supported on concrete or other solid footing. R.R.O. 1990, Reg. 851, s. 96 (1).

(2) The bottom of a cupola shall be dropped only,

(a) after a visual and audible warning signal has been given for at least three minutes; and

- (b) by having the prop or props removed by a winch or similar device operated from outside a wall or shield at the cupola or from another safe location. R.R.O. 1990, Reg. 851, s. 96 (2).
- (3) As soon as is practicable after a cupola is emptied, coke slag and unmelted metal from the dropping of the cupola bottom shall be removed by a mechanical rake or other mechanical means. R.R.O. 1990, Reg. 851, s. 96 (3).
- 97.** (1) Subject to subsection (2), material to be charged into molten metal shall be free from ice or moisture. R.R.O. 1990, Reg. 851, s. 97 (1).
- (2) Subsection (1) does not apply where precautions have been taken to ensure that any resultant reaction will not endanger any worker. R.R.O. 1990, Reg. 851, s. 97 (2).
- 98.** A completely enclosed vessel shall be broken open prior to its being charged into a furnace. R.R.O. 1990, Reg. 851, s. 98.
- 99.** Where metal castings or scrap are broken by means of a dropping device, or similar device, a permanent shield of wood planking at least thirty-eight millimetres thick shall be provided to protect workers from flying metal fragments. R.R.O. 1990, Reg. 851, s. 99.
- 100.** A container used for holding or transporting molten metal shall be dry before use. R.R.O. 1990, Reg. 851, s. 100.
- 101.** The floor and any water system immediately surrounding a melting unit shall be so constructed as to prevent the accumulation of moisture under or near the melting unit. R.R.O. 1990, Reg. 851, s. 101.
- 102.** Where molten metal is handled on a gallery, mezzanine or other area having any working space below it, the gallery, mezzanine or area shall have a solid floor that will prevent molten metal from leaking or burning through it and the gallery, mezzanine or other area shall have a solid barrier, of not less than 1.05 metres in height, on all exposed sides to prevent metal spillage from the gallery, mezzanine or other area. R.R.O. 1990, Reg. 851, s. 102.

LOGGING

- 103.** In this section and in sections 104 to 119,
- “bucking” means the act of sawing a log or a tree that has been felled into smaller pieces; (“tronçonnage”)
- “chicot” means,
- (a) a dead tree, or
 - (b) a dead limb of a tree that may endanger a worker; (“chicot”)
- “felling area” means an area where trees are being felled and into which they might fall; (“parterre de coupe”)
- “hang up” means a tree that has not fallen to the ground after being,
- (a) partly or wholly separated from its stump, or
 - (b) displaced from its natural position; (“encroué”)
- “haul road” means a road, other than a highway as defined in the *Highway Traffic Act*, on which vehicles used to haul logs are operated; (“chemin d’exploitation”)
- “landing area” means a cleared area where trees or logs are stored, measured, processed, unloaded or loaded and includes a log dump; (“dépôt transitoire”)
- “limbing” means the act of removing limbs from a tree before or after felling; (“ébranchage”)
- “logger” means a worker who engages in logging and includes the employer and any person under the control of the employer; (“travailleur forestier”)
- “skidding” means the operation of moving logs or trees by pulling across the terrain; (“débusquage”)
- “snag” means any material or object that may interfere with the safe movement of a tree or log or that may endanger a person or any equipment; (“obstacle”)
- “spring pole” means a section of tree, or bush which is, by virtue of its arrangement in relation to other materials, under tension; (“perche sous tension”)
- “stake” means a wooden or metal post used to support and prevent the lateral movement of logs; (“ridelle”)
- “tree” means a tree that is standing or is down and from which the limbs have not been removed. (“arbre”) R.R.O. 1990, Reg. 851, s. 103; O. Reg. 630/94, s. 4.
- 104.** (1) Sections 105 to 106.2 apply to employers who undertake logging operations. O. Reg. 488/01, s. 1.
- (2) In sections 105 to 106.2,
- “registered” means registered with the Ministry of Training, Colleges and Universities in order to complete a training program referred to in subsection 105 (1). O. Reg. 488/01, s. 1.

