

THE WORKPLACE SAFETY AND HEALTH ACT
(C.C.S.M. c. W210)

Workplace Safety and Health Regulation

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PART 1

DEFINITIONS AND GENERAL MATTERS

Definitions

1.1 The following definitions apply in this regulation.

"3 decibel exchange rate" means that when the sound energy doubles, the decibel level increases by three. (« taux d'échange de 3 décibels »)

"abnormal audiogram" means an audiogram that indicates

- (a) the threshold in either ear is more than 25 dB at 500, 1000 and 2000 Hz;
- (b) the threshold in either ear is more than 60 dB at 3000, 4000 or 6000 Hz; or
- (c) there is one-sided hearing loss with the difference in hearing threshold level between the better and the poorer ear exceeding the average of 30 dB at 3000, 4000 and 6000 Hz. (« audiogramme anormal »)

"abnormal shift" means a threshold shift, in either ear, of 15 dB at two consecutive test frequencies from 1000 Hz up to and including 6000 Hz when compared to the baseline test. (« déplacement anormal »)

"ACGIH" means the American Conference of Governmental Industrial Hygienists. (« ACGIH »)

"Act" means *The Workplace Safety and Health Act*. (« Loi »)

"aerial device" means a vehicle-mounted or trailer-mounted telescoping or articulating device that is used to position a worker at an elevated worksite, and includes

- (a) a work basket or bucket;
- (b) an aerial ladder;
- (c) an extendable and articulating boom platform;
- (d) a vertical tower; and
- (e) any combination of the devices listed in clauses (a) to (d). (« engin élévateur »)

"airborne" means carried by, or forming part of, the air. (« aéroporté » ou « en suspension dans l'air »)

"ANSI" means the American National Standards Institute. (« ANSI »)

"arboriculture" means the pruning, repair, maintenance or removal of trees. (« arboriculture »)

"asbestos" means the fibrous form of crocidolite, amosite, chrysotile, anthophyllite, actinolite, tremolite or a mixture containing any of those minerals. (« amiante »)

"asbestos-containing material" means

- (a) a friable material containing 0.1% or greater asbestos; and

(b) a non-friable material containing 1.0% or greater asbestos. (« matériau contenant de l'amiante »)

"audiogram" means a written or printed record of the hearing level of a person expressed as a function of frequency. (« audiogramme »)

"audiologist" means a person who is registered as a speech and hearing therapist under *The Manitoba Speech and Hearing Association Act*, R.S.M. 1990, c. 101. (« audiologiste »)

"base plate" means a device used to distribute a vertical load over a large area of a sill. (« socle »)

"bearer" means a horizontal scaffold member on which the scaffold's work platform rests. (« traverse »)

"biological substance" means a substance containing living organisms or parts of living organisms in their natural or modified forms. (« substance biologique »)

"blast site" means the area that may be affected by a blast, and includes any area in which an unexploded charge is or may be located. (« lieu de dynamitage »)

"blaster" means a person who holds a valid blaster's certificate issued under Part 34 (Explosives). (« dynamiteur »)

"boatswain's chair" means a seat designed for one worker which is supported by slings or a frame and is attached to a single point of suspension. (« sellette »)

"boom" means the part of a structure that is attached to a crane or hoist superstructure and is used to support the upper end of the hoisting tackle. (« flèche »)

"bootleg" means the bottom remnant or an intact portion of a hole that has been charged and blasted, and that contains no visible explosives. (« culot »)

"borehole" means a hole or cavity created by manual or mechanical means for the insertion of explosives charges. (« trou de mine »)

"bulk shipment" means a shipment of a controlled product that is contained, without intermediate containment or intermediate packaging, in

(a) a vessel with a water capacity of more than 454 litres;

(b) a freight container, road vehicle, railway vehicle, or portable tank;

(c) the hold of a ship; or

(d) a pipeline. (« en vrac »)

"buoyant apparatus" mean an apparatus that

(a) is capable of supporting the weight of a worker in water;

(b) is constructed to remain stable when floating;

(c) has no projections that prevent it from sliding easily over the side of a boat or ship; and

(d) requires no adjustment before use. (« engin flottant »)

"CAN" means a standard approved by the Standards Council of Canada. (« CAN »)

"**CGSB**" means the Canadian General Standards Board. (« CGSB »)

"**charge**" means an explosive that has been prepared for detonation. (« charge »)

"**chemical substance**" means any natural or artificial substance, whether in the form of a solid, liquid, gas or vapour, other than a biological substance. (« substance chimique »)

"**close workplace**" means a workplace from which, under normal travel conditions and using the means of transportation used at the workplace in an emergency, an ill or injured worker can be transported to a medical facility in 30 minutes or less. (« lieu de travail rapproché »)

"**co-chairperson**" means the co-chairperson of a committee. (« coprésident »)

"**combustible liquid**" means a liquid that has a flashpoint at or above 37.8°C and below 93.3°C. (« liquide combustible »)

"**commission**" means the Hazardous Materials Information Review Commission established under the *Hazardous Materials Information Review Act* (Canada). (« Conseil »)

"**competent**" means possessing knowledge, experience and training to perform a specific duty. (« compétent »)

"**compressed air environment**" means an environment in which air has been mechanically compressed so as to raise the air pressure higher than atmospheric pressure. (« atmosphère d'air comprimé »)

"**confined space**" means an enclosed or partially enclosed space that

(a) except for the purpose of performing work, is not primarily designed or intended for human occupancy; and

(b) has restricted means of access or egress. (« espace clos »)

"**contaminated laundry**" means laundry that has been contaminated by waste. (« linge sale contaminé »)

"**controlled product**" means any product, material or substance specified by the regulations made under clause 15(1)(a) of the *Hazardous Products Act* (Canada) to be included in any of the classes listed in Schedule II of that Act. (« produit contrôlé »)

"**Controlled Products Regulations**" means the *Controlled Products Regulations* (Canada), SOR/88-66, made under the *Hazardous Products Act* (Canada). (« Règlement sur les produits contrôlés »)

"**crane**" means equipment that is designed to lift loads, lower loads, and move loads horizontally when they are lifted, and includes

(a) a mobile, tower, bridge, barge-mounted, overhead or rail-mounted crane, overhead travelling crane and gantry crane;

(b) a jib, wall and pillar crane, exceeding one tonne capacity; and

(c) a boom truck. (« grue »)

"**CSA**" means the Canadian Standards Association. (« CSA »)

"**dba**" means the sound level in decibels as measured using the "A"-weighting network and slow meter response on a sound level meter that meets the requirements for a Type 2 meter as specified by ANSI Standard ANSI S1.4-2003, *Specifications For Sound Level Meters*. (« dbA »)

"**decibel**" or "**dB**" 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 » ou « dB »)

"**deep foundation**" means a foundation unit that provides support for a building or structure by transferring loads either by end bearing to soil or rock at substantial depth below the building or structure, or by adhesion or friction or both, in the soil or rock in which it is placed, and includes a pile or caisson. (« fondation profonde »)

"**deep foundation excavation**" means an excavation for a deep foundation. (« excavation de fondation profonde »)

"**demolition site**" means the premises on which demolition work is carried out, and for certainty includes the building or structure being demolished. (« chantier de démolition »)

"**demolition work**" means the demolition of the whole or a part of a building or structure. (« travaux de démolition »)

"**derrick**" means a stationary or portable structure that is used to support the hoisting and lowering mechanism on a rig. (« tour de forage »)

"**designated material**" means a chemical or biological substance which meets the criteria as a carcinogen, mutagen, respiratory sensitizer, reproductive toxin, fetotoxin or teratogen under the *Controlled Products Regulations*. (« matière désignée »)

"**detonator**" means a device used to detonate a charge. (« détonateur »)

"**distant workplace**" means a workplace from which, under normal travel conditions and using the means of transportation used at the workplace in an emergency, an ill or injured worker can be transported to a medical facility in two hours or less. (« lieu de travail éloigné »)

"**drilling rig**" means the derrick and all equipment directly involved with drilling a well. (« appareil de forage »)

"**electrical worker**" means a person authorized to do electrical work or restricted electrical work under *The Electricians' Licence Act*. (« électricien »)

"**elevated work platform**" means

- (a) a self-elevating work platform; and
- (b) a suspended work platform;

and includes a work platform that is mounted to an aerial device or a forklift or is suspended from a crane. (« plateforme de travail élevée »)

"**emergency stop**" means the operation of a circuit that

- (a) overrides all other controls;
- (b) removes drive power;
- (c) causes all moving parts to stop; and

(d) removes power from other hazardous functions present in the safeguarded space. (« arrêt d'urgence »)

"**excavation**" means a dug out area of ground and includes a deep foundation excavation, trench, tunnel, and shaft. (« excavation »)

"**explosive**" means any substance that is made, manufactured or used to produce an explosion or detonation, and includes gunpowder and other propellant powders, blasting agents, slurries, water gels, dynamite, detonating cord, lead azide, detonators, ammunition and rockets. (« explosif »)

"**explosive-operated tool**" means a tool that uses an explosive charge to bring about its action. (« outil à cartouches explosives »)

"**fall arrest system**" means a fall protection system that is designed to stop a worker's fall before the worker hits the surface below. (« dispositif antichute »)

"**fall protection system**" means a fall protection system set out in section 14.6. (« dispositif de protection contre les chutes » ou « matériel de protection contre les chutes »)

"**falsework**" means the structural supports and bracing required to safely support temporary loads during construction, and includes the placement of concrete. (« ouvrage provisoire »)

"**firefighter**" means a worker who provides one or more of the following services at the site of an emergency:

- (a) fire suppression;
- (b) search and rescue;
- (c) emergency medical care;
- (d) hazardous materials response. (« pompier »)

"**firefighting vehicle**" means a specialized vehicle that carries an assortment of tools and equipment for use by firefighters when responding to an emergency. (« véhicule d'incendie »)

"**first aid services**" means the services of a first aider and the first aid equipment, facilities and supplies required under Part 5. (« services de premiers soins »)

"**first aid training provider**" means a person, society or organization that provides a training course in first aid or cardiopulmonary resuscitation, or both, that is acceptable to the director. (« fournisseur de cours de premiers soins »)

"**first aider**" means a worker who

- (a) has the qualifications of a first aider 1, 2 or 3, as set out in Schedule A of Part 5; or
- (b) has equivalent qualifications approved by the director under subsection 5.5(3). (« secouriste »)

"**flammable liquid**" means a liquid that has a flashpoint below 37.8°C and has a vapour pressure not exceeding 275.8 kilopascals at 37.8°C. (« liquide inflammable »)

"**flammable substance**" means

(a) a flammable or combustible solid, liquid or gas; or

(b) dust that is capable of creating an explosive atmosphere when suspended in air in concentrations within the explosive limit of the dust. (« substance inflammable »)

"flyform system" means a complete falsework structure, which is intended to be moved as a unit. (« coffrage mobile »)

"forestry" means the cutting and harvesting of trees, the transportation of logs for processing and includes site preparation for tree planting and seeding. (« foresterie »)

"fugitive emission" means a gas, liquid, solid, vapour, fume, mist, fog or dust containing a controlled product. (« émission fugitive »)

"full body harness" means a device consisting of connected straps designed to contain the torso and pelvic area of a worker with provision for attaching a lanyard, lifeline or other component. (« harnais de sécurité complet »)

"harassment" means any objectionable conduct, comment or display by a person that

(a) is directed at a worker in a workplace;

(b) is made on the basis of race, creed, religion, colour, sex, sexual orientation, gender-determined characteristics, political belief, political association or political activity, marital status, family status, source of income, disability, physical size or weight, age, nationality, ancestry or place of origin; and

(c) creates a risk to the health of the worker. (« harcèlement »)

"haul road" means a temporary road used to haul forest products from the location where the products were cut or harvested. (« chemin de débardage »)

"hazard information" means information on the proper and safe use, storage and handling of a controlled product and includes information relating to its toxicological properties. (« renseignements sur les dangers »)

"hazardous waste" means a controlled product that is intended solely for disposal or is sold for recycling or recovery. (« résidu dangereux »)

"health care facility" means

(a) a hospital, a personal care home, a psychiatric facility, a medical clinic, a medical laboratory, a community health centre and CancerCare Manitoba;

(b) a physician's office;

(c) an ambulance as defined in *The Emergency Medical Response and Stretcher Transportation Act*;

(d) a dentist's office;

(e) a veterinary office or clinic;

(f) a laundry facility that is located in, or that provides services to, a facility referred to in clause (a); and

(g) any other workplace where physical or mental health treatment or care is provided to a person, other than a place where first aid services are provided to employees in accordance

with Part 5 (First Aid). (« établissement de santé »)

"hoist" means equipment that is designed to lift and lower loads. (« appareil de levage »)

"hot work" means work that produces arcs, sparks, flames, heat or other sources of ignition. (« travail à chaud »)

"hours of darkness" means

(a) the period beginning 30 minutes after sunset and ending 30 minutes before sunrise; or

(b) any period when, because of insufficient light or unfavourable atmospheric conditions, persons or vehicles cannot be seen at a distance of 150 m. (« heures d'obscurité »)

"industrial audiometric technician" means a person who is licensed as an industrial audiometric technician under Part 12 (Hearing Conservation and Noise Control). (« technicien en audiométrie industrielle »)

"infectious material" means a biohazardous infectious material or organism under the *Controlled Products Regulations*. (« matière infectieuse »)

"isolated workplace" means a workplace

(a) that is normally accessible only by air; or

(b) from which, under normal travel conditions and using the means of transportation used at the workplace in an emergency, an ill or injured worker cannot be transported from the workplace to a medical facility within two hours or less. (« lieu de travail isolé »)

"lanyard" means a flexible line of webbing, synthetic fibre or wire rope that is used to secure a full body harness to a lifeline or anchor. (« cordon d'assujettissement »)

"ledger" means a horizontal scaffold member that rests on a vertical support. (« poutrelle horizontale »)

"Lex" means the level of a worker's total exposure to noise in dBA, averaged over the entire work day based on a 3 decibel exchange rate as measured by a noise dosimeter meeting the requirements of a Type 2 instrument, as specified by ANSI Standard S1.25-1991 (R2002), *Specification for Personal Noise Dosimeters*. (« Lex »)

"licensed ambulance service" means an ambulance service licensed under *The Emergency Medical Response and Stretcher Transportation Act*. (« service d'ambulance autorisé »)

"life jacket" means a life jacket that meets the requirements of CGSB Standard CAN/CGSB 65.7-M88, *Lifejackets, Inherently Buoyant Type*. (« gilet de sauvetage »)

"lifeline" means a flexible synthetic line or rope made of fibre, wire or webbing, rigged from one or more anchors to which a worker's lanyard or other part of a fall protection system is attached. (« corde d'assurance »)

"lockout" means the disconnection, blocking or bleeding of all sources of energy that may create a motion or action by any part of a machine and its auxiliary equipment. (« verrouillage »)

"lodged tree" means a tree that has not fallen to the ground after being partly or wholly separated from its stump or displaced from its natural position. (« arbre encroué »)

"low hazard work" means work of an administrative, clerical or professional nature that does not ordinarily require substantial physical exertion or exposure to a potentially hazardous condition

or substance. (« travaux comportant peu de risques »)

"manufacturer's specifications" means

- (a) the written specifications, instructions or recommendations provided by the manufacturer of equipment or supplies that describe how the equipment or supplies are to be constructed, erected, installed, assembled, examined, inspected, started, operated, used, handled, stored, stopped, calibrated, adjusted, maintained, repaired or dismantled; and
- (b) an instruction, maintenance and operating manual, including any diagrams, for the equipment or supplies. (« directives du fabricant »)

"material safety data sheet" means a document meeting the requirements of the *Controlled Products Regulations*. (« fiche signalétique »)

"medical facility" means

- (a) a hospital;
- (b) a medical clinic;
- (c) a physician's office; or
- (d) a nursing station operated and administered by the Government of Manitoba or Canada or both, or operated by a person or entity under an agreement with one or both governments. (« installation médicale »)

"misfire" means the remnant of a hole containing an explosive that has not been successfully detonated. (« raté »)

"musculoskeletal injury" means an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue, including a sprain, strain or inflammation that may occur to a worker in a workplace and that is caused or aggravated by any of the following:

- (a) a repetitive motion;
- (b) a forceful exertion;
- (c) vibration;
- (d) mechanical compression;
- (e) a sustained or awkward posture;
- (f) a limitation on motion or action;
- (g) any other factor that creates a risk of musculoskeletal injury. (« blessure musculosquelettique »)

"occupational exposure limit" means the limit of exposure of a worker to an airborne chemical or biological substance established under Part 36. (« seuil d'exposition professionnelle »)

"open excavation" means an excavation in which the width is greater than the depth. (« excavation à ciel ouvert »)

"patient" means a person receiving physical or mental treatment or care at a health care facility. (« patient »)

"personal flotation device" means a personal flotation device that meets the requirements of CGSB Standard CAN/CGSB 65.11-M88, *Personal Flotation Devices*. (« vêtement de flottaison individuel »)

"portable ladder" means a ladder that is not fixed in place, and includes a stepladder. (« échelle portative »)

"portable wood ladder" means a portable ladder constructed out of wood. (« échelle portative en bois »)

"powered mobile equipment" means a self-propelled machine or combination of machines, including a prime mover or a vehicle, used to

(a) manipulate or move material;

(b) move workers; or

(c) provide a powered aerial device for workers. (« équipement mobile à moteur »)

"precast concrete part" means a concrete element, including a tilt-up precast panel, that is cast in a location other than its final position in a structure. (« pièce en béton préfabriqué »)

"product identifier" means, with respect to a controlled product, the brand name, code name or code number specified by a supplier or the chemical name, common name, generic name or trade name. (« identificateur du produit »)

"professional engineer" has the same meaning as in *The Engineering and Geoscientific Professions Act*. (« ingénieur »)

"rated load" means the load that machinery or a piece of equipment is rated to bear in accordance with its design. (« charge nominale »)

"residential construction" means construction work where the construction materials, methods and procedures used are those used for single and multiple family dwelling construction projects and the dwelling is designed with an eave elevation of not more than 6 m. (« construction résidentielle »)

"restricted work envelope" means the portion of a work envelope to which a robot is restricted by devices that establish limits that cannot be exceeded if the robot's control fails. (« enveloppe de travail restreinte »)

"rig" includes a drilling rig and a well servicing rig. (« installations de forage »)

"rigging" means any combination of rope, wire rope, cable, chain, sling, sheave, hook, container and associated fittings and accessories used in a hoisting operation. (« câblage »)

"robot" means an automatically controlled, reprogrammable multi-purpose manipulator programmable in three or more axes, which may be either fixed in place or mobile for use in automation applications. (« robot »)

"robot system" includes a robot and all accessories required for the robot's operation, including end-effectors, pendants, devices, sensors, safeguards, power and control panels and communication interfaces to sequence and monitor the robot. (« système robotisé »)

"SAE" means the Society of Automotive Engineers. (« SAE »)

"**scaffold**" means a temporary work platform, including its supporting structure and all other components, used for supporting workers, materials and equipment, and, unless the context requires otherwise, includes the following types of scaffolds:

- (a) a bracket scaffold, being a platform that is supported by two or more triangular brackets projecting out from a building or structure to which the brackets are securely fastened;
- (b) a ladder-jack scaffold, being a platform that is supported by brackets attached to ladders;
- (c) a mobile scaffold, being a freestanding scaffold that is equipped with castors or wheels at the base of the scaffold;
- (d) an outrigger scaffold, being a platform that is supported by rigid members that are cantilevered out from the building or structure or from vertical supports;
- (e) a pump jack scaffold, being a scaffold consisting of vertical poles, platform planking and movable platform brackets that travel on the vertical poles;
- (f) a single-pole scaffold, being a work platform that is supported by bearers attached at the outer end to a single row of braced vertical supports and at the inner end to the building or structure;
- (g) a tubular frame scaffold, being a work platform that is supported by welded tubular frames, cross-braces and accessories. (« échafaud »)

"**SCBA**" means self-contained breathing apparatus. (« ARA »)

"**self-elevating work platform**" means a work platform that can be self-elevated, and includes a boom-type elevating work platform and one that rolls or is self-propelled. (« plateforme de travail auto-élevatrice »)

"**shaft**" means a vertical or inclined opening that leads to an underground work area and is excavated below ground level. (« puits d'accès »)

"**shoring**" means an assembly of structural members designed to prevent earth or material from falling, sliding or rolling into an excavation. (« étaieement »)

"**sill**" means a footing used to distribute the load from a vertical support or a base plate of a scaffold to the ground. (« sole »)

"**sound control measure**" means an administrative or engineering control introduced in the workplace to eliminate, control or reduce a worker's exposure to noise, including

- (a) the replacement, modification or elimination of noisy equipment;
- (b) the modification of a building or structure; and
- (c) the modification of any operation or work practice;

but does not include the use of any form of hearing protection worn by a worker. (« mesure de protection contre le bruit »)

"**strut**" means a horizontal cross-member of shoring that directly resists pressure. (« étrésillon »)

"**supplier label**" means a label provided by a supplier that discloses the information and displays the hazard symbols referred to in clause 13(b) of the *Hazardous Products Act* (Canada). (« étiquette du fournisseur »)

"supplier material safety data sheet" means a material safety data sheet provided by a supplier that discloses the information referred to in subclauses 13(a)(i) to (v) of the *Hazardous Products Act* (Canada). (« fiche signalétique du fournisseur »)

"support structure" means a structure or device designed to provide protection to workers in an excavation, tunnel or shaft from cave-ins, collapse, sliding or rolling materials, and includes shoring, bracing, piles, planking and trench cages. (« ouvrage de soutènement »)

"suspended work platform" includes a swing stage, powered platform, boatswain's chair, personnel basket or cage or similar work platform that is suspended by means of ropes or cables to reach an elevated worksite and is used for supporting workers, equipment and materials. (« plateforme de travail suspendue »)

"tag-out" means the placement of a tag on a machine, tool or piece of equipment that states that workers are not to start or operate the machine, tool or piece of equipment. (« étiquetage »)

"temporary support system" means a system designed to be used as a temporary support for all loads that will be or are likely to be imposed on it and includes falsework, flyforms, formwork, ramps, platforms, runways, scaffolds, braces, shoring and stairs. (« système de soutien temporaire »)

"threshold limit value" means the threshold limit value for a chemical or biological substance established in the ACGIH publication, *Threshold Limit Value for Chemical Substances and Physical Agents and Biological Indices*. (« valeur limite d'exposition »)

"travel restraint system" means a fall protection system that is designed to prevent a worker from travelling to a location where there is a risk of falling. (« harnais de retenue »)

"trench" means an excavation that is deeper than its width at the bottom. (« tranchée »)

"trench cage" means a steel support structure designed to resist the pressure from the walls of a trench and capable of being moved as a unit. (« cage pour tranchée »)

"trench jack" means a screw or hydraulic jack used as a brace for shoring. (« vérin pour tranchée »)

"tunnel" means a generally horizontal excavation that is more than one metre long and located underground. (« tunnel »)

"violence" means

(a) the attempted or actual exercise of physical force against a person; and

(b) any threatening statement or behaviour that gives a person reasonable cause to believe that physical force will be used against the person. (« violence »)

"well" means a well as defined under *The Oil and Gas Act*. (« puits »)

"well servicing rig" means a derrick and all rig equipment directly involved with servicing a well. (« appareil d'entretien de puits »)

"worker member" means a member of a committee elected by a union or the workers at the workplace. (« membre représentant les travailleurs »)

"working alone" means the performance of any work function by a worker who

(a) is the only worker for that employer at that workplace at any time; and

(b) is not directly supervised by the employer, or another person designated as a supervisor by the employer, at any time. (« travailler seul »)

"**working in isolation**" means working in circumstances where assistance is not readily available in the event of injury, ill health or emergency. (« travailler en isolement »)

Notice requirements

1.2(1) When this regulation requires a person to give notice to the division or the director, the notice must be given

(a) to the director or a safety and health officer, in the case of a notice that is to be given to the division; or

(b) to the director, in the case of notice that is to be given to the director.

1.2(2) Subject to section 2.7 (notice of serious incident), notice may be given

(a) verbally, by giving it in person or by telephone; or

(b) in writing, by delivering it personally or by sending it by fax, e-mail, courier or mail.

1.2(3) Notice is deemed to have been given only when the notice is received by the director or a safety and health officer.

Conformity to publications, codes and standards

1.3(1) When this regulation requires a tool, machine or other thing to meet the requirements of a publication, code or standard, the tool, machine or thing must satisfy the requirements of the most recent edition of the publication, code or standard in existence at the time it was manufactured.

1.3(2) When this regulation requires a person to perform work or other services in accordance with the requirements of a publication, code or standard, the person must perform the work or services in accordance with the requirements of the most recent edition of the publication, code or standard.

1.3(3) When this regulation requires a person to comply with a publication, code or standard, the person may, as an alternative, comply with another equivalent publication, code or standard that the director has approved in writing.

Inconsistency

1.4 If there is an inconsistency between a requirement under this regulation and a requirement contained in a publication, code or standard referenced in this regulation, the provisions of this regulation prevail.

Certification by professional engineer

1.5 Unless otherwise specified in this regulation, when this regulation requires that specifications or procedures be certified by a professional engineer,

(a) the certification must be in writing and must be signed and sealed by the professional engineer; and

(b) an employer who is responsible for obtaining the certification must ensure that a copy of it is readily available at the workplace.

Regulation applies to self-employed persons

1.6 A provision of this regulation that applies to an employer or a worker also applies, with necessary changes, to a self-employed person.

Employer's obligations extended

1.7 A provision of this regulation that applies to a worker also applies, with necessary changes, to an employer who performs work or other services.

PART 2

GENERAL DUTIES

GENERAL SAFETY DUTIES

Safe work procedures

2.1 In addition to the requirement to develop safe work procedures contained in the other Parts of this regulation, an employer must

- (a) develop and implement safe work procedures for the work that is done at the workplace;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with those safe work procedures.

Consultations required

2.2 In developing and implementing the safe work procedures required under section 2.1 and any other Part of this regulation, an employer must consult with the following:

- (a) the committee at the workplace;
- (b) the representative at the workplace;
- (c) when there is no committee or representative at the workplace, the workers at the workplace.

Duty of employer to provide information

2.3 An employer must provide workers with ready access to the following at the workplace:

- (a) the Act;
- (b) each regulation made under the Act that applies to the workplace or to work done at the workplace;
- (c) each code of practice approved and issued by the director that relates to a regulation under the Act that applies to the workplace or any work done at the workplace.

Inspections of workplace

2.4(1) An employer must

- (a) ensure that regular inspections of the workplace and of work processes and procedures at the workplace are conducted to identify any risk to the safety or health of any person at the workplace; and
- (b) if a risk is identified, correct any unsafe condition as soon as is reasonably practicable and, in the interim, take immediate steps to protect the safety and health of any person who may be at risk.

2.4(2) A prime contractor must

- (a) ensure that regular inspections of the construction project site and the work processes and procedures at the site are conducted to identify any risk to the safety or health of any person at the site; and
- (b) if a risk is identified, ensure that any unsafe condition is corrected as soon as is reasonably

practicable, and in the interim, ensure that immediate steps are taken to protect the safety and health of any person who may be at risk.

PREGNANT OR NURSING WORKERS

Pregnant or nursing workers

2.5 When a worker informs her employer that she is pregnant or nursing, the employer must

- (a) inform the worker of any known or foreseeable risk that conditions at the workplace pose or may pose to the safety or health of the worker or to her unborn or nursing child; and
- (b) so far as is reasonably practicable,
 - (i) take steps to minimize the exposure of the worker to the condition that creates the risk, or
 - (ii) if alternate work is available that involves no risk or less risk and the worker is reasonably capable of performing that work, assign the worker temporarily to that alternative work without loss of pay or benefits.

SERIOUS INCIDENTS AT WORKPLACE

Definition: "serious incident"

2.6 In sections 2.7 to 2.9, "**serious incident**" means an incident

- (a) in which a worker is killed;
- (b) in which a worker suffers
 - (i) an injury resulting from electrical contact,
 - (ii) unconsciousness as the result of a concussion,
 - (iii) a fracture of his or her skull, spine, pelvis, arm, leg, hand or foot,
 - (iv) amputation of an arm, leg, hand, foot, finger or toe,
 - (v) third degree burns,
 - (vi) permanent or temporary loss of sight,
 - (vii) a cut or laceration that requires medical treatment at a hospital as defined in *The Health Services Insurance Act*, or
 - (viii) asphyxiation or poisoning; or
- (c) that involves
 - (i) the collapse or structural failure of a building, structure, crane, hoist, lift, temporary support system or excavation,
 - (ii) an explosion, fire or flood,

(iii) an uncontrolled spill or escape of a hazardous substance, or

(iv) the failure of an atmosphere-supplying respirator.

Notice of serious incident

2.7(1) When a serious incident occurs at a workplace, an employer must immediately and by the fastest means of communication available, notify the division of the incident and provide the following information:

(a) the name and address of each person involved in the incident;

(b) the name and address of the employer, and if any person involved in the incident is employed by another employer, the name and address of that other employer;

(c) the name and address of each person who witnessed the incident;

(d) the date, time and location of the incident;

(e) the apparent cause of the incident and the circumstances that gave rise to it.

2.7(2) An employer who becomes aware that information provided under subsection (1) was inaccurate or incomplete must immediately notify the division of the correct or complete information.

Site of serious incident to be preserved

2.8 Except to the extent necessary to free a trapped person or to avoid the creation of an additional hazard, and subject to a directive issued by a safety and health officer under clause 24(1)(l) of the Act, an employer must ensure that nothing involved in a serious incident is altered or moved until at least 24 hours after the notice under subsection 2.7(1) is given.

Investigations: serious incidents and accidents

2.9(1) An employer must ensure that each of the following is investigated as soon as reasonably practicable after it occurs:

(a) a serious incident;

(b) an accident or other dangerous occurrence

(i) that injures a person, and results in the person requiring medical treatment, or

(ii) that had the potential to cause a serious incident.

2.9(2) An investigation must be carried out by

(a) the co-chairpersons of the committee at the workplace or their designates;

(b) the employer and the representative at the workplace; or

(c) the employer, in the presence of a worker employed at the workplace who is not associated with the management of the workplace, when there is no committee or representative at the workplace.

2.9(3) After an investigation is completed, an employer, in consultation with the co-chairpersons or their designates, the representative or the worker, as applicable, must prepare a written report that includes the following:

- (a) the name of any person injured or killed;
- (b) the date, time and place of the incident, accident or dangerous occurrence;
- (c) a description of the incident, accident or dangerous occurrence;
- (d) any graphics, photographs or other evidence that may assist in determining the cause or causes of the incident, accident or dangerous occurrence;
- (e) an explanation of the cause of the incident, accident or dangerous occurrence, including any factors or events that indirectly contributed to it occurring;
- (f) any immediate corrective action taken;
- (g) any long-term action that will be taken to prevent the occurrence of a similar incident, accident or dangerous occurrence, or the reasons for no action being taken.

RECORDS

Retention of records

2.10 An employer must ensure that a record required to be made or retained under this regulation is not destroyed or disposed of

- (a) for the period prescribed in this regulation for the specific class of records; or
- (b) if there is no prescribed period, for five years after the record is made or comes into the possession of the employer.

Transferring custody of records

2.11 When an employer who has control of a record required to be kept under this regulation ceases to operate in Manitoba,

- (a) the employer must transfer the record to the successor employer, when there is a successor employer; or
- (b) when there is no successor employer, the employer must
 - (i) preserve the record,
 - (ii) notify the director, and
 - (iii) deliver the record at the time and to the place identified by the director.

MISCELLANEOUS

Pressure plants and pressure vessels

2.12 An employer and an owner must ensure that a pressure plant or pressure vessel used at a workplace that is not subject to *The Steam and Pressure Plants Act* is properly constructed, installed, used, stored, repaired and maintained in accordance with the manufacturer's specifications.

Non-smokers health protection in workplace

2.13 A contravention of sections 2 to 6.2 of *The Non-Smokers Health Protection Act* relating to a workplace is deemed to be a contravention of the Act for the purpose of issuing an improvement order to a person under section 26 of the Act.

Clean and sanitary workplace

2.14 An employer must ensure that, so far as is reasonably practicable, a workplace is

- (a) kept in a clean and sanitary state; and

- (b) kept free from any condition that may create a risk to a worker's safety or health.

Control of airborne dust

2.15 An employer and a prime contractor must ensure that appropriate methods are used at a construction project site to control airborne dust that creates or may create a risk to the safety or health of a worker.

Protrusions

2.16 An employer must ensure that any protrusion from concrete or other surfaces, such as nails, pins, cables or other temporary obstructions, is removed or cut off at the surface if it

- (a) creates a tripping or other hazardous condition for a worker; and

- (b) is not necessary for the work being done.

Snow and ice accumulation

2.17 An employer must ensure that

- (a) all work areas are, so far as is reasonably practicable, kept clear of snow and ice accumulations; and

- (b) where an overhead accumulation of snow or ice creates a risk to a person,

- (i) the accumulation is removed, or

- (ii) an overhead barrier designed to withstand any load that will be or is likely to be imposed is installed.

Sign at construction project site

2.18 The prime contractor, or if there is no prime contractor, the employer, must ensure that the following information is clearly and prominently identified on a sign located in a conspicuous place at a construction project site:

- (a) the name of the prime contractor or the employer, as applicable;

- (b) the location of any first aid service;

- (c) the name and telephone number of the person who can be contacted about safety and health matters at the site; and

- (d) contact information for the committee and the representative, as applicable.

PART 3

WORKPLACE SAFETY AND HEALTH COMMITTEES AND REPRESENTATIVES

COMMITTEES

Formation of committee

3.1(1) When a committee is required to be established, an employer or prime contractor must immediately consult with each of the existing unions, or the workers if there is no union, to jointly determine its size.

3.1(2) If no union exists, an employer or prime contractor must appoint one or more workers to conduct the election of worker members to the committee. The workers appointed must not be associated with the management of the workplace and the election must be conducted in a manner consistent with recognized democratic practices.

3.1(3) An employer or prime contractor must not influence or attempt to influence the election of the worker members of a committee.

3.1(4) An employer, prime contractor or worker who disputes

- (a) the number of worker members to be elected; or
- (b) the election of, or manner of electing, worker members;

may refer the dispute to a safety and health officer who may issue an order in accordance with the Act.

Term of office

3.2(1) A committee member is to serve for a term of two years and continues to hold office until reappointed or re-elected or until a successor is appointed or elected.

3.2(2) Despite subsection (1), if a union exists and the union's constitution specifies a term of office for worker members of the committee, the term of office of the worker member is the term specified in the union's constitution.

Meetings

3.3(1) A committee must meet within one month after it has been established and, after that,

- (a) at regular intervals not exceeding three months; or
- (b) at such shorter intervals as ordered by the director.

3.3(2) An order of the director under clause (1)(b) may be made for a particular workplace or a class of workplaces.

3.3(3) A committee member must be given at least three days' prior notice of a regularly scheduled committee meeting.

3.3(4) An employer or prime contractor must provide a committee with a suitable location for committee meetings and appropriate resources for carrying out its duties and functions.

Special meetings

3.4 A co-chairperson of a committee may call a special meeting to deal with matters of

urgent concern, including but not limited to serious incidents, accidents, dangerous occurrences or matters believed to constitute a serious risk to the safety or health of a worker or other persons.

Quorum

3.5 The quorum of a committee is one-half of the worker members and one-half of the members appointed by the employer or the prime contractor.

Committee must establish rules

3.6(1) A committee must establish written rules of procedure for discharging its duties under the Act.

3.6(2) The committee must in its rules provide for

- (a) regular meetings of the committee, and the day, time and place of the meetings;
- (b) the procedure to be followed and the type and amount of notice to be given to change the day, time or place of a regular meeting of the committee; and
- (c) rules respecting the conduct of committee meetings.

3.6(3) The committee may in its rules provide for such other matters as the committee considers necessary or desirable.

Minutes

3.7(1) A committee must ensure that

- (a) the minutes of each committee meeting are
 - (i) recorded in a format acceptable to the division,
 - (ii) signed by the co-chairpersons, and
 - (iii) kept at the workplace for a period of at least 10 years from the date of the meeting; and
- (b) a copy of the minutes prepared in accordance with clause (a) is given to the employer or prime contractor.

3.7(2) An employer or prime contractor must, within seven days of receiving a copy of the minutes of a committee meeting, ensure that a copy is sent to the division and to each committee member.

Distributing information to committee members

3.8 An employer or prime contractor must distribute to committee members at the workplace any information or document addressed to the committee or to committee members as soon as reasonably practicable but no later than seven days after the information or document is received.