105. (1) Every employer shall establish and maintain the following training programs, approved by the Ministry of Training, Colleges and Universities:

1. For cutters and skidder operators,
 - i. Cutter-Skidder Operator (Program # P750000),
 - ii. Cutter (Program # P750010), and
 - iii. Skidder-Operator (Program # P750020).
2. For mechanical harvesting equipment operators, Mechanical Harvesting Equipment Operator — Common Core (Program # P750025) and,
 - i. Feller Buncher Operator (Program # P750035),
 - ii. Cut-to-Length Processor Operator (Program # P750045),
 - iii. Grapple Skidder Operator (Program # P750055),
 - iv. Forwarder/Transporter Operator (Program # P750065),
 - v. Delimber Operator (Program # P750075),
 - vi. Slasher Operator (Program # P750085),
 - vii. Chipper Operator (Program # P750095). O. Reg. 488/01, s. 1.

(2) A document issued by the Ministry of Training, Colleges and Universities, showing that a worker is registered for a training program referred to in subsection (1) or has successfully completed it, is conclusive proof, for the purposes of sections 106, 106.1 and 106.2, of the worker being registered for the program or of his or her successful completion of the program, as the case may be. O. Reg. 488/01, s. 1.

(3) In accordance with the *Agreement on Internal Trade, 1995* and the *Protocols of Amendment*, a worker shall be deemed to hold a document showing successful completion referred to in subsection (2) if he or she has successfully completed equivalent training in another province or territory of Canada, as determined by the Director. O. Reg. 488/01, s. 1.

106. (1) The employer shall ensure that,

- (a) every cutter has successfully completed Cutter-Skidder Operator (Program # P750000) or Cutter (Program # P750010); and
- (b) every skidder operator has successfully completed Cutter-Skidder Operator (Program # P750000) or Skidder Operator (Program # P750020). O. Reg. 488/01, s. 1.

(2) The employer shall ensure that every cutter or skidder operator who has not successfully completed the training required under subsection (1) is registered for the appropriate program before performing work to which the program relates. O. Reg. 488/01, s. 1.

(3) Despite subsection (2), the employer shall ensure that every worker employed to work as a cutter or as a skidder operator on May 31, 2002 who has not successfully completed the training required under subsection (1) is registered for the appropriate program by June 3, 2002. O. Reg. 488/01, s. 1.

(4) The employer shall ensure that every worker who is registered under subsection (2) or (3) successfully completes the appropriate program within one year after being registered. O. Reg. 488/01, s. 1.

106.1 (1) The employer shall ensure that every worker who operates mechanical harvesting equipment has successfully completed the appropriate program referred to in subparagraphs 2 i to vii of subsection 105 (1). O. Reg. 488/01, s. 1.

(2) The employer shall ensure that every worker who operates mechanical harvesting equipment and has not successfully completed the training required under subsection (1) is registered for the appropriate program before performing work to which the program relates. O. Reg. 488/01, s. 1.

(3) Despite subsection (2), the employer shall ensure that every worker employed to operate mechanical harvesting equipment on May 31, 2002 who has not successfully completed the training required under subsection (1) is registered for the appropriate program by June 3, 2002. O. Reg. 488/01, s. 1.

(4) The employer shall ensure that every worker who is registered under subsection (2) or (3) successfully completes the appropriate program within one year after being registered. O. Reg. 488/01, s. 1.

106.2 (1) The employer shall ensure that every worker who supervises the operation of mechanical harvesting equipment has successfully completed Mechanical Harvesting Equipment Operator — Common Core (Program # P750025) before performing supervisory work relating to mechanical harvesting equipment. O. Reg. 488/01, s. 1.

(2) Despite subsection (1), the employer shall ensure that every worker employed to supervise the operation of mechanical harvesting equipment on May 31, 2002 who has not successfully completed the training required under subsection (1) successfully completes the program no later than December 31, 2002. O. Reg. 488/01, s. 1.

107. (1) Subject to subsection (2), a felling area shall be kept clear of workers. R.R.O. 1990, Reg. 851, s. 107 (1).

(2) Subsection (1) does not apply to,

(a) a worker authorized by the employer or supervisor to be in the felling area; or

(b) an inspector or worker accompanying an inspector in the course of their duties. R.R.O. 1990, Reg. 851, s. 107 (2).