REPRESENTATIVES

Meetings with representative

3.9(1) When a representative is designated at a workplace, an employer must meet with the representative at regular intervals not exceeding three months to discuss safety and health matters.

3.9(2) A representative may call a special meeting with the employer to deal with matters of urgent concern, including but not limited to serious incidents, accidents, dangerous occurrences or matters believed to constitute a serious risk to the safety or health of a worker or another person.

3.9(3) An employer must meet with a representative when the representative calls a special

meeting.

GENERAL

Officer may call meeting

3.10 For the purpose of ensuring the proper functioning or to provide information or education concerning workplace safety and health, a safety and health officer may call a special meeting of

- (a) a committee;
- (b) several committees jointly;
- (c) the co-chairpersons of one or more committees; or
- (d) one or more representatives.

Bulletin board

3.11(1) An employer or prime contractor must provide a bulletin board in a prominent place in the workplace that is readily accessible to workers for the exclusive use of committee members, the representative, or both, in connection with safety and health matters.

3.11(2) When a bulletin board is provided under subsection (1), the following information must be posted on it:

- (a) when a committee exists,
 - (i) the name of each committee member and the date each member's term of office expires,
 - (ii) the scheduled dates of committee meetings,
 - (iii) the agenda for each meeting,
 - (iv) a copy of the minutes of each committee meeting, which must be signed by the co-chairpersons and must remain posted until all matters of concern recorded in the minutes are resolved, and
 - (v) any item recommended to be posted by a committee member;
- (b) if a representative has been designated,
 - (i) the name of the representative,
 - (ii) the scheduled dates of meetings,
 - (iii) the agenda for each meeting, and
 - (iv) any item recommended to be posted by the representative.

Examination of information and materials

3.12 An employer and a prime contractor must ensure that a committee member and a representative is allowed to examine any logbook, assessment, inspection report or other record that the employer or prime contractor is required to keep at the workplace under the Act or the regulations.

Lost-time injury information

3.13 An employer must provide information respecting lost-time injuries at the workplace to the committee members and to the representative.

Handling of personal health information

3.14 A committee member and a representative must not disclose a worker's personal health information unless the disclosure is required or permitted by law.

PART 4

GENERAL WORKPLACE REQUIREMENTS

Air quality and ventilation

4.1 An employer must, as much as is reasonably practicable, ensure that

- (a) a workplace has appropriate air quality and is adequately ventilated; and
- (b) contaminants and impurities are prevented from accumulating in the air at a workplace.

Mechanical ventilation

4.2 When an employer or an owner provides a mechanical ventilation system at a workplace, the employer or owner must ensure that

- (a) it is designed and installed in accordance with the requirements of
 - (i) the *Manitoba Building Code*, and
 - (ii) any applicable municipal code, standard or by-law;
- (b) it provides sufficient amounts of air to replace the air it exhausts from the workplace;
- (c) it, and any associated humidification equipment, is inspected and maintained by a competent person at a frequency that is sufficient to
 - (i) protect the safety and health of workers, and
 - (ii) minimize the growth of biological contaminants and their dissemination through the system; and
- (d) its ventilation openings are kept free of obstructions and sources of contamination.

Air cleaning systems

4.3 An employer and an owner must ensure that any mechanical ventilation system designed to recirculate air in the workplace removes particulate and gaseous contaminants through an air cleaning system that is designed, installed and maintained to protect the safety and health of workers.

Arrangement of work areas

4.4 When there is a risk to the safety or health of a worker because of vehicular traffic or the nature of the work performed in the workplace, an employer must ensure that

- (a) work areas are arranged to allow for the safe movement of persons, equipment and materials; and
- (b) aisle or walkway routes designated for pedestrian traffic are clearly indicated by conspicuous markings or other effective means.

Slipping and tripping hazards

4.5(1) An employer must ensure that floors, platforms, walkways, ramps and stairs available for use by a worker are maintained in a state of good repair and kept free of slipping and tripping hazards.

4.5(2) If it would be unsafe or hazardous for a worker to use an area described in subsection (1), the employer must

(a) take reasonable steps to prevent the area from being entered or used; and

(b) post a conspicuous sign at or near the area clearly indicating that it is not to be used.

Drinking water

4.6(1) An employer must ensure that an adequate supply of potable drinking water is available to workers at a workplace.

4.6(2) Unless water is provided by a drinking fountain, an employer must ensure that an adequate supply of single-use, sanitary drinking cups is located by each supply of drinking water.

4.6(3) When it is necessary to identify the supply of drinking water, an employer must ensure that the supply has a prominent label that clearly indicates it contains drinking water.

Number of toilet facilities and washbasins

4.7 Subject to the provisions of the *Manitoba Building Code*, an employer must ensure that a workplace has the number of toilets and washbasins in separate facilities for each sex as provided in the following table.

Table		
# of Workers of the Gender	Minimum # of Toilets for that Gender	Minimum # of Washbasins for that Gender

1 - 10	1	1
11 - 25	2	2
26 - 50	3	3

51 - 75	4	4
76 - 100	5	5
Over 100	6, plus an additional one for each additional 30 workers	6, plus an additional one for each additional 30 workers

Toilet facilities

4.8(1) Despite section 4.7, a workplace may have one toilet facility for the use of both sexes if

- (a) the total number of workers present at the workplace at one time is never more than 10; and
- (b) the door to the toilet facility can be locked from the inside.

4.8(2) If two or more toilets are required for men, an employer may substitute not more than half of

the toilets with stall urinals.

4.8(3) An employer must ensure that each toilet facility at a workplace

- (a) has a legible sign posted on or near the door leading to each facility, which denotes the sex of those entitled to use a toilet facility;
- (b) is used only as a toilet facility;
- (c) is kept free from obstacles or obstructions;
- (d) is kept clean, sanitary and in good working order;
- (e) is supplied with
 - (i) toilet tissue at each toilet at all times,
 - (ii) easily cleanable containers for waste materials, and
 - (iii) a covered disposal container for feminine hygiene products near each toilet used by women;
- (f) except for a urinal, is equipped with an individual compartment and a door that can be locked from the inside; and
- (g) is adequately heated, illuminated and ventilated.

4.8(4) An employer must not place unreasonable restrictions on a worker's use of or access to toilet facilities at a workplace.

Hand washing facilities

4.9(1) An employer may substitute circular wash fountains for washbasins required by section 4.7 on the basis that each 500 mm of the fountain's circumference is equivalent to one washbasin.

4.9(2) An employer must ensure that a washbasin

- (a) is located in close proximity to each toilet;
- (b) has a supply of clean hot and cold water;
- (c) is supplied with soap and individual disposable clean towels or other suitable means of cleaning and drying hands; and
- (d) is kept clean, sanitary and operational.

Hand cleaning facilities at construction project site

4.10 If it is not reasonably practicable to provide washbasins at a construction project site, an employer and prime contractor must ensure that alternative adequate washing facilities are provided, such as waterless hand cleaners, hand sanitizers, clean water, soap and towels or other suitable facilities.

Change and washing facilities

4.11 If, due to a hazardous substance coming in contact with the worker's skin, a work process may create a risk to a worker's safety or health, an employer must, when reasonably practicable, provide and maintain suitable, adequate and clean change and washing facilities.

Thermal stress

4.12 When a workplace or work process exposes a worker to conditions that may create a

risk to the worker's safety or health because of heat or cold, an employer must implement safe work procedures and control measures to ensure that

(a) the threshold limit values for thermal stress established by the ACGIH in its publication, *Threshold Limit Value for Chemical Substances and Physical Agents and Biological Indices*, are followed; and

(b) the worker is provided with information, instruction and training in the symptoms of thermal stress and the precautions to be taken to avoid injury from thermal stress.

Thermal conditions — indoor workplaces

4.13 Subject to subsection 4.12, an employer must establish and maintain thermal conditions, including air temperature, radiant temperature, humidity and air movement, in an indoor workplace that are appropriate to the nature of the work being done.

Lighting

4.14 An employer must ensure that

(a) a workplace is equipped with

(i) sufficient lighting to allow a worker to perform his or her job safely, and

(ii) adequate emergency lighting that operates if the regular lighting system fails and provides sufficient lighting to enable workers to do the following:

(A) perform necessary emergency shut-down procedures,

(B) leave the workplace safely,

(C) restore the regular lighting system; and

(b) all parts of a workplace where a worker passes have illumination of at least five decalux.

Eating prohibited in contaminated area

4.15 An employer must ensure that a worker does not eat or drink in a part of a workplace that is, or may be, contaminated by a hazardous substance.

PART 5

FIRST AID

Employer to provide first aid services

5.1(1) An employer must supply first aid services in the workplace in accordance with this Part.

5.1(2) Subsection (1) does not apply when more than one employer has workers at the same workplace if

(a) the employers, including the prime contractor at the workplace, agree in writing to collectively provide the first aid services required by this Part; or

(b) the director, by written notice, requires that the employers, including the prime contractor at the workplace, collectively provide the first aid services required by this Part.

Workers to be advised of location for first aid

5.2 An employer must ensure that a worker is aware of the location at which first aid services are available in the workplace.

Ill or injured worker must report

5.3 A worker who becomes ill or is injured at the workplace must, as soon as is reasonably practicable, report to

(a) the first aid room, when a first aid room is provided at the workplace; or

(b) the location identified under section 5.2, when there is no first aid room at the workplace.

Assistance

5.4 An employer must ensure a worker who becomes ill or is injured at the workplace receives assistance, as required, from

(a) a first aider; or

(b) a supervisor, if no first aider is required to be present in the workplace.

Number of first aiders that must be present

5.5(1) An employer must ensure that the minimum number of first aiders, as set out in the following tables, are present during working hours at a workplace.

Number of workers per shift	Close Workplace	
	Low hazard work	Other work
1 to 10	—	—
11 to 40	FA1	FA2
41 to 100	FA1	2 FA2s
101 to 199	2 FA1s	2 FA2s
200 or more	3 FA1s	3 FA2s

TABLE 2		
Distant workplace		
Number of workers per shift	Low hazard work	Other work
1 to 10	—	FA1
11 to 40	FA1	FA2
41 to 100	FA1	2 FA3s
101 to 199	2 FA1s	2 FA3s
200 or more	3 FA1s	3 FA3s

TABLE 3		
Isolated Workplace		
Number of workers per shift	Low hazard work	Other work
1 to 10	FA1	FA2
11 to 40	FA1	FA3
41 to 100	2 FA1s	2 FA3s
101 to 199	2 FA1s	3 FA3s
200 or more	3 FA1s	4 FA3s

5.5(2) In the tables in subsection (1),

(a) the number of workers per shift is to be determined

(i) at a close or distant workplace, on the basis of the number of workers working at the beginning of the shift, and

(ii) at an isolated workplace, on the basis of the total number of workers employed at the isolated workplace;

(b) where both low hazard work and other work — being work that is not low hazard work — exist in the same workplace, an employer may

(i) combine the number of workers and provide first aiders as if all work were other work, or

(ii) provide separate first aiders for the different types of work; and

(c) "**FA1**" means a person who holds a valid first aider 1 qualification, "**FA2**" means a person who holds a valid first aider 2 qualification and "**FA3**" means a person who holds a valid first aider 3 qualification.

5.5(3) A person who possesses one or more credentials in first aid that are, in the opinion of the director, equivalent to the requirements for obtaining a certificate described in Schedule A to this Part, may act, and be counted, as a first aider at a workplace.

5.5(4) An employer must

(a) maintain a list of the name and work location of each first aider; and

(b) ensure that a copy of the list is

(i) provided upon request to a committee member or representative at the workplace, and

(ii) posted in a conspicuous location at the workplace.

Employer obligations to first aiders

5.6(1) An employer must

- (a) allow a first aider to provide prompt and adequate first aid to an ill or injured worker;
- (b) ensure that the first aider suffers no loss of pay or other benefits as a result of providing the first aid; and
- (c) ensure that a first aider has adequate time off from regular work duties to receive required first aider training, with no loss of pay or other benefits.

5.6(2) Clauses (1)(a) and (b) also apply to any other worker who, at the request of a first aider, assists the first aider in providing first aid to an ill or injured worker.

Employer to keep record of illness and injury

5.7 An employer must ensure that any illness or injury suffered by a worker in the course of the worker's work is promptly recorded and that the records are retained for five years from the date the record is made.

Transportation of seriously ill or injured worker

5.8(1) An employer must, at his or her expense, ensure that a seriously ill or injured worker is transported to a medical facility.

5.8(2) If a licensed ambulance service is operated from a location within 30 minutes' travel time of a workplace under normal travel conditions, an employer must ensure that a means of communicating with the ambulance service is available at the workplace.

5.8(3) If a licensed ambulance service is not operated from a location within 30 minutes' travel time of a workplace, an employer must provide for a means of transporting an ill or injured worker that is

- (a) readily available at the times work is performed at the workplace; and
- (b) capable of accommodating an occupied stretcher, if a workplace is a distant or isolated workplace.

Appropriate first aid for occupational hazard

5.9 When a workplace has an occupational hazard that creates a risk that is not adequately addressed by the first aid services required under this Part, the employer must

- (a) consult, in order to determine the appropriate first aid service required, with
 - (i) the committee or representative or, where there is no committee or representative, the workers at the workplace, and
 - (ii) any safety and health professional employed by the employer; and
- (b) provide the additional first aid services that are determined to be appropriate.

Contamination by blood or bodily fluids

5.10 An employer must ensure that anything in the workplace that has been contaminated by blood or bodily fluids is disposed of or cleaned by a competent person in a manner that prevents a worker from being exposed to the blood or bodily fluids.

Asphyxia or poisoning

5.11 If a worker at a workplace is at risk of asphyxiation or poisoning, an employer must ensure that, so far as is reasonably practicable, arrangements are made to immediately provide first aid, medical attention and other measures appropriate to the nature and probable effects of a worker being asphyxiated or poisoned.

FIRST AID KITS AND FIRST AID ROOM

First aid kits required

5.12(1) In accordance with the following table, an employer must provide first aid kits that meet the requirements set out in Schedule B to this Part at the workplace:

TABLE	
Total number of workers employed at workplace	Number of first aid kits that must be provided at workplace
24 or fewer	1
25 to 50	2
51 to 75	3
76 or more	4

5.12(2) In respect of the number of first aid kits that must be provided under subsection (1), a vehicle, boat or aircraft used by an employer to transport one or more workers is deemed to be a workplace, and the number of workers employed at that workplace is deemed to equal the seating capacity of the vehicle, boat or aircraft.

5.12(3) Subsection (1) does not apply to an employer who is required to provide a first aid room under section 5.14.

Personal first aid kit for worker working alone

5.13 An employer must ensure a personal first aid kit that meets the requirements set out in Schedule B to this Part is provided to a worker who works alone and who does not have ready access to a first aid kit required to be provided under subsection 5.12(1).

When employer must provide first aid room

5.14 An employer must provide a first aid room at

- (a) a workplace at which 100 or more workers per shift are employed to perform work that is not low hazard work; and
- (b) a construction camp or industrial camp at which 100 or more workers reside together, if no first aid room is provided at the workplace and the camp is
 - (i) provided by the employer as a residence to be used only by the workers,
 - (ii) separate from the workplace, and
 - (iii) not a hotel, motel or other similar accommodation.

Requirements for first aid room

5.15(1) Every first aid room must

- (a) be located in an area that is

- (i) easily accessible to workers at all times, and
 - (ii) near both the work area it is to serve and toilet facilities;
- (b) have adequate lighting, ventilation and heating, and be covered by a floor made of non-porous material;
- (c) be of an adequate size to accommodate a stretcher;
- (d) be equipped with
- (i) instructions on how and where to access a first aider,
 - (ii) a communication system capable of communicating with the medical facility to which an injured worker would be transported,
 - (iii) a permanently installed sink with hot and cold potable running water,
 - (iv) a cot or bed with a moisture-protected mattress and two pillows, and
 - (v) the items set out in Schedule C to this Part.

5.15(2) An employer must ensure that a first aid room

- (a) is clearly identified as a first aid room;
- (b) is used exclusively for the purposes of administering first aid and medical examinations and to provide rest for persons who are ill or injured;
- (c) during working hours, is supervised by a first aider who is readily available to provide first aid; and
- (d) is kept clean and sanitary.

DIRECTOR'S POWERS

Additional first aid services

5.16(1) If the director is of the opinion that the first aid services required to be provided under this Part are inadequate given the particular risks associated with a workplace, the director may, by written notice, specify additional first aid services to be provided by the employer.

5.16(2) An employer must forthwith provide the additional first aid services specified in a notice under subsection (1).

Alternative first aid services

5.17 If the director is of the opinion that the first aid services required to be provided under this Part are not warranted given the particular risks associated with a workplace, the director may, by written notice, vary the requirements of the first aid services to be provided by the employer.

Manner of giving notice

5.18 A notice under this Part may be communicated to the employer by

- (a) delivering it to the employer; or

(b) by sending it by prepaid mail addressed to the employer, at the address of the employer last known to the director.

Publication of first aid training providers

5.19 The director may, in a manner he or she determines, publish the name and other relevant information of a person, society or organization that provides a training course in first aid or cardiopulmonary resuscitation, or both, that is consistent with the requirements of first aider training set out in Schedule A to this Part.

SCHEDULE A

FIRST AIDER QUALIFICATIONS

When certificate is valid

1 For the purposes of this Schedule, a certificate issued by a first aid training provider is valid only if it specifies

- (a) the first aid training provider that issued the certificate;
- (b) the title and duration of the course;
- (c) the level of qualification for which the certificate is issued; and
- (d) the date it was issued and its expiry date, which must not be more than three years after the date it was issued.

Minimum requirements: first aider 1

2 A person has the qualifications of a first aider 1 if he or she holds a certificate issued by a first aid training provider showing that he or she has successfully completed at least eight hours in first aid training that addresses the following topics:

- (a) the role, function and responsibilities of the first aider;
- (b) emergency scene management;
- (c) patient assessment: primary and secondary survey;
- (d) basic anatomy and physiology, including body systems such as respiratory, circulatory, musculoskeletal, neurological and integumentary;
- (e) obstructed airway and other breathing emergencies;
- (f) cardiovascular emergencies, such as heart attack and stroke;
- (g) control of bleeding, both internal and external;
- (h) signs and symptoms of shock;
- (i) cardiopulmonary resuscitation — adult — one person rescue;
- (j) trauma and other acute medical situations — bone and joint injury, head and spine injury, skin disruption (lacerations and burns) and poisoning;
- (k) general precautions to prevent blood and body fluid exposure;

(l) infection control.

Minimum requirements: first aider 2

3 A person has the qualifications of a first aider 2 if he or she holds one or more certificates issued by one or more first aid training providers showing that he or she has successfully completed at least 16 hours in the following first aid and cardiopulmonary resuscitation training courses:

(a) at least 12 hours in first aid training that addresses the topics required for first aider 1 plus the following additional topics:

- (i) interaction with higher-level trained personnel and medical care agencies,
- (ii) ambulance system,
- (iii) obstructed airway and other breathing emergencies,
- (iv) assessment and monitoring of vital signs,
- (v) respiratory emergencies — respiratory system review, management of airways, airway obstruction and chest injuries,
- (vi) circulatory system review — heart attack and stroke,
- (vii) bleeding — wounds and control of bleeding and bandaging,
- (viii) abdominal injuries — system review by quadrant,
- (ix) stabilization — head, spine and pelvis injuries,
- (x) upper and lower extremity injuries,
- (xi) medical emergencies — epilepsy, diabetes and drug overdose,
- (xii) assessment and treatment of burns,
- (xiii) eye injury,
- (xiv) environmental illness and injury — heat, cold and poisonings,
- (xv) movement of a casualty — carries;

(b) at least four hours in cardiopulmonary resuscitation training that addresses the following topics:

- (i) risk factors,
- (ii) signals and actions of heart attack and stroke,
- (iii) airway obstruction — prevention, causes and recognition,
- (iv) entrance into the emergency medical services system,
- (v) one rescuer cardiopulmonary resuscitation (adult),
- (vi) treatment of an adult with an obstructed airway,

- (vii) turning of the casualty into the recovery position.

Minimum requirements: first aider 3

4 A person has the qualifications of a first aider 3 certificate if he or she holds one or more certificates issued by one or more first aid training providers showing that he or she has successfully completed at least 70 hours in the following first aid and cardiopulmonary resuscitation training courses:

(a) at least 62 hours in first aid training that covers the topics listed in clauses 2(a) to (l) and subclauses 3(a)(i) to (xv), appropriate to the first aider 3 qualification, plus the following additional topics:

- (i) the role, function, responsibilities of the first aider — knowledge of emergency medical system, the place of the first aider in the system, other skill levels in the system,
- (ii) different phases of emergency medical care — removal from immediate dangers,
- (iii) scene management — triage,
- (iv) training in the use of first aid equipment, e.g.: oxygen, bag-valve mask and mouth-to-mouth,
- (v) anatomy and physiology appropriate to the first aider 3 qualification,
- (vi) airway management and the use of first aid equipment (e.g.: bag valve, mask resuscitator, oxygen equipment),
- (vii) assessment and treatment of common medical emergencies — heart attack, cardiac arrest, stroke and diabetes,
- (viii) trauma to head, spine, chest, abdomen and pelvis — multiple injury management,
- (ix) soft tissue injuries,
- (x) safe carries and transport,
- (xi) insect bites,
- (xii) burns — assessment and treatment,
- (xiii) obstetrics: emergency delivery and postpartum hemorrhage,
- (xiv) recognition of the acute signs and symptoms of drug overdose and treatment of the injured worker,
- (xv) assessment and treatment of the acute abdomen (e.g.: distended or tender),
- (xvi) recordkeeping: preservation of information necessary for subsequent action,
- (xvii) understanding and familiarity with relevant provisions of the Act and its regulations;

(b) at least eight hours in cardiopulmonary resuscitation training that covers the topics listed in subclauses 3(b)(i) to (vii), appropriate to the first aider 3 qualification, plus the following additional topics:

- (i) two rescuer cardiopulmonary resuscitation,
- (ii) mouth-to-mask resuscitation,

(iii) spinal injuries.

SCHEDULE B
FIRST AID KITS

Content of first aid kit

1 A first aid kit must contain the following items:

(a) general:

- (i) a recent edition of a first aid manual,
- (ii) a pair of impervious disposable gloves,
- (iii) a disposable resuscitation mask with a one-way valve,
- (iv) a disposable cold compress,
- (v) 12 safety pins,
- (vi) splinter forceps,
- (vii) one pair of 12 cm bandage scissors,
- (viii) 25 antiseptic swabs,
- (ix) waterless hand cleaner,
- (x) waterproof waste bag;

(b) dressings — each of the following items must be sterile and individually wrapped in order to maintain sterility:

- (i) 16 surgical gauze pads (7.5 cm squares),
- (ii) 4 pads (7.5 cm × 10 cm, non-adhesive),
- (iii) 32 adhesive dressings (2.5 cm wide),
- (iv) 2 large pressure dressings,

(c) bandages:

- (i) 3 triangular bandages (1 m each),
- (ii) 2 conforming bandages (10 cm each),
- (iii) 2 rolls of 2.5 cm adhesive tape,
- (iv) 1 roll of 7.5 cm elastic adhesive bandage,
- (v) 2 rolls of 7.5 cm tensor bandage.

Content of personal first aid kit

2 A personal first aid kit must contain the following items:

- (a) 10 sterile adhesive dressings, assorted sizes, individually packaged;

- (b) five 10 cm × 10 cm sterile gauze pads, individually packaged;
- (c) a 10 cm × 10 cm sterile compress dressing, with ties;
- (d) five antiseptic cleansing towelettes, individually packaged;
- (e) a cotton triangular bandage;
- (f) a waterproof waste bag;
- (g) a pair of impervious disposable gloves;
- (h) a roll of 2.5 cm adhesive bandage tape.

SCHEDULE C

FIRST AID ROOM

Contents

1 Every first aid room must contain the following items:

- (a) a first aid record book;
- (b) a space blanket;
- (c) hot and cold packs;
- (d) a spine board and straps;
- (e) an adjustable cervical collar or set of different sized cervical collars;
- (f) a stretcher;
- (g) a splint set;
- (h) a sphygmomanometer (blood pressure cuff);
- (i) a stethoscope;
- (j) a thermometer;
- (k) dressing forceps;
- (l) tongue depressors;
- (m) paper towels;
- (n) single use, sanitary drinking cups;
- (o) a flashlight;
- (p) two washbasins, preferably stainless steel;
- (q) one kidney basin;

- (r) one instrument sterilizer;
- (s) one cabinet for dressings;
- (t) one magnifying loop with built-in lamp;
- (u) one sanitary receptacle with lid and disposable plastic liners;
- (v) hospital grade disinfectant;
- (w) the contents of four first aid kits as set out in Schedule B, but only one copy of a recent edition first aid manual is required.

PART 6

PERSONAL PROTECTIVE EQUIPMENT

GENERAL

Personal protective equipment required

6.1(1) An employer must ensure that, to the extent practicable, the safety and health of each worker is protected by

- (a) the design of the workplace or work process;
- (b) the use of engineering controls; and
- (c) the implementation of safe work procedures.

6.1(2) An employer must ensure that a worker wears and uses personal protective equipment

- (a) during the period necessary to implement a measure described in subsection (1);
- (b) if the measures taken under subsection (1) are insufficient to protect the safety and health of the worker;
- (c) in any of the circumstances described in sections 6.7 to 6.18; and
- (d) in the event of an emergency in the workplace, including a spill or discharge of a hazardous substance.

Safe work procedures

6.2(1) An employer must

- (a) develop and implement safe work procedures for the use of personal protective equipment in the workplace;
- (b) train workers in those safe work procedures; and
- (c) ensure that workers comply with those safe work procedures.

6.2(2) If the manufacturer of personal protective equipment has established safe work procedures for the equipment's use, an employer must ensure that the safe work procedures developed and implemented under clause (1)(a) are not inconsistent with those established by the manufacturer.

Employer obligations re protective equipment

6.3 If personal protective equipment is required to be worn or used in the workplace, an employer must

- (a) provide a worker, at no cost, the equipment appropriate for the risks associated with the workplace and the work;
- (b) ensure that the equipment is
 - (i) stored in a location that is clean, secure, and readily accessible by the worker,
 - (ii) immediately repaired or replaced if it is defective, and

(iii) immediately replaced with clean or decontaminated equipment if it is rendered ineffective because of contamination with a hazardous substance; and

(c) make, so far as is reasonably practicable, appropriate adjustments to the work procedures and rate of work to eliminate or reduce any risk to the safety or health of a worker that may arise from the worker's use of the equipment.

Employer obligations re equipment provided

6.4 An employer must ensure that

(a) before providing personal protective equipment to a worker, the equipment is fit for its purpose, as determined by the employer inspecting it and testing it or carrying out any pre-use procedure in accordance with the manufacturer's specifications;

(b) the equipment provided fits the worker correctly and can be used by the worker without an adverse effect to the worker's safety or health from the use of the equipment; and

(c) the worker is informed of and understands the safety or health risk for which the equipment is designed and the limitations, if any, in the protection it provides.

Worker obligations re equipment

6.5(1) A worker who is provided with personal protective equipment must

(a) wear or use it in accordance with the manufacturer's specifications;

(b) take reasonable steps to prevent damage to it; and

(c) inform the employer if it becomes defective or fails to provide the protection that it was intended to provide.

6.5(2) Subsection (1), except clause (c), applies in respect of protective headwear and footwear that a worker is required to provide for himself or herself under subsections 6.11(1) and 6.12(2).

Obligations when worker provides personal protective equipment

6.6 When a worker is required to provide protective headwear or protective footwear for himself or herself,

(a) an employer has no obligations under clause 6.3(a), subclauses 6.3(b)(i) and (ii) and section 6.10 in respect of that equipment, but must ensure that the equipment provided by the worker meets, and is used in accordance with, the requirements of this Part; and

(b) the worker must ensure that he or she takes reasonable steps to prevent damage to the equipment and that it

(i) meets and is used in accordance with the manufacturer's specifications and the requirements of this Part,

(ii) is immediately repaired or replaced if it is defective, and

(iii) is immediately replaced with clean or decontaminated equipment, if it is rendered ineffective because of contamination by a hazardous substance.

SPECIFIC TYPES OF
PERSONAL PROTECTIVE EQUIPMENT

High visibility safety apparel

6.7 An employer must provide high visibility safety apparel that meets the requirements of CAN/CSA-Z96-02, *High-Visibility Safety Apparel*, and that is appropriate for the risk, to a worker who is exposed to the risk of injury

- (a) from a moving vehicle or powered mobile equipment; or
- (b) due to the worker not being visible to other persons because of environmental or other conditions in the workplace or at the worksite.

Skin protection

6.8(1) If there is a risk of injury to a worker's skin from sparks, molten metal or ionizing or non-ionizing radiation, an employer must provide personal protective equipment that

- (a) meets the requirements of CAN/CSA-W117.2-01 (R2006), *Safety in Welding, Cutting and Allied Processes*; and
- (b) is appropriate for the risk;

or a safeguard that provides equivalent protection.

6.8(2) An employer must provide personal protective equipment that is appropriate for the risk if there is a risk of injury to a worker's skin from radiant heat or a sharp or jagged object which may puncture or abrade the skin.

Protective clothing

6.9(1) If a work process may create a risk to the safety or health of a worker from contamination of the worker's skin or clothing by a hazardous substance, an employer must

- (a) provide the worker with protective clothing appropriate for the risk; and
- (b) launder or dispose of the protective clothing on a regular basis.

6.9(2) If an employer is required to provide protective clothing under subsection (1), the employer must provide a place to store the worker's street clothing that is separate from the place where the worker's personal protective clothing is stored.

Protective headwear — employer's responsibilities

6.10(1) At a workplace that is not a construction project site, an employer must provide a worker with protective headwear that is appropriate for the risk and meets the requirements of CSA Standard Z94.1-05, *Industrial Protective Headwear — Performance, Selection, Care and Use* or ANSI Z89.1-2003, *American National Standard for Industrial Head Protection*, if there a risk of injury

- (a) to the worker's head, including a significant possibility of lateral impact to the worker's head;
or
- (b) to the worker from contact with an exposed energized electrical conductor.

6.10(2) An employer required to provide a worker with protective headwear must also provide a worker with

- (a) a liner for that headwear, if it is necessary to protect the worker from cold conditions; and

(b) a retention system to secure the protective headwear firmly to the worker's head, if the worker is likely to work in conditions that may cause the headwear to dislodge.

6.10(3) Instead of complying with subsection (1), an employer may provide to the worker a bump hat or other protective headwear appropriate for the risk, if the risk of injury to a worker's head is limited to injury to the worker's scalp.

Protective headwear — worker's responsibilities

6.11(1) A worker at a construction project site is responsible for providing

(a) his or her own protective headwear; and

(b) if necessary,

(i) a liner for the headwear to protect the worker from cold conditions, and

(ii) a retention system to secure the headwear firmly to the worker's head, where the worker works in conditions that may cause the headwear to dislodge.

6.11(2) The protective headwear that a worker provides for himself or herself under this section must

(a) be appropriate for the risk; and

(b) meet the requirements of CSA Standard Z94.1-05, *Industrial Protective Headwear — Performance, Selection, Care and Use* or ANSI Standard Z89.1-2003, *American National Standard for Industrial Head Protection*, if there a risk of injury

(i) to the worker's head, including a significant possibility of lateral impact to the worker's head, or

(ii) to the worker from contact with an exposed energized electrical conductor.

Footwear: responsibilities of employers and workers

6.12(1) An employer must provide a worker with

(a) outer foot guards that provide metatarsal protection, when there is substantial risk of a crushing injury to the worker's foot; and

(b) protective footwear, when the worker's feet may be endangered by a hot, corrosive or toxic substance.

6.12(2) Subject to subsection (1), a worker is responsible for providing for himself or herself protective footwear that

(a) is appropriate for the risk associated with the worker's workplace and work; and

(b) meets the requirements of

(i) CSA Standard-Z195.1-02, *Guideline on Selection, Care, and Use of Protective Footwear*, or

(ii) CAN/CSA Standard-Z195-02, *Protective Footwear*,

if the worker may be at risk of injury from a heavy or falling object or from treading on a sharp object.

6.12(3) Despite subsection (2), an employer may permit, with appropriate conditions and after

consulting with the committee, the representative or, where there is no committee or representative, the workers, a worker to use soft-soled, slip resistant protective footwear without puncture-proof plates in the soles and toecaps provided by the worker, if the worker is

- (a) a steel erector engaged in the connection of structural components of a skeletal structure; or
- (b) engaged in the installation of roof finishing materials.

Eye and face protectors

6.13(1) An employer must provide a worker an eye or face protector that meets the requirements of CAN/CSA-Z94.3-02, *Eye and Face Protectors* and CSA Standard Z94.3.1-02, *Protective Eyewear: A User's Guide*, and that is appropriate for the risk, if there is a risk of irritation or injury to the worker's face or eyes from

- (a) flying objects or particles;
- (b) splashing liquids or molten metal;
- (c) ultraviolet, visible or infrared radiation; or
- (d) any other material, substance or matter.

6.13(2) For certainty, prescription lenses or prescription eyewear are not included as eye protectors under this section.

Hand, arm, leg and body protection

6.14(1) An employer must provide a worker with hand, arm, leg or body protective equipment that is appropriate for the risk and to the workplace if there is a risk of injury to the worker's hands, arms, legs or torso.

6.14(2) Without limiting subsection (1), an employer must provide a worker with appropriate gloves or mitts and sleeves if there is a risk of injury to the worker from contact with an exposed energized electrical conductor.

Respiratory protective equipment

6.15(1) An employer must ensure that respiratory protective equipment provided to a worker is

- (a) appropriate for the risk to which the worker is or may be exposed, as determined by the employer;
- (b) selected, used and maintained in accordance with CAN/CSA-Z94.4-02, *Selection, Use, and Care of Respirators*;
- (c) of proper size, and that it makes an effective seal to the facial skin of the worker where a tight fit is essential to its proper functioning;
- (d) kept in a convenient and sanitary location when not in use, and that it is not exposed to extremes of temperature or to any contaminant that may inactivate it; and
- (e) not shared by workers, unless it is cleaned before different workers use it.

6.15(2) An employer must ensure that a worker using the respiratory protective equipment

- (a) is adequately trained by a competent person in the proper fit, testing, maintenance, use and cleaning of the equipment and in its limitations;
- (b) is able to test, maintain and clean the equipment;

- (c) is able to use the equipment safely; and
- (d) inspects and tests the equipment before each use.

Working in dangerous atmospheres

6.16(1) An employer must provide a worker who is required to enter an atmosphere that is immediately dangerous to his or her safety or health with one of the following atmosphere-supplying respirators:

- (a) an open-circuit SCBA, which
 - (i) is sufficiently charged to enable the worker to perform the work safely,
 - (ii) operates in a pressure demand or positive pressure mode, and
 - (iii) has a minimum rated capacity of 30 minutes;
- (b) an airline respirator equipped with a full face piece that
 - (i) operates in a pressure demand or positive pressure mode, and
 - (ii) has an auxiliary supply of air sufficient to allow the worker to escape in case of failure of the primary air supply equipment;
- (c) a closed-circuit SCBA.

6.16(2) An employer must ensure that air in an atmosphere-supplying respirator provided under subsection (1) meets the purity requirements set out in Table 2 of CAN/CSA Standard-Z180.1-00, *Compressed Breathing Air and Systems*.

Protection from drowning

6.17(1) When a worker is required to work at a place, other than a boat, from which the worker could fall and drown, and he or she is not protected by a guardrail, an employer must

- (a) provide the worker with a life jacket;
- (b) ensure that the worker complies with Part 14 (Fall Protection);
- (c) ensure that the following rescue equipment is readily available:
 - (i) an appropriately powered boat equipped with a boathook,
 - (ii) a buoyant apparatus attached to a nylon rope, where the rope is not less than 9 mm in diameter and not less than 15 m in length,
 - (iii) a notification or signalling device; and
- (d) ensure that a sufficient number of properly equipped and trained rescue personnel are readily available to undertake a rescue in the event one is required.

6.17(2) An employer must ensure that each worker who is transported by or works on a boat is provided with his or her own life jacket or personal flotation device that is kept within the immediate reach of the worker at all times.

6.17(3) An employer must provide the following personal protective equipment to a worker if there is a risk to the safety or health of the worker from falling through ice:

(a) a full body suit that protects the worker from hypothermia and buoyancy equipment that meets the following standards and has the following minimum buoyancy:

(i) CGSB Standard CAN/CGSB 65.7-M88, *Lifejackets, Inherently Buoyant Type*, and with a minimum buoyancy of 93 N or 21 lbs,

(ii) CGSB Standard CAN/CGSB 65.11-M88, *Personal Flotation Devices*, and with a minimum buoyancy of 69 N or 15.5 lbs,

(iii) CGSB Standard CAN/CGSB 65-GP-14M, *Lifejackets, Inherently Buoyant, Standard Type*, and with a minimum buoyancy of 125 N or 28 lbs;

(b) a full body flotation suit that both meets the buoyancy requirements under clause (a) and protects the worker from hypothermia.

6.17(4) If a worker is required or permitted to work on ice,

(a) an employer must ensure that the worker is instructed that he or she must wear the personal protective equipment provided under subsection (3) at all times while on the ice; and

(b) the worker must wear the personal protective equipment at all times while on the ice.

6.17(5) If a worker works alone on a boat,

(a) an employer must ensure that the worker is

(i) provided with a life jacket or personal flotation device, and

(ii) instructed that he or she must wear the jacket or device at all times while working; and

(b) the worker must wear the jacket or device at all times while working.

Definition: "ice"

6.17(6) In subsections (3) and (4), "**ice**" means ice that is

(a) over water, where the water is more than one metre deep; or

(b) over any other material into which a worker could sink more than one metre.

All-terrain vehicles and snowmobiles

6.18(1) An employer must ensure that a worker who is required or permitted to travel in or on the following is provided with protective headwear, including, where required, a liner, cold weather face guard and an eye protector for working in cold conditions:

(a) an all-terrain vehicle or a snowmobile, as defined in *The Off-Road Vehicles Act*;

(b) a towed conveyance, being a sled, cutter, trailer, toboggan or carrier that may be towed by a snowmobile or an all-terrain vehicle.

6.18(2) Subsection (1) does not apply where the all-terrain vehicle is equipped with roll-over protective structures and enclosed by a cab that is an integral part of the vehicle.

PART 7

STORAGE OF MATERIALS, EQUIPMENT, MACHINES AND TOOLS

General requirement re storage

7.1 An employer must ensure that all workplace materials, equipment, machines and tools are stored in a manner that does not create a risk to the safety or health of a worker or affect the safe operation of the workplace.

Safe loading conditions — permanent or temporary building or structure

7.2(1) An employer must ensure that the safe loading conditions for a permanent or temporary building or structure, as specified in the *Manitoba Building Code* or the design specifications of a professional engineer, are not exceeded

- (a) during its construction; or
- (b) when it is used to store materials, equipment, machines or tools.

7.2(2) If it appears that the loading conditions specified in subsection (1) may be exceeded when the use of a building or structure is changed, the employer must ensure that the loading conditions respecting the changed use are certified in advance of the change in use as being safe by a professional engineer.

Storage beneath electrical lines

7.3 An employer must obtain the written approval of the electrical authority having jurisdiction before storing machinery, materials or equipment beneath an outdoor overhead electrical line.

Design of racking

7.4(1) An employer must ensure that all racks and frames used to store materials, equipment, machines or tools are

- (a) designed, constructed and maintained to support the load placed on them; and
- (b) placed on firm foundations that can support the load.

7.4(2) An employer must ensure that commercially manufactured racks and frames are installed, used and maintained in accordance with the manufacturer's specifications.

7.4(3) An employer must ensure that racks that exceed a 3:1 height-to-depth ratio are suitably anchored, externally braced or properly secured to a building or structure.

7.4(4) An employer must ensure that all racks and frames used outdoors to store materials, equipment, machines or tools are designed, constructed and maintained to support loads placed on them by wind, wind gusts and other environmental conditions.

Risks re powered mobile equipment

7.5 When there is a risk that powered mobile equipment may collide with a rack column, an employer must provide

- (a) a post or guardrail connected to the floor around the exposed column that is capable of absorbing the impact of the powered mobile equipment; or
- (b) a suitable means of reinforcing the exposed column by a device secured to the column.

Stacking material, including brick, steel and bags

7.6 An employer must ensure that

- (a) materials are stored on level and stable platforms and are not piled to a height that could endanger the stability of the pile;
- (b) without limiting clause (a),
 - (i) bricks or other masonry building materials are not piled more than 2 m high, unless the pile is tapered back to one-half block per tier above the two metre level,
 - (ii) structural steel material, including poles, pipe, or bar stock, are stacked in racks or frames, or otherwise suitably restrained to prevent movement, and
 - (iii) bagged or loose materials are supported to prevent movement; and
- (c) if materials are stored outdoors, the effect of wind, wind gusts and other environmental conditions are considered when determining the manner of stacking and storing the material.

PART 8

MUSCULOSKELETAL INJURIES

Risk assessment

8.1(1) When an employer is aware, or ought reasonably to have been aware, or has been advised, that a work activity creates a risk of musculoskeletal injury, the employer must

- (a) ensure that the risk is assessed; and
- (b) on the basis of the assessment, implement control measures to eliminate or reduce, so far as is reasonably practicable, the risk of musculoskeletal injury to the worker.

8.1(2) The control measures may include one or more of the following:

- (a) providing, positioning and maintaining equipment that is designed and constructed to reduce or eliminate the risk of musculoskeletal injury;
- (b) developing and implementing safe work procedures to eliminate or reduce the risk of musculoskeletal injuries;
- (c) implementing work schedules that incorporate rest and recovery periods, changes to workload or other arrangements for alternating work;
- (d) providing personal protective equipment in accordance with Part 6 (Personal Protective Equipment).

8.1(3) An employer must

- (a) monitor the effectiveness of any control measure implemented to eliminate or reduce the risk of musculoskeletal injury; and
- (b) where the monitoring identifies that a risk of musculoskeletal injury is not being or has not been eliminated or reduced, implement further control measures, where it is reasonably practicable to do so.

Duty to inform workers

8.2 An employer must ensure that every worker who may be exposed to a risk of musculoskeletal injury

- (a) is informed of the risk and of the signs and common symptoms of any musculoskeletal injury associated with the worker's work; and
- (b) receives instruction and training respecting any control measure implemented by the employer.

PART 9

WORKING ALONE OR IN ISOLATION

Application

9.1 This Part applies to every workplace where a worker works alone or works in isolation.

Risk identification

9.2(1) When a worker works alone or works in isolation, an employer must identify the risks arising from the conditions and circumstances of the worker's work in consultation with

- (a) the committee at the workplace;
- (b) the representative at the workplace; or
- (c) when there is no committee or representative, the workers at the workplace.

9.2(2) An employer must, so far as is reasonably practicable, take steps to eliminate or reduce the identified risks to workers working alone or working in isolation.

Safe work procedures

9.3(1) An employer must

- (a) develop and implement safe work procedures to eliminate or reduce the identified risks to workers working alone or working in isolation;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

9.3(2) The safe work procedures must include

- (a) the establishment of an effective communication system that consists of
 - (i) radio communication,
 - (ii) telephone or cellular phone communication, or
 - (iii) any other means that provides effective communication given the risks involved;
- (b) any of the following:
 - (i) a system of regular contact by the employer with the worker working alone or in isolation,
 - (ii) limitations on or prohibitions of specified activities,
 - (iii) the establishment of training requirements; and
- (c) where applicable, the provision of emergency supplies for use in travelling or working under conditions of extreme cold or other inclement weather conditions.

9.3(3) An employer must post a copy of the safe work procedures in a conspicuous place at the workplace.

9.3(4) An employer must review and revise the procedures not less than every three years or sooner if circumstances at a workplace change in a way that poses a risk to the safety or health of a worker

working alone or in isolation.

PART 10

HARASSMENT

Harassment prevention policy

10.1(1) An employer must

- (a) develop and implement a written policy to prevent harassment in the workplace; and
- (b) ensure that workers comply with the harassment prevention policy.

10.1(2) The harassment prevention policy must be developed in consultation with

- (a) the committee at the workplace;
- (b) the representative at the workplace; or
- (c) when there is no committee or representative, the workers at the workplace.

Required statements

10.2(1) The harassment prevention policy must include the following statements:

- (a) every worker is entitled to work free of harassment;
- (b) the employer must ensure, so far as is reasonably practicable, that no worker is subjected to harassment in the workplace;
- (c) the employer will take corrective action respecting any person under the employer's direction who subjects a worker to harassment;
- (d) the employer will not disclose the name of a complainant or an alleged harasser or the circumstances related to the complaint to any person except where disclosure is
 - (i) necessary to investigate the complaint or take corrective action with respect to the complaint, or
 - (ii) required by law;
- (e) a worker has the right to file a complaint with the Manitoba Human Rights Commission;
- (f) the employer's harassment prevention policy is not intended to discourage or prevent the complainant from exercising any other legal rights pursuant to any other law.

10.2(2) The harassment prevention policy must provide information on the following procedures under the policy:

- (a) how to make a harassment complaint;
- (b) how a harassment complaint will be investigated;
- (c) how the complainant and alleged harasser will be informed of the results of the investigation.

Posting policy

10.3 An employer must post a copy of the harassment prevention policy in a conspicuous place at the workplace.

PART 11

VIOLENCE IN THE WORKPLACE

Risk identification and assessment

11.1(1) An employer must identify and assess the risk of violence in the workplace in consultation with

- (a) the committee at the workplace;
- (b) the representative at the workplace; or
- (c) when there is no committee or representative, the workers at the workplace.

11.1(2) When a risk of violence in the workplace is identified, an employer must

- (a) develop and implement a violence prevention policy in consultation with the same persons that conducted the assessment of the risk of violence under subsection (1);
- (b) train workers in the violence prevention policy; and
- (c) ensure that workers comply with the violence prevention policy.

11.1(3) The violence prevention policy must include the following statements:

- (a) the employer must ensure, so far as is reasonably practicable, that no worker is subjected to violence in the workplace;
- (b) the employer will take corrective action respecting any person under the employer's direction who subjects a worker to violence;
- (c) the employer will not disclose the name of a complainant or the circumstances related to the complaint to any person except where disclosure is
 - (i) necessary in order to investigate the complaint,
 - (ii) required in order to take corrective action in response to the complaint, or
 - (iii) required by law;
- (d) the violence prevention policy is not intended to discourage or prevent the complainant from exercising any other legal rights pursuant to any other law.

11.1(4) The violence prevention policy must provide information on the following matters:

- (a) how to eliminate the risk of violence to a worker;
- (b) where elimination of the risk of violence to a worker is not possible, how to minimize the risk of violence to a worker;
- (c) how to report an incident of violence;
- (d) how an incident of violence will be investigated.

11.1(5) An employer must post a copy of the violence prevention policy in a conspicuous place at the workplace.

Duty to inform workers

11.2(1) When a risk of violence in the workplace is identified, an employer must inform a worker about the risk of violence in the workplace.

11.2(2) The duty to inform a worker about the risk of violence includes a duty to provide information on

(a) the nature and extent of the risk; and

(b) the risk of violence from persons whom workers are likely to encounter in the course of their work.

PART 12

HEARING CONSERVATION AND NOISE CONTROL

Sound control design

12.1 An employer must ensure that a new workplace, a significant physical alteration, renovation or repair to an existing workplace or a work process or any significant equipment that is introduced to the workplace is designed and constructed so that the continuous noise level generated

(a) is not more than 85 dBA; or

(b) is as low as is reasonably practicable, where it is not reasonably practicable to meet the standard under clause (a).

Noise exposure assessed and reported

12.2 An employer must conduct a noise exposure assessment at the workplace in accordance with CAN/CSA Standard-Z107.56-06, *Measurement of Occupational Exposure to Noise*, and prepare and post in a conspicuous place in the workplace a written report of the assessment, if

(a) a worker is or is likely to be exposed to noise at a workplace in excess of 80 dBA;

(b) there is

(i) an alteration, renovation or repair of the workplace,

(ii) new equipment introduced in the workplace, or

(iii) a modification done to a work process,

that may result in a significant change in a worker's exposure to noise; or

(c) a worker provides the employer with evidence of an occupationally induced hearing loss.

Hearing protection

12.3 If a worker is or is likely to be exposed to noise in a workplace that exceeds 80 dBA Lex but does not exceed 85 dBA Lex, the employer must

(a) inform a worker about the hazards of the level of noise; and

(b) on the request of the worker, provide him or her with

(i) a hearing protector that complies with CAN/CSA Standard-Z94.2-02, *Hearing Protection Devices — Performance, Selection, Care, and Use*, and

(ii) information about the selection, use and care of the hearing protector.

Control measures if exposure exceeds 85 dBA Lex

12.4(1) When a noise exposure assessment conducted under this Part indicates a worker is exposed to noise in the workplace that is more than 85 dBA Lex, and if reasonably practicable, an employer must implement sound control measures that reduce the noise to which the worker is exposed to 85 dBA Lex or less.

12.4(2) When it is not reasonably practicable to implement sound control measures, or the sound control measures implemented by an employer do not reduce the worker's noise exposure to

85 dBA Lex or less, an employer must

- (a) inform the worker about the hazards of the level of noise;
- (b) provide the worker with
 - (i) a hearing protector that
 - (A) complies with CAN/CSA Z94.2-02, *Hearing Protection Devices — Performance, Selection, Care, and Use*, and
 - (B) reduces the worker's noise exposure to 85 dBA Lex or less, and
 - (ii) information about the selection, use and care of the hearing protector; and
- (c) at the employer's expense, provide the worker with the following audiometric tests:
 - (i) an initial baseline test as soon as is reasonably practicable but not later than 70 days after the worker is initially exposed to that noise level,
 - (ii) a further test at least once every year after the initial baseline test.

12.4(3) In order to ensure the tests and reports required under this Part are completed, an employer obligated to provide audiometric testing must, at the employer's expense, engage a physician or audiologist.

12.4(4) Only a physician, an audiologist or an industrial audiometric technician engaged by the employer may perform the audiometric testing described in clause (2)(c).

Testing and results

12.5(1) An audiometric test required under clause 12.4(2)(c) must be conducted

- (a) using an audiometer that
 - (i) meets the requirements of CAN/CSA CAN3-Z107.4-M86 (R2001), *Pure Tone Air Conduction Audiometers for Hearing Conservation and for Screening*, and
 - (ii) provides pure tones of selected frequencies at calibrated outputs and is used to measure pure tone air conduction hearing threshold levels; and
- (b) in a location where the octave band sound pressure level is not more than the octave band sound pressure level indicated in Column 1 of the following table for each octave band centre frequency set out in Column 2.

Column 1 Octave Band Sound Pressure Level (Decibels)	Column 2 Octave Band Center Frequency (Hz)
30	500
30	1000
35	2000
42	4000
45	8000

12.5(2) An industrial audiometric technician, physician or audiologist administering an audiometric test must

- (a) comply with the requirements of subsection (1);
- (b) record the results of the test;
- (c) retain a copy of the test record for a period of at least 10 years from the date of the test; and
- (d) provide a copy of the test results to the worker.

12.5(3) If the results of an audiometric test indicate an abnormal audiogram or show an abnormal shift, the industrial audiometric technician, physician or audiologist administering the test must

- (a) advise the worker of the test results;
- (b) request that the worker provide a relevant medical history; and
- (c) if he or she is not the physician or audiologist engaged by the employer under subsection 12.4(3), forward the results, the relevant medical history and a baseline audiogram to that physician or audiologist.

12.5(4) Every worker must provide a relevant medical history if requested to do so under clause (3)(b).

12.5(5) When a physician or audiologist engaged by an employer receives results of an audiometric test that indicate an abnormal audiogram or show an abnormal shift, the physician or audiologist must

- (a) review the test results, the worker's medical history and the baseline audiogram;
- (b) prepare a written report setting out
 - (i) his or her interpretation of the results, including his or her opinion as to whether the abnormal audiogram or abnormal shift is a result of exposure to noise at the workplace, and
 - (ii) any recommendations with respect to actions to be taken by the employer to conserve the worker's hearing; and
- (c) provide a copy of the report to the employer and the worker.

12.5(6) The physician or audiologist who prepares the report under subsection (5) must retain the test record and the report for a period of at least 10 years from the date the report is prepared.

Annual report

12.6(1) An employer who is required to provide audiometric testing must ensure that an annual written report is prepared that sets out a detailed account of the steps taken by the employer to comply with the requirements of this Part.

12.6(2) The annual report must include

- (a) the sound control measures taken at the workplace; and
- (b) statistics in respect of the number of workers
 - (i) who received audiometric testing under clause 12.4(2)(c),

(ii) who experienced an abnormal audiogram or an abnormal shift, and

(iii) whose abnormal audiogram and abnormal shift was, in the opinion of the physician or audiologist who reviewed the test results, a result of exposure to noise at the workplace.

12.6(3) Within 30 days after having the annual report prepared, an employer must provide a copy of it to

(a) the physician or audiologist engaged by the employer under subsection 12.4(3);

(b) the committee or, if there is no committee, the representative; and

(c) the director.

Part 6 applies to hearing protectors provided

12.7 A hearing protector provided by an employer under this Part is personal protective equipment and the obligations of the employer and the worker under Part 6 (Personal Protective Equipment) apply to the hearing protector provided.

Warning signs

12.8 An employer must post a warning sign — indicating that any person entering the workplace or work area risks exposure to a noise level that is harmful to hearing — at the entrance to any workplace or work area where the noise level is more than 85 dBA.

INDUSTRIAL AUDIOMETRIC TECHNICIANS

Industrial audiometric technician licences

12.9(1) The director may issue an industrial audiometric technician's licence to a person who

(a) makes application to the director in a form approved by the director;

(b) satisfies the director that he or she has successfully completed a course of study in industrial audiometry approved by the director; and

(c) pays a fee of \$100.

12.9(2) An industrial audiometric technician's licence issued or renewed under this section remains valid for a period of five years, unless the director

(a) extends it; or

(b) revokes or suspends it sooner.

12.9(3) The director must grant a renewal of an industrial audiometric technician's licence if the licence holder

(a) files with the director an application for renewal, in the form approved by the director, at least 60 days before his or her existing licence expires; and

(b) pays a fee of \$100.

12.9(4) The director may extend the time for filing an application for renewal under clause (3)(a).

Requirement re ongoing training

12.10 Every person who holds a licence issued under section 12.9 must, when and within the time specified by the director, complete a refresher course of study in industrial audiometry specified by the director.

Director's suspension of licence

12.11(1) The director may suspend or revoke an industrial audiometric technician's licence if the director is of the opinion that the licence holder has failed to

- (a) complete the course of study required to be completed within the time specified by the director;
- (b) perform audiometric tests competently and in accordance with the provisions of this regulation; or
- (c) comply with the provisions of this Part.

12.11(2) When the director suspends or revokes the licence of an industrial audiometric technician, the director must promptly notify the person of the suspension or revocation and the procedure for seeking a reconsideration of the decision.

12.11(3) A person may request the director reconsider a suspension or revocation of his or her licence by filing a request with the director within 14 days after receiving notice that his or her licence has been suspended or revoked.

12.11(4) A request for a reconsideration must be in writing and must set out the grounds upon which the request is made.

12.11(5) The director must decide the request for reconsideration and may

- (a) confirm or rescind the suspension or revocation;
- (b) alter the length of the suspension; or
- (c) set out terms and conditions to be fulfilled by the person before allowing the person to hold an industrial audiometric technician's licence.

12.11(6) The director may hold a hearing when reconsidering a suspension or revocation under this section but is not required to do so.

12.11(7) If the director decides to hold a hearing the director

- (a) is not bound by the rules of evidence that apply to judicial proceedings; and
- (b) may establish rules of practice and procedure for the hearing.

Prohibition — industrial audiometric technicians

12.12 No person other than a person who holds a valid industrial audiometric technician's licence issued by the director may act as an industrial audiometric technician, or represent that he or she is entitled to act as an industrial audiometric technician under this Part.

PART 13

ENTRANCES, EXITS, STAIRWAYS AND LADDERS

ENTRANCES, EXITS AND STAIRWAYS

Safe access and egress

13.1(1) An employer and an owner must provide and maintain a safe means of access to and egress from

- (a) the workplace; and
- (b) all work-related areas at a workplace.

13.1(2) An employer and an owner must ensure that each means of access and egress

- (a) complies with the *Manitoba Building Code* and *Manitoba Fire Code*;
- (b) is free from all obstructions, including obstructions from materials and equipment and accumulations of waste and ice and snow; and
- (c) has sufficient traction to allow workers to move safely.

Temporary doorways: construction project site

13.2 An employer and a prime contractor must ensure that a temporary doorway used for access or egress at a construction project site

- (a) is designed and constructed to open outward from the workplace; and
- (b) is not locked in the closed position when a worker is at the site.

Doors

13.3(1) An employer must ensure that doors to and from a workplace or work area can be opened without substantial effort and are not obstructed.

13.3(2) When an enclosed area may create a risk to the safety or health of a worker entering it, an employer must ensure that a door used to enter or leave the area

- (a) is kept in good working order; and
- (b) has a means of opening it from the inside.

Secondary means of egress

13.4 An employer must ensure that there is a ready, convenient and safe secondary means of egress from the workplace that is conspicuously marked and readily usable at all times if

- (a) the primary means of egress from a workplace becomes unusable because of a malfunction of equipment or a work process; or
- (b) a worker could be isolated from the primary means of egress.

Emergency exits

13.5 An employer and an owner must ensure that emergency exits and means of egress from a workplace are conspicuously marked and designed to enable quick and unimpeded evacuation of the workplace.

Stairs to be provided

13.6(1) When work at a construction project site on a multi-storey building or structure has progressed to 10 or more metres above ground level, an employer and a prime contractor must ensure that permanent or temporary stairs to the ground are provided from each working level of the project.

13.6(2) Subsection (1) does not apply to the erection of structural framing.

13.6(3) Where the stairs would interfere with work on the uppermost working levels, an employer is not required to provide stairs within two storeys or 7 m vertically to the uppermost level.

LADDERS — GENERAL

Loads

13.7 Every ladder provided by an employer for use at a workplace must be designed and constructed and maintained to safely support any load that will be or is likely to be imposed on it.

Worker to inspect ladder

13.8 An employer must ensure that a worker inspects a ladder for defects prior to each use. A ladder found to be broken or defective may not be used until it has been repaired and restored to its original design specifications.

Metal ladders near electrical equipment

13.9 An employer must ensure that no worker uses a metal ladder or metal reinforced rails on a ladder near any exposed energized electrical circuits or equipment.

Coatings on wood ladders

13.10 An employer may not apply anything to a wood ladder, except

- (a) a transparent protective coating; and
- (b) a small identifying mark or symbol, which may be non-transparent.

PORTABLE LADDERS

Commercially manufactured portable ladder

13.11 An employer must ensure that a commercially manufactured portable ladder used at a workplace

- (a) complies with the applicable requirements of the following standards:
 - (i) CSA Standard CAN3-Z11-M81 (R2005), *Portable Ladders*,
 - (ii) ANSI Standard A14.1-2000, *American National Standard for Ladders — Wood — Safety Requirements*,
 - (iii) ANSI Standard A14.2-2000, *American National Standard for Ladders — Portable Metal — Safety Requirements*,
 - (iv) ANSI Standard A14.5-2000, *American National Standard for Ladders — Portable Reinforced Plastic — Safety Requirements*; and
- (b) is used and maintained in accordance with the manufacturer's specifications and safe

operating instructions.

Site-fabricated portable wood ladder

13.12 An employer must ensure that a portable wood ladder fabricated on the worksite for use by a worker

- (a) is constructed entirely from straight-grained, construction grade or better lumber that is free of
 - (i) loose knots, or knots greater than one-third the width or thickness of the material, and
 - (ii) sharp edges, splinters or shakes;
- (b) has side rails that are
 - (i) at least 400 mm but not more than 500 mm apart, and
 - (ii) not notched, tapered, lapped or spliced;
- (c) has evenly spaced rungs that are
 - (i) nailed directly to the edge of the side rails,
 - (ii) not more than 300 mm on centre,
 - (iii) at least nominal 25 mm × 100 mm, and
 - (iv) supported by filler blocks, of the same thickness as the rung, fastened between the rungs or secured by a single continuous wire; and
- (d) if its length is
 - (i) 5 m or less, has side rails measuring at least nominal 50 mm × 100 mm, or
 - (ii) more than 5 m, has side rails measuring at least nominal 50 mm × 150 mm.

Double width site-fabricated portable ladder

13.13 An employer must ensure that a portable wood ladder fabricated on the worksite for use by a worker which is of double width

- (a) is constructed entirely from straight-grained, construction grade or better lumber that is free of
 - (i) loose knots, or knots greater than one-third the width or thickness of the material, and
 - (ii) sharp edges, splinters or shakes;
- (b) has side rails that are not notched, tapered, lapped or spliced;
- (c) if its length is
 - (i) 5 m or less, has side rails measuring at least nominal 50 mm × 100 mm, or
 - (ii) more than 5 m, has side rails measuring at least nominal 50 mm × 150 mm;
- (d) is composed of three rails that are evenly spaced;
- (e) is at least 1.5 m wide; and

- (f) has evenly spaced rungs that
 - (i) are not more than 300 mm on centre,
 - (ii) are at least nominal 50 mm ×100 mm,
 - (iii) extend the full width of the ladder, and
 - (iv) are supported by filler blocks, of the same thickness as the rung, fastened between the rungs or secured by a single continuous wire.

Extension ladders

13.14(1) An employer must ensure that an extension ladder used by a worker

- (a) is equipped with locks that securely hold the sections of the ladder in the extended position; and
- (b) does not exceed
 - (i) 14.6 m in length, if it consists of two sections, or
 - (ii) 20 m in length, if it consists of more than two sections.

13.14(2) An employer must ensure that, if a section of an extension ladder is extended, the extended section overlaps another section for at least

- (a) one metre, for a ladder less than 11 m in length;
- (b) 1.25 m, for a ladder between 11 m and 15 m in length; or
- (c) 1.5 m, for a ladder over 15 m in length.

General limitation re length

13.15 An employer must ensure that no single portable ladder and no section of an extension ladder exceeds 9 m in length.

Portable ladders

13.16(1) When in use at a workplace, an employer must ensure that a portable ladder is secured against movement at all times during use and is placed on a stable, level base.

13.16(2) Without limiting subsection (1), an employer must ensure that

- (a) where a portable ladder is used as a means of access to a platform, roof or other landing, it extends at least one metre above the platform, roof or other landing; and
- (b) for a portable ladder other than a stepladder, it is placed against a structure so that the slope of the ladder is no more than 1:4.

Stepladders

13.17 An employer must ensure that a stepladder

- (a) is not more than 6 m high when set for use; and
- (b) has legs that are securely held in position by metal braces or an equivalent rigid support.

Workers using portable ladder

13.18 An employer must ensure that a worker using

- (a) a stepladder or other commercially manufactured portable ladder does so in accordance with the manufacturer's specifications and safe operating instructions; and
- (b) a portable ladder other than a stepladder
 - (i) does not extend any part of his or her body, except his or her arms, beyond the side rails of the ladder, and
 - (ii) maintains a three-point contact on the ladder at all times.

Prohibitions re use of portable ladder

13.19 An employer must ensure that a worker does not perform work from either of the top two rungs, steps or cleats of

- (a) a portable ladder other than a stepladder unless the manufacturer's specifications for the ladder permit it; or
- (b) a stepladder, unless
 - (i) it has a railed platform at the top, or
 - (ii) the manufacturer's specifications for the stepladder permit it.

FIXED LADDERS

Fixed ladders

13.20(1) An employer and an owner must ensure that a ladder that is permanently fixed to a supporting building or structure

- (a) is designed by a professional engineer, as is its permanent attachment system to the building or structure;
- (b) is constructed, erected and installed in accordance with the specifications certified by a professional engineer;
- (c) is equipped with a suitable safety gate, or equally effective means of protection from falling, at all access openings in floors, platforms and rest platforms;
- (d) where it is in a vertical position or at an angle of not more than 25° to the vertical, it
 - (i) meets the requirements of the ANSI Standard, ANSI 14.3-2002, *Safety Requirements for Fixed Ladders American National Standard for Ladders — Fixed — Safety Requirement*,
 - (ii) has side rails that extend at least one metre above any platform, roof or other landing on the building or structure to which it is fixed,
 - (iii) has an opening in the platform, roof or other landing that does not exceed 750 mm × by 750 mm, and
 - (iv) is equipped, if it is more than 5 m high, with ladder cages and rest platforms, at intervals of not more than 5 m, or a fall protection system that meets the requirements of Part 14 (Fall Protection); and
- (e) where it is fixed at an angle of more than 25° to the vertical or more than one horizontal to

two vertical, it is equipped with

- (i) a handrail that extends its entire length and is between 800 mm and 920 mm above the front edge of the treads,
- (ii) treads that are level and uniform in width and depth and in the vertical distances between them throughout the length of the ladder, and
- (iii) on an open side, both a handrail and an intermediate rail or equivalent safeguard.

13.20(2) Clause (1)(c) does not apply to

- (a) a landing that is serviced by more than one fixed ladder; or
- (b) a fixed ladder installed before the coming into force of this regulation.

Fixed ladders re multi-level buildings

13.21 An employer and an owner must ensure that a fixed ladder that complies with the requirements of section 13.20 is used to provide access to every level of a multi-level building that is more than 4 m above the preceding level.

PART 14

FALL PROTECTION

Application

14.1(1) This Part applies to every workplace where there is a risk of a worker falling

- (a) a vertical distance of 3 m or more;
- (b) a vertical distance of less than 3 m where there is an increased risk of injury due to the surface or item on which the worker might land;
- (c) into operating machinery or moving parts of the machinery;
- (d) into water or another liquid;
- (e) into or onto a hazardous substance or object;
- (f) through an opening on a work surface; or
- (g) a vertical distance of more than 1.2 m from an area used as a path for a wheelbarrow or similar equipment.

14.1(2) This Part does not apply to a workplace that is subject to Division 2 of Part 31 (Roof Work).

Safe work procedures

14.2(1) An employer must

- (a) develop and implement safe work procedures to prevent falls at the workplace;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

14.2(2) The safe work procedures must identify the fall hazards at the workplace and set out the measures that will be used to prevent falls at the workplace.

14.2(3) When this Part requires the use of a guardrail system or fall protection system at a workplace, the safe work procedures must address the following issues:

- (a) the location of each guardrail system or fall protection system to be used at the workplace;
- (b) the procedures used to assemble, maintain, inspect, use and disassemble a fall protection system;
- (c) where applicable, the rescue procedures to be used for rescuing a worker after a fall has been arrested.

GUARDRAIL SYSTEMS

Guardrail system requirements

14.3 Subject to section 14.6, an employer must ensure that a guardrail system is used where

there is a risk of a worker falling in any of the circumstances set out in subsection 14.1(1).

Guardrail requirements

14.4(1) An employer must ensure that a guardrail

(a) is at least 900 mm high and not more than 1,060 mm above the working surface, with an intermediate rail at between 450 and 530 mm above the working surface; and

(b) is constructed and secured to resist a static load of 900 N in any direction in which the load may be applied at any point on the top rail and on any intermediate rail.

14.4(2) A guardrail must have a toe board securely fastened to the posts and extending from the surface of the working area to a height of at least 125 mm when there is a risk of falling objects.

14.4(3) If a guardrail is made from wood, it must

(a) be free from splinters and protruding nails; and

(b) have a top and mid rail of at least 38 mm × 89 mm securely supported on posts of at least 38 mm × 89 mm and spaced at not more than 2.4 m.

Temporary guardrail removal

14.5 An employer may temporarily remove a guardrail when it is necessary to do so to facilitate work in the immediate area. The employer must ensure that any worker in the area uses a fall protection system while the guardrail is removed.

FALL PROTECTION SYSTEMS

Fall protection systems

14.6 When the use of a guardrail system is not reasonably practicable or would not be effective, an employer must ensure that the worker is protected by at least one of the following fall protection systems:

(a) a travel restraint system;

(b) a fall arrest system;

(c) a safety net;

(d) another fall protection system approved by the director.

Requirements for fall protection systems

14.7(1) An employer must ensure that a fall protection system

(a) is designed, installed, tested, used and maintained in accordance with the applicable requirements of the following standards:

(i) CSA Standard Z259.1-05, *Body Belts and Saddles for Work Positioning and Travel Restraint*,

(ii) CAN/CSA Standard Z259.2.1-98 (R2004), *Fall Arresters, Vertical Lifelines, and Rails*,

(iii) CAN/CSA Standard Z259.2.2-98 (R2004), *Self-Retracting Devices for Personal Fall-Arrest Systems*,

- (iv) CSA Standard Z259.2.3-99 (R2004), *Descent Control Devices*,
- (v) CSA Standard Z259.10-06, *Full Body Harnesses*,
- (vi) CSA Standard Z259.11-05, *Energy Absorbers and Lanyards*,
- (vii) CAN/CSA Standard Z259.12-01 (R2006), *Connecting Components for Personal Fall Arrest Systems (PFAS)*,
- (viii) CSA Standard Z259.16-04, *Design of Active Fall-Protection Systems*,
- (ix) CSA Standard Z259.13-04, *Flexible Horizontal Lifeline Systems*,
- (x) ANSI Standard 10.11-1989 (R1998), *Personnel & Debris Nets for Construction & Demolition Operations — Safety Requirements for Personnel and Debris Nets — American National Standard for Construction and Demolition Operations*;

(b) designed and certified as safe by a professional engineer and installed, tested, used and maintained in accordance with the specifications certified by the professional engineer.

14.7(2) Despite the reference to safety belts in CSA Standard Z259.1-05, *Body Belts and Saddles for Work Positioning and Travel Restraint*, an employer must ensure that a safety belt is not used as part of a fall protection system at the workplace.

Inspection and maintenance

14.8(1) An employer must ensure that the equipment used as part of a fall protection system is

- (a) inspected before use on each work shift by
 - (i) subject to subsection (2), the worker who uses the fall protection system, or
 - (ii) a competent person other than the worker using the system;
- (b) kept free from any substance or condition that could contribute to deterioration of the equipment; and
- (c) maintained in good working order and in accordance with the manufacturer's specifications.

14.8(2) When a safety net is used, the net must be inspected by a competent person before each work shift.

Inspection after fall arrest

14.9 After a fall protection system has arrested the fall of a worker, an employer must ensure that the system is not returned to service until it has been inspected and certified as safe by the manufacturer or a professional engineer.

Defective components

14.10 When a component of a fall protection system is defective in condition or function, an employer must not use the component and must immediately remove it from service and either return it to the manufacturer to be repaired or replaced or destroy it.

Training

14.11 An employer must ensure that a worker using a fall protection system is trained in its use, care and inspection by a competent person.

Travel restraint systems

14.12 When a travel restraint system is used, an employer must ensure that

- (a) the travel restraint system consists of a full body harness with adequate attachment points;
- (b) the full body harness is attached by a lifeline or lanyard to a fixed support that meets the requirements of section 14.14 (fixed support system requirements); and
- (c) the length of the lifeline or the lanyard is selected so that the worker can only proceed to within one metre of an opening or edge.

Fall arrest systems

14.13(1) When a fall arrest system is used, an employer must ensure that the system

- (a) consists of a full body harness with adequate attachment points;
- (b) is attached by a lifeline or lanyard to an independent fixed support that meets the requirements of subsection 14.14(1);
- (c) is designed in accordance with CSA Standard Z259.16-04, *Design of Active Fall-Protection Systems* and CSA Standard Z259.13-04, *Flexible Horizontal Lifeline Systems*;
- (d) is manufactured so that a worker's free fall distance does not exceed 1.2 m excluding the increase in the total fall distance resulting from the use of shock absorbers; and
- (e) is arranged so that a worker cannot
 - (i) hit the ground or an object or level below the work, or
 - (ii) swing in a manner that poses a risk to the safety or health of a worker.

14.13(2) When a lanyard referred to in clause (1)(b) is equipped with a shock absorber or other similar device, the shock absorber or device must comply with CSA Standard Z259.11-05, *Energy Absorbers and Lanyards*.

14.13(3) An employer must ensure that a fall arrest system does not include a shock absorber if wearing or using one could cause a worker to hit the ground or an object or level below the work.

14.13(4) An employer must ensure that the fall arrest system does not subject a worker who falls to a peak dynamic fall arrest force greater than 8 kN.

Fixed support system requirements

14.14(1) The owner of a building or structure must ensure that a permanent anchorage system used as the fixed support in a travel restraint system or fall arrest system for that building meets the following requirements:

- (a) the anchor has an ultimate capacity of at least 22.2 kN in any direction in which the load may be applied for each worker attached;
- (b) the anchorage system is certified by a professional engineer as having the required load capacity;
- (c) where the anchorage system is used in conjunction with a suspended work platform, the system is designed, constructed and used in accordance with CAN/CSA Standard-Z91-02, *Health and Safety Code for Suspended Equipment Operations* and CAN/CSA-Z271-98 (R2004), *Safety Code for Suspended Elevating Platforms*.