108. A landing area shall have sufficient space cleared of any hazard to enable operations to be performed without endangering any worker. R.R.O. 1990, Reg. 851, s. 108.

109. A tree shall,

(a) be felled only,

(i) after all workers other than the logger felling the tree are cleared from the danger area,

(ii) after all snags have been cut and cleared away,

(iii) after all chicots and spring poles in the vicinity of the tree being felled have been lowered safely to the ground, and

(iv) in such a manner that the logger felling the tree is able to stand clear of the tree during its fall;

(b) be felled alongside or across a road only after the road has been blocked off or controlled by signaller; and

(c) be limbed, bucked or topped only when the logger is in a position so that the limb, log or top when severed cannot roll or drop on the logger. R.R.O. 1990, Reg. 851, s. 109.

110. When a hang up occurs,

(a) the logger shall keep the felling area clear of all workers; and

(b) the hang up shall,

(i) be felled forthwith by winching or pulling using a chain or cable from a safe distance or by other safe means,

(ii) not be climbed by any worker,

(iii) not be lowered by felling another tree into or onto it, and

(iv) not be removed by cutting the supporting tree. R.R.O. 1990, Reg. 851, s. 110.

111. A spring pole shall be severed or cut in a manner that will not endanger,

(a) the logger cutting or severing the spring pole; or

(b) any other worker. R.R.O. 1990, Reg. 851, s. 111.

112. Skidding shall be done,

(a) only when all loggers, other than the operator of the vehicle doing the skidding, are clear of the danger area; and

(b) so as not to raise the log being skidded to a height that might,

(i) cause the vehicle moving the log to upend or overturn, or

(ii) otherwise endanger the operator of the vehicle moving the log. R.R.O. 1990, Reg. 851, s. 112.

113. A log shall be loaded or unloaded only when,

(a) the requirements of section 56 are met; and

(b) the immediate area is clear of all workers except those engaged or assisting in the loading or unloading. R.R.O. 1990, Reg. 851, s. 113.

114. Except for a truck, a vehicle used in logging shall be equipped with a canopy that is,

(a) of sufficient strength and construction to protect any worker in the cab from any load likely to fall on the canopy; and

(b) installed by welding or bolting to the frame of the vehicle. R.R.O. 1990, Reg. 851, s. 114; O. Reg. 420/10, s. 16.

115. A truck used in logging shall have all rear windows guarded against penetration by any part of its load by a guard the strength of which is equivalent to the strength of the cab in which the window is located. R.R.O. 1990, Reg. 851, s. 115.

116. (1) A vehicle used for hauling logs shall,

(a) comply with section 55;

(b) be so loaded that no log extends,

(i) outside the stakes, or

(ii) farther than one-half its diameter above the stakes;

- (c) have its load secured with chains or cables so as to prevent the dislodging or other movement of the load or any part thereof;
 - (d) while any worker is in the cab, not be loaded or unloaded by a method in which a boom or part of the load is likely to pass over the cab;
 - (e) have the cab occupied by more than two workers only in an emergency;
 - (f) subject to clause (e), be operated only when all workers are clear of the vehicle and of its load; and
 - (g) when unable to be unloaded completely by mechanical means,
 - (i) be equipped with a tripping device for releasing the load that is so located that the worker operating the device is not endangered, and
 - (ii) have its load released only in compliance with subclause (i). R.R.O. 1990, Reg. 851, s. 116 (1); O. Reg. 420/10, s. 17.
- (2) Where a truck or trailer used for hauling logs is equipped with stakes and the stakes are trip stakes, such stakes shall only be located on the right-hand side or rear of the truck or trailer. R.R.O. 1990, Reg. 851, s. 116 (2).

117. A haul road shall,

- (a) be adequate to provide for the safe operation of vehicles;
- (b) have by-passes or turnout spaces at sufficiently frequent intervals to permit the safe passing of vehicles using the road; and
- (c) have signs warning of the approach to every,
 - (i) bridge,
 - (ii) crossroad,
 - (iii) blind curve,
 - (iv) steep grade, and
 - (v) railway crossing. R.R.O. 1990, Reg. 851, s. 117.