14.14(2) When a permanent anchorage system cannot be used at a workplace, an employer must ensure that the temporary fixed support in a travel restraint system or fall arrest system meets the

following requirements:

- (a) when a fall arrest system without a shock absorber is used, a support used in a fall arrest system must be capable of supporting a static force of at least 8 kN without exceeding the allowable unit stress for each material used in the fabrication of the anchor point;
- (b) when a shock absorber is used in a fall arrest system, the support must be capable of supporting a static force of at least 6 kN without exceeding the allowable unit stress for each material used in the fabrication of the anchor point;
- (c) a support used in a travel restraint system must be capable of supporting a static force of at least 2 kN without exceeding the allowable unit stress for each material used in the fabrication of the anchor point.

No sharp edges

14.15 An employer must ensure that no component of a travel restraint system or a fall arrest system comes into contact with a sharp edge that could cut, chafe or abrade any component of the system.

Fall arrest systems and powered mobile equipment

14.16 When a fall arrest system is used on powered mobile equipment, an employer must ensure that the system is attached to an anchor in accordance with the specifications of the manufacturer of the powered mobile equipment.

Fall protection on vehicles

14.17 When a worker may have to climb on a vehicle or its load at any location other than a garage, warehouse or other permanent facility and it is not reasonably practicable to provide a fall protection system for the worker, an employer must

- (a) take steps to eliminate or reduce the need for a worker to climb onto the vehicle or its load; and
- (b) provide information, instruction and training to a worker on safe work procedures for climbing or working on the vehicle or its load.

Full body harness

14.18 When a worker uses a full body harness, an employer must ensure that

- (a) the full-body harness and connecting linkage are used, maintained, adjusted and stored in accordance with the manufacturer's specifications; and
- (b) the full-body harness is properly fitted to the worker.

Lanyards

14.19 When a worker uses a lanyard, an employer must ensure that the lanyard is

- (a) as short as work conditions permit;
- (b) equipped with suitable snap hooks;
- (c) free of imperfections, knots and splices, other than end terminations;
- (d) protected by padding where it passes over sharp edges;
- (e) protected from heat, flame, abrasive or corrosive materials during use;
- (f) used, maintained, adjusted and stored in accordance with the manufacturer's specifications; and

(g) used by only one worker at a time.

Lifeline requirements

14.20 When a worker uses a lifeline, an employer must ensure that the lifeline is

- (a) suitable for the conditions in which the lifeline is to be used, having regard to factors including strength, abrasion resistance, extensibility and chemical stability;
- (b) free of imperfections, knots and splices, other than end terminations;
- (c) protected by padding where the lifeline passes over sharp edges;
- (d) protected from heat, flame, abrasive or corrosive materials during use;
- (e) fastened to a secure anchor point or anchor points as required under this Part; and
- (f) installed, used and maintained in accordance with the manufacturer's specifications or specifications certified by a professional engineer.

Vertical lifelines

14.21 When a worker uses a vertical lifeline, an employer must ensure that

- (a) the lower end of the vertical lifeline extends to the ground or to a safe landing; and
- (b) the vertical lifeline is protected at the lower end to ensure that the line cannot be fouled by equipment.

Horizontal lifelines

14.22(1) When a worker uses a horizontal lifeline system, an employer must ensure that the specifications for the system are kept at the worksite and are readily accessible by a worker.

14.22(2) The specifications for a horizontal lifeline system must address the following issues:

- (a) the arrangement of the system, including the anchorage or fixed support system;
- (b) the components used;
- (c) the number of workers that can safely be attached to it;
- (d) the instructions for installation or erection;
- (e) the maximum load capacity of the system.

14.22(3) When a permanent horizontal lifeline system from a manufacturer is installed at a workplace, an employer must ensure that, before the system is put into use, the system is certified as being properly installed according to the manufacturer's specifications by one of the following:

- (a) the manufacturer;
- (b) a person authorized by the manufacturer;
- (c) a professional engineer.

14.22(4) When a permanent horizontal lifeline system designed by a professional engineer is installed at a workplace, the employer must ensure that, before the system is put into use, the system is certified as being properly installed according to the engineer's specifications by a professional engineer.

Inspection and testing of safety nets

14.23(1) When a safety net is used, an employer must ensure that a professional engineer or a competent person under a professional engineer's supervision inspects and tests the installation of the safety net before it is put in service.

14.23(2) An employer must ensure that the safety net

- (a) is installed not more than 7.70 m below the work area; and
- (b) extends at least 2.5 m on all sides beyond the work area.

RESIDENTIAL CONSTRUCTION

Erection of second floor exterior wall

14.24(1) When a worker is required to erect a second floor exterior wall on a residential construction project in circumstances where it is not reasonably practicable to provide a fall protection system for the worker, an employer must ensure that an alternate safe work procedure is implemented to protect the safety and health of the worker.

14.24(2) A safe work procedure implemented under subsection (1) must offer protection to the worker that is equal or greater to the protection provided by a fall protection system that meets the requirements of this Part.

Installation of wood trusses

14.25(1) When a worker is required to install wood trusses on a residential construction project in circumstances where it is not reasonably practicable to provide a fall protection system for the worker before the installation of roof sheeting, an employer must ensure that an alternate safe work procedure is implemented to protect the safety and health of the worker.

14.25(2) A safe work procedure implemented under subsection (1) must

- (a) ensure that no work is performed by a worker while standing on the top plate of the exterior walls of the structure; and
- (b) offer protection to the worker that is equal or greater to the protection provided by a fall protection system that meets the requirements of this Part.

Training and compliance

14.26 When an employer implements an alternate safe work procedure under section 14.24 or 14.25, the employer must

- (a) provide information, instruction and training on the safe work procedures to workers; and
- (b) ensure that workers comply with the safe work procedures.

BUILDING REQUIREMENTS

Required roof protection

14.27(1) The owner of a building that is more than five storeys tall or 15 m in height that is constructed after the coming into force of this regulation must either

- (a) provide a permanent perimeter guardrail system that meets the requirements of this Part; or
- (b) provide roof-level protection consisting of
 - (i) a continuous parapet or fencing not less than 900 mm in height, or
 - (ii) a system of lifeline anchors with one anchor set back a minimum of 3 m from the edge of the roof for every six linear metres of unprotected roof edge.

14.27(2) When roof-level protection on a building consists of a system of lifeline anchors, the owner of the building must ensure that

- (a) each lifeline anchor is
 - (i) capable of resisting a force of 22.2 kN in any direction in which the load may be applied for each worker attached, and
 - (ii) made of stainless steel or other material resistant to corrosion;
- (b) the anchorage system is certified by a professional engineer as having the required load capacity; and
- (c) where an eyebolt is used as an anchor, that the interior opening of the eye measures at least 38 mm.

Steel frame building requirements

14.28 During the construction of a steel frame building, the owner of the building and the prime contractor responsible for the construction of the building must ensure that the structural components of the building designed to accommodate a fall protection system

- (a) are designed, approved and certified as safe by a professional engineer; and
- (b) include
 - (i) double connections at each column and at beam webs over a column,
 - (ii) at least four anchor bolts per column, and
 - (iii) perimeter columns that extend at least one metre above the finished floor to permit the installation of perimeter safety cables.

Definition: "anchor"

14.29 In this Part, "**anchor**" means a secure point of attachment for a lifeline or lanyard.

PART 15
CONFINED SPACES

GENERAL REQUIREMENTS

Application

15.1 This Part applies to every workplace where a worker works in a confined space.

Safe work procedures

15.2(1) An employer must

- (a) develop and implement safe work procedures for working in a confined space;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

15.2(2) The safe work procedures must include

- (a) procedures for recognizing the risks associated with working in the confined space;
- (b) procedures for isolating — including blanking, disconnecting, interrupting and locking out — pipes, lines and sources of energy from a confined space;
- (c) safety and personal protective equipment to be used;
- (d) procedures for communicating with a standby worker;
- (e) an emergency response plan and rescue procedures to be implemented in the event of an accident or other emergency in a confined space; and
- (f) information about the entry permit system under section 15.4.

General requirements

15.3 Before requiring a worker to enter or work in a confined space, an employer must

- (a) identify and assess the risks to safety or health a worker is likely to be exposed to while in the confined space;
- (b) identify and take measures to reduce, control or eliminate the risks to safety or health associated with the confined space, including
 - (i) using alternative means of performing the work to be done that will not require the worker to enter the space, and
 - (ii) making alterations to the physical characteristics of the space that may be necessary to ensure safe access to and egress from all accessible parts of the space;
- (c) identify the appropriate type and frequency of tests and inspections necessary to determine the likelihood of a worker being exposed to any of the identified risks, and ensure those tests and inspections are completed by a competent person;
- (d) identify the safety and personal protective equipment required to be used or worn in the confined space by a worker while he or she performs work;

(e) identify emergency and personal protective equipment required by a worker who undertakes rescue operations in the event of an accident or other emergency within the confined space; and

(f) establish and implement an entry permit system for a confined space, in accordance with section 15.4.

Entry permit

15.4(1) An entry permit system established by an employer under clause 15.3(f) must

(a) ensure that an entry permit containing the following information is completed and signed by a competent person before a worker enters a confined space:

(i) the location of the confined space,

(ii) the name of each worker who will enter the confined space and the reason for their entry,

(iii) the date and time during which the permit is valid; and

(b) specify

(i) the work being done in the confined space,

(ii) the safe work procedures for entering, being in and leaving a confined space, and

(iii) all hazards to the safety and health of a worker identified by the risk assessment carried out under clause 15.3(a).

15.4(2) An employer must ensure that a copy of the completed and signed entry permit is readily available at the site of the confined space.

Review of entry permit

15.5(1) An employer must review and revise an entry permit when

(a) a work activity in a confined space changes;

(b) circumstances at the workplace or in a confined space change in a way that poses a risk to the safety or health of a worker; or

(c) any of the workers or information listed in the permit changes.

15.5(2) An employer must ensure that a worker who may be affected by a change to an entry permit or a work activity in a confined space is informed of the change.

No unauthorized entry

15.6 An employer and an owner must take all steps reasonably practicable to prevent any person, other than a worker who is required or permitted to do so, from entering a confined space.

SPECIFIC REQUIREMENTS

Requirements before confined space is entered

15.7(1) An employer must, before requiring or permitting a worker to enter or work in a confined space,

(a) ensure that the worker entering the space wears a full-body harness attached to a lifeline that is attached to a personal hoisting device, unless an alternate safe method of access and egress is provided from all accessible parts of the confined space;

(b) identify and take measures to ensure that a worker will not be exposed to the risk of drowning or becoming engulfed or entrapped in any liquid or free-flowing solid that may be present in the confined space; and

(c) identify and take measures to ensure that all energy sources that present a hazard to a worker entering, occupying or leaving the confined space have been locked out, and the energy sources have been put in a zero energy state.

15.7(2) An employer must ensure that the structural integrity of a confined space is maintained when its physical characteristics are altered in order to ensure safe access and egress by a worker.

Standby worker

15.8(1) An employer must ensure that

(a) a standby worker is designated for every confined space; and

(b) the standby worker remains present at the entrance to a confined space at all times while a worker is in the space if the risk assessment done under clause 15.3(a) has identified that the space is or may become hazardous to a worker entering it for any reason, including:

(i) the design or construction of the confined space,

(ii) the materials or substances in the confined space, including the materials or substances in its atmosphere, or

(iii) the work activities performed or the processes used in the confined space.

15.8(2) An employer must ensure that

(a) a worker designated as a standby worker is

(i) qualified as a first aider 1, 2 or 3, as set out in Part 5 (First Aid), and

(ii) trained in confined space work and emergency and rescue procedures;

(b) the designated standby worker

(i) is in direct communication with the worker in the confined space, and

(ii) has a suitable system to summon assistance if necessary; and

(c) the worker in the confined space is able to directly communicate with the standby worker.

Traffic hazards

15.9 An employer must ensure that appropriate barricades and warning signs are provided to keep vehicle and pedestrian traffic away from a confined space in which work is, or is about to be, carried out.

Purging and ventilating unsafe atmosphere

15.10(1) In the following circumstances, an employer must ensure that a confined space is purged, ventilated or both before a worker is required or permitted to enter it:

(a) where there is or may be a concentration of a flammable or explosive substance present at more than 10% of its lower explosive limit, the space must be purged, ventilated or both so that the concentration is reduced to less than 10%;

(b) where there is or may be an oxygen deficiency — oxygen content less than 19.5% by volume — or oxygen enrichment — oxygen content greater than 23% by volume — the space must be

purged, ventilated or both so that the oxygen content is at least 19.5% but not more than 23%; (c) subject to subsection (2), where there is or may be a chemical or biological substance that creates a risk to the safety or health of the worker, the space must be purged, ventilated or both to the extent possible to eliminate or reduce the risk associated with the substance.

15.10(2) When a worker occupies a confined space that has an atmosphere that may create a risk to the safety or health of a worker, the employer must ensure that

- (a) the space is continuously ventilated to maintain a safe atmosphere; and
- (b) the atmosphere is continuously monitored by a competent person.

Personal protective equipment and other control measures

15.11 When purging, ventilating or both cannot bring the atmosphere within a confined space into compliance with clauses 15.10(1)(a) to (c), an employer must ensure that additional control measures are undertaken to protect the safety and health of the worker entering the space, including providing to a worker personal protective equipment appropriate for the conditions in the confined space.

Entry prohibited

15.12 Despite any other provision of this Part, an employer must not require or permit

- (a) a worker to enter a confined space if the oxygen content level in the space is above 23%; or
- (b) a worker, other than a firefighter responding to an emergency, to enter a confined space if a concentration of a flammable or explosive substance in the confined space cannot be reduced to less than 10% of its lower explosive limit.

Emergency response — general

15.13 An employer must ensure that

- (a) the personal protective and emergency equipment identified under clauses 15.3(d) and (e) — equipment required to undertake rescue operations in the event of an accident or other emergency within a confined space — is readily available at the site of a confined space; and
- (b) that, in the event of an accident or other emergency, the emergency response plan and rescue procedures developed under clause 15.2(2)(e) are implemented.

Emergency response — top entry into confined space

15.14(1) When entry into a confined space is from the top, an employer must ensure that, in the event of an accident or other emergency within the space,

- (a) the worker entering the confined space and workers carrying out a rescue use a full-body harness and are attached to a lifeline unless another appropriate personal protective equipment system is provided;
- (b) where a lifeline is used, the lifeline is attended by a worker who is trained in the emergency response plan and rescue procedures; and
- (c) where reasonably practicable, a personal hoisting device is
 - (i) available to assist with a rescue, and
 - (ii) located at the entrance to the confined space when a worker is in the confined space.

15.14(2) Despite clause (1)(a), when the use of a full-body harness attached to a lifeline would create an additional risk to the worker in the confined space or would not be reasonably practicable, an employer must ensure that an alternate method of rescue is available to immediately remove a

worker from a confined space into which entry is from the top.

PART 16

MACHINES, TOOLS AND ROBOTS

DIVISION 1

Application

16.1 This Division applies to every workplace where a machine or tool is used.

Safe work procedures

16.2(1) An employer must

- (a) develop and implement safe work procedures respecting all machines and tools used in the workplace;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

16.2(2) The safe work procedures must include practices and procedures dealing with the lockout of machines used in the workplace.

Duty to inform workers

16.3 An employer must ensure that a worker is

- (a) informed of any risks associated with a machine or tool used in the workplace; and
- (b) provided with information, instruction and training in the safe use and operation of the machine or tool.

MACHINE AND TOOL SAFETY

Machine and tool safety

16.4(1) An employer must ensure that any machine or tool in the workplace is

- (a) capable of safely performing the functions for which it is used; and
- (b) used, inspected and operated in accordance with
 - (i) the manufacturer's specifications, and
 - (ii) the safe work procedures for the workplace.

16.4(2) An employer and the supplier of any machine or tool must ensure that the installation, testing, repair and maintenance of or any modification to any machine or tool is carried out in accordance with

- (a) the manufacturer's specifications; or
- (b) the specifications certified by a professional engineer.

16.4(3) An employer and a supplier must ensure that any machine or tool under his or her control is inspected at regular intervals to ensure that, so far as reasonably practicable, the machine

or tool is capable of

- (a) withstanding any stress that is or is likely to be imposed on it; and
- (b) safely performing the functions for which it is used.

Safeguards required

16.5(1) Subject to section 16.6, an employer must ensure that a machine has safeguards on it that will prevent a worker from coming into contact with the following hazards:

- (a) moving parts on the machine;
- (b) points of the machine at which material is cut, shaped or bored;
- (c) surfaces with temperatures that may cause skin to freeze, burn or blister;
- (d) energized components;
- (e) debris, material or objects thrown from a machine;
- (f) material being fed into or removed from the machine;
- (g) any other hazard that may pose a risk to the safety or health of the worker.

16.5(2) An employer must ensure that any safeguard required under this Part is designed, constructed, installed, used and maintained in accordance with CSA Standard Z432-04, *Safeguarding of Machinery*.

Alternative mechanism

16.6(1) When it is not reasonably practicable to provide a safeguard on a machine, an employer must ensure that an alternative mechanism, system or change in work procedure is put into place to protect the safety and health of a worker.

16.6(2) An alternative mechanism, system or change in work procedure must offer protection to a worker that is equal, or greater to, the protection provided by a safeguard that meets the requirements of section 16.5.

Removing a safeguard

16.7(1) No person may remove a safeguard or make it ineffective unless it is necessary to perform servicing, repairs, tests, cleaning, maintenance or adjustments on or to the machinery that cannot be done with the safeguard in place.

16.7(2) When a safeguard is removed or made ineffective for the purposes of subsection (1), an employer must ensure that

- (a) alternative protective measures are in place until the safeguard is replaced;
- (b) the safeguard is replaced immediately after the task is completed; and
- (c) the safeguard functions properly once replaced.

16.7(3) When a safeguard is removed or made ineffective for the purposes of subsection (1) by a worker who does not directly control the machine, an employer must ensure that the worker who removes the safeguard or makes it ineffective locks out the machine in accordance with the requirements of this Part.

Operating controls

16.8 An employer must ensure that

- (a) the operating controls of a machine
 - (i) are readily and clearly identifiable,
 - (ii) are located within reach of the operator, and
 - (iii) cannot be activated by inadvertent contact; and
- (b) subject to subsection 16.19(1), a machine is equipped with a stopping device that is
 - (i) readily and clearly identifiable, and
 - (ii) located in the direct view and within reach of the operator at all times.

Worker apparel

16.9 When there is a risk that a worker or a worker's apparel may come into contact with a moving part of a machine, an employer must ensure that the worker

- (a) wears close-fitting clothing;
- (b) confines long hair with a hairnet, close-fitting cap, close-fitting headwear or some other effective means; and
- (c) does not wear dangling neckwear, jewelry, wristwatches, rings or other similar items that may create a potential hazard.

Starting a machine

16.10 The operator of a machine must ensure that the starting of the machine does not endanger the operator or any other person.

Warning system

16.11(1) When the operator of a machine does not have a clear view of all parts of the machine and the surrounding area, an employer must ensure that the machine is equipped with

- (a) an audible alarm system that provides a warning of sufficient volume and for a sufficient period before start-up of the machine to alert a person of the imminent start-up; or
- (b) a distinctive and conspicuous visual warning system to alert a person of the imminent start-up.

16.11(2) An employer must place clearly visible warning signs at each point of access to a machine that starts automatically. The warning signs must give clear instructions to a worker on the nature of the hazard posed by the machine.

Vibrations

16.12 An employer must not install or place any machine in a workplace that may cause vibrations that would pose a risk to the safety or health of any person.

Unattended or suspended machines

16.13 An employer must ensure that a worker does not leave a machine or any part of a machine unattended or in a suspended position unless the machine or part has been

- (a) immobilized and secured against movement; or
- (b) enclosed by a safeguard to prevent access by any other worker to the machine or part.

LOCKOUT

Locking out — safety precautions

16.14(1) Subject to subsections (3) and (4), when a machine is serviced, repaired, tested, cleaned, maintained or adjusted, an employer must ensure that no worker performs work on the machine until it has come to a complete stop and the worker performing work on the machine has

- (a) locked out the machine and removed and rendered safe any hazardous condition; or
- (b) otherwise rendered the machine inoperative in a manner that prevents reactivation and provides protection that is equal to, or greater than, the protection provided by clause (a).

16.14(2) An employer must ensure that a worker does not perform work on a machine that is to be serviced, repaired, tested, cleaned, maintained or adjusted until

- (a) the machine is tested to ensure that it is inoperative; and
- (b) the worker is assured that it is inoperative.

16.14(3) An employer must develop and implement safe work procedures for the service, repair, testing, cleaning, maintenance or adjustment of a machine when

- (a) the manufacturer's specifications require the machine to remain operative when it is serviced, repaired, tested, cleaned, maintained or adjusted; or
- (b) there are no manufacturer's specifications and it is not reasonably practicable to lockout the machinery when it is serviced, repaired, tested, cleaned, maintained or adjusted.

16.14(4) When it is not reasonably practicable to lockout the machinery when it is serviced, repaired, tested, cleaned, maintained or adjusted, an employer must ensure that the safe work procedures developed in subsection (3) offer protection to a worker that is equal to or greater than the protection provided by a lockout procedure.

Removing a lock

16.15(1) No person may remove a lock from locked out machinery unless the person is the worker who installed the lock.

16.15(2) Despite subsection (1), a competent person designated by the employer may remove the lock in an emergency or when the worker who installed the lock is not available.

16.15(3) An employer must ensure that no worker returns a machine to operation after it has been locked out or rendered inoperable until the worker determines that no other person may be endangered by the operation of the machine.

Lock and key process

16.16(1) When the lockout procedure uses a lock and key, an employer must

- (a) issue to each worker who is required or permitted to work on a machine a lock that is operable only by that worker's key or a duplicate key;
- (b) designate a worker to keep the duplicate key;
- (c) ensure that the duplicate key is accessible only to the designated worker;
- (d) ensure that the lock used has a unique mark or identification tag on it that identifies the worker to whom the lock is assigned; and
- (e) ensure that a logbook is kept to record the use of the duplicate key.

16.16(2) Where it is not reasonably practicable to use a worker's key to remove a lock, the employer may permit the designated worker to remove the lock if the designated worker has determined that

(a) the key used to lock the lock is not available; and

(b) it is safe to remove the lock and activate the machine.

16.16(3) When the lock has been removed, an employer must ensure that the worker who locked out the machine is informed of the removal of the lock.

Control of more than one machine

16.17 When a central automated system controls more than one machine, an employer must ensure that any machine to be serviced, repaired, tested, cleaned, maintained or adjusted is isolated from the central system before the lockout procedures are implemented.

Transitional: continued use of tag-out system

16.18 Despite the requirements of this Part, an employer may continue to use a tag-out system at a workplace for no more than one year after this regulation comes into force if a tag-out system was in use at the workplace when this regulation comes into force.

ADDITIONAL SAFEGUARDS FOR CONVEYORS

Emergency stopping system for conveyor

16.19(1) An employer must ensure that a conveyor has an emergency stopping system that is readily accessible to workers working at the conveyor unless worker access to the conveyor is prevented by guarding or other means.

16.19(2) An employer must ensure that a conveyor emergency stopping system is designed and installed so that manual resetting is required before the conveyor can be restarted after an emergency stop.

16.19(3) An employer must ensure that a conveyor cannot be restarted after an emergency stop until an inspection has determined that the conveyor can be operated safely.

Emergency pull-cords

16.20 When the emergency stopping system uses emergency stop pull-cords, an employer must ensure that

(a) the pull-cords are clearly visible and readily accessible at the operator's normal control station and at other appropriate points; and

(b) the system is activated when

(i) the pull-cord is pulled in any direction,

(ii) the pull-cord breaks, or

(iii) the failure of a single spring in the pull-cord assembly occurs.

Elevated conveyors

16.21 If an elevated conveyor crosses over a place where a worker may pass or work, an employer must ensure that a suitable guarding system is provided to prevent materials on the conveyor from falling on the worker.

MISCELLANEOUS MACHINES AND TOOLS

Grinding machines

16.22(1) When a worker is operating a fixed or portable grinding machine, an employer must ensure that

- (a) an abrasive wheel is operated only where it is equipped with a safeguard;
- (b) an abrasive wheel is not operated in excess of the maximum speed specified by the manufacturer of the wheel;
- (c) the maximum speed of each grinder shaft in revolutions per minute is permanently marked on the grinder; and
- (d) the mounting flanges for an abrasive wheel have an equal and correct diameter for the wheel.

16.22(2) When a tool rest is installed on a fixed grinder, an employer must ensure that the tool rest is

- (a) installed in a manner that is compatible with the work process;
- (b) securely attached to the grinder; and
- (c) set not more than 3 mm from the face of the wheel or below the horizontal centre line of the wheel.

16.22(3) An employer must ensure that a worker does not use the sides of an abrasive wheel for grinding unless the abrasive wheel is designed for that use.

Storage of explosive-operated tools

16.23 An employer must ensure that when an explosive-operated tool is not in use it is not left unattended unless it is stored in a locked container.

Pneumatic powered tools

16.24(1) An employer must ensure that a worker does not use a pneumatic powered tool unless

- (a) the compressed air supply for the tool does not exceed the tool's pressure rating; and
- (b) the tool's hose connections have a positive locking device or rated safety chains or cable to restrain the hose from uncontrolled movement if the section becomes disconnected.

16.24(2) An employer must ensure that a pneumatic powered tool is disconnected from a compressed air supply before any adjustment to the tool is made or the tool is serviced.

Hand or portable power tools

16.25(1) An employer must ensure that

- (a) a hand tool or a portable power tool is inspected before use to make certain it is in safe working condition; and
- (b) a defective hand or power tool is removed from service.

16.25(2) Before refuelling or servicing a gas-operated power tool, an employer must ensure that the worker stops the motor and allows the motor to cool in accordance with the manufacturer's specifications.

Pressurized hoses

16.26(1) An employer must ensure that an effective restraining device is used on a hose, pipe or

connection that is under pressure if inadvertent disconnection of the hose, pipe, or connection could result in a risk to the safety or health of a worker or any other person.

16.26(2) An employer must ensure that the restraining device is used in accordance with the supplier's instructions or the manufacturer's specifications.

Chain saw requirements

16.27(1) An employer must ensure that a chain saw used at a workplace is

- (a) manufactured, used and maintained in accordance with CAN/CSA Standard-Z62.1-03, *Chain Saws*;
- (b) equipped with a safety chain, chain brake and chain catcher;
- (c) operated and maintained in accordance with the manufacturer's specifications; and
- (d) equipped with a mechanism that minimizes the risk of injury from kickback when the saw is in use.

16.27(2) When a chain saw is used by a worker operating from an elevated work platform or personnel basket, an employer must ensure that appropriate start-up procedures are developed and implemented to protect the safety and health of the worker.

Lasers

16.28 An employer must ensure that a laser used in a workplace is installed, used and maintained in accordance with ANSI Standard Z136.1-2005, *American National Standard for Safe Use of Lasers*.

DIVISION 2

ROBOTS

Application

16.29(1) Subject to subsection (2), this Division applies to every workplace where a robot or robot system is used.

16.29(2) This Division does not apply to any of the following:

- (a) a personal or mobile robot;
- (b) an automatic guided vehicle system;
- (c) an automated storage and retrieval system;
- (d) a numerically controlled machine.

Safe work procedures

16.30 An employer must

- (a) develop and implement safe work procedures respecting the installation, operation, use, teaching and maintenance of robots and robot systems used in the workplace;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

Employer's duties

16.31 An employer must ensure that every robot and robot system in the workplace

- (a) meets the requirements of CAN/CSA Standard-Z434-03, *Industrial Robots and Robot Systems — General Safety Requirements*; and
- (b) is installed, anchored, wired and used in accordance with the manufacturer's specifications.

Safeguards

16.32(1) An employer must ensure that every robot and robot system in the workplace has safeguards that prevent a worker from entering the restricted work envelope while the robot or robot system is in motion.

16.32(2) When a safeguard is removed or made ineffective to permit maintenance, repair, testing, teaching or adjustment, the employer must ensure that the safeguard is replaced or made effective before a worker uses the robot or robot system again.

Controls

16.33(1) An employer must ensure that the primary controls of a robot or robot system, including a restart control,

- (a) are located outside the restricted work envelope;
- (b) are arranged so that the robot or robot system is clearly visible to the worker operating the primary controls; and
- (c) cannot be activated inadvertently.

16.33(2) An employer must ensure that a worker operating a robot or robot system is provided with a readily accessible emergency stop device.

DEFINITIONS

Definitions

16.34 The following definitions apply in this Part.

"**machine**" means any combination of mechanical parts that transmits from one part to another or otherwise modifies force, motion or energy, but does not include a vehicle. (« machine »)

"**tool**" includes an implement that is powered by the energy of a person, such as a hammer, axe or screwdriver. (« outil »)

PART 17

WELDING AND ALLIED PROCESSES

Application

17.1 This Part applies to every workplace where welding or allied processes take place.

Safe work procedures

17.2 An employer must

- (a) develop and implement safe work procedures respecting welding and allied processes performed in the workplace;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

CSA standard

17.3 An employer must ensure that all welding and allied processes in the workplace comply with the requirements of CSA Standard W117.2-01 (R2006), *Safety in Welding, Cutting, and Allied Processes*.

Contained welding or allied process

17.4 When a container, pipe, valve or fitting

- (a) holds or may have held an explosive, flammable or otherwise hazardous substance; or
- (b) may become pressurized to the point of being a hazard to a person at a workplace;

an employer must ensure that any welding or allied process performed by a worker is performed in accordance with the safe work procedures developed under section 17.2.

Electric arc welding

17.5 An employer must, so far as is reasonably practicable, ensure that a worker does not perform electric arc welding if another worker may be exposed to radiation from the arc unless the other worker is using an appropriate eye protector or is protected from the radiation by an appropriate barrier.

Appropriate welding and ground leads

17.6 An employer must ensure that appropriate welding and ground leads are used to fasten the electric supply cable securely so that the inner wires of an electric welding machine are not exposed to damage and the cable cannot be separated from the fittings.

Testing for gas welding and allied process

17.7 An employer must ensure that a person performing a gas welding or allied process tests a regulator and its flexible connecting hose immediately after it is connected to a gas cylinder to ensure that there is no leak of the gas supply.

Flashback arresters

17.8 When gas welding or an allied process is carried out, an employer must

- (a) provide a flashback between the torch and the fuel gas and oxygen supply that
 - (i) prevents the reverse flow of fuel, gas, oxygen or air from the torch to the supply lines, and
 - (ii) stops a flame from burning back from a torch into the supply lines;

- (b) ensure that hose lines or pipelines for conveying the gases to the burner and the couplings are legibly marked or identified to ensure the hoses are not interchanged; and
- (c) ensure that the torch is ignited by a lighting device that is designed for that purpose.

Definition: "welding or allied process"

17.9 In this Part, "**welding or allied process**" means any type of electric or fuel gas welding or cutting process, including

- (a) arc welding, brazing, solid-state welding, soldering, resistance welding, and other welding;
and
- (b) allied processes such as thermal spraying and thermal adhesive bonding, and arc cutting, laser cutting, oxygen cutting or other cutting.

PART 18
RADIATION

Application

18.1(1) Subject to subsection (2), this Part applies to every workplace where ionizing or non-ionizing radiation is used.

18.1(2) This Part does not apply to

- (a) radiation sources subject to the *Nuclear Safety and Control Act* (Canada); and
- (b) radiation provided to a medical or dental patient.

Safe work procedures

18.2 An employer must

- (a) develop and implement safe work procedures respecting the use of radiation in the workplace to ensure that workers are not exposed to radiation in excess of limits established in the ACGIH publication, *Threshold Limit Value for Chemical Substances and Physical Agents and Biological Indices*;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

Exposure controls

18.3 When workers in a workplace are, or may be, exposed to levels of radiation in excess of the limits referred to in clause 18.2(a), an employer must implement procedures that control exposure to radiation in the workplace.

Duty to inform workers

18.4 An employer must inform a worker who may be exposed to radiation in the workplace of the potential hazards of radiation exposure.

PART 19

FIRE AND EXPLOSIVE HAZARDS

Application

19.1 This Part applies to every workplace where

- (a) combustible liquids, flammable liquids or flammable substances are present; or
- (b) hot work is performed.

Safe work procedures

19.2 An employer must

- (a) develop and implement safe work procedures for fire and explosive hazards in the workplace, including hot work if hot work is performed in the workplace;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

Fire protection equipment and fire extinguishers

19.3(1) An employer must ensure that

- (a) fire protection equipment of an appropriate type and sufficient size and capacity to be effective is installed in the workplace in accordance with the *Manitoba Fire Code*; and
- (b) portable fire extinguishers are located in the workplace in accordance with the *Manitoba Fire Code*.

19.3(2) An employer must ensure that all fire protection equipment and portable fire extinguishers are maintained in accordance with the manufacturer's specifications and the *Manitoba Fire Code*.

Containers for contaminated materials

19.4 An employer must ensure that any material contaminated by a flammable or combustible liquid is placed in a container that is stored in accordance with the *Manitoba Fire Code*.

Containers for combustible or flammable liquids

19.5 An employer must ensure that any flammable or combustible liquid is kept in a container that meets the requirements of the *Manitoba Fire Code*.

Use of gasoline

19.6(1) An employer must ensure that gasoline is not used to start a fire or used as a cleaning agent.

19.6(2) An employer must ensure that a worker does not

- (a) refill a tank connected to a heating device with a combustible or flammable liquid while the device is in operation or is hot enough to ignite the liquid; or
- (b) place a tar pot that is in use within 3 m of an entrance to or exit from a building or structure.

Control of ignition sources, static charges

19.7 An employer must ensure that

- (a) static charge accumulations during the transfer of a flammable liquid or explosive substance

from one container to another are prevented by either electrically bonding or grounding the containers;

(b) metallic or conductive containers used to transfer flammable liquids are electrically bonded to each other or are electrically grounded while their contents are being transferred from one container to the other; and

(c) only flammable fuel transfer equipment and portable fuel transfer tanks approved by the CSA or the Underwriters Laboratories of Canada are used to transfer flammable liquids.

Flammable or explosive substances in atmosphere

19.8(1) An employer must ensure that a worker does not enter a workplace where a flammable or explosive substance is present in the atmosphere at a level that is more than 10% of the lower explosive limit of that substance.

19.8(2) Subsection (1) does not apply to a firefighter engaged in an emergency operation that is subject to Part 42 (Firefighters).

Hot work

19.9(1) An employer must ensure that hot work is performed in accordance with the *Manitoba Fire Code*.

19.9(2) Before any hot work begins, an employer must ensure that a container or piping that contains or has contained a flammable substance is purged using an effective removal method.

19.9(3) An employer must ensure that welding or cutting of metal that has been cleaned with a flammable or combustible liquid or flammable gases does not take place until the metal has thoroughly dried.

Compressed gas equipment

19.10 An employer must ensure that all compressed gas cylinders are stored in accordance with the *Manitoba Fire Code*.

Definition: "container"

19.11 In this Part, "**container**" means a stationary or portable vessel or receptacle used to contain a flammable substance such as a tank, tank car, tank truck or a cylinder.

PART 20

VEHICULAR AND PEDESTRIAN TRAFFIC

Application

20.1 This Part applies to

- (a) every workplace where there is a risk to the safety or health of a person due to the movement of vehicular traffic; or
- (b) every construction project site where there is a risk to the safety or health of a person due to the proximity of pedestrian or vehicular traffic to the project site.

Walkway protection required

20.2 Except for residential construction, an employer must ensure that no work is carried out at a construction project site located within 4.5 m of a pedestrian walkway unless the part of the walkway adjacent to the project site is covered.

Requirements re covered walkway

20.3 An employer must ensure that, when a pedestrian walkway is required to be covered under section 20.2,

- (a) the cover of the pedestrian walkway
 - (i) is wide enough to completely cover the pedestrian walkway,
 - (ii) is installed at such a height as to provide at least 2.4 m of unobstructed passage beneath it,
 - (iii) is capable of supporting any load that is likely to be imposed on it, but in no circumstances less than 2.4 kN per square metre, and
 - (iv) provides a weather-tight roof; and
- (b) the covered walkway has
 - (i) a partition that covers the side adjacent to the construction project site,
 - (ii) where it is adjacent to a street, a railing one metre high from ground level on the street side, and
 - (iii) adequate lighting.

Fencing

20.4 An employer must ensure that a fence at least one metre in height is installed and maintained on any perimeter side of a construction project site where there is a risk to the safety or health of a person travelling — whether by walking or by vehicle — adjacent to the site.

Safe work procedures: traffic control

20.5(1) Whenever the movement of vehicular traffic constitutes a risk to the safety or health of a worker, an employer must

- (a) develop and implement safe work procedures that provide an effective means of traffic control;
- (b) train workers in those safe work procedures; and
- (c) ensure that workers comply with those safe work procedures.

20.5(2) Without limiting subsection (1), if vehicular traffic creates a risk to the safety or health of a worker, an employer must ensure that one or more of the following are used to protect the worker:

- (a) warning signs;
- (b) barriers;
- (c) lane control devices;
- (d) flashing lights;
- (e) flares;
- (f) conspicuously identified pilot vehicles;
- (g) automatic or remote controlled traffic control systems;
- (h) speed restrictions;
- (i) one or more workers who are designated and act as flagpersons, in accordance with section 20.6.

Flagpersons

20.6(1) An employer must ensure that before a worker is designated as a flagperson, the worker is trained in the safe work procedures for the safe control of traffic operations.

20.6(2) An employer must ensure that a worker who is designated as a flagperson is provided with

- (a) a paddle with reflective surfaces, on one side of which is "STOP" and on the other is "SLOW";
- (b) high visibility safety apparel that meets the requirements of section 6.7 (high visibility safety apparel);
- (c) a means of communication with any other worker acting as a flagperson at the workplace, when he or she does not have a clear view of that other flagperson.

Signal person on construction site

20.7(1) An employer must ensure that a worker is designated to act as a signal person when powered mobile equipment at a construction project site travels in a reverse direction or moves in a manner that may create a risk to the safety or health of its operator or any other worker in its vicinity.

20.7(2) A worker designated as a signal person must

- (a) have a clear view of the operator and the intended path of travel of the powered mobile equipment; and
- (b) direct the operator of the equipment through the use of
 - (i) pre-arranged visual signals, if the signals will be clearly visible to the operator, or
 - (ii) a radio communication system, if visual signals will not be clearly visible to the operator.

Reverse warnings

20.8 An employer must ensure that powered mobile equipment, except a vehicle that has less

than a one tonne carrying capacity, is equipped with a suitable warning device that operates automatically when it moves in reverse.

PART 21

EMERGENCY WASHING FACILITIES

Application

21.1 This Part applies to every workplace where hazardous, irritating or corrosive substances are used.

Duty to provide emergency washing facilities

21.2(1) An employer must provide emergency washing facilities at a workplace where hazardous, irritating or corrosive substances are used.

21.2(2) An employer must assess the risk of exposure to hazardous, irritating or corrosive substances in the workplace in consultation with

- (a) the committee at the workplace;
- (b) the representative at the workplace; or
- (c) when there is no committee or representative, the workers at the workplace.

21.2(3) An employer must provide the number and type of emergency washing equipment that is sufficient to address the risk of exposure to hazardous, irritating or corrosive substances as determined by the assessment under subsection (2).

21.2(4) An employer must ensure that the emergency washing equipment provided at the workplace meets the requirements and is installed, tested and maintained in accordance with

- (a) ANSI Standard Z358.1-04, *American National Standard for Emergency Eyewash and Shower Equipment*; and
- (b) the equipment manufacturer's specifications.

Location and identification of washing equipment

21.3 An employer must ensure that

- (a) the emergency washing equipment is located in the workplace and clearly identified in accordance with the requirements of ANSI Standard Z358.1-04, *American National Standard for Emergency Eyewash and Shower Equipment*; and
- (b) unimpeded access to the equipment is provided.

Training

21.4 An employer must ensure that a worker who may be required to use emergency washing equipment is trained in the use of the equipment in accordance with the requirements of

- (a) ANSI Standard Z358.1-04, *American National Standard for Emergency Eyewash and Shower Equipment*; and
- (b) the equipment manufacturer's specifications.

Personal eyewash unit

21.5(1) In addition to the emergency washing equipment required under section 21.2, an employer may provide a personal eyewash unit to a worker and a worker may use the unit to immediately flush an eye injury.

21.5(2) When a worker has used a personal eyewash unit to flush an eye injury, an employer must ensure that the worker immediately uses the emergency washing equipment provided in the

workplace.

PART 22

POWERED MOBILE EQUIPMENT

GENERAL

Application

22.1 This Part applies to every workplace where powered mobile equipment is used.

Safe work procedures

22.2 An employer with a workplace that is subject to this Part must

- (a) develop and implement safe work procedures for the use of powered mobile equipment in the workplace;
- (b) train workers in those safe work procedures; and
- (c) ensure that workers comply with those safe work procedures.

Inspection and maintenance

22.3(1) An employer must ensure that powered mobile equipment is inspected by a competent person for defects and unsafe conditions

- (a) as often as is necessary to ensure that the equipment is in safe operating condition; and
- (b) without limiting clause (a), in accordance with the manufacturer's specifications.

22.3(2) If an inspection of powered mobile equipment identifies a defect or unsafe condition that is hazardous or may create a risk to the safety or health of a worker, an employer must ensure that the powered mobile equipment is not operated until the defect is repaired or the unsafe condition is corrected.

22.3(3) An employer must ensure that a written record of the inspections, repairs and maintenance carried out on the powered mobile equipment is kept at the workplace and made readily available to the operator of the equipment.

Operator's manual

22.4 An employer must ensure the operator's manual for powered mobile equipment is readily available to a worker who operates the equipment.

SAFETY REQUIREMENTS FOR EQUIPMENT

Guarding moving parts

22.5(1) An employer must ensure that the exposed moving parts of powered mobile equipment, including gears, pulleys, belts, chains and shafts, are effectively shielded, enclosed or guarded in a manner that prevents a worker from coming in contact with the moving parts.

22.5(2) Where it is not reasonably practicable to provide a shield, enclosure or guard, an employer must ensure that an alternative mechanism, system or change in work procedure that offers protection to a worker that is equal to or greater than the protection from a shield, enclosure or guard is put into place to protect the safety and health of a worker.

Exhaust and other hot equipment surfaces

22.6(1) An employer must ensure that every surface of powered mobile equipment, including

exhaust systems and hydraulic lines, that may burn a worker who comes in contact with it is shielded or guarded in a manner that provides effective protection from burns.

22.6(2) An employer must ensure that powered mobile equipment which has an enclosed compartment that is used to transport workers has the exhaust outlet of the engine located so that exhaust gases cannot enter the compartment.

Safety requirements

22.7(1) An employer and a supplier must ensure that powered mobile equipment is equipped with

- (a) a horn or other audible warning device;
- (b) a portable fire extinguisher that meets the applicable requirements for extinguishers contained in the *Manitoba Fire Code*;
- (c) an effective braking system; and
- (d) an effective parking device.

22.7(2) An employer and a supplier must ensure that powered mobile equipment that is used to drive ancillary equipment, including a power take-off, crane or auger or any digging, lifting or cutting equipment, is equipped with a device, within easy reach of the operator, that allows the operator to immediately stop the ancillary equipment.

Seats, seatbelts and restraining devices

22.8 If, at the time it was manufactured or subsequently, powered mobile equipment is equipped with a seat with a seatbelt or another type of restraining device, an employer must ensure that

- (a) the seat and seatbelt or restraining device are not removed; and
- (b) when the powered mobile equipment is in use, the operator and any other worker required or permitted to be in or on the equipment use the seats and seatbelts or other restraining devices.

Lights

22.9(1) An employer must ensure that powered mobile equipment which is operated during hours of darkness or in an area that is not adequately illuminated is equipped with suitable headlights and back-up lights that clearly illuminate the path of travel.

22.9(2) A supplier must ensure that powered mobile equipment that is intended to be operated during hours of darkness is equipped with suitable headlights and back-up lights that clearly illuminate the path of travel.

Windshield and other transparent materials

22.10(1) An employer and a supplier must ensure that powered mobile equipment which is equipped with a windshield is also equipped with suitable windshield wipers and washers.

22.10(2) An employer and a supplier must ensure that any transparent material used as part of the enclosure for a cab or canopy on powered mobile equipment is made of safety glass or another material that gives at least the equivalent protection against shattering.

Falling objects protective structures

22.11(1) An employer must ensure that, when there is a risk to the safety or health of the operator of powered mobile equipment or any other worker who is required or permitted to be in or on the equipment from a falling object, the equipment is equipped with a falling objects protective structure that

(a) complies with the applicable requirements of

(i) SAE Standard J167 (2002), *Overhead Protection for Agricultural Tractors — Test Procedures and Performance Requirements*,

(ii) SAE Standard J/ISO 3449 (1998), *Earthmoving Machinery — Falling-Object Protective Structures — Laboratory Test and Performance Requirements*, or

(iii) SAE Standard J1042 (2003), *Operator Protection for General-Purpose Industrial Machines*;
or

(b) is certified by a professional engineer as providing the equivalent or better protection than that of a structure that complies with the requirements of clause (a).

22.11(2) An employer must ensure that any addition, modification or structural repair of a falling objects protective structure is done in accordance with the instructions of, and is recertified as restored to its original performance requirements by, the equipment manufacturer or a professional engineer.

Protection against shifting equipment

22.12(1) An employer must ensure that powered mobile equipment used to transport tools, equipment or materials that may shift during a stop is equipped with a bulkhead or a restraining device that effectively protects the operator and any other worker who is required or permitted to be in or on powered mobile equipment.

22.12(2) An employer must ensure that no worker places equipment or material in the cab of powered mobile equipment in which the operator or any other worker is being transported unless they are positioned or secured to restrict their movement and prevent injury to the operator or other worker.

Hazardous materials not be placed in enclosed part

22.13 An employer must ensure that no flammable liquids, hazardous chemicals or any other potentially harmful materials are transported in an enclosed part of powered mobile equipment where a worker is present.

Fuel tanks not to be in enclosed cabs

22.14 If an enclosed cab is provided, the employer and supplier must ensure that the fuel tank of the powered mobile equipment is not located in its enclosed cab.

WHEN POWERED MOBILE EQUIPMENT IS USED

Visual inspection

22.15 An employer must ensure that before powered mobile equipment is operated, its operator completes a visual inspection of the equipment and the surrounding area to ensure that it is in safe operating condition and that no one, including the operator, will be endangered when the powered mobile equipment is started.

Dangerous movement

22.16(1) An employer must ensure that, if the movement of a load or the cab, counterweight or any other part of the powered mobile equipment creates a risk to the safety or health of a person,

(a) the person does not remain within the range of the moving load or part; and

(b) the operator of the equipment does not move the load or the equipment if a person is at risk.

22.16(2) An employer must ensure that, if a person could be caught between a moving part of the powered mobile equipment and another object,

(a) entry to the area is restricted; and

(b) the operator of the equipment maintains an appropriate clearance distance between the powered mobile equipment and the object.

22.16(3) An employer must ensure that no person is in the immediate path of travel of powered mobile equipment or under any material or equipment that is being loaded or unloaded from it.

Barrier if used above grade height

22.17 An employer must ensure that, when powered mobile equipment is used above grade height in or on a building or other structure, an appropriate barrier is installed to prevent the equipment from falling.

Requirements re transporting workers

22.18(1) An employer must ensure that no worker is transported by powered mobile equipment or any attachment unless

(a) the equipment or attachment is designed for that purpose; and

(b) if there is a separation between the operator and the passenger or passengers, there is a suitable means of communication between the operator and the passenger or passengers.

22.18(2) Without limiting subsection (1), an employer must ensure that no worker is transported on top of a load that is being moved by powered mobile equipment.

Unattended equipment

22.19 An employer must ensure that the operator does not leave the controls of powered mobile equipment unattended unless

(a) the equipment is secured against unintentional movement by an effective method of immobilizing the equipment; and

(b) all suspended or elevated parts, if any, are fully lowered.

Extending boom

22.20 An employer must ensure that no worker operates powered mobile equipment equipped with an extending boom unless the equipment is stable under all operating conditions.

Ladders attached to extending boom

22.21(1) An employer must ensure that

(a) if a ladder is a permanent part of an extending boom on powered mobile equipment, no worker is on the ladder when the equipment is being moved or the boom is being articulated, extended or retracted; and

(b) if outriggers or stabilizers are incorporated into powered mobile equipment, no worker climbs a ladder attached to an extending boom unless the outriggers or stabilizers are deployed and used in accordance with the manufacturer's specifications.

22.21(2) An employer must ensure that a worker who works from a ladder attached to an extending boom on power mobile equipment complies with Part 14 (Fall Protection).

22.21(3) Clause (1)(a) does not apply to firefighters working on firefighting equipment.

MAINTENANCE

Maintenance on elevated parts

22.22 An employer must ensure that if an elevated part of powered mobile equipment is being maintained or repaired by a worker, the part and the powered mobile equipment are securely blocked in place and cannot move.

Tire servicing

22.23(1) An employer must ensure that

- (a) a competent person services, inspects, disassembles and reassembles a tire or tire and wheel assembly of powered mobile equipment in accordance with the specifications of both the tire manufacturer and the manufacturer of the powered mobile equipment; and
- (b) the manufacturer's service manuals for the tires and wheels are readily available to the competent person.

22.23(2) An employer must ensure that a competent person

- (a) uses a clamp-on type of connector to inflate split-rim and locking ring wheels; and
- (b) only inflates a tire mounted on a split-rim or locking ring wheel if
 - (i) the wheel assembly is in a tire cage or is similarly restrained, and
 - (ii) potential flying parts from split-rim or locking ring failure or tire rupture are contained.

22.23(3) An employer must ensure that, where a clamp-on type of connector is used to inflate a tire, the person doing so

- (a) uses
 - (i) an in-line pressure gauge, and
 - (ii) positive pressure control; and
- (b) inflates the tire from a position that is safe and that is not within the potential trajectory of the tire.

ROLLOVER PROTECTIVE STRUCTURES

Definition: "Rollover protective structure"

22.24 In sections 22.25 and 22.26, "**rollover protective structure**" means a structure designed to reduce the possibility of injury to an operator of powered mobile equipment in the event of a rollover or upset of the equipment.

Requirement for ROPS

22.25(1) Unless equipped with a rollover protective structure that meets the requirements of this section, no person may operate, and no employer may authorize or permit a worker to operate,

- (a) the following types of powered mobile equipment with a machine mass of 700 kg or more:
 - (i) a tractor,

- (ii) a motor grader,
 - (iii) a prime mover,
 - (iv) a skidder,
 - (v) a tracked dozer or loader,
 - (vi) a wheeled dozer or loader;
- (b) the following types of powered mobile equipment with a machine mass of 2,700 kg or more:
- (i) a compactor,
 - (ii) a roller; or
- (c) powered mobile equipment that is an agricultural tractor with engine power greater than 15 kW.

22.25(2) Where a rollover protective structure is required to be provided under subsection (1), the employer and the supplier of powered mobile equipment must ensure that the equipment is equipped with a rollover protective structure that

- (a) if commercially manufactured, complies with the applicable requirements of
 - (i) CSA Standard B352.0-95 (R2006), *Rollover Protective Structures (ROPS) for Agricultural, Construction, Earthmoving, Forestry, Industrial and Mining Machines — Part 1: General Requirements*, and
 - (A) CSA Standard B352.1—95 (R2006), *Rollover Protective Structures (ROPS) for Agricultural, Construction, Earthmoving, Forestry, Industrial, and Mining Machines — Part 2: Testing Requirements for ROPS on Agricultural Tractors*, or
 - (B) CSA Standard B352.2—95 (R2004), *Rollover Protective Structures (ROPS) for Agricultural, Construction, Earthmoving, Forestry, Industrial, and Mining Machines — Part 3: Testing Requirements for ROPS on Construction, Earthmoving, Forestry, Industrial, and Mining Machines*,
 - (ii) SAE Standard J1042 (2003), *Operator Protection for General-Purpose Industrial Machines*,
 - (iii) SAE Standard J1194 (1999), *Rollover Protective Structures (ROPS) for Wheeled Agricultural Tractors*,
 - (iv) ISO Standard 3471:1994, *Earth-moving machinery — Roll-over protective structures — Laboratory tests and performance requirements*, or
 - (v) a predecessor of a standard described in this clause that was in effect when the powered mobile equipment was manufactured; or
- (b) if not commercially manufactured, is designed by a professional engineer and constructed and maintained so that when the equipment on which it is installed is travelling at a forward speed of 16 km/h, engages a 30° slope and rolls 360° about the longitudinal axis on a hard clay surface,
 - (i) the rollover protective structure will withstand the impact forces,

(ii) upon impact, no part of the rollover protective structure will enter the space of the equipment that is normally used by the operator, and

(iii) the rollover protective structure will support the equipment when the equipment is upside down.

22.25(3) A rollover protective structure is not required to conform with the requirements of subsection (2) if

- (a) it was manufactured before May 1, 1991;
- (b) it was manufactured in accordance with

(i) a standard approved by an agency of the Government of Canada or of a province or territory of Canada, or

(ii) the design specifications certified by a professional engineer; and

- (c) it is maintained in accordance with the standard or specifications applicable under clause (b).

22.25(4) When a rollover protective structure is required to be provided under subsection (1), the employer and the supplier must ensure that

(a) the rollover protective structure is securely fastened to the frame of the mobile equipment;

(b) the rollover protective structure has a permanently attached legible identification marker containing the following information:

(i) if commercially manufactured,

(A) the name of the commercial manufacturer,

(B) its model and serial number,

(C) the title and clause of the standard to which it was designed, manufactured and installed, and

(D) the equipment make and model for which it is designed to be used, or

(ii) if designed by a professional engineer, the name and registration number of the professional engineer who designed it; and

(c) the powered mobile equipment is equipped with a seat with a seat belt for the operator and any other worker required or permitted to be in or on the powered mobile equipment.

22.25(5) A rollover protective structure manufactured before May 1, 1991 is not required to have an identification marker as described in clause (4)(b), but the employer using it or its owner must, on the request of a safety and health officer, provide evidence that the rollover protective structure meets the requirements of clauses (3)(b) and (c).

Structural integrity of ROPS

22.26(1) Where the structural integrity of a rollover protective structure required under section 22.25 is compromised, no person may operate the powered mobile equipment, and no employer may permit the powered mobile equipment to be operated, unless

(a) the rollover protective structure is replaced; or

(b) a professional engineer certifies that it has not been compromised in such a manner that it no longer complies with the requirements of subsection 22.25(2).

22.26(2) An employer and a supplier must ensure that any addition, modification or structural repair of a rollover protective structure is done in accordance with the instructions of, and is recertified as restored to its original performance requirements by, the equipment manufacturer or a professional engineer.

Exceptions

22.27 Sections 22.25 and 22.26 do not apply to

- (a) a farm tractor, as defined in *The Highway Traffic Act*, manufactured before January 1, 2001 and used exclusively for agricultural work;
- (b) a compactor or roller manufactured before January 1, 1979;
- (c) powered mobile equipment described in subsection 22.25(1), other than a compactor or roller to which clause (b) applies, that was manufactured before January 1, 1974;
- (d) powered mobile equipment in use on ice, as "ice" is defined in section 22.33; or
- (e) powered mobile equipment in use in a building or structure built before May 1, 1991 that does not have sufficient overhead clearance for the safe operation of equipment equipped with a rollover protective structure.

POWERED LIFT TRUCKS

Definition: "powered lift truck"

22.28 In sections 22.29 and 22.30, "**powered lift truck**" means powered mobile equipment that is

- (a) designed to allow the operator to lift, carry and unload a load; and
- (b) within a class of trucks to which the code of practice referred to in subsection 22.29(2) applies.

Powered lift truck operating certificate

22.29(1) No employer shall require or permit a worker to operate a powered lift truck unless the employer has issued a certificate to the worker under this section.

22.29(2) No employer shall issue a certificate to a worker to operate a powered lift truck unless the employer has first ensured that the worker

- (a) has received instruction, training and testing in the operation of the powered lift truck in accordance with a code of practice approved and issued under the Act;
- (b) is familiar with the operating procedures of the truck that the worker will be operating; and
- (c) has demonstrated competency in the operation of the truck that the worker will be operating in accordance with the code of practice referred to in clause (a).

22.29(3) An employer who issues a certificate to a worker must

- (a) establish and implement an evaluation system to ensure that the worker maintains competency in the operation of the powered lift truck;
- (b) maintain a record of the training the worker receives in the operation of the truck; and
- (c) produce a copy of the certificate and record on the request of a safety and health officer.

Load rating chart

22.30 An employer and a supplier must ensure that a powered lift truck is provided with a clearly visible and legible load rating chart that is affixed to the truck.

CONCRETE PUMP TRUCKS

Concrete pump trucks

22.31(1) In this section, "**concrete pump truck**" means powered mobile equipment that is comprised of a concrete pump, a distribution boom or mast, delivery pipes and the equipment on which they are mounted.

22.31(2) An employer must ensure that the operator of a concrete pump truck inspects the concrete distribution boom or mast and the boom or mast's safety and control devices before each use.

22.31(3) Before using a concrete pump truck at a workplace, an employer must ensure that the outriggers of the equipment are extended in accordance with the manufacturer's specifications.

22.31(4) While a concrete pump truck is in use at a workplace, an employer must ensure that

(a) no worker or other person is positioned under a distribution boom or mast connected to the concrete pump truck; and

(b) except for a worker placing the concrete, no worker or other person is in the work area of the distribution boom or mast when it is being used.

22.31(5) An employer must ensure that a concrete pump truck is not moved when its distribution boom or mast is partially or fully extended, unless the truck is designed to be moved with its distribution boom or mast partially or fully extended.

22.31(6) An employer must ensure that a worker who is assisting the operator of a concrete pump truck does not

(a) straighten a kinked end hose by increasing the pressure in the hose; or

(b) clear a blockage of the end of the hose with any part of his or her body.

DUMP TRUCKS

Dump trucks

22.32(1) When a dump truck is used at a workplace, the safe work procedures developed and implemented under section 22.2 must include procedures respecting the use of other powered mobile equipment to free a load trapped in the dump box of the truck.

22.32(2) When more than one dump truck is being operated at a workplace at the same time, an employer must ensure that the trucks maintain a sufficient distance between them to avoid contact if one of the trucks tips over.

22.32(3) Before a dump truck dumps a load, an employer must ensure that the ground on which the load is to be dumped is stable and capable of withstanding the weight of both the truck and the load.

WORKING ON ICE

Definition: "ice"

22.33 In sections 22.34 to 22.37, "ice" means ice that is

- (a) over water, where the water is more than one metre deep; or
- (b) over any other material into which a worker could sink more than one metre.

Safe work procedures on ice

22.34(1) Without limiting section 22.2, where a worker is required or permitted to use powered mobile equipment on ice, an employer must

- (a) develop and implement safe work procedures for the use of powered mobile equipment on ice;
- (b) train workers in those safe work procedures; and
- (c) ensure that workers comply with those safe work procedures.

22.34(2) The safe work procedures under clause (1)(a) must include

- (a) procedures for testing the thickness of the ice to ensure that it will support the load to be placed on it
 - (i) before any work begins, and
 - (ii) as often during the work as necessary to ensure that there is no risk to the safety of the workers; and
- (b) a plan for dealing with an emergency arising from powered mobile equipment breaking through the surface of the ice.

22.34(3) For certainty, the safe work procedures under clauses (1)(b) and (c) include the protection from drowning procedures prescribed in subsections 6.17(3) and (4).

Gross vehicle weight to be legibly marked

22.35(1) An employer must ensure that powered mobile equipment used on ice has its weight, when fully fuelled, legibly marked on it.

22.35(2) An employer must ensure that the weight of an attachment that is attached to powered mobile equipment used on ice is legibly marked on the attachment.

Refuelling on ice prohibited

22.36 An employer must ensure that powered mobile equipment is not refuelled while it is on ice.

Pilot vehicle required

22.37(1) When building a winter road on ice, an employer must ensure that a worker in a pilot vehicle accompanies workers operating powered mobile equipment on the ice.

22.37(2) The pilot vehicle must be equipped with a means of communication that enables the operator to communicate with

- (a) the workers who will implement the plan for dealing with an emergency arising from powered mobile equipment breaking through the ice; or
- (b) the applicable emergency response services.

PART 23

CRANES AND HOISTS

Application

23.1 This Part applies to every workplace where a crane or hoist is used.

Safe work procedures

23.2(1) An employer must

- (a) develop and implement safe work procedures respecting the use of cranes and hoists;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

23.2(2) The safe work procedures must deal with the installation, removal or replacement of the mast or boom section of a crane or hoist and all related parts.

Operator requirements

23.3(1) An employer must ensure that only a person who is authorized to practise the trade of crane and hoist operator under the *Trade of Crane and Hoisting Equipment Operator Regulation*, Manitoba Regulation 91/2000, is allowed to operate

- (a) a mobile crane with a rated load of 7,300 kg or more;
- (b) a boom truck hoist with a rated load of 7,300 kg or more; or
- (c) a tower crane.

23.3(2) An employer must ensure that the operator of a crane or hoist does not leave the controls of the crane or hoist unattended while a load is being hoisted.

Applicable standards

23.4 An employer and a supplier must ensure that

(a) a commercially manufactured crane or hoist is designed, constructed, erected, used, maintained, examined, inspected, operated and repaired in accordance with the manufacturer's specifications and the applicable requirements of the following standards:

- (i) CSA Standard W178.1-02, *Certification of Welding Inspection Organizations*,
- (ii) CSA Standard W178.2-01, *Certification of Welding Inspectors*,
- (iii) CAN/CSA Standard-B167-96 (R2002), *Safety Standard for Maintenance and Inspection of Overhead Cranes, Gantry Cranes, Monorails, Hoists, and Trolleys*,
- (iv) CSA Standard C22.2 NO. 33-M1984 (R2004), *Construction and Test of Electric Cranes and Hoists*,
- (v) CAN/CSA Standard-Z150-98 (R2004), *Safety Code on Mobile Cranes*,
- (vi) CAN/CSA Standard-Z185-M87 (R2004), *Safety Code for Personnel Hoists*,
- (vii) CAN/CSA Standard-Z248-2004, *Code for Tower Cranes*,
- (viii) CAN/CSA Standard-Z256-M87 (R2006), *Safety Code for Material Hoists*; or

- (b) a crane or hoist that is not commercially manufactured is
 - (i) designed by a professional engineer in accordance with the applicable requirements of the standards set out in clause (a),
 - (ii) certified by a professional engineer, and
 - (iii) constructed, erected, used, maintained, examined, inspected, operated and repaired in accordance with the professional engineer's requirements.

Repairs and modifications

23.5 An employer must ensure that structural repairs or modifications to the components of a crane or hoist are

- (a) made only under the direction and control of a professional engineer; and
- (b) certified by the professional engineer that the workmanship and quality of the materials used has restored the components to not less than their original capacity.

Maintenance and inspection schedule

23.6 An employer and a supplier must, while a crane or hoist is in their possession,

- (a) develop and implement a maintenance and inspection schedule for a crane or hoist in accordance with the manufacturer's specifications or the specifications of the applicable standard under clause 23.4(a) where no manufacturer's specifications exist; and
- (b) maintain the crane or hoist in a safe operating condition.

Duty to inspect

23.7(1) An employer must ensure that a crane or hoist is inspected by the operator before the start of each work shift in order to detect any defect, malfunction or hazardous condition.

23.7(2) A supplier must ensure that a crane or hoist is inspected for any defect, malfunction or hazardous condition before the crane or hoist is supplied to any person.

Logbook for cranes

23.8(1) When a crane with a rated load capacity of one tonne or more is in the possession of an employer or a supplier, the employer or supplier must provide and maintain a logbook for the crane that records the following information:

- (a) the date and time when any work was performed on the crane;
- (b) the length of time in hoisting service;
- (c) all defects or deficiencies and when they were detected;
- (d) all inspections performed on the crane, including examinations, checks and tests;
- (e) a record of any certification of repairs or modifications under section 23.5;
- (f) a description of the work performed by the crane each day;
- (g) in the case of a tower crane,
 - (i) whether or not the weight testing device was lifted for each working day, before the work of lifting loads began, and

(ii) a record of certification under section 23.25;

(h) any matter or incident that may affect the safe operation of the crane.

23.8(2) An employer and supplier must ensure that every entry in the logbook is signed by the person performing the work.

23.8(3) When a supplier provides a crane to a person, the supplier must ensure that the most current version of the logbook accompanies the crane.

23.8(4) When ownership of a crane is transferred, the person transferring ownership must ensure that all logbooks for the crane are transferred to the new owner.

Rated load

23.9(1) An employer and a supplier must ensure that a crane or hoist has a plate or weatherproof label permanently secured to it that legibly shows

(a) in the case of a commercially manufactured crane or hoist,

(i) the manufacturer's name,

(ii) the model, serial number and the year of manufacture or shipment date, and

(iii) the manufacturer's rated load; and

(b) in the case of a crane or hoist that is not commercially manufactured, the rated load certified by a professional engineer.

23.9(2) An employer and a supplier must ensure that a mobile crane or boom truck is equipped at all times with a load chart showing the rated load at all permitted boom angles and boom radiuses.

23.9(3) An employer must ensure that a tower crane has a load chart conspicuously and permanently secured to the cab that shows the manufacturer's rated loads at various radiuses of a single line, a two-part line and a four-part line separately.

23.9(4) An employer must ensure that the structural components of an A-frame, gin pole or guyed derrick are designed to withstand at least four times the rated load of the equipment.

Weight load information

23.10 An employer must ensure that the operator of a crane or hoist is provided with the information necessary to enable the operator to determine readily and accurately the weight of any load that the operator is required or permitted to raise.

Warning devices

23.11(1) When the movement of a crane or hoist may create a risk of safety or health of a person, an employer must ensure that the crane or hoist is equipped with an effective warning device that

(a) is readily accessible to the operator at the operator's working position; and

(b) is designed to warn a worker of the impending movement of the crane or hoist.

23.11(2) If an employer uses an auditory warning device, the device must have a distinct sound that is distinguishable from all other sounds at the workplace.

Boom and jib stops

23.12 When the design or operation of a crane or other hoist may result in the boom or jib falling backwards because of its return movement, an employer and a supplier must ensure that the

crane or hoist is equipped with

- (a) a boom stop and a limit device; and
- (b) where a jib is attached, a jib stop and a limit device.

Signal person communication

23.13(1) Unless the operator of a crane or hoist has an unobstructed and clear view of its operation, an employer must designate a signal person to give the operator signals to provide for the safe operation of the crane or hoist.

23.13(2) Except for an emergency stop signal, an operator must not follow any signal given by any worker other than the designated signal person.

Load movement

23.14 When there is a risk to the safety or health of a person because of the movement of a load by a crane or hoist, an employer must ensure that the movement of the load is controlled by a tag line or clamp device.

Outrigger or stabilizer procedures

23.15 When a crane or hoist is equipped with outriggers or stabilizers, an employer must ensure that

- (a) the outriggers or stabilizers
 - (i) are used in accordance with the manufacturer's specifications, and
 - (ii) are set on a solid footing or pad; and
- (b) the area around the outriggers or stabilizers is kept clear of obstructions.

Riding prohibited

23.16 An employer must ensure that no person rides on a load, hook, rigging or bucket attached to a crane or hoist.

Barricading base

23.17 When there a risk of a worker being trapped or crushed by any moving part of the crane or hoist when it swings, an employer must ensure that a barricade is erected around the base of the crane or hoist.

Vehicular and pedestrian traffic safety

23.18 When hoisting takes place adjacent to or in the vicinity of a pedestrian walkway, street, highway or other public thoroughfare, an employer must provide signs, barricades and properly identified flagpersons or other measures in accordance with Part 20 (Vehicular and Pedestrian Traffic).

Temperature and weather conditions

23.19 An employer must ensure that a crane or hoist does not operate

- (a) when the temperature is at or below the temperature for the safe loading conditions recommended in the manufacturer's specifications;
- (b) when the wind velocity exceeds the limit recommended in the manufacturer's specifications for safe operation; and
- (c) when weather conditions or other circumstances are such that the operation of the crane or hoist creates a risk to the safety or health of any person.

Plan of procedures for multiple crane lift

23.20 An employer must ensure that

- (a) a plan of procedures for the operator of a lift of one load involving two or more cranes is prepared by a professional engineer; and
- (b) every worker involved in the lift is trained in the plan of procedures.

Operator protection

23.21 An employer must ensure that the operator of a crane or hoist is protected from any falling material or equipment.

TOWER CRANES

Tower crane requirements

23.22(1) An employer must ensure that the foundation for a tower crane is designed and certified by a professional engineer.

23.22(2) An employer must ensure that a tower crane is equipped with the following devices located at the operator's work position in clear view of the operator:

- (a) a permanent load gauge that indicates the weight of the load being hoisted and immediately displays that weight to the operator;
- (b) a wind velocity gauge to measure the wind velocity at or above the height of the jib.

23.22(3) An employer must ensure that a tower crane is equipped with the following safety devices:

- (a) an overload device consisting of a hoist overload switch that automatically restricts the lift of the load;
- (b) a travel limit device consisting of a movement overload switch that automatically restricts the radius within which the load can travel;
- (c) a height limit switch that automatically prevents the cable from being over wound on the drum;
- (d) a trolley travel limit device consisting of a trolley-in and a trolley-out limit switch that prevents the trolley from running to the end of its track and falling off.

23.22(4) An employer must ensure that the safety devices set out in subsection (3) are adjusted and set in accordance with the manufacturer's specifications and have their limit switches sealed.

Means of verbal communication

23.23 An employer must

- (a) provide, install and maintain a direct means of verbal communication between a tower crane operator and each hook-up, rigger or signal person; and
- (b) provide a direct means of verbal communication between the operators of two or more tower cranes with overlapping radiuses.

Multiple cranes

23.24 When two or more tower cranes are erected in such a manner that the radiuses of operations overlap, an employer must ensure that the operators operate the cranes so that there are no collisions between the cranes or their loads.

Structural testing and examination

23.25(1) An employer must ensure that all structural and rigging components of a tower crane undergo non-destructive testing under the direction and control of a professional engineer in accordance with the manufacturer's specifications as close as reasonably practicable to the construction project site

(a) before the crane is used for the first time in Manitoba; and

(b) if the crane is moved from project to project, before it is used after the move.

23.25(2) If a tower crane is in operation on a construction project for more than one year from the date on which the crane starts operating, an employer must ensure its structural components are examined under the direction and control of a professional engineer in accordance with the manufacturer's specifications.

23.25(3) An employer must ensure that the results of the testing or examination required under subsections (1) and (2) are certified by a professional engineer in a report that clearly identifies the crane and the components to which the information relates.

OVERHEAD CRANES

Positive lockout system

23.26 An employer must ensure that an overhead electric crane is provided with a positive lockout system so that power is shut off when a worker is maintaining or servicing the crane.

Rail stops

23.27 An employer must ensure that a craneway at a workplace is equipped with adequate rail stops to prevent the overhead electric crane from contacting any obstruction or overrunning the end of the rails.

Upper limit devices

23.28 An employer must ensure that

(a) an overhead crane has a hoist equipped with a working upper limit device; and

(b) the upper-limit switch is not used as a braking device.

Safety latch

23.29 An employer must ensure that a hoisting hook is equipped with a safety latch or similar security device.

MATERIAL HOISTS

Inspection and testing

23.30(1) Subject to subsection (2), an employer must ensure that a material hoist is tested before being used.

23.30(2) A material hoist does not have to be tested if it has been tested within seven days before its last use.

Barricading base

23.31(1) An employer must provide a fence or other suitable barricade at the base of a material hoist to prevent unauthorized entry of any person.

23.31(2) A worker must not use the base of a material hoist to access an adjacent structure.

ROOFER'S HOISTS

Employer obligations

23.32(1) An employer must ensure that the following requirements are complied with when a roofer's hoist is used:

- (a) bolts or pins used to interconnect component parts of a roofer's hoist are equipped with safety pins that prevent them from being dislodged;
- (b) drivers, pulleys and belts are effectively guarded;
- (c) a roofer's hoist is only used for vertical lifting;
- (d) a roofer's hoist is in a level position.

23.32(2) An employer must ensure that a roofer's hoist has counterweights that are

- (a) designed as a component part of the hoist to remain securely attached to the hoist until all hoisting is completed; and
- (b) heavy enough to counterbalance four times the maximum weight of the load being lifted.

23.32(3) An employer must ensure that roofing material, bagged material or any other construction material is not used as counterweight on a roofer's hoist.

RIGGING

Rigging specifications

23.33 An employer must ensure that

- (a) commercially manufactured rigging is assembled, used, maintained, inspected and dismantled in accordance with the manufacturer's specifications; and
- (b) rigging that is not commercially manufactured is assembled, used, maintained, inspected and dismantled in accordance with the specifications of a professional engineer.