118. A bridge on a haul road shall,

- (a) be structurally adequate to support any load likely to be applied to it;
- (b) have curbs of a height of not less than fifteen centimetres on each side of the travelled portion of the bridge;
- (c) be of sufficient width between curbs to permit the passage of vehicles using the bridge; and
- (d) have markers which clearly indicate the width and ends of the bridge. R.R.O. 1990, Reg. 851, s. 118.

119. A vehicle used to transport loggers shall have the part of the vehicle in which the loggers are transported,

- (a) structurally adequate to support any load likely to be applied to it;
- (b) provided with an adequate number of seats securely attached to the vehicle so that all loggers being transported may be seated;
- (c) illuminated by an electrical lighting system;
- (d) equipped with a means of communication between the loggers and operator of the vehicle to enable the loggers to signal the operator to stop;
- (e) adequately ventilated to protect loggers from noxious fumes and gases;
- (f) free of tools, equipment or flammable liquid, which may be in racks outside the logger compartment;
- (g) when used in inclement weather,
 - (i) enclosed to provide protection from the weather, and
 - (ii) adequately heated to protect the passengers from undue discomfort due to cold; and
- (h) provided with emergency exits in accordance with the provisions of the *Highway Traffic Act*. R.R.O. 1990, Reg. 851, s. 119.

PART I.1 (ss. 119.1-119.20) REVOKED: O. Reg. 98/11, s. 2.

**PART II
BUILDINGS**

120. Except as prescribed in this Part, the Building Code applies to all industrial establishments with respect to,

- (a) access to an exit;
- (b) exit from a floor area;
- (c) structural adequacy;
- (d) washrooms;
- (e) service rooms;
- (f) the fire-resistance rating of a separation for an access to an exit, service room and a process room that contains a flammable substance;
- (g) the fire protection rating of a closure. R.R.O. 1990, Reg. 851, s. 120; O. Reg. 420/10, s. 23.

121. In this Part,

“hazardous room” means, with respect to an industrial establishment, a room containing a substance which, because of its chemical nature, the form in which the substance exists or its handling or processing, may explode or become easily ignited creating a condition of imminent hazard to a person’s health or safety. R.R.O. 1990, Reg. 851, s. 121.

122. (1) This section applies with respect to a hazardous room,

- (a) with an area greater than fifteen square metres; or
- (b) requiring a distance of travel greater than 4.5 metres from any point in the room to an egress doorway. R.R.O. 1990, Reg. 851, s. 122 (1).

(2) A hazardous room shall be located in a floor area that has at least two exits. R.R.O. 1990, Reg. 851, s. 122 (2).

(3) A hazardous room shall have at least two egress doorways that are at least three-quarters of the length of the diagonal distance of the room from each other. R.R.O. 1990, Reg. 851, s. 122 (3).

(4) One egress doorway must be located within a maximum distance of twenty-three metres from any point in a hazardous room. R.R.O. 1990, Reg. 851, s. 122 (4).

123. (1) The requirements of the Fire Code respecting fire extinguishers apply at industrial establishments. 1990, Reg. 851, s. 123 (1).

(2) The requirements of the Fire Code respecting keeping egress doorways, public corridors and exits free from obstruction apply at industrial establishments. 1990, Reg. 851, s. 123 (2).

(3) In this section,

“Fire Code” means Ontario Regulation 213/07 (Fire Code) made under the *Fire Protection and Prevention Act, 1997*. R.R.O. 1990, Reg. 851, s. 123 (3); O. Reg. 420/10, s. 24.

PART III INDUSTRIAL HYGIENE

124. Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided. R.R.O. 1990, Reg. 851, s. 124.

125. Where a worker is exposed to a potential hazard of injury to the skin due to contact with a substance, a quick-acting deluge shower shall be provided. R.R.O. 1990, Reg. 851, s. 125.

126. Removal of material shall be done in such a way as not to cause a hazard. R.R.O. 1990, Reg. 851, s. 126.

127. An industrial establishment shall be adequately ventilated by either natural or mechanical means such that the atmosphere does not endanger the health and safety of workers. R.R.O. 1990, Reg. 851, s. 127.

128. (1) Replacement air shall be provided to replace air exhausted. R.R.O. 1990, Reg. 851, s. 128 (1).