Spreader bar requirements

23.34 An employer must ensure that a spreader bar is designed and certified by a professional engineer, and constructed, assembled, maintained, inspected, used and dismantled in accordance with the professional engineer's specifications.

Rigging and spreader bar requirements

23.35 An employer must ensure that rigging and spreader bars are

- (a) suitable for and capable of supporting the load being rigged;
- (b) capable of supporting at least five times the maximum weight of the load which will be or is likely to be imposed; and
- (c) labelled or marked with their rated load and weight.

Containers

23.36 An employer must ensure that a container used for a load being lifted is designed for that particular purpose and is labelled or marked with its weight and rated load.

Hook block

23.37 An employer must ensure that a hook block has its rated load and weight legibly cast or stamped on it in a conspicuous location.

VEHICLE LIFTS

Vehicle lift requirements

23.38(1) An employer must ensure that a vehicle lift meets the requirements of the following standards:

- (a) ANSI Standard ANSI/ALI ALCTV-1998, *Automotive Lifts — Safety Requirements for Construction, Testing and Validation*;
- (b) ANSI Standard ANSI/ALI ALOIM-2000, *Automotive Lifts — Safety Requirements for Operation, Inspection and Maintenance*;
- (c) ANSI Standard ANSI/ALI ALIS-2001, *Standard for Automotive Lifts — Safety Requirements for Installation and Service*.

23.38(2) An employer must ensure that a pneumatic or hydraulic vehicle lift has controls operated by constant manual pressure.

23.38(3) An employer must ensure that the operator of a vehicle lift

- (a) remains at the controls while the vehicle lift is in motion; and
- (b) does not block the controls during raising and lowering.

23.38(4) An employer must ensure that no worker is under a suspended load unless the load is supported by

- (a) a vehicle lift designed for that purpose; or
- (b) rated stands or blocks, other than jacks, that are designed, constructed and maintained to support the load and placed on firm foundations.

PART 24

PILE DRIVING

Application

24.1 This Part applies to every workplace where piles are driven into, or removed from, the ground.

Safe work procedures

24.2 An employer must

- (a) develop and implement safe work procedures respecting the use of pile driving equipment;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

Pile hoisting

24.3 An employer must ensure that

- (a) no worker operating pile driving equipment hoists piles in the leads when a worker who is not directly involved in the pile driving operation
 - (i) is on the superstructure of the pile driving equipment, or
 - (ii) within range of the pile if it falls; and
- (b) no worker
 - (i) remains or rides on a load or part of a load being moved, raised or lowered by pile driving equipment, or
 - (ii) is on the superstructure of the pile driving equipment or within range of a pile if it falls, if the worker is not directly involved in the pile hoisting.

Ladder systems

24.4(1) An employer must provide an appropriate ladder system for use by a worker who is required or permitted to climb on a lead.

24.4(2) A worker must use the ladder system when one is provided.

Support of piles and sheet-piles

24.5 An employer must ensure that piles and sheet-piles are adequately supported to prevent their uncontrolled movement while they are being hoisted, placed, cut, removed or withdrawn.

Rigging suspended pile hammer

24.6 An employer must ensure that a pile hammer that is suspended by the hammer line is securely rigged when the equipment is not operating.

Pile driving

24.7 An employer must ensure that

- (a) workers in the area of a pile being struck by a pile driver are protected from any risk to their safety or health that may result from the pile shattering;
- (b) before piles are placed in position for driving, pile heads are trimmed to fit the follower on the pile-driving cap and are free of debris;

(c) a follower or pile-driving cap is of a size and type suitable for the type of piling to be driven.

Extraction of piles

24.8 An employer must ensure that a pile may only be extracted by the use of a device approved by a professional engineer.

Crane boom inspection

24.9(1) An employer must ensure that a crane boom used for driving piles with a vibratory hammer is inspected and certified by a professional engineer as safe for continued use

(a) at intervals of not more than 600 operating hours while it is in use; and

(b) when not in use, before being returned to hoisting service.

24.9(2) An employer must ensure that a crane boom with a vibratory pile extractor is inspected and certified by a professional engineer as safe for continued use

(a) at intervals of not more than 200 operating hours while it is in use; and

(b) when not in use, before being returned to hoisting service.

24.9(3) An employer must ensure that a crane boom used for dynamic compaction is inspected and certified by a professional engineer as safe for continued use

(a) at intervals of not more than 200 operating hours while it is in use; and

(b) before it is returned to hoisting service.

Definitions

24.10 The following definitions apply in this Part.

"lead" means a wood or steel frame with one or two parallel members for guiding the hammer or piles in the correct alignment. (« jumelles »)

"pile" means a slender deep foundation unit made of materials or a combination of materials such as wood, steel or concrete, which is pre-manufactured and placed by driving, jacking or screwing. (« pieu »)

PART 25

WORK IN THE VICINITY OF OVERHEAD ELECTRICAL LINES

Application

25.1 This Part applies to every workplace where work is done

- (a) within 3 m of an overhead electrical line; or
- (b) using equipment or machinery from a location from which it, or any part of it, is capable of coming within 3 m of an overhead electrical line.

Safe work procedures

25.2 An employer must

- (a) develop and implement safe work procedures for working near overhead electrical lines;
- (b) train workers who may perform work or operate equipment or machinery near overhead electrical lines in those safe work procedures; and
- (c) ensure that the workers comply with those safe work procedures.

General obligation to preventing contact

25.3 When a workplace is subject to this Part, an employer must ensure that the work is carried out, and equipment or machinery used is operated, in a manner that prevents

- (a) contact with the overhead electrical line; or
- (b) electricity arcing from the line to the equipment or machinery.

When notification of electrical authority required

25.4(1) An employer must notify the electrical authority having jurisdiction over an overhead electrical line before authorizing or permitting a worker to

- (a) work within 3 m of the line; or
- (b) use equipment or machinery from a location from which it, or any part of it, is capable of coming within 3 m of an overhead electrical line.

25.4(2) A notice under subsection (1) must specify the site of the work and the location of the line.

Confirmation or instructions

25.5(1) When a notice has been given under section 25.4, an employer must receive the following from the electrical authority before authorizing or permitting the work to be commenced or the equipment or machinery to be used:

- (a) a written confirmation that complies with subsection (2) that
 - (i) contacting the line will not endanger the safety or health of the worker, or
 - (ii) the electrical authority will, if contact would be sufficient to endanger the safety or health of the worker,
 - (A) de-energize the line,

- (B) effectively guard the line against contact, or
- (C) reroute or displace the electricity from the worksite;

(b) instructions on how to safely proceed, where

(i) contact with the line would be sufficient to endanger the safety or health of the worker, and

(ii) the electrical authority is unable to take any of the measures described in subclause (a)(ii).

25.5(2) A written confirmation must contain the following information:

(a) the site where the work is to be done or the equipment or machinery is to be used;

(b) the name of the employer;

(c) if contact would be sufficient to endanger the safety or health of the worker, the date and time when the electrical authority will take one or more of the measures described in subclause (1)(a)(ii).

25.5(3) An employer must ensure that the written confirmation received from the electrical authority is available at the site where the work is to be done or the equipment or machinery is to be used.

Employer: comply with instructions and signals

25.6(1) When an employer receives instructions under clause 25.5(1)(b), the employer must

(a) ensure that those instructions are complied with when the work is done or the equipment or machinery is used; and

(b) without limiting clause (a), assign a signal person to give pre-arranged signals to the operator of equipment or machinery that is used in the vicinity of the overhead electrical line.

25.6(2) A signal person responsible for giving signals to the operator of equipment or machinery under this section must

(a) have an unobstructed view of the operator;

(b) signal the operator when the equipment or machinery being operated may come into contact with the electrical line; and

(c) make all reasonable efforts to

(i) notify persons who are not required to be engaged in the work that they are prohibited from entering the worksite, and

(ii) prevent persons, other than the operator, from touching the equipment or machinery until it is safe to do so.

25.6(3) When it is not possible for the signal person and the operator of the equipment or machinery to have an unobstructed view of each other, an employer must ensure that

(a) the signal person and the operator of the equipment or machinery are provided with a suitable means of communication; or

(b) a person

(i) is posted in a location where he or she can see both the signal person and the equipment or machinery, and

(ii) relays all signals between the signal person and the operator.

Emergency precautions

25.7 If equipment or machinery comes into contact with an energized overhead electrical line, an employer must

(a) ensure that a worker on the equipment or machinery

(i) remains on it, or

(ii) if required to leave it, jumps clear of it, so that no part of the worker's body touches the equipment or machinery and the ground at the same time; and

(b) take immediate precautions to prevent any other worker from coming close to, or in contact with, the electrical line or the equipment or machinery that is in contact with it.

Inspection after contact

25.8 An employer must ensure that a machine or any tool or equipment that has contacted an energized overhead electrical line is inspected to ensure that there is no risk to the safety or health of a worker before permitting it to be used again.

PART 26

EXCAVATIONS AND TUNNELS

GENERAL MATTERS

Application

26.1(1) Subject to subsection (2), this Part applies to every workplace where excavation work takes place.

26.1(2) This Part does not apply to a mine as defined in *The Mines and Minerals Act*.

Safe work procedures

26.2(1) An employer must

- (a) develop and implement safe work procedures for the work to be done at an excavation, including the installation, use and removal of shoring;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

26.2(2) Before any excavation work begins, an employer must ensure that workers are made aware of the potential hazards of the job functions they are to perform.

REGISTRATION

Registration requirement

26.3(1) In order to perform excavation work, an employer must

- (a) notify the division that the employer intends to do excavation work; and
- (b) receive a registration number from the division.

26.3(2) An employer must not begin any excavation work unless the employer has a valid registration number.

26.3(3) A safety and health officer may revoke an employer's registration number if the officer is of the opinion that the employer is performing excavation work in a manner that creates or may create a risk to the safety or health of a worker.

26.3(4) When a registration number has been revoked, an employer may not be issued a new registration number unless a safety and health officer is satisfied that the employer will perform excavation work in accordance with the requirements of this Part.

NOTIFICATION

Notice of excavation

26.4(1) An employer who proposes to make an excavation that is more than 1.5 m deep in

which a worker is required or permitted to enter must notify the division not more than 48 hours before the day that excavation work is scheduled to begin and provide the following information to the division:

- (a) the name and address of the owner of the land where the excavation is to be made;
- (b) the name and address of the employer;
- (c) the location of the excavation;
- (d) the starting date of the excavation and its proposed completion date;
- (e) the proposed depth, length and width of the excavation;
- (f) a description of the proposed support structure, including the method of shoring and type of shoring materials, if shoring is to be used;
- (g) verification that the owners of underground facilities have been notified and that the location of any pipes, conduits, or previous excavations in or adjacent to the proposed excavation site has been determined;
- (h) the name of the person who will be supervising the work.

26.4(2) An employer required to notify the division under this section must not begin excavation work until the division has assigned a serial number to the excavation project.

26.4(3) This section does not apply to the digging of a burial lot or plot in a cemetery as defined in *The Cemeteries Act*.

SUPERVISION

Employer to appoint supervisor

26.5(1) An employer must supervise or designate a competent person to supervise work at an excavation site. The supervisor must be present at the site whenever a worker is in the excavation or work on the excavation is being performed.

26.5(2) When a worker is in an excavation that is more than 1.5 m deep, an employer must ensure that a competent person is located at the surface of the excavation to alert the worker of any potentially unsafe condition and provide assistance in an emergency.

UNDERGROUND FACILITIES

Underground facilities

26.6(1) Before any excavation work begins, an employer must

- (a) give notice of the proposed excavation to the owners of underground facilities, such as gas, oil, steam, water, sewer, communication and electrical systems, in the area where the work is to be done;
- (b) ensure that the owner of the underground facilities has conspicuously marked the location of the facilities; and
- (c) obtain from the owner of the underground facilities any relevant information, instructions and

documents that the owner may provide respecting the facilities and precautions to be taken when excavating.

26.6(2) An employer must keep the information, instructions and documents received from the owner under clause (1)(c) at the excavation site.

26.6(3) If an underground facility in the area of an excavation is likely to be exposed by excavation work, an employer must ensure that adequate support and protection is provided for the facility in accordance with the instructions of the owner of the facility.

26.6(4) If there is inadvertent exposure of, contact with or damage to an underground pipe, cable or conduit or any other underground facility when excavation work is performed, an employer must

(a) immediately evacuate all workers from the excavation site until any hazard or unsafe condition that arises or may arise has been identified and remedied; and

(b) immediately notify the owner of the pipe, cable, conduit or other underground facility.

HAZARDS

Flooding risks

26.7 When flooding may occur in an excavation, an employer must ensure that no worker enters the excavation unless

(a) the worker is equipped with a full body harness attached to a lifeline that meets the requirements of Part 14 (Fall Protection);

(b) the worker is in direct communication with the person who is required to be located on the surface of the excavation under subsection 26.5(2); and

(c) the worker's safety equipment is rigged so that the worker can be immediately removed from the excavation if a hazardous situation occurs.

Hazardous atmosphere risks

26.8(1) When the atmosphere in an excavation is toxic or hazardous or may reasonably be suspected to be toxic or hazardous, an employer must ensure that no worker enters the excavation until after a competent person tests the atmosphere in the excavation to determine whether a breathing or other hazard exists.

26.8(2) If a test under subsection (1) finds that a breathing hazard exists in an excavation, an employer must ensure that no worker enters the excavation unless the requirements of section 26.7 are met and

(a) suitable ventilation is installed, operated and maintained that will supplement and maintain a satisfactory supply of breathable air to the excavation and to workers in the excavation; or

(b) any worker entering the excavation is provided with suitable respiratory protective equipment that meets the requirements of Part 6 (Personal Protective Equipment).

26.8(3) If a test under subsection (1) finds that no breathing or other hazard exists in an excavation, an employer must ensure that periodic and frequent tests of the atmosphere in the excavation are carried out by a competent person to determine if the atmosphere in the excavation remains safe.

26.8(4) An employer must ensure that the results of any tests required to be conducted under this section are

- (a) recorded;
- (b) kept at the excavation site; and
- (c) readily accessible to a worker who requests the results of the tests.

Water hazards

26.9 An employer must ensure that an excavation that a worker may be required or permitted to enter is kept free of an accumulation of water that may create a risk to the safety or health of the worker.

Hazardous objects

26.10(1) An employer must ensure that trees, utility poles, boulders and other objects located near an excavation site that may create a risk to the safety or health of a worker are removed or adequately supported before excavation work begins.

26.10(2) An employer must ensure that excavated material is placed at least one metre away from the edge of an excavation and piled so that it cannot fall into the excavation.

26.10(3) An employer must ensure that no worker places equipment or other material near the edge of an excavation so that the item can fall into the excavation.

26.10(4) When a concrete truck delivers concrete to an excavation site, an employer must ensure that

- (a) the distance between the truck and the edge of a vertical excavation is at least equal to the depth of the excavation; or
- (b) the excavation is sloped at an angle not greater than 45° measured from the horizontal plane.

Powered mobile equipment and machinery

26.11 An employer must ensure that no worker drives, operates or locates powered mobile equipment or machinery so that it endangers the stability of the walls of an excavation.

Guarding excavations

26.12(1) When excavation work is being carried out adjacent to an area where the public or a worker who is not usually engaged in the work may pass, an employer must ensure that the excavation is adequately guarded by a fence, guardrail or covering sufficient to prevent a person from falling into the excavation.

26.12(2) If there is a danger of a worker falling into an excavation that is more than 3 m deep, an employer must ensure that the excavation is adequately guarded by a fence, guardrail or covering sufficient to prevent a worker from falling into the excavation.

26.12(3) When an excavation poses a hazard to traffic because it is located close to a roadway, an employer must ensure that reflective traffic control devices are installed around the excavation.

Walkways

26.13(1) If a worker is required or permitted to cross over an excavation, an employer must ensure that the excavation is equipped with an adequate walkway with suitable guardrails that meet the requirements of Part 14 (Fall Protection).

26.13(2) An employer must ensure that the walkway required under subsection (1) is kept clear of obstructions, excavated materials and equipment.

Safe means of entering and leaving an excavation

26.14(1) If a worker is required or permitted to enter an excavation, an employer must provide the worker with a safe means of entering and leaving the excavation.

26.14(2) If a worker is required or permitted to enter an open excavation or trench that is more than 1.5 m deep, an employer must provide a ladder, stairway or ramp as a means of entering and leaving the excavation or trench.

26.14(3) If a ladder is used as the means for entering and leaving an open excavation or trench, an employer must ensure that the ladder

- (a) extends 1 m above the top of the excavation or trench; and
- (b) is located not more than 3 m from the worker, when a ladder is used in a trench.

SUPPORT STRUCTURES

Support structures

26.15(1) If a worker is required or permitted to enter an excavation that is more than 1.5 m deep, an employer must ensure that a support structure is installed in the excavation, unless

- (a) the excavation is cut in solid rock or other equally stable material, excluding frozen ground;
- (b) the walls of the excavation are sloped at an angle not greater than 45° measured from the horizontal plane; or
- (c) a combination of slope and vertical face is used for stabilizing the walls of the excavation where the vertical face is not more than one metre high and the remaining walls are sloped at an angle not greater than 45° measured from the horizontal plane.

26.15(2) If shoring is used in an open excavation that is more than 1.5 m deep but no more than 4.5 m deep, the employer must ensure that the shoring is constructed of components that meet the minimum requirements for the applicable soil conditions set out in the Schedule to this Part.

26.15(3) An employer must ensure that a support structure is installed in an excavation in which a worker is required or permitted to enter that is 1.5 m deep or less if there is a danger of a cave-in, collapse or material sliding or rolling into the excavation due to

- (a) soil conditions where the excavation is to be made; or
- (b) work conditions at the construction project site where the excavation is to be made.

26.15(4) If an adjacent building, foundation or other structure may be affected by an excavation, an employer must ensure that, before any work on the excavation begins, the building, foundation or other structure is supported by a support structure that is designed and certified by a professional engineer and constructed, installed, used and dismantled in accordance with the professional engineer's specifications.

Design by professional engineer

26.16(1) If a worker is required or permitted to enter an excavation that is more than 3 m deep, an employer must ensure that a support structure is installed in the excavation that is designed and certified by a professional engineer and constructed, installed, used, maintained and dismantled in accordance with the professional engineer's specifications.

26.16(2) An employer must ensure that the professional engineer's specifications for a support structure address the following matters:

- (a) the size and specifications of the structure, including the type and grade of materials used in its construction;

(b) the loads and types of soil conditions for which the structure is designed;

(c) the installation, use and dismantling instructions.

26.16(3) When an employer is required to have a support structure designed by a professional engineer, the employer must ensure that the structure is inspected and certified by a professional engineer immediately after the installation of the structure has been completed.

26.16(4) Despite subsection (1), an employer is not required to retain a professional engineer if a support structure is installed in a trench that is more than 1.5 m deep but not more than 4.5 m deep, if the shoring is constructed of components that comply with the shoring requirements for the applicable soil conditions set out in the Schedule to this Part.

Support structure requirements

26.17(1) An employer must ensure that a support structure is

(a) structurally sound;

(b) suitable for the type and condition of the soil to be supported; and

(c) of sufficient strength to prevent the walls of the excavation from caving in, collapsing or otherwise moving into the excavation.

26.17(2) Subject to subsection (3), an employer must ensure that any support structure extends at least 300 mm above the top of the excavation.

26.17(3) When under clause 26.15(1)(c),

(a) a combination slope and vertical face is used for wall stability in an excavation; and

(b) the depth of the excavation below the sloped sides exceeds one metre;

an employer must ensure that a support structure is installed and extends at least 600 mm above the bottom of the sloped sides in a continuous manner to prevent any material from falling into the excavation.

Required inspection

26.18(1) An employer must ensure that a support structure is immediately inspected by a professional engineer if

(a) a safety and health officer is of the opinion that the support structure may create a risk to the safety or health of a worker; or

(b) there is a change in ground stability in the excavation in which the support structure has been installed.

26.18(2) If an inspection results in a recommendation that the support structure be redesigned, an employer must ensure that

(a) the structure is redesigned and certified by a professional engineer; and

(b) the structure is constructed, installed, used, maintained and dismantled in accordance with the professional engineer's specifications.

Reshoring

26.19 If an employer installs reshoring in an excavation, the employer must ensure that, before a worker enters the excavation, the reshoring or any other support structure in the excavation is

- (a) designed and certified by a professional engineer; and
- (b) constructed, used, maintained and dismantled in accordance with the professional engineer's specifications.

Support structure when earth exposed

26.20 When 1.5 m of earth is exposed on a side of a vertical excavation in which a worker is required or permitted to enter, an employer must ensure that a support structure is immediately installed in the excavation to support the exposed earth.

Installing shoring

26.21 An employer must ensure that shoring is installed from the top to the bottom of an excavation in descending order and removed in the reverse order from which it was installed.

Scaling walls

26.22 If a worker is required or permitted to enter an excavation with a support structure, an employer must ensure that the walls of the excavation are scaled and trimmed, where necessary, to reduce the danger of falling material.

Support structure in firm contact

26.23(1) An employer must ensure that a support structure in an excavation is installed firmly in contact with the walls of an excavation and any voids between the structure and the walls are back-filled.

26.23(2) Subsection (1) does not apply to a trench cage.

Wood shoring

26.24(1) If wood shoring is used in an excavation, an employer must ensure that

- (a) the shoring components are of a size, composition and arrangement to safely support the walls of the excavation; and
- (b) the lumber used meets the requirements set out in the Schedule to this Part.

26.24(2) An employer may provide a steel trench jack of equivalent strength to wood shoring to be used as a strut in a trench.

No worker to enter

26.25 An employer must ensure that a worker does not enter any part of a trench beyond the point to which shoring has advanced.

Trench excavation by mechanical equipment

26.26(1) When a trench is being excavated by a trench digger, backhoe or similar equipment, the operator of the equipment must

- (a) ensure that the digging portion of the machinery or equipment remains in the excavation while shoring is proceeding; and
- (b) maintain a clear view of all workers in and near the trench.

26.26(2) The operator of equipment excavating a trench must ensure that the equipment does not come into contact with the shoring.

Trench cages

26.27(1) An employer must ensure that a trench cage is constructed and used in accordance with design specifications certified by a professional engineer.

26.27(2) An employer must ensure that the sides of a trench cage are continuous and extend at

least 300 mm above the vertical wall of an excavation.

26.27(3) If a trench cage is used, an employer must ensure that a worker does not work in the excavation unless the worker works from inside the trench cage.

26.27(4) When trench cages are stacked, an employer must ensure that the trench cages have been

- (a) designed for stacking by a professional engineer; and
- (b) stacked in accordance with a stacking method specified by the professional engineer.

DEEP FOUNDATION EXCAVATIONS

Support structure for deep foundation excavations

26.28(1) An employer must ensure that the support structure for a deep foundation excavation is designed and certified by a professional engineer and constructed, installed, used, maintained and dismantled in accordance with the professional engineer's specifications.

26.28(2) If a worker is required or permitted to enter a deep foundation excavation, an employer must ensure that the professional engineer's design specifications for the support structure to be used in the excavation for the deep foundation include a method for the worker to enter and leave the excavation.

26.28(3) If a worker is required or permitted to enter a deep foundation excavation, an employer must ensure that the support structure for the excavation

- (a) extends from a point 300 mm above ground level to the point where work is being carried out;
- (b) has a minimum diameter of 700 mm; and
- (c) is secured against movement.

Worker to wear body harness

26.29(1) An employer must ensure that a worker in a deep foundation excavation always wears a full body harness attached to a secured lifeline. The harness and lifeline must both meet the requirements of Part 14 (Fall Protection).

26.29(2) When a worker is in a deep foundation excavation, an employer must ensure that the worker's lifeline

- (a) extends to the top of the excavation and is secured in a suitable manner to an anchorage point as required under Part 14 (Fall Protection); and
- (b) is attended to continuously by at least one other worker.

Hoisting device

26.30(1) If a worker is required or permitted to enter a deep foundation excavation, an employer must ensure that a tripod-type or similar hoist is used to lower and raise the worker.

26.30(2) An employer must ensure that a hoist used in a deep foundation excavation, and all of the hoist's cables, hooks and components, are

- (a) designed and certified by a professional engineer;
- (b) installed, used, maintained and dismantled in accordance with the professional engineer's specifications;

- (c) inspected regularly to ensure that the hoist and its components are in safe operating condition;
- (d) of a sufficient height to safely raise a worker completely above the ground surface; and
- (e) equipped with a brake capable of supporting at least four times the maximum load likely to be imposed on it.

Hook to have positive means of securement

26.31 An employer must ensure that a hook used for hoisting a worker or any other object in a deep foundation excavation is fitted with a positive means of securement.

Guarding deep foundation excavation

26.32 An employer must ensure that a deep foundation excavation is adequately guarded or covered whenever work on the excavation is not being performed.

SHAFTS AND TUNNELS

Professional engineer to design support structure

26.33(1) An employer must ensure that, during the excavation of a shaft or a tunnel, the walls of the shaft or tunnel are retained by a support structure that is

- (a) designed and certified by a professional engineer as being of sufficient strength to prevent the walls from collapsing or caving in; and
- (b) constructed, installed, used, maintained and dismantled in accordance with the professional engineer's specifications.

26.33(2) An employer must ensure that the professional engineer's design specifications are kept at the site of the excavation of the shaft or tunnel and are made readily accessible to a worker, on request.

Work areas to be free of mud and debris

26.34 An employer must ensure that the following areas of a shaft or tunnel excavation are kept free of loose mud and other accumulations of debris:

- (a) the access landing;
- (b) the bottom of the shaft or tunnel excavation;
- (c) other similar work areas.

Ventilation to be provided

26.35 An employer must provide a suitable ventilation system in a shaft or tunnel to ensure that

- (a) the ventilation rate is at least 0.25 m³ per second per square metre of face of the shaft or tunnel; and
- (b) the concentrations of toxic vapours, gases, aerosols, dusts or other hazardous substances are reduced to and remain at levels that will not be hazardous to the safety or health of a worker.

Accessway

26.36(1) An employer must ensure that an accessway is provided for the full depth of a shaft that a worker is required or permitted to enter.

26.36(2) An employer must ensure that the accessway

(a) is completely separated from a hoistway so that a load or hoist will not come in contact with a worker; and

(b) has a landing or rest platform provided at vertical intervals not exceeding 5 m or a protective cage or other suitable safety device.

26.36(3) An employer must ensure that the accessway is securely covered when it is not in use.

Guardrail at shaft opening

26.37 An employer must ensure that the opening to a shaft is protected by a guardrail and toe board that meet the requirements of Part 14 (Fall Protection).

Illumination

26.38(1) An employer must ensure that a source of lighting of at least five decalux is provided at the location in a shaft or tunnel where a worker is working.

26.38(2) An employer must provide an adequate emergency lighting system in a tunnel or shaft if the normal lighting system fails.

Internal combustion engines

26.39 An employer must ensure that an internal combustion engine is not used in a shaft or tunnel unless

(a) the engine is equipped with a properly maintained exhaust conditioner;

(b) the engine is shut down immediately if the ventilation system ceases to operate or function effectively and is not restarted until the ventilation system is functioning effectively;

(c) tests are conducted continuously and recorded at least once during each shift to determine the concentration of hazardous gases in the work area; and

(d) an appropriate fire extinguisher is kept near the internal combustion engine.

Haulage locomotives

26.40(1) An employer must ensure that if a haulage locomotive is used in a tunnel it is equipped with the following:

(a) a properly maintained braking system;

(b) interlock power controls that are operational from the driver's station only;

(c) an appropriate fire extinguisher.

26.40(2) An employer must ensure that track for haulage equipment is

(a) constructed in a straight manner and at a uniform height to the established grade; and

(b) securely attached to the foundation ties.

Fire protection

26.41 An employer must ensure that there is an effective means for extinguishing a fire in a shaft or tunnel.

Removal of scrap materials

26.42 An employer must ensure that scrap materials are removed at least daily from, and not allowed to accumulate in, a shaft or tunnel.

Communication system

26.43(1) An employer must ensure that a shaft hoist has a communication system available and working at all times between the hoist operator and workers at landings in the shaft leading to a tunnel or an underground space.

26.43(2) An employer must ensure that the communication system is used during a hoisting operation.

Hoisting operations

26.44(1) An employer must ensure that only a competent person designated by the employer operates hoisting equipment in a shaft or tunnel.

26.44(2) An employer must ensure that, at all times when a hoisting operation is underway in a shaft or tunnel, a worker designated by the employer is present at the top and the bottom of the shaft to supervise the operation.

26.44(3) An employer must ensure that a worker only signals to hoist a conveyance when the worker is on the landing from which the conveyance is to move.

MISCELLANEOUS PROVISIONS**Electrical installations**

26.45 An employer must ensure that all electrical circuits and equipment in an excavation are installed in accordance with the requirements of the *Manitoba Electrical Code*.

Haulage buckets

26.46 An employer must ensure that a worker in an excavation does not load a haulage bucket to the point where material is likely to fall out of the bucket.

Storage and dispensing of flammable liquids

26.47 An employer must ensure that flammable and combustible liquids are not used in an excavation unless they are stored in accordance with the *Manitoba Fire Code* and dispensed from safety containers that meet the requirements of CSA Standard B376-M1980 (R2003), *Portable Containers for Gasoline and Other Petroleum Fuels*.

Schedule — Minimum shoring requirements subsection 26.15(2), 26.16(4) and 26.24(1)

	Depth	UPRIGHTS (Vertical Members)		STRINGERS / WALES (Horizontal Members)*		CROSS-BRACES, STRUTS (Horizontal)*			
		Member minimum dimensions	Maximum spacing horizontally	Member minimum dimensions	Maximum spacing horizontally	Member minimum dimensions (mm)		Maximum spacing vertically (to match Stringers / Wales)	Maximum spacing horizontally along Stringers / Wales
Category 1a Stiff clays and stiff to hard clay tills, and stiff fissured clays	(m)	(mm)	(mm)	(mm)	(mm)	Width of Trench (m)			
	1.5 - 3.0 m	38 x 235	384	89 x 140	1200	less than 1.8 m.	1.8 m. to 3.7 m.	1200	1291
	3.0 - 4.5 m	38 x 235	344	191 x 191	915	89 x 89	140 x 140	915	1475
		UPRIGHTS (Vertical)		STRINGERS / WALES (Horizontal)		CROSS-BRACES, STRUTS (Horizontal)			
Category 1b Stiff fissured soils, and stiff clay fills	Depth	Member minimum dimensions	Maximum spacing horizontally	Member minimum dimensions	Maximum spacing horizontally	Member minimum dimensions (mm)		Maximum spacing vertically (to match Stringers / Wales)	Maximum spacing horizontally along Stringers / Wales
	(m)	(mm)	(mm)	(mm)	(mm)	Width of Trench (m)			
	1.5 - 3.0 m	89 x 140	686	89 x 140	1200	less than 1.8 m.	1.8 m. to 3.7 m.	1200	796
	3.0 - 4.5 m	89 x 140	564	191 x 191	915	89 x 89	140 x 140	915	939
		UPRIGHTS (Vertical)		STRINGERS / WALES (Horizontal)		CROSS-BRACES, STRUTS (Horizontal)			
Category 2 Soft cohesive soils, and stiff to wet/loose silt soils	Depth	Member minimum dimensions	Maximum spacing horizontally	Member minimum dimensions	Maximum spacing horizontally	Member minimum dimensions (mm)		Maximum spacing vertically (to match Stringers / Wales)	Maximum spacing horizontally along Stringers / Wales
	(m)	(mm)	(mm)	(mm)	(mm)	Width of Trench (m)			
	1.5 - 3.0 m	38 x 235	229	89 x 140	1200	89 x 89	140 x 140	1200	918
	3.0 - 4.5 m	89 x 140	457	191 x 191	915	89 x 89	140 x 140	915	887
		UPRIGHTS (Vertical)		STRINGERS / WALES (Horizontal)		CROSS-BRACES, STRUTS (Horizontal)			
Category 3a Cohesionless: loose to medium dense soils	Depth	Member minimum dimensions	Maximum spacing horizontally	Member minimum dimensions	Maximum spacing horizontally	Member minimum dimensions (mm)		Maximum spacing vertically (to match Stringers / Wales)	Maximum spacing horizontally along Stringers / Wales
	(m)	(mm)	(mm)	(mm)	(mm)	Width of Trench (m)			
	1.5 - 3.0 m	38 x 235	326	89 x 140	1200	89 x 89	140 x 140	1200	1193
	3.0 - 4.5 m	38 x 235	293	191 x 191	915	89 x 89	140 x 140	915	1359
		UPRIGHTS (Vertical)		STRINGERS / WALES (Horizontal)		CROSS-BRACES, STRUTS (Horizontal)			
Category 3b Cohesionless: dense to very dense soils	Depth	Member minimum dimensions	Maximum spacing horizontally	Member minimum dimensions	Maximum spacing horizontally	Member minimum dimensions (mm)		Maximum spacing vertically (to match Stringers / Wales)	Maximum spacing horizontally along Stringers / Wales
	(m)	(mm)	(mm)	(mm)	(mm)	Width of Trench (m)			
	1.5 - 3.0 m	38 x 235	460	89 x 140	1200	89 x 89	140 x 140	1200	1414
	3.0 - 4.5 m	38 x 235	415	191 x 191	915	89 x 89	140 x 140	915	1616

* Notes for Table:

- All spacings shown are centre-to-centre of members.
- Design based on 086.1-2001 Wood Design Manual; all "uprights" (vertical shoring) to be minimum 2-span continuous (cantilevers not to be included as "spans"). All shoring assumed to have members orientated for weak-axis bending.
- All members to be graded lumber meeting S.P.F. No. 2 or better.
- In this Schedule:
"strut" means a horizontal cross-member of shoring that directly resists pressure; (« étréssillon »)
"upright" means a vertical shoring member that is placed against and directly resists pressure from a wall of an excavation; (« montant »)
"wale" means a horizontal shoring member that is placed parallel to the excavation face and whose sides bear against the vertical shoring member or the earth. (« moise »)

PART 27

WORK IN A COMPRESSED AIR ENVIRONMENT

Application

27.1 This Part applies to every workplace where work is done in a compressed air environment, but does not apply to divers or to persons working in diving bells.

Safe work procedures

27.2 An employer must

- (a) develop and implement safe work procedures for working in a compressed air environment;
- (b) train workers who may perform work in a compressed air environment in those safe work procedures; and
- (c) ensure that workers comply with those safe work procedures.

General requirements

27.3(1) An employer must, before allowing or permitting a worker to enter a compressed air environment,

- (a) ensure that the division is notified of the nature and location of the work in writing, at least 30 days in advance of the work beginning; and
- (b) establish a comprehensive work plan for work in compressed air that
 - (i) has been developed and approved by a professional engineer, and
 - (ii) meets the requirements of CAN/CSA Standard-Z275.3-M86 (R2004), *Occupational Safety Code for Construction Work in Compressed Air*.

27.3(2) An employer must ensure that work done in a compressed air environment is done in accordance with the work plan established under clause (1)(b).

PART 28

SCAFFOLDS AND OTHER ELEVATED WORK PLATFORMS

GENERAL REQUIREMENTS

Application

28.1(1) This Part applies to every workplace where work takes place using a scaffold or elevated work platform.

28.1(2) Except for work of short duration that can be done safely from a ladder, an employer must ensure that a worker engaged in work that cannot be done from the ground or other safe elevation is provided with a scaffold or an elevated work platform.

Safe work procedures

28.2(1) When a scaffold or an elevated work platform is required to be provided at a workplace, the employer must

- (a) develop and implement safe work procedures for using the scaffold or elevated work platform provided;
- (b) train workers who work on scaffolds and elevated platforms in those safe work procedures; and
- (c) ensure that the workers comply with those safe work procedures.

28.2(2) An employer must ensure that the safe work procedures developed in subsection (1) include emergency response and rescue procedures appropriate to the risks associated with the failure of a scaffold or other elevated work platform.

Commercially manufactured scaffolds and elevated work platforms

28.3(1) An employer must ensure that a commercially manufactured scaffold or elevated work platform is installed, used, maintained and dismantled in accordance with the manufacturer's specifications. But the employer may alter those specifications if the alteration is certified by a professional engineer.

28.3(2) When a commercially manufactured scaffold or elevated work platform is used at a workplace, the employer must ensure that a copy of the manufacturer's specifications, and any alterations certified by a professional engineer, are readily accessible at that workplace.

SCAFFOLDS

General Provisions Applying to All Scaffolds

Types that must be designed by engineer

28.4(1) Despite any other provision of this Part, an employer must ensure that the following scaffolds are designed by a professional engineer:

- (a) an open access scaffold more than 10 m in height;

(b) an enclosed or hoarded access scaffold more than 7.5 m in height.

28.4(2) For a scaffold described in subsection (1), an employer must ensure that

(a) the specifications for constructing, installing, using, maintaining and dismantling it are certified by a professional engineer;

(b) it is constructed, installed, used, maintained and dismantled in accordance with those specifications; and

(c) a copy of its design and all the specifications under clause (a) are readily accessible at the construction project site where it is used.

28.4(2) For a scaffold described in subsection (1), an employer must ensure that

(a) the specifications for constructing, installing, using, maintaining and dismantling it are certified by a professional engineer;

(b) it is constructed, installed, used, maintained and dismantled in accordance with those specifications; and

(c) a copy of its design and all the specifications under clause (a) are readily accessible at the construction project site where it is used.

Standards re scaffolds

28.5 Subject to sections 28.3 and 28.4, an employer must ensure that a scaffold complies with the requirements of CAN/CSA S269.2-M87 (R2003) *Access Scaffolding for Construction Purposes* or a more specific standard prescribed in this Part.

General design and use requirements

28.6(1) An employer must ensure that a scaffold

(a) can safely support, and its footing, sills and similar supports can support without undue settlement or deformation, at least four times the maximum load that will be or is likely to be imposed on it;

(b) if partially or fully enclosed, has components and tie-ins that are adequate to support any added load that may be imposed on it by wind, wind gusts or other environmental conditions;

(c) is installed plumb and is stabilized by

(i) having its vertical and horizontal members braced to prevent lateral movement,

(ii) being anchored and securely guyed or tied back to the building or structure, or to a fixed support, at the intervals recommended

(A) by a professional engineer, if the scaffold was designed by a professional engineer, or

(B) by the manufacturer, if the scaffold was commercially manufactured,

but in no case at vertical and horizontal intervals of more than three times the minimum lateral dimension of the scaffold;

(d) is equipped with

(i) a ladder, stair, runway or ramp that provides a worker with a safe means of access to and egress from the scaffold platform, and

- (ii) toe-boards on the open sides of the scaffold platform, where there is a risk of tools, materials, equipment and debris falling from the platform or a worker slipping off the platform; and
- (e) has all openings, including stairway openings, appropriately guarded.

28.6(2) For the purposes of clause (1)(a), the maximum load of a scaffold is to be determined in reference to the actual weight of all the scaffold's components combined with the following loads that will be or are likely to be imposed on it:

- (a) the actual weight of the workers using it, including their tools, materials and equipment;
- (b) wind, wind gusts and other environmental conditions.

Additional criteria: scaffolds of particular height

28.7 An employer must ensure that a scaffold is equipped with each of the following that applies:

- (a) if the scaffold platform is 3 m or more above the level a worker may fall, the scaffold platform is equipped with a guardrail on the open sides and ends of the platform that is in line with the outer edge of the platform;
- (b) if a scaffold is more than 6 m in height, it is equipped with a suitable hoisting device for hoisting materials;
- (c) if a scaffold is 9 or more metres in height, it is equipped with
 - (i) an internal stairway or ladders, and
 - (ii) if any ladder under subclause (i) exceeds 3 m in height, the ladder is equipped with fall protection attachments.

Characteristics: rope, wire rope and tiebacks

28.8(1) An employer must ensure that a rope or wire rope used in scaffolding is

- (a) protected against abrasion or other physical damage; and
- (b) made of heat- or chemical-resistant material, if there is a possibility of exposure to heat or chemicals.

28.8(2) Despite any other provision of this Part, an employer must ensure that wire is not used in a tieback system for securing a scaffold to a building or structure.

Platforms: secured and minimum width

28.9(1) An employer must ensure that a scaffold platform is secured to prevent movement and is at least

- (a) 500 mm wide nominally; or
- (b) 1.5 m wide nominally, if it is used by workers who are bricklayers, stonemasons, plasterers or a similar tradespeople, and the scaffold is used to hold their immediate supply of building materials.

28.9(2) Despite clause (1)(a), where a scaffold platform forms part of a lean-to scaffold and consists of a commercially manufactured plank, the platform must be at least 400 mm wide.

Manufactured or wood planks

28.10(1) Where a scaffold platform consists of commercially manufactured planks, an employer

must ensure that the planks are used, stored, inspected and maintained in accordance with the manufacturer's specifications.

28.10(2) When a scaffold platform consists of wood planks, an employer must ensure that

- (a) each individual plank is secured to prevent movement;
- (b) the planks
 - (i) are constructed of nominal 50 mm × 250 mm No. 1 construction grade lumber (S-P-F),
 - (ii) are 5 m or less in length and have the same thickness as the adjoining planks,
 - (iii) are laid tightly together side-by-side with adjoining planks to cover the full width of the scaffold platform, and
 - (iv) extend at least 150 mm, but not more than 300 mm, beyond the end supports of the scaffold; and
- (c) if the planks overlap,
 - (i) the overlap must be centred directly over a vertical support of the scaffold, and
 - (ii) despite subclause (b)(iv), the overlapping planks extend at least 300 mm beyond the end supports of a scaffold.

28.10(3) Where the platform consists of wood planks, an employer must ensure that the scaffold has vertical supports for the planks at least every 2.5 m.

Work limitations

28.11 An employer must ensure that a worker who installs, alters or dismantles a scaffold

- (a) works from a section of the scaffold that conforms with the requirements of this Part; or
- (b) uses a fall protection system that meets the requirements of Part 14 (Fall Protection).

Competent persons to supervise and inspect

28.12 An employer must appoint one or more competent persons who are responsible for

- (a) supervising the installation, dismantling and removal of a scaffold;
- (b) inspecting the components of a scaffold for defects before the scaffold is first used, and after that, before it is used on any particular day; and
- (c) ensuring that any component found to be defective is repaired or replaced before the scaffold is used or is continued to be used.

Workers using scaffolds

28.13(1) An employer must ensure that

- (a) no scaffold is loaded in excess of its rated load; and
- (b) a worker who is permitted or required to work on a scaffold
 - (i) is informed of its rated load, and
 - (ii) does not carry any materials or equipment while climbing a scaffold.

28.13(2) An employer must ensure that adequate overhead protection is provided where any worker is required or permitted to work

- (a) beneath the affected part of a scaffold that is being installed, altered or dismantled; or
- (b) where there is a risk of material falling on the worker who is working on the scaffold platform or in the area of the scaffold.

PROVISIONS FOR PARTICULAR
TYPES OF SCAFFOLDS

Lean-to scaffold

28.14(1) An employer must ensure that a lean-to scaffold is not more than 5 m above grade.

28.14(2) An employer must ensure that, if there is a risk that a worker using a lean-to scaffold may fall three or more metres, the worker uses a fall protection system that meets the requirements of Part 14 (Fall Protection).

Ladder-jack scaffold

28.15(1) An employer must ensure that a ladder-jack scaffold is not more than 5 m above grade.

28.15(2) For a ladder-jack scaffold, an employer must ensure that it is designed and constructed

- (a) in compliance with the requirements of ANSI Standard A10.8-2001, *Safety Requirements for Scaffolding — American National Standard for Construction and Demolition Operations*; and
- (b) so that it has ladders that are spaced not more than 2.5 m apart and that it bears on
 - (i) both the side rails and the ladder rungs, or
 - (ii) the ladder rungs only, but only if the bearing area of each rung is at least 254 mm.

28.15(3) An employer must ensure that

- (a) a ladder-jack scaffold is maintained in as level a position as possible;
- (b) no more than two workers are on a ladder-jack scaffold at any one time; and
- (c) if there is a risk that a worker using a ladder-jack scaffold may fall three or more metres, the worker uses a fall protection system that meets the requirements of Part 14 (Fall Protection).

Tubular frame scaffold

28.16 For a tubular frame scaffold, an employer must ensure that

- (a) any necessary base plates, shore heads, extension devices or screwjacks are securely installed and securely attached to the sills and the legs of the frame; and
- (b) if frames are stacked, there are no gaps between the lower end of one frame and the upper end of the frame below it.

Bracket scaffold

28.17(1) For a bracket scaffold, an employer must ensure that the brackets are securely attached to prevent them from dislodging and are not more than 3 m apart.

28.17(2) Subsection 28.10(3) does not apply to a bracket scaffold.

Outrigger scaffold

28.18 Where an outrigger scaffold is used, an employer must ensure that

(a) counterweights are not used to support it unless prior approval has been obtained from a professional engineer; and

(b) unless it is designed for the following uses by a professional engineer, it is not used

- (i) to store construction materials,
- (ii) as a crane loading platform.

Single-pole scaffold

28.19 For a single-pole scaffold, an employer must ensure that

(a) it is adequately supported in two directions by a system of diagonal braces that are not more than 6 m long, and connected to the vertical supports as close to the ledgers as possible; and

(b) each of its ledgers are supported by a bearer that is securely fastened to the structure.

Mobile scaffolds

28.20(1) For a mobile scaffold, an employer must ensure that

(a) it is stable;

(b) if its height is more than three times its least lateral dimension measured at the base, it is equipped with outriggers, guy wires or other necessary means to prevent it from overturning;

(c) it has castors or wheels that are equipped with suitable braking devices or blocked to prevent it from moving; and

(d) if it has pneumatic tires, its outriggers or stabilizers are used in a manner that ensures the weight of the scaffold does not rest on the tires during use.

28.20(2) An employer must ensure that no worker remains on a mobile scaffold when it is being moved unless

(a) the surface over which it is to travel is firm, level and free of obstructions;

(b) the worker on it is secured to the building or structure by an independent fall protection system; and

(c) the worker remains within the confines of the mobile scaffold.

ELEVATED WORK PLATFORMS

Suspended Work Platforms

Standards re suspended work platforms

28.21(1) An employer must ensure that a suspended work platform used at a workplace is designed, and constructed, installed, maintained, used and dismantled in accordance with CAN/CSA Standard-Z271-1998 (R2004), *Safety Code for Suspended Elevating Platforms*, and CAN/CSA Standard-Z91-02, *Health and Safety Code for Suspended Equipment Operations*.

28.21(2) An employer must ensure that

(a) a suspended work platform constructed at a workplace is designed and certified by a professional engineer; and

(b) the professional engineer's specifications for the design, construction, installation, maintenance, use and removal of the suspended work platform are in accordance with the standards under subsection (1).

28.21(3) Subject to section 28.3, an employer must ensure that the manufacturer's specifications for a commercially manufactured suspended work platform used at a workplace are in accordance with the standards under subsection (1).

Prior notification of suspended work platform use

28.22(1) An employer who proposes to use a suspended work platform at a height in excess of 3 m above ground must give notice of the following to the division at least eight hours before the platform is suspended:

- (a) the name and address of the employer;
- (b) the location of the workplace where the suspended work platform is to be used;
- (c) a description of the type of suspended work platform to be used, including particulars on lifelines, thrust-outs, counterweights and tiebacks;
- (d) the date when use of the suspended work platform will begin; and
- (e) the name of the worker who will supervise the use of the suspended work platform.

28.22(2) Upon receiving a notice that complies with subsection (1), the division must assign a serial number to the worksite where the suspended work platform is to be used and provide the serial number to the employer.

28.22(3) An employer must not require or permit a worker to work on a suspended work platform until the employer receives the serial number for the worksite described in subsection (2).

Requirements for suspended work platforms

28.23(1) For a suspended work platform, an employer must ensure that

- (a) it is equipped with a secondary safety device that will activate if the suspension rope connection or primary hoisting system fails;
- (b) hooks used to support it are equipped with positive and secure safety latches;
- (c) cables, hooks, eyebolts, shackles and similar hoisting components used to support it are
 - (i) rated by the manufacturer for specific load conditions, and
 - (ii) capable of supporting 10 times the rated load;
- (d) every mechanical hoisting device used for raising or lowering it is equipped with an automatically operating locking mechanism to prevent free running of the suspension ropes; and
- (e) if cornice hooks are used to support it,
 - (i) the hooks are securely supported on parts of the building or structure that have adequate strength to carry the load that will be or is likely to be imposed, and
 - (ii) the hooks are secured by an independent tieback from the load ring to a solid anchor on the building or structure.

28.23(2) Where a manually operated suspended work platform is to be used, an employer must ensure that

- (a) the platform is equipped with spring-actuated locking pawls;
- (b) the hoisting mechanism is locked in a positive drive position by means of a spring-steel locking pin; and
- (c) the locking pin is permanently attached to the hoisting mechanism by a light chain.

Tie-in guides and building requirements

28.24(1) Where a building or structure more than five storeys or 15 m in height will be serviced by a suspended work platform, the owner must ensure that the building or structure is designed and constructed with

- (a) fixed anchor points that meet the requirements of CSA Standard CSA Z271-98 (R2004), *Safety Code for Suspended Elevating Platforms*; and
- (b) tie-in guides that provide a positive means of engagement between the platform and the building or structure during the full vertical or inclined travel of the platform on the face of the building or structure.

28.24(2) Subsection (1) also applies to the owner of a building or structure that was constructed on or after July 2, 1985, if

- (a) the building or structure is more than five storeys or 15 m in height; and
- (b) its windows are cleaned or maintained from its exterior.

Professional engineer's certification

28.25 When a suspended work platform is permanently installed on a building or structure, the owner of the building or structure must ensure that

- (a) a professional engineer certifies, before its first use, that the anchor points, platform, the platform's suspension system and all components of the suspension system are safe; and
- (b) the anchor points are inspected at least annually to ensure the anchor points are safe.

Portable outrigger beams and similar supports

28.26(1) An employer must ensure that a portable outrigger beam or other similar support structure of a suspended work platform

- (a) is designed and constructed to support at least four times the weight of the platform and its rated load;
- (b) is located
 - (i) plumb to the stirrups of the platform,
 - (ii) at right angles, or as near as practicable to right angles, to the face of the building or structure, and
 - (iii) so that the outboard portion of the beam does not extend more than 1 m beyond its fulcrum point; and
- (c) is securely tied-back to a secure anchor on the building or structure which is capable of supporting the weight of the suspended work platform.

28.26(2) When counterweights are used in conjunction with a portable outrigger beam or similar support structure, an employer must ensure that the length of the inboard portion of the beam or support structure is not less than three times the outboard portion, and the counterweights are

- (a) secured to the beam or support structure when in use; and
- (b) not made up of bagged or loose material.

Wire or fibre rope used to suspend platforms

28.27(1) An employer must ensure that only wire rope is used to suspend a suspended work platform. The wire rope used must be

- (a) 8 mm or greater in diameter;
- (b) capable of supporting 10 times the weight of the platform and its rated load;
- (c) continuous and unspliced, except for terminal eye splices; and
- (d) long enough to permit the platform to be lowered to a safe landing.

28.27(2) Despite subsection (1), fibre rope may be used to suspend a boatswain's chair if

- (a) the fibre rope is
 - (i) at least 20 mm in diameter, and
 - (ii) capable of supporting 10 times the weight of the chair and its rated load;
- (b) the boatswain's chair is not suspended 30 m or more above the ground; and
- (c) the rope is not exposed to the effects of corrosive chemicals, heat, cold, abrasion or other adverse conditions.

28.27(3) An employer must ensure fibre rope is not used as a lifeline if it is exposed to the effects of corrosive chemicals, heat, cold, abrasion or other adverse conditions.

Rated load to be marked

28.28 An employer must ensure that

- (a) the rated load of a suspended work platform is permanently and legibly marked on the platform;
- (b) a worker who is required to work on a suspended work platform is informed of its rated load; and
- (c) the suspended work platform is not loaded in excess of its rated load.

Competent person to install, operate and inspect

28.29 When a suspended work platform is to be used at a workplace, an employer must

- (a) appoint one or more competent persons to install it, and once it is installed, to operate it; and
- (b) ensure that when it is in use, the platform and all of its components, and any machine or equipment that is used to hoist the platform, are inspected daily by a competent person.

Workers using suspended work platform

28.30 When a worker is required to use a suspended work platform, an employer must ensure

that

- (a) there is one worker to operate each suspension when raising or lowering the platform;
- (b) the platform is maintained in as level a position as possible, and in no case is it out of level by more than 10% of the platform's length;
- (c) every worker on the platform is secured at all times to an independent vertical lifeline that meets the requirements of Part 14 (Fall Protection), so that the failure of the suspended work platform will not cause a failure of the lifeline support system;
- (d) except in an emergency, a lifeline or a suspension rope of the platform is not used by a worker as a means of access to or egress from the platform; and
- (e) where a boatswain's chair is used, the worker is attached to a separately secured lifeline that is independent of the chair support system.

Work area below a suspended work platform

28.31 When a suspended work platform is in use, an employer must ensure that

- (a) the work area below the platform is roped off or barricaded in a suitable manner; and
- (b) warning signs are posted in a conspicuous location to advise persons of the overhead hazard.

Bridging not to be used

28.32 An employer must ensure that two or more suspended work platforms are not bridged together by the use of planks or any other connection.

WHEN CRANE USED TO SUSPEND
A PERSONNEL BASKET OR CAGE

General restriction re use of crane

28.33(1) An employer may only permit a crane to be used to hoist a personnel basket or cage where it is not reasonably practicable to carry out the required work by use of a scaffold or other type of elevated work platform that does not include the use of a crane.

28.33(2) The prior notification requirements of section 28.22 apply whenever a crane is used to hoist a personnel basket or cage, regardless of the height of the hoisting operation.

Basket or cage requirements when crane used

28.34(1) Despite section 28.21, when a crane is used to hoist a personnel basket or cage, an employer must ensure that the personnel basket or cage

- (a) is designed by a professional engineer in accordance with CAN/CSA Z150-98 (R2004), *Safety Code on Mobile Cranes*, and is constructed in accordance with the design specifications certified by the engineer;
- (b) is equipped with
 - (i) anchor points located above the load hook of the personnel basket or cage for the attachment of a worker's fall arrest system,
 - (ii) a guardrail that meets the requirements of Part 14 (Fall Protection), and
 - (iii) a skid resistant deck;

- (c) has more than one means of suspension or support, and is designed, constructed and maintained so that the failure of one of the means will not cause the collapse of all or part of it;
- (d) is designed and constructed so that it remains horizontal at all times;
- (e) is suspended from, or supported by, a direct attachment to the boom of the crane; and
- (f) has the following legibly and permanently marked in a conspicuous place on it:
 - (i) the maximum number of workers who may occupy the personnel basket or cage,
 - (ii) its weight,
 - (iii) the crane type for which it has been designed,
 - (iv) any other information necessary for safe operation of the personnel basket or cage.

Inspection and certification

28.34(2) An employer must ensure that the professional engineer who designed the personnel basket or cage

- (a) inspects it before its first use; and
- (b) certifies that it has been manufactured in accordance with his or her design specifications.

Crane requirements and documentation

28.35(1) An employer must ensure that a crane used to hoist a personnel basket or cage

- (a) is equipped with
 - (i) fail-safe mechanisms that prevent the boom and the personnel basket or cage from free falling in the event of a power or system failure or the inadvertent release of any operating controls, and
 - (ii) an automatic limit switch that prevents the personnel basket or cage and load from reaching beyond the highest permissible position specified by the crane manufacturer;
- (b) has, on its hoist line, hooks that are equipped with self-closing safety latches at the point where the personnel basket or cage is suspended;
- (c) is not used to hoist material when the personnel basket or cage is being used to support a worker;
- (d) is not loaded in excess of 25% of its rated load; and
- (e) has a clearly visible and legible load chart, revised in accordance with clause (d) by a professional engineer, that is affixed in a conspicuous place on the crane.

28.35(2) An employer must keep all design drawings, test reports, written statements and certification documents required under this section and section 23.34 with the crane at all times during a hoisting operation.

Operating requirements

28.36 When a crane is used to hoist a personnel basket or cage, an employer must ensure that

- (a) emergency rescue procedures are developed and implemented for the hoisting operation;

- (b) the workers involved in the hoisting operation are informed of those emergency rescue procedures;
- (c) there is an adequate means of communication between the worker or workers in the personnel basket or cage and the crane operator; and
- (d) every worker in the personnel basket or cage
 - (i) wears a full body harness that is connected independently to a fixed anchor point located above the crane's load hook, and
 - (ii) uses the harness in accordance with Part 14 (Fall Protection).

AERIAL DEVICES AND SELF-ELEVATING WORK PLATFORMS

Standards re self-elevating work platforms and aerial devices

28.37(1) An employer must ensure that a self-elevating work platform or aerial device used at a workplace is designed, and constructed, installed, maintained, used and dismantled, in accordance with

- (a) CAN/CSA Standard-B354.1-04, *Portable Elevating Work Platforms*;
- (b) CAN/CSA Standard-B354.2-01 (R2006), *Self-propelled Elevating Work Platforms*;
- (c) CAN/CSA Standard-B354.4-02, *Self-propelled Boom-Supported Elevating Work Platforms*; or
- (d) CSA Standard C225-00 (R2005), *Vehicle-Mounted Aerial Devices*.

28.37(2) An employer must ensure that

- (a) a self-elevating work platform or aerial device constructed at a workplace is designed and certified by a professional engineer; and
- (b) the professional engineer's specifications for its construction, installation, maintenance, use and removal are in accordance with the standards under subsection (1).

28.37(3) Subject to section 28.3, an employer must ensure that the manufacturer's specifications for a commercially manufactured self-elevating work platform or aerial device used at a workplace are in accordance with the standards under subsection (1).

28.37(4) An employer must ensure that structural repairs and modifications to the components of a self-elevating work platform or aerial device are

- (a) made only under the direction and control of a professional engineer; and
- (b) certified by the professional engineer that the workmanship and quality of the materials used has restored the components to not less than their original capacity.

Guarding

28.38 An employer must ensure that each self-elevating work platform and aerial device used at a workplace is equipped with

- (a) suitable guards to prevent a worker from contacting the moving parts and machinery, including protection from shearing hazards created by the movement of the platform; and

(b) guardrails and toe-boards on all open sides or an enclosure that is at least 900 mm in height.

Fall protection

28.39(1) An employer must ensure that a worker using a self-elevating work platform or aerial device

(a) uses a fall arrest system that meets the requirements of Part 14 (Fall Protection) when

(i) the platform or aerial device is being elevated, lowered or moved, or

(ii) the worker steps beyond the guardrail; and

(b) has the lanyard of the fall arrest system attached in accordance with the specifications of

(i) the manufacturer of the work platform or aerial device, or

(ii) a professional engineer.

28.39(2) An employer must ensure that a lifeline is of an appropriate length to prevent a worker from being ejected from the self-elevating work platform or aerial device if it collapses.

28.39(3) Despite subsection (1), a fall arrest system is not required for a worker who remains within the confines of the guardrail of a scissor lift while the lift is being raised or lowered.

Maintenance, records and manuals

28.40(1) An employer and a supplier must, while a self-elevating work platform or aerial device is in their possession,

(a) maintain it so that it is safe for use;

(b) keep a permanent record of all inspections, tests, repairs, modifications and maintenance performed on it; and

(c) ensure that its operator's manual is kept with it.

28.40(2) A record under subsection (1)(b) must include the name and signature of the person who maintains it and the person who performs an inspection, test, repair or modification on it.

Signs

28.41 An employer and a supplier of a self-elevating work platform or aerial device must ensure that the platform or device has signs that are clearly visible and legible to an operator at its controls indicating the following:

(a) the identity of the supplier;

(b) the name and number of the standard to which the platform or aerial device was designed;

(c) its rated load;

(d) all limiting operating conditions, including the use of outriggers, stabilizers and extendable axles;

(e) the specific firm level surface conditions required for use of the platform or aerial device in the elevated position;

(f) any warnings specified by the manufacturer;

(g) except for a boom-type elevating work platform, the direction of machine movement for each

operating control.

Climbing prohibited

28.42 An employer must ensure that no worker climbs on the extension mechanism or the boom of a self-elevating work platform or aerial device.

Use of the self-elevating work platform or aerial device

28.43 An employer must ensure that a self-elevating work platform or aerial device

- (a) is used only in accordance with the specifications of its manufacturer or those of the professional engineer who designed it;
- (b) is not loaded in excess of its rated load, or loaded or used in a manner that affects its stability or endangers a worker;
- (c) is used only on a firm level surface that complies with the conditions required for its use;
- (d) is not moved unless all workers on it are protected from falling; and
- (e) when elevated, is accessed by a worker only if procedures for doing so have been established in accordance with the manufacturer's specifications or those of the professional engineer who designed it, and then only in accordance with those procedures.

Inspection

28.44 An employer must ensure that a competent person inspects a self-elevating work platform or aerial device before it is first used and daily when it is in use.

FORKLIFT-MOUNTED WORK PLATFORMS

Design and construction

28.45 An employer must ensure that an elevated work platform mounted on a forklift

- (a) is commercially manufactured or constructed in accordance with the specifications certified by a professional engineer;
- (b) is designed by the manufacturer of the forklift or a professional engineer to support safely the load that it is expected to support;
- (c) is equipped with guardrails and toe-boards that meet the requirements of Part 14 (Fall Protection);
- (d) is equipped with a screen or similar barrier along the edge of the platform adjacent to the mast of the forklift to prevent a worker from coming into contact with the mast drive mechanism;
- (e) has a skid-resistant deck;
- (f) has the following legibly and permanently marked in a conspicuous place on it:
 - (i) the maximum number of workers who may occupy the platform,
 - (ii) the weight of the platform and its rated load,
 - (iii) the forklift type for which it has been designed,
 - (iv) any other information necessary for its safe operation; and

(g) is securely attached to the forks and carriage of the forklift.

Use of forklift-mounted work platform

28.46 When a worker is on a work platform mounted on a forklift, an employer must ensure that

(a) the forklift is on a stable, level surface, unless it is a rough terrain forklift; and

(b) the operator of the forklift remains at its controls when the platform and the forklift are in the elevated position.

Fall arrest system

28.47 An employer must ensure that

(a) a worker on a work platform mounted on a forklift uses a fall arrest system that meets the requirements of Part 14 (Fall Protection); and

(b) the fall arrest system is attached at an anchor point specified by the professional engineer who designed the work platform.

PART 29

FALSEWORK AND FLYFORMS

Application

29.1 This Part applies to every workplace where falsework or flyform systems are used.

Safe work procedures

29.2 An employer must

- (a) develop and implement safe work procedures for using falsework and flyform systems in the workplace;
- (b) train the workers who work with falsework and flyform systems in those safe work procedures; and
- (c) ensure that workers who work with falsework and flyform systems comply with those safe work procedures.

Employer to instruct workers

29.3 An employer must ensure that only a person competent in the use of falsework and flyform systems supervises the construction, installation, maintenance and dismantling of falsework and flyform systems.

FALSEWORK

Design of falsework

29.4(1) An employer must ensure that falsework is

- (a) designed and certified by a professional engineer and constructed, installed, used, maintained and dismantled in accordance with the professional engineer's specifications; or
- (b) designed, constructed, installed, used, maintained and dismantled in accordance with CSA Standard S269.1-1975 (R2003), *Falsework for Construction Purposes*.

29.4(2) Without limiting subsection (1), an employer must ensure that falsework is constructed and installed and used in accordance with the latest edition of design drawings, including any field design changes and any other supplementary information certified by a professional engineer.

Design drawings requirements

29.5 An employer must ensure that falsework design drawings and any supplementary information include

- (a) sufficient information to enable the falsework to be assembled to meet the design requirements;
- (b) the minimum dimensions and materials of sills and other foundation members, including the load bearing capacity required of any material upon which sills are to be placed;
- (c) where concrete is to be placed, the sequence, method and rate of concrete placement to prevent overloading any part of the falsework; and
- (d) all field design details and any field modifications to be undertaken during construction and installation.

Load support

29.6 An employer must ensure that all partially assembled components of falsework are capable of supporting any load that will be or is likely to be imposed on them.

Falsework used for concrete

29.7 When falsework is used for the placement of concrete, the employer must ensure that

- (a) before each placement of concrete,
 - (i) the falsework is inspected to ensure that it is constructed in accordance with the design drawings and any supplementary information, and
 - (ii) a record of the inspection is kept at the construction project site;
- (b) the falsework is not removed until the concrete has attained sufficient strength to support itself and any load that will be or is likely to be imposed on it; and
- (c) where resupport of concrete is required after falsework has been removed, the method for the resupport has been designed and certified by a professional engineer.

FLYFORM SYSTEMS**Flyform design**

29.8(1) An employer must ensure that

- (a) a flyform system is designed and certified by a professional engineer and constructed, installed, used, maintained and dismantled in accordance with the professional engineer's specifications;
- (b) the design and installation drawings and any supplementary information relating to the flyform system
 - (i) include a plan view, a longitudinal section and a cross-section of each type of panel to be used, and
 - (ii) indicate the calculated position of the centre of gravity of the panels;
- (c) every panel used in a flyform system
 - (i) can resist a minimum horizontal load of 345 kg applied in any direction on the upper edge,
 - (ii) has a safety factor against overturning of at least 2.0, and its legs placed to attain this safety factor, and
 - (iii) has a safety factor against sliding of at least 1.5; and
- (d) where any of the safety factors in clause (c) cannot be attained,
 - (i) the flyform panel is attached to a permanent structure with properly designed devices or an adjacent flyform panel so that the required safety factor is attained, and
 - (ii) where it is put in place using a crane or hoist, it is attached before it is unhooked from the crane or hoist.

29.8(2) When all flyform panels have been assembled to form one continuous piece of falsework, an employer must ensure that the falsework meets the safety factors required under clause (1)(c).

Moving flyforms

29.9(1) An employer must ensure that

(a) a worker rigging a flyform panel or system that is to be moved from one location to another near the edge of a structure is attached to a lifeline that meets the requirements of Part 14 (Fall Protection); and

(b) the flyform panel or system is cleared of all material that is not part of the designed structure before it is moved.

29.9(2) An employer must ensure that no worker detaches a rigging component on a flyform panel or system until the panel or system is stable and secure.

Inspection of flyforms

29.10 An employer must ensure that a flyform system is inspected by a competent person immediately after it is relocated to ensure that it is stable and meets the design specifications.

PART 30

TEMPORARY STRUCTURES

Application

30.1 This Part applies to every workplace where temporary structures are constructed or used.

Safe work procedures

30.2 An employer must

- (a) develop and implement safe work procedures for constructing or using temporary structures;
- (b) train workers who construct or use temporary structures in those safe work procedures; and
- (c) ensure that workers who construct or use temporary structures comply with those safe work procedures.

Temporary structure to be supported

30.3(1) An employer must ensure that unfinished structures, including masonry walls, and temporary structures are adequately braced or supported to withstand any load or force that will be or is likely to be imposed on them, including wind and wind gusts.

30.3(2) When a temporary support system is used under subsection (1), an employer must ensure that it is not removed until the structure has been permanently stabilized.

Employer to provide floor

30.4(1) If a skeleton frame building of more than one storey in height is being erected and persons, other than those engaged in erecting the structure, are required to work or pass beneath the work area, an employer must provide

- (a) a permanent floor; or
- (b) a temporary floor that
 - (i) extends over an entire working area, except for necessary openings which must be protected by a guardrail in accordance with Part 14 (Fall Protection),
 - (ii) is designed to safely support any load that will be or is likely to be imposed on it, including loads from material, machinery or equipment such as cranes and hoists, and
 - (iii) is securely fastened to structural members that are capable of safely supporting any imposed load.

30.4(2) When a plank floor is used as a temporary floor, an employer must ensure that the planks used are

- (a) structurally sound and at least 50 mm thick; and
- (b) securely fastened to the frame of the building and laid close together to form a solid floor.

30.4(3) When material is stored on a temporary floor, an employer must ensure that the material does not fall off the edge of the floor.

Openings in temporary floors

30.5 When an opening in a temporary floor cannot be adequately protected by a guardrail, an employer must ensure that

(a) the opening is completely covered with securely fastened planks or other materials capable of supporting any load that will be or is likely to be imposed on them; and

(b) the covering is clearly, visibly and legibly marked to identify the hazard.

Temporary stairs and landings

30.6(1) An employer must ensure that

(a) temporary stairs and landings are designed and constructed to support any load that will be or is likely to be imposed on them; and

(b) temporary stairs have

(i) in any one flight, a rise that is uniform and treads that are similar in width, length and height,

(ii) a slope not exceeding 50° from the horizontal,

(iii) a vertical distance of not more than 4 m between landings or floors,

(iv) on open sides, including landings, securely fastened and supported handrails equivalent in strength to the top rail of a guardrail, and

(v) a minimum width of at least 750 mm, except where the temporary stairs are prefabricated steel scaffold stairs or unless space restrictions require the stairs to be narrower.

30.6(2) An employer must ensure that steel stairs that are designed to have concrete fill have secured in place temporary wooden tread fillers which extend the full width and length of the treads and landings.

Design of temporary runways, ramps and platforms

30.7 An employer must ensure that a temporary runway, ramp or platform

(a) is designed and constructed to support any load that will be or is likely to be imposed on it;

(b) subject to working conditions and usage, is a minimum of 600 mm in width; and

(c) is securely fastened in place and adequately supported to prevent horizontal or lateral movement.

Temporary ramps

30.8(1) An employer must ensure that a temporary ramp has a slope not greater than one vertical to three horizontal.

30.8(2) When a temporary ramp has a slope greater than one vertical to eight horizontal, the employer must ensure that cross cleats are provided, with the cross cleats being

(a) provided at regular intervals not greater than 450 mm ;

(b) constructed of 25 × 50 mm (nominal) wood strips securely nailed to a ramp, or other means providing equivalent resistance to slipping; and

(c) kept clear of snow, ice and mud accumulations.

PART 31
ROOF WORK

Application

31.1 This Part applies to every workplace where roofing material is repaired, applied to or removed from a building or structure.

DIVISION 1
GENERAL REQUIREMENTS

General requirements re roof work

31.2 Before any work begins on the roof of a building, an employer must ensure that the structure of the building and its roof is evaluated to determine if it is capable of withstanding the loads that will be or are likely to be imposed on the roof, including the loads resulting from the workers and the equipment and materials they use.

Safe work procedures

31.3 When roof work is done, an employer must

- (a) develop and implement safe work procedures for roof work;
- (b) train workers who do roof work in those safe work procedures; and
- (c) ensure that workers who do roof work comply with those safe work procedures.

DIVISION 2
RESIDENTIAL ROOF WORK

Application

31.4(1) This Division applies to residential construction projects where roofing material is repaired, applied to or removed from an existing building, provided that

- (a) the eave height is not more than 6 m; and
- (b) the fall height is more than 3 m.

31.4(2) Nothing in this Division limits or restricts the application of Division 1 to residential construction projects.

Requirements re slopes 4:12 to 6:12

31.5(1) When, in respect of residential construction, a roof deck has a slope greater than 4:12 but not greater than 6:12, an employer must ensure that

- (a) roof jacks and toe-boards are installed
 - (i) continuously along the length of the eave, and
 - (ii) below the work area at intervals of not more than 2.4 m as measured along the roof deck;
- (b) guardrails are installed; or

(c) a fall protection system as required under Part 14 (Fall Protection) is provided.

31.5(2) An employer must ensure that a roof jack used under subsection (1)(a) is provided with an effective non-slip device and has securely fastened to it a toe-board of at least 50 × 150 mm (nominal).

Requirements re slopes more than 6:12

31.6 When, in respect of residential construction, a roof deck has a slope greater than 6:12, an employer must ensure that

(a) guardrails are installed; or

(b) a fall protection system as required under Part 14 (Fall Protection) is provided.

Application individual roof deck locations

31.7 When a roof slope varies at different locations along a roof deck, sections 31.5 and 31.6 apply to each location individually.

Exemption re fall protection

31.8 Part 14 (Fall Protection) does not apply to a residential construction project where the slope of the roof deck is 4:12 or less.

PART 32

PRECAST CONCRETE

Application

32.1 This Part applies to every workplace where precast concrete is used.

Precast construction: general requirements

32.2 An employer must ensure that a precast concrete part of a structure is designed, constructed, installed, used, maintained and inspected in accordance with the specifications of

- (a) the professional engineer who designed it and the manufacturer who manufactured it; and
- (b) the professional engineer who designed the structure.

Safe work procedures

32.3 When precast concrete parts are to be constructed, installed, used, altered, maintained, repaired or inspected, an employer must

- (a) develop and implement safe work procedures respecting the precast concrete parts;
- (b) train workers in those safe work procedures; and
- (c) ensure that workers comply with those safe work procedures.

Specifications and precast design engineer

32.4 An employer must ensure that the design specifications and drawings relating to a precast concrete part that is to be used are signed and certified by the professional engineer or engineers referred to in section 32.2 and include the following:

- (a) the information necessary to enable the part to be accurately constructed and installed, including installed in the proper sequence;
- (b) the hoisting, site, storage, placement, grouting and field repair procedures for the part;
- (c) the minimum dimensions of the bearing surfaces of the part;
- (d) identification of the components of the part that require shoring, bracing or other temporary support;
- (e) if an opening is to be cut in the part, the method to be used to cut the opening;
- (f) the weight of the part.