(2) The replacement air shall,

- (a) be heated, when necessary, to maintain at least the minimum temperature in the workplace specified in section 129;
- (b) be free from contamination with any hazardous dust, vapour, smoke, fume, mist or gas; and
- (c) enter in such a manner so as,
 - (i) to prevent blowing of settled dust into the workplace,
 - (ii) to prevent interference with any exhaust system, and
 - (iii) not to cause undue drafts. R.R.O. 1990, Reg. 851, s. 128 (2).

(3) The discharge of air from any exhaust system shall be in such a manner so as to prevent the return of contaminants to any workplace. R.R.O. 1990, Reg. 851, s. 128 (3).

129. (1) Subject to subsection (2), an enclosed workplace shall be at a temperature,

- (a) suitable for the type of work performed; and
 - (b) not less than 18° Celsius. R.R.O. 1990, Reg. 851, s. 129 (1).
- (2) Clause (1) (b) does not apply to a workplace,
- (a) that is normally unheated;
 - (b) where the necessity of opening doors makes the heating of the area to the temperature specified in clause (1) (b) impracticable;
 - (c) where perishable goods requiring lower temperatures are processed or stored;
 - (d) where radiant heating is such that a worker working in the area has the degree of comfort that would result were the area heated to the temperature specified in clause (1) (b);
 - (e) where the process or activity is such that the temperature specified in clause (1) (b) could cause discomfort; or
 - (f) during the first hour of the main operating shift where process heat provides a substantial portion of building heat. R.R.O. 1990, Reg. 851, s. 129 (2).

130. A worker who may be exposed to a biological, chemical or physical agent that may endanger the worker's safety or health shall be trained,

- (a) to use the precautions and procedures to be followed in the handling, use and storage of the agent;
- (b) in the proper use and care of required personal protective equipment; and
- (c) in the proper use of emergency measures and procedures. R.R.O. 1990, Reg. 851, s. 130.

131. No food, drink or tobacco shall be taken into, left or consumed in any room, area or place where any substance that is poisonous by ingestion is exposed. R.R.O. 1990, Reg. 851, s. 131.

132. (1) Subject to subsection (2), the regulations made under the Act respecting designated substances and an order by a Director under section 33 of the Act, potable drinking water shall be provided,

- (a) from,
 - (i) a fountain with an upward jet, or
 - (ii) a tap from a piped water supply or a covered vessel, together with a supply of single-use cups in a sanitary container located near the tap;
- (b) on every floor where work is regularly performed; and
- (c) within 100 metres of any area where work is regularly performed. R.R.O. 1990, Reg. 851, s. 132 (1); O. Reg. 565/06, s. 1; O. Reg. 420/10, s. 25.

(2) Subsection (1) does not apply to logging, except in logging camps. R.R.O. 1990, Reg. 851, s. 132 (2).

133. (1) Except for emergency facilities, hot and cold water shall be provided at each shower. R.R.O. 1990, Reg. 851, s. 133 (1).

- (2) Hot water required under subsection (1) shall not,
 - (a) be less than 30° Celsius;
 - (b) exceed 60° Celsius; or
 - (c) be directly mixed with steam. R.R.O. 1990, Reg. 851, s. 133 (2); O. Reg. 420/10, s. 26.

134. Where workers are exposed to a substance that,

- (a) is poisonous by ingestion; and
- (b) can contaminate the skin,

shower rooms and individual lockers for street and work clothes shall be provided. R.R.O. 1990, Reg. 851, s. 134.

135. Where ten or more workers are employed, a room or other space shall be provided,

- (a) affording reasonable privacy; and
- (b) equipped with one or more cots and chairs, unless such facilities are provided at a first-aid station. R.R.O. 1990, Reg. 851, s. 135.

136. A place suitable for eating purposes shall be provided where,

- (a) thirty-five or more workers are employed; or
- (b) there is any room, area or place in which there is exposure to a substance that is poisonous by ingestion. R.R.O. 1990, Reg. 851, s. 136.

137. Protective clothing or other safety device that has been worn next to the skin shall be cleaned and disinfected prior to being worn by another worker. R.R.O. 1990, Reg. 851, s. 137.

138. (1) Where a worker is likely to be exposed to an atmosphere at atmospheric pressure with an oxygen content of less than 18 per cent, the worker shall be protected by mechanical ventilation so that the worker's safety and health is not endangered. R.R.O. 1990, Reg. 851, s. 138 (1).

(2) Where the measures prescribed by subsection (1) are not practicable, the worker shall be protected by air supplied breathing equipment so that the worker's safety and health is not endangered. R.R.O. 1990, Reg. 851, s. 138 (2).

139. (1) In this section,

“dBA” means a measure of sound level in decibels using a reference sound pressure of 20 micropascals when measured on the A-weighting network of a sound level meter; (“dBA”)

“decibel” means a unit of measurement of sound pressure level that is equal to 20 times the logarithm to the base 10 of the ratio of the pressure of a sound, divided by the reference pressure of 20 micropascals; (“décibel”)

“equivalent sound exposure level” is the steady sound level in dBA which, if present in a workplace for eight hours in a day, would contain the same total energy as that generated by the actual and varying sound levels to which a worker is exposed in his or her total work day, determined in accordance with the formula set out in subsection (2). (“niveau d'exposition sonore équivalent”) O. Reg. 565/06, s. 2.

(2) The formula for determining the equivalent sound exposure level is as follows:

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$$L_{ex,8} = 10 \text{ Log}_{10} \left(\frac{\left[\sum_{i=1}^n (t_i \times 10^{0.1 \text{ SPL}_i}) \right]}{8} \right)$$

where,

$L_{ex,8}$ is the equivalent sound exposure level in 8 hours,

Σ is the sum of the values in the enclosed expression for all activities from $i = 1$ to $i = n$,

i is a discrete activity of a worker exposed to a sound level,

t_i is the duration in hours of i ,

SPL_i is the sound level of i in dBA,

n is the total number of discrete activities in the worker's total workday.

O. Reg. 565/06, s. 2; O. Reg. 420/10, s. 27.

(3) Every employer shall take all measures reasonably necessary in the circumstances to protect workers from exposure to hazardous sound levels. O. Reg. 565/06, s. 2.

(4) The protective measures shall include the provision and use of engineering controls, work practices and, subject to subsection (7), personal protective equipment. O. Reg. 565/06, s. 2.

(5) Any measurement of sound levels in the workplace that is done in order to determine what protective measures are appropriate shall be done without regard to any use of personal protective equipment. O. Reg. 565/06, s. 2.

(6) Without limiting the generality of subsections (3) and (4), every employer shall ensure that no worker is exposed to a sound level greater than an equivalent sound exposure level of 85 dBA, $L_{ex,8}$. O. Reg. 565/06, s. 2.

(7) Except in the circumstances set out in subsections (8) and (9), the employer shall protect workers from exposure to a sound level greater than the limit described in subsection (6) without requiring them to use and wear personal protective equipment. O. Reg. 565/06, s. 2.

(8) If this subsection applies, workers shall wear and use personal protective equipment appropriate in the circumstances to protect them from exposure to a sound level greater than the limit described in subsection (6). O. Reg. 565/06, s. 2.

(9) Subsection (8) applies if engineering controls are required by subsections (3) and (4) and,

(a) are not in existence or are not obtainable;

(b) are not reasonable or not practical to adopt, install or provide because of the duration or frequency of the exposures or because of the nature of the process, operation or work;

(c) are rendered ineffective because of a temporary breakdown of such controls; or

(d) are ineffective to prevent, control or limit exposure because of an emergency. O. Reg. 565/06, s. 2.

(10) A clearly visible warning sign shall be posted at every approach to an area in the workplace where the sound level, measured as described in subsection (5), regularly exceeds 85 dBA. O. Reg. 565/06, s. 2.

TABLE 1 REVOKED: O. Reg. 494/09, s. 3.

FORM 1 REVOKED: O. Reg. 420/10, s. 28.

FORM 2
NOTICE

Occupational Health and Safety Act

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TAKE NOTICE that this
(specify the "place", "matter"

.....
or "thing", as the case may be)

is a danger or hazard to the safety of workers employed in or having
access to these premises and the use thereof shall be discontinued

immediately until the inspector's order of
(date)

to
(name of employer or owner)

.....
(address of employer or owner)

has been complied with.

No person, except an inspector, shall remove this notice unless author-
ized by an inspector.

Dated the day of, 19.....

.....
(signature of inspector)

R.R.O. 1990, Reg. 851, Form 2.

Français

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