Supervisor

32.5 An employer must ensure that a worker who works with precast concrete is supervised by a person who is experienced in precast concrete construction.

Placement and support

32.6 An employer must ensure that a precast concrete part is

- (a) placed on a supporting component of the structure that is capable of safely supporting its load; and
- (b) properly braced to withstand any load, including wind and wind gusts, that is or is likely to be imposed on the part when it is placed in its final position.

Hoisting of precast concrete parts

32.7 When a precast concrete part is hoisted, an employer must ensure that

- (a) the device used to hoist the part, such as a spreader bar, clamp or other similar device, is
 - (i) designed and certified by a professional engineer,
 - (ii) equipped with a clearly visible and legible load rating chart, if it is an adjustable type of lifting device,
 - (iii) rated for the safe working load and size of the part, and
 - (iv) inspected by a competent person before it is first used and daily when in use; and
- (b) the part is not hoisted directly over any person.

Rigging clamps

32.8 An employer must ensure that rigging clamps used for precast hollow core slab erection are

- (a) designed for hoisting precast concrete parts; and
- (b) provided with a safety sling of adequate capacity to safely support the load that is or is likely to be imposed.

Specific provision re tilt-up precast panels

32.9 For a precast concrete part that is a tilt-up precast panel, an employer must ensure that the panel is

- (a) unless approved by a professional engineer, void of any cold joints;
- (b) protected from damage from welding or any other application of heat or any other work procedure;
- (c) broken from the casting surface by a mechanical bond breaker;
- (d) protected from damage by a lifting insert, bracing insert or other bracing component; and
- (e) hoisted only after the concrete has attained the required strength specifications of the professional engineer referred to in clause 32.2(a).

Tension equipment and operation

32.10(1) An employer must develop and implement safe work procedures for pre-tensioning, post-tensioning or detensioning operations in accordance with the specifications of

- (a) the manufacturer of the precast concrete part; or
- (b) a professional engineer.

32.10(2) An employer must ensure that

- (a) tensioning equipment is used and maintained in accordance with the manufacturer's specifications;
- (b) a bar, strand, wire or other material used for tensioning a precast concrete part
 - (i) is protected from any damage during handling, storage and transportation, and

(ii) is not damaged by welding, burning or any other work procedure; and

(c) during a tensioning operation, only workers involved in the operation are in the immediate vicinity.

Protection from damage

32.11 No employer may permit any work to proceed on a tensioning operation until the strands have been adequately protected.

PART 33
DEMOLITION WORK

Application

33.1 This Part applies to every workplace where demolition work takes place.

Safe work procedures

33.2 An employer carrying out demolition work must

- (a) develop and implement safe work procedures for demolition work;
- (b) ensure that workers involved in demolition work are trained in those safe work procedures; and
- (c) ensure that workers involved in demolition work comply with those safe work procedures.

Employer's general obligation re demolition work

33.3 An employer must ensure that the demolition work is

- (a) carried out in accordance with CSA Standard S350-M1980 (R2003), *Code of Practice for Safety in Demolition of Structures*;
- (b) conducted in such a way as to ensure that, so far as is reasonably practicable, workers and other persons are not exposed to risks to their safety or health in connection with the demolition work;
- (c) subject to sections 33.8 and 33.9, carried out in the reverse order of erection of the building or structure; and
- (d) performed floor by floor from the top downward, if a worker is or may be present in the building or structure during its demolition.

Employer's obligation before demolition begins

33.4(1) An employer must ensure that before demolition work begins,

- (a) the following are removed from the building or structure, or part of the building or structure, being demolished:
 - (i) glass, metal cornices or other material that may shatter,
 - (ii) hazardous substances, including asbestos,
 - (iii) any tanks, wells, piping systems, flammable or explosive materials or gas cylinders;
- (b) where anything mentioned in
 - (i) subclause (a)(ii) cannot be removed, it is subjected to control measures in accordance with Part 36 (Chemical and Biological Substances) and Part 37 (Asbestos), and
 - (ii) subclause (a)(iii) cannot be removed, it is made safe;
- (c) authorization from the authority having jurisdiction has been obtained to disconnect any utility or service at the demolition site, the utility or service has been disconnected, and written confirmation of the authorized disconnection is available at the demolition site; and
- (d) the demolition site is

- (i) free of unauthorized persons, and
- (ii) appropriately barricaded to prevent access by unauthorized persons.

33.4(2) An employer must ensure that a competent person

(a) inspects the demolition site and confirms that subsection (1) has been complied with before proceeding with demolition work; and

(b) supervises the demolition work at all times when demolition work is in progress.

Notice to owners of affected property

33.5 An employer must

(a) provide notice in writing of the intended demolition work to the owner of any building, structure or property connected or adjacent to the demolition site, or that may be affected by the demolition; and

(b) ensure that the owner has adequate time to ensure the safety of any persons in the building or structure or on the property.

Stability of adjoining building or structure

33.6(1) When a building or structure adjoins the demolition site and the demolition work may affect its stability, an employer must ensure that the demolition work is carried out in accordance with procedures, as certified by a professional engineer, that safeguard the stability of the adjoining building or structure.

33.6(2) An employer must ensure that a copy of the procedures certified by the professional engineer is kept at the demolition site at all times when demolition work is in progress.

Ventilation, loads, removal of debris and chutes

33.7(1) When carrying out demolition work, an employer must ensure that

(a) adequate ventilation is provided for a machine powered by an internal combustion engine that operates in an enclosed area;

(b) every floor, roof or other surface is of sufficient strength to safely support any of the following loads:

(i) the load of a worker who is required or permitted to be on it,

(ii) the load of any equipment, including powered mobile equipment, placed on it;

(c) material or debris is removed promptly and is not allowed to accumulate

(i) in an area that might result in the collapse of all or part of the building or structure due to overloading, or

(ii) on the ground immediately outside of the building or structure being demolished; and

(d) unless it is being demolished at the time, no wall or other part of the building or structure is left unstable or in danger of collapsing.

33.7(2) When demolishing a structure, an employer must provide a chute for use in removing debris and dust if the dropping debris or dust creates a risk to the safety or health of a worker or any other person.

33.7(3) An employer must ensure that a chute provided under subsection (2)

- (a) is properly secured;
- (b) has all of its openings adequately guarded;
- (c) has placed adjacent to its outlet, in a conspicuous location, a clearly visible and legible sign bearing the wording "DANGER, NO ENTRY" in a minimum of 5 cm letters; and
- (d) empties into an area that is appropriately barricaded to prevent access by any person.

33.7(4) An employer must ensure that

- (a) workers and equipment are located clear of any falling material or debris; and
- (b) without limiting clause (a), a floor opening is adequately covered to prevent material from falling below, if
 - (i) a wall that is within 3 m of the opening is being demolished, and
 - (ii) there is a risk to the safety or health of a worker.

Demolition by explosives

33.8 When an explosive is to be used to carry out the demolition work, an employer must ensure that

- (a) a competent person develops a demolition procedure to protect the safety and health of workers; and
- (b) the worker who uses the explosives does so in accordance with the requirements of Part 34 (Explosives).

Demolition by pushing or pulling

33.9(1) An employer must ensure that

- (a) when a part of a building or structure is demolished by pushing, the point at which the force is applied is located
 - (i) at least two-thirds up the height of the part, measured from the base of the part being pushed, or
 - (ii) at the point specified by a professional engineer; and
- (b) when a part of a building or structure is demolished by pulling,
 - (i) the horizontal distance from the machine used for the pulling to the face of the part being pulled is at least 20% greater than the height of the part, and
 - (ii) no person stands between the machine and the building or structure.

33.9(2) When carrying out demolition work, an employer must ensure that no crane boom is used for pushing or pulling a building or structure.

Presence of pre-stressed concrete parts

33.10 An employer must

- (a) determine whether pre-stressed or post-tension concrete parts are present in the building or structure being demolished; and
- (b) if present, ensure those parts are demolished in accordance with the specifications of a

professional engineer.

Structural members

33.11 If structural members are present in the building or structure being demolished, an employer must ensure that each member that is being removed is

- (a) not placed under any stress other than its own weight; and
- (b) secured or supported to prevent it from dropping or swinging uncontrollably.

PART 34
EXPLOSIVES

INTRODUCTORY PROVISIONS

Application

34.1(1) This Part applies to every workplace where explosives are used.

34.1(2) Despite subsection (1), this Part does not apply to any class of work that is covered by the *Operation of Mines Regulation*, Manitoba Regulation 228/94.

34.1(3) This Part is in addition to the regulations made under the *Explosives Act* (Canada) and is to be read and applied as being ancillary to it.

Safe work procedures

34.2(1) An employer must

(a) develop and implement safe work procedures for the use of explosives, including procedures for removing any misfire;

(b) train blasters and other workers who may work in the vicinity of blasting in those safe work procedures; and

(c) ensure that the blasters and other workers comply with those safe work procedures.

34.2(2) The safe work procedures developed and implemented by the employer must be consistent with the code of practice respecting the safe use of explosives issued by the director.

CERTIFICATION OF BLASTERS

Classes of blasting

34.3 The director may issue a blaster's certificate for the following classes of work:

(a) unlimited, under which a blaster may detonate explosives by fuse and cap, a non-electrical detonation system or electrical detonation, with no restriction on the number of shots or series;

(b) fuse and cap with limited electrical, under which a blaster may detonate a maximum blast of 50 shots by safety fuse and cap assemblies, non-electrical detonation systems or electrical detonators hooked up in a single series;

(c) fuse and cap, under which a blaster may detonate a maximum blast of 50 shots by safety fuse and cap assemblies or non-electrical detonation systems;

(d) seismic, under which a blaster may detonate a single shot electrical blast for seismic purposes;

(e) a class established by the director.

Training programs and examinations

34.4 The director may establish blaster safety training programs and examinations for the different classes of blaster's certificates established under section 34.3.

Issuing and renewing blaster certificates

34.5(1) The director may issue a blaster's certificate of a class set out in section 34.3, to a

person who

- (a) in a form approved by the director, applies to the director and verifies the information in the application by statutory declaration;
- (b) satisfies the director that he or she has successfully completed the relevant blaster safety training program; and
- (c) successfully completes the examination for the class of certificate.

34.5(2) A certificate issued under this section

- (a) is valid for the period fixed by the director; and
- (b) is subject to any terms and conditions, including terms and conditions for its renewal, imposed by the director.

34.5(3) Subject to subsection (4), the director must grant a renewal of a blaster's certificate held by a blaster who is not otherwise suspended if the blaster

- (a) files with the director an application for renewal, in the form approved by the director, before his or her existing certificate authorization expires; and
- (b) complies with any term or condition imposed by the director for renewing the certificate.

34.5(4) As a condition of renewing a certificate, the director may require the blaster to successfully complete an examination or re-examination if

- (a) the blaster applies for the renewal after the time for doing so under clause (3)(a) has expired; or
- (b) the director is not satisfied that the blaster carried out sufficient blasting operations, or sufficient blasting operations of the relevant type, under his or her previous certificate to demonstrate safe and competent blasting.

Fees

34.6 The fee for enrolling in a blaster's safety program or for taking a blaster's examination or re-examination is \$25.

Employer's reporting of blaster

34.7 If an employer is of the opinion that a blasting operation carried out by a blaster has put the safety or health of any person, including the blaster, at risk, the employer must immediately ensure that

- (a) the blaster does not perform any further duties as a blaster; and
- (b) the actions of the blaster are reported to the director.

Director's suspension of blaster

34.8(1) The director must immediately suspend a blaster's certificate if the director is of the opinion that

- (a) the blaster presents a risk to the safety or health of a worker, the blaster or other person; or
- (b) without limiting clause (a), the blaster
 - (i) has carried out a blast in an unsafe manner, or

(ii) is operating unsafely.

34.8(2) A suspension under subsection (1) must be for a minimum of 30 days, but the director may, in his or her discretion, impose a longer suspension.

34.8(3) Where the director suspends the certificate of a blaster, the director must promptly notify the blaster and the blaster's employer of the suspension, its length and the procedure for requesting a reconsideration of the suspension.

34.8(4) A blaster whose certificate is suspended must immediately surrender the certificate to the director.

34.8(5) At the end of the period of suspension, the director must review the matter and may reinstate or revoke the blaster's certificate.

34.8(6) When a blaster's certificate has been revoked, the director may set out terms and conditions to be fulfilled by the blaster for the reinstatement of a blaster's certificate.

Reconsideration

34.9(1) A blaster may request the director reconsider a suspension of his or her certificate by filing a request with the director within 14 days after receiving notice that his or her certificate has been suspended.

34.9(2) A request for a reconsideration must be in writing and must set out the grounds upon which the request is made.

34.9(3) The director must decide the request for reconsideration and may

(a) confirm or rescind the suspension;

(b) alter its length; or

(c) set out terms and conditions to be fulfilled by the blaster before rescinding the suspension of the blaster's certificate.

No hearing required

34.10(1) The director may hold a hearing when reconsidering a suspension but is not required to do so.

34.10(2) If the director decides to hold a hearing, the director

(a) is not bound by the rules of evidence that apply to judicial proceedings; and

(b) may establish rules of practice and procedure for the hearing.

BLASTING PROCEDURES

Only blaster may be authorized to blast

34.11(1) An employer must not authorize or permit a charge to be prepared, fixed or fired, or a misfire to be handled, by anyone other than

(a) a blaster; or

(b) a person who is

(i) working under the direct personal supervision of a blaster, and

(ii) undergoing training to obtain a blaster's certificate.

34.11(2) A blaster may only carry out a blasting operation that is within the class of work specified in his or her certificate.

Blaster not to work alone

34.12(1) A blaster must not work alone while carrying out a blasting operation.

34.12(2) If a blaster is assisted by a person who is not a blaster, the blaster must ensure that all work carried out by the person is done under the direct personal supervision of the blaster.

Proof of certificate must be provided

34.13(1) Before becoming involved in a blasting operation, a blaster must deliver proof of his or her blaster's certificate to

- (a) the person in charge of the workplace where the blasting operation is to take place; or
- (b) the employer, where there is no person in charge of the workplace.

34.13(2) Upon the request of a safety and health officer, a blaster must produce his or her blasting certificate for inspection.

Employer must ensure proof is received

34.14 No employer or person in charge of a workplace may permit any person to carry out a blasting operation unless he or she has first provided the employer or the person in charge proof that he or she is a blaster.

Blaster must supervise

34.15(1) Before blasting occurs, an employer must designate the blaster as the supervisor of the blast site, and where more than one blaster is working in a blast site, the employer must designate one of the blasters as the supervisor.

34.15(2) An employer must ensure that the supervising blaster has full authority over, and is responsible for the safety of, every other person, including other blasters, assisting with the blasting operation.

Blasting operations

34.16(1) An employer must ensure that

- (a) all explosives, other than the total charge to be loaded, are kept in a magazine;
- (b) no magazine is located within 8 m of a flammable liquid or compressed gas;
- (c) empty containers, cases, cardboard boxes, bags or other wrappings from explosives and detonators are not reused, but rather are disposed of in accordance with the manufacturer's specifications;
- (d) the blaster
 - (i) uses the oldest explosive in a magazine first,
 - (ii) does not use a deteriorated or damaged explosive,
 - (iii) does not move or carry a charged explosive or a detonator in a manner that creates a risk to the safety or health of the blaster or another person, and
 - (iv) does not leave an explosive unattended while it is being transported from the magazine to the blast site or after it is loaded and ready to be blasted;

(e) a charge is primed only at the blasting site, and for certainty, no charge is primed in a magazine or any other place where other explosives are stored;

(f) before a borehole is drilled, all loose rock or other material that may pose a risk to the safety or health of a worker or other person is scaled or removed, and if blasting may have occurred previously in the area of the blast site,

(i) the drilling face is thoroughly cleaned in accordance with appropriate procedures,

(ii) a blaster has inspected the drilling face and blasted material to locate any misfires and bootlegs, and

(iii) if a misfire or bootleg is found, the blaster has dealt with it in accordance with the safe work procedures for the workplace and for the relevant type of explosive; and

(g) no worker tampers with an explosive, a detonator or any part of an explosive or detonator.

34.16(2) Before blasting occurs, an employer must ensure that adequate precautions are taken against possible injury to persons and damage to property, including without limitation, ensuring that

(a) the blaster or supervising blaster limits the charge used to the minimum required to do the blast;

(b) a blasting mat or other suitable means of protection is used to control flying debris;

(c) unauthorized persons are warned not to enter or remain in the area of the blast site by

(i) the placement of warning signs or barricades, or

(ii) the posting of flagpersons or guards;

(d) roads, trails, paths and other approaches to the blast site are closed during blasting operations;

(e) the person who controls any railway within the blast site is given advance notice of the blasting operations to be carried out; and

(f) sufficient warning is given before a blast takes place.

34.16(3) An employer must ensure that the blaster does not fire a charge until

(a) all surplus explosives or detonators are removed from the blast site; and

(b) all workers and other persons are at a safe distance from the blast site, or if a worker or other person is required to remain in the blast site, he or she is protected by suitable cover from falling rocks, flying debris, mud or anything else that is disturbed, agitated or displaced by the blast.

34.16(4) An employer must ensure that all boreholes that are charged with explosives in one loading operation are fired in one blasting operation.

34.16(5) An employer must ensure that a blaster does not perform a blasting operation using electric detonators during or on the approach of an electrical storm or a severe dust storm.

Post-blast inspection and clearance by blaster

34.17(1) After a blast an employer must ensure that, before a worker or other person is allowed to return to the blast site, the blaster has

- (a) inspected the blast site for misfires and bootlegs;
- (b) marked each misfire or bootleg with a conspicuous marker; and
- (c) given clearance for workers and other persons to return to the blast site.

34.17(2) In the event that a misfire or bootleg is found, an employer must ensure that it is not abandoned, but rather that the blaster deals with it in accordance with the safe work procedures for the workplace and for the relevant type of explosive.

No smoking or burning material near explosives

34.18(1) No person may smoke or burn any material within 8 m of an explosive.

34.18(2) An employer must ensure that no person smokes or burns any material within 8 m of an explosive.

DIRECTOR'S POWERS

Director's powers

34.19 For the purpose of this Part, the director may

- (a) establish
 - (i) terms and conditions that may be imposed on a blaster's certificate,
 - (ii) procedures to be followed for the reconsideration of a suspension, and
 - (iii) requirements for issuing or renewing blaster's certificates, including a class of blaster's certificates established under clause 34.3(e); and
- (b) authorize a designated person to exercise powers or perform duties under this Part.

PART 35

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEMS

APPLICATION

Application

35.1(1) Subject to subsections (2) and (3), this Part applies to every workplace where a controlled product is used, stored, produced or handled.

35.1(2) This Part does not apply if the controlled product is any of the following:

- (a) wood or a product made of wood;
- (b) tobacco or a product made of tobacco;
- (c) a manufactured article
 - (i) that is formed to a specific shape or design during manufacture,
 - (ii) that has a shape or design that determines its use in whole or in part, and
 - (iii) that, under normal use, will not release or otherwise cause a person to be exposed to chemicals emanating from it; or
- (d) a product being transported or handled pursuant to *The Dangerous Goods Handling and Transportation Act* or the *Dangerous Goods Transportation Act* (Canada), to the extent that its handling, offering for transport or transport is subject to those Acts.

35.1(3) The provisions of this Part relating to supplier labels and material safety data sheets do not apply to the following:

- (a) an explosive within the meaning of the *Explosives Act* (Canada);
- (b) a cosmetic, device, drug or food within the meaning of the *Food and Drugs Act* (Canada);
- (c) a control product within the meaning of the *Pest Control Products Act* (Canada);
- (d) a prescribed substance within the meaning of the *Nuclear Safety and Control Act* (Canada); or
- (e) a product, material or substance included in Part II of Schedule I of the *Hazardous Products Act* (Canada) and packaged as a consumer product in quantities normally used by a member of the general public.

REQUIREMENTS

Controlled product use and storage

35.2(1) An employer must ensure that a controlled product is not used, stored, produced or handled in a workplace unless all the applicable requirements of this Part in respect of labels, identifiers, material safety data sheets and worker education have been satisfied.

35.2(2) Despite subsection (1), an employer may store a controlled product in a workplace while

actively seeking information required by this Part.

Training

35.3(1) An employer must ensure that a worker who works with or near a controlled product or performs work involving the manufacture of a controlled product receives training in the following:

- (a) the content required to be on a supplier label and a workplace label and the purpose and significance of the information on the label;
- (b) the content required to be on a material safety data sheet and the purpose and significance of the information on the material safety data sheet;
- (c) procedures for safely storing, using and handling the controlled product;
- (d) if applicable, the methods of identification referred to in section 35.7;
- (e) the procedures to be followed if there are fugitive emissions;
- (f) the procedures to be followed in case of an emergency involving the controlled product.

35.3(2) An employer must ensure that the training required under subsection (1) is developed and implemented in consultation with

- (a) the committee at the workplace;
- (b) the representative at the workplace; or
- (c) when there is no committee or representative, the workers at the workplace.

35.3(3) An employer must ensure that any worker who receives the training required under subsection (1) is able to apply the information provided to protect the worker's safety and health.

35.3(4) An employer must review the worker training program at least once each year or more frequently if required by a change in work conditions or available hazard information. The review must be conducted in consultation with

- (a) the committee at the workplace;
- (b) the representative at the workplace; or
- (c) when there is no committee or representative, the workers at the workplace.

LABELLING REQUIREMENTS

Supplier label required

35.4(1) An employer must ensure that the container of a controlled product or a controlled product received at a workplace is labelled with a supplier label.

35.4(2) An employer must not remove, deface, modify or alter the supplier label as long as any amount of a controlled product remains in the container in which it was received from the supplier.

35.4(3) If a supplier label applied to a container of a controlled product or a controlled product becomes illegible or is accidentally removed from the controlled product or the container, an employer must replace the label with another supplier label or a workplace label.

35.4(4) An employer who receives a controlled product in a multi-container shipment where the individual containers have not been labelled by the supplier must affix a label that meets the

requirements of the *Controlled Products Regulations* to each container.

35.4(5) If a controlled product imported under section 23 of the *Controlled Products Regulations* is received at a worksite without a supplier label, the employer must apply a label disclosing the information and displaying the hazard symbols referred to in paragraph 13(b) of the *Hazardous Products Act* (Canada).

35.4(6) An employer who has received a controlled product transported as a bulk shipment must

(a) affix a supplier label to the container of the controlled product or to the controlled product in the workplace; or

(b) in cases where pursuant to section 15 of the *Controlled Products Regulations* the supplier is not required to label a controlled product transported as a bulk shipment, affix a workplace label to the container of the controlled product or to the controlled product in the workplace.

Workplace label for employer-produced products

35.5(1) When an employer produces a controlled product in a workplace, the employer must ensure that the controlled product or the container of the controlled product has a workplace label applied to it.

35.5(2) Subsection (1) does not apply to

(a) the production of a fugitive emission; or

(b) a controlled product in a container that is intended to contain the controlled product for sale or disposition and is about to be appropriately labelled within the normal course of business and without undue delay.

Workplace label for decanted products

35.6(1) When a controlled product is decanted at a workplace into a container other than the container in which it was received from a supplier, an employer must ensure that a workplace label is applied to the container.

35.6(2) Subsection (1) does not apply to a portable container that is filled directly from a container that has a supplier label or workplace label affixed to it if

(a) all of the controlled product is required for immediate use;

(b) the controlled product is under the control of and is used exclusively by the worker who filled the portable container;

(c) the controlled product is used only during the shift in which the portable container was filled; and

(d) the contents of the portable container are clearly identified.

Identification of product in piping system or vessel

35.7 When a controlled product in a workplace is contained or transferred in a

(a) pipe;

(b) piping system, including valves;

(c) process vessel;

(d) reaction vessel; or

- (e) tank car, tank truck, ore car, conveyor belt or similar conveyance;

an employer must ensure the safe use, storage and handling of the controlled product through a combination of worker education and the use of colour coding, labels, placards or any other mode of identification.

Placard identifiers

35.8 When a controlled product is not in a container or is in any form intended for export, an employer may fulfill the labelling requirements of sections 35.4 (supplier label), 35.5 (workplace label) and 35.6 (workplace label for decanted products), by posting a placard in a conspicuous place at the location where the controlled product is stored that

- (a) contains the information required for a workplace label; and
- (b) is of such size and in such a location that the information on it is conspicuous and clearly legible to workers.

CONTROLLED PRODUCTS IN LABORATORY

Supplier label not required for laboratory chemicals

35.9(1) No supplier label is required on a controlled product that an employer receives from a supplier

- (a) if the controlled product
 - (i) originates from a laboratory supply house,
 - (ii) is intended by the employer solely for use in a laboratory, and
 - (iii) is packaged in a container in a quantity of less than 10 kg; and
- (b) the container is labelled in accordance with paragraph 17(b) of the *Controlled Products Regulations*.

35.9(2) An employer must ensure that a laboratory sample of a controlled product brought into a laboratory is packaged in a container that has a label with the following information printed on it:

- (a) the product identifier;
- (b) the chemical identifier or generic chemical identity of every ingredient of the controlled product referred to in subclauses 13(1)(i) to (v) of the *Hazardous Products Act* (Canada), if known to the employer or supplier;
- (c) the supplier identifier;
- (d) the statement "Hazardous Laboratory Sample — for hazard information or in an emergency call [insert telephone number referred to in clause (e)];
- (e) an emergency telephone number for the supplier that will enable
 - (i) a user of the controlled product to obtain hazard information in respect of the controlled product, and
 - (ii) a medical professional to obtain the information in respect of the controlled product referred to in clause 13(a) of the *Hazardous Products Act* (Canada) and is in the possession of

the supplier for the purpose of making a medical diagnosis of, or rendering treatment to, a person in an emergency.

35.9(3) When a controlled product is in a container other than the container in which it was received from the supplier, the employer is not required to comply with subsection 35.6(1) if the controlled product is only used in a laboratory and is clearly identified.

35.9(4) When an employer produces a controlled product for use in a laboratory, the employer is not required to comply with subsection 35.5(1) if the controlled product is clearly identified.

35.9(5) When a controlled product is produced at a workplace and is in a container for the sole purpose of use, analysis, testing or evaluation in a laboratory, an employer is not required to comply with subsections 35.5(1) and 35.6(1) if the controlled product is clearly identified and the employer complies with subsection 35.3(1).

MATERIAL SAFETY DATA SHEETS

Supplier material safety data sheets

35.10(1) An employer who acquires a controlled product for use at a workplace must obtain a supplier material safety data sheet for that controlled product unless the supplier is exempted from the requirement to provide a material safety data sheet by section 9 or 10 of the *Controlled Products Regulations* and the employer complies with the applicable section.

35.10(2) When a supplier material safety data sheet obtained under subsection (1) is more than three years old, an employer must, if possible, obtain from the supplier an up-to-date supplier material safety data sheet for the controlled product.

35.10(3) If an employer is unable to obtain a material safety data sheet as required under subsection (2), the employer must review and revise, if necessary, the existing supplier's material safety data sheet on the basis of the ingredients disclosed on the sheet.

35.10(4) An employer may provide a material safety data sheet in a format that differs from the format provided by the supplier or containing additional hazard information if

- (a) the employer-provided material safety data sheet contains no less content or information than the supplier material safety data sheet; and
- (b) the supplier material safety data sheet is available at the workplace and the employer-provided material safety data sheet indicates that availability.

Employer material safety data sheets

35.11(1) When a controlled product or a fugitive emission that contains a controlled product is produced at a workplace, an employer must prepare a material safety data sheet for the controlled product in question.

35.11(2) The material safety data sheet must be updated by the employer

- (a) as soon as practicable but not later than 90 days after new hazard information becomes available; and
- (b) at least once every three years.

Accessibility of material safety data sheets

35.12 An employer must ensure that all supplier material safety data sheets and employer-provided data sheets required under this Part are readily accessible

- (a) to workers at the workplace who may be exposed to the controlled product; and
- (b) to the committee or representative at the workplace.

Deletions from material safety data sheets

35.13 When an employer claims an exemption from a requirement to disclose information under section 35.14, the employer may delete from a material safety data sheet for the time period referred to in subsection 35.15(3), the information that is the subject of the claim but may not delete hazard information.

CONFIDENTIALITY

Claim for disclosure exemption

35.14 An employer may file a claim with the commission that the following information is confidential business information and should be exempt from disclosure on a label or a material safety data sheet required under this Part:

- (a) the chemical identity or concentration of an ingredient of a controlled product;
- (b) the name of a toxicological study that identifies an ingredient of a controlled product;
- (c) the chemical name, common name, generic name, trade name or brand name of a controlled product;
- (d) information that could be used to identify a supplier of a controlled product.

Interim non-disclosure

35.15(1) Subject to subsection (2), an employer who claims an exemption from the commission may

- (a) delete the information that is the subject of the claim for exemption from the material safety data sheet for the controlled product; and
- (b) remove a supplier label and replace it with the workplace label that complies with this Part.

35.15(2) An employer may delete confidential business information and remove the documents from the date the employer files the claim for exemption until its determination by the commission if the employer discloses on the material safety data sheet, and where applicable, on the label of the product or its container,

- (a) the date on which the claim for exemption was filed; and
- (b) the registry number assigned to the claim for exemption under the *Hazardous Materials Information Review Act* (Canada).

35.15(3) An exemption is valid for three years after the date the commission determines the information is confidential business information.

Exemption from disclosure

35.16(1) If an employer is notified by the commission that a claim for exemption under section 35.14 is valid, the employer may, subject to subsection (2),

- (a) remove the supplier label and replace it with a workplace label that complies with this Part; and

(b) delete the confidential business information from the material safety data sheet for the controlled product.

35.16(2) The employer may delete confidential business information from a controlled product's material safety data sheet or label if the employer includes on its material safety data sheet and, if applicable, on its label or the container in which it is packaged,

(a) a statement that an exemption from disclosure has been granted;

(b) the date of the commission's decision granting the exemption; and

(c) the registry number assigned to the claim for exemption under the *Hazardous Materials Information Review Act* (Canada).

35.16(3) The information referred to in subsection (2) must be included for a period of three years beginning not more than 30 days after the final disposition of the claim for exemption.

Duty to disclose information

35.17(1) An employer who manufactures a controlled product must give, as soon as practicable under the circumstances, the source of toxicological data used in preparing a material safety data sheet on request to any of the following:

(a) a safety and health officer;

(b) the committee at the workplace;

(c) the representative at the workplace;

(d) when there is no committee or representative, the workers at the workplace.

35.17(2) The *Hazardous Materials Information Review Act* (Canada), applies to the disclosure of information under subsection (1).

Information confidential

35.18(1) If a safety and health officer or other official working under the authority of the *Hazardous Products Act* (Canada) obtains information from the commission under clause 46(2)(e) of the *Hazardous Materials Information Review Act* (Canada), the officer or other official

(a) must keep the information confidential; and

(b) must not disclose it to any person except in accordance with this Part and for the purposes of the administration or enforcement of the *Hazardous Products Act* (Canada) or this Act.

35.18(2) A person to whom information is disclosed under clause (1)(b)

(a) must keep the information confidential; and

(b) must not disclose it to any person except in accordance with this Part and for the purposes of the administration or enforcement of the *Hazardous Products Act* (Canada) or this Act.

Information to medical professional

35.19(1) An employer must give any information in the employer's possession, including confidential business information exempted from disclosure under this Part, to a medical professional for the purpose of making a medical diagnosis or treating a worker in an emergency.

35.19(2) A person to whom confidential business information is given under subsection (1) must not give the information to another person except for the purpose of treating a worker in an emergency.

35.19(3) A person to whom confidential business information is given under subsection (2) must keep the information confidential.

Limits on disclosure

35.20(1) A person must not use or disclose confidential business information exempted from disclosure under this Part except in accordance with sections 35.18 and 35.19.

35.20(2) Subsection (1) does not apply to a person who makes a claim for exemption or a person acting with that person's consent.

HAZARDOUS WASTE

Data sheet for hazardous waste

35.21(1) If hazardous waste that contains a controlled product is produced, stored, handled or disposed of in the workplace, the employer must prepare a material safety data sheet for the hazardous waste unless a document which addresses composition, hazards and safe measures for the waste is readily available at the workplace.

35.21(2) An employer must ensure that a material safety data sheet required by subsection (1) is readily accessible to

- (a) workers at the workplace who may be exposed to the controlled product; and
- (b) the committee or representative at the workplace.

Placard to identify hazardous waste

35.22 An employer may identify hazardous waste which is not in a container by posting a placard in a workplace which

- (a) discloses the information required for a workplace label; and
- (b) is of a size and in locations so that the information is conspicuous and clearly legible to workers.

Hazardous waste sale or disposal

35.23 An employer must not sell or dispose of hazardous waste to a person unless

- (a) on the sale or disposal, the employer provides that person with a material safety data sheet in respect of each controlled product in the hazardous waste; and
- (b) the hazardous waste or container in which the hazardous waste is packaged has a label applied to it which complies with subsection 35.5(1) (workplace label for employer-produced products) or the information mandated by the *Controlled Products Regulations* is provided to the person receiving it.

Keeping material safety data sheets

35.24 An employer must keep a material safety data sheet required under this Part for a controlled product, including hazardous waste, for at least 30 years after the sheet was received from the supplier or produced at the workplace.

Definitions

35.25 The following definitions apply in this Part.

"**container**" includes a bag, barrel, bottle, box, can, cylinder, drum, storage tank or similar package or receptacle. (« contenant »)

"**label**" includes any mark, sign, device, stamp, seal, sticker, ticket, tag or wrapper. (« étiquette »)

"workplace label" means a label that contains the following information:

- (a) a product identifier;
- (b) information for the safe handling of the controlled product; and
- (c) a statement indicating that a material safety data sheet for the controlled product is available. (« étiquette du lieu de travail »)

PART 36

CHEMICAL AND BIOLOGICAL SUBSTANCES

APPLICATION

Application

36.1 This Part applies to every workplace in which a chemical or biological substance is present.

ASSESSMENTS

Duty to assess chemical and biological substances

36.2(1) An employer must assess all information that is practicably available to the employer respecting a chemical or biological substance present in the workplace to determine if the substance creates or may create a risk to the safety or health of a worker in the workplace. The assessment must take place in consultation with

- (a) the committee at the workplace;
- (b) the representative at the workplace; or
- (c) when there is no committee or representative, the workers at the workplace.

36.2(2) An employer must reassess a chemical or biological substance in accordance with the requirements of subsection (1) if

- (a) there is a change
 - (i) in conditions in the workplace, or
 - (ii) in the health or physical condition of a worker known to the employer; or
- (b) new information about the substance becomes available to the employer.

SAFE WORK PROCEDURES

Safe work procedures

36.3 An employer must

- (a) develop and implement safe work procedures respecting the use, production, storage, handling and disposal of any chemical or biological substance that an assessment under section 36.2 has determined creates or may create a risk to the safety or health of a worker in that workplace;
- (b) train workers in the safe work procedures; and

- (c) ensure that workers comply with the safe work procedures.

CONTROL MEASURES
FOR NON-AIRBORNE HAZARDS

Control measures for non-airborne hazards

36.4 If an assessment under section 36.2 determines that non-airborne exposure to a chemical or biological substance creates or may create a risk to the safety or health of a worker, an employer must immediately implement control measures in the workplace to eliminate any risk resulting from non-airborne exposure to the substance.

OCCUPATIONAL EXPOSURE LIMITS FOR
AIRBORNE HAZARDOUS SUBSTANCES

Establishing airborne occupational exposure limits

36.5(1) Subject to subsection (2), if an assessment under section 36.2 determines that the presence of an airborne chemical or biological substance in the workplace creates or may create a risk to the safety or health of a worker, an employer must

- (a) in the case of an airborne substance for which the ACGIH has established a threshold limit value, establish an occupational exposure limit for the substance that does not exceed the threshold limit value established by the ACGIH;

- (b) in the case of an airborne designated material, establish an occupational exposure limit for the material that is as close to zero as possible and does not exceed the threshold limit value established by the ACGIH, where one exists; or

- (c) in the case of an airborne substance for which the ACGIH has not established a threshold limit value,

- (i) implement control measures in the workplace sufficient to eliminate any risk to the safety or health of a worker, or

- (ii) ensure that a competent person establishes an occupational exposure limit for the substance that will ensure that the safety or health of all workers in the workplace will not be placed at risk.

36.5(2) When exposure to an airborne chemical or biological substance at a concentration below the threshold limit value for that substance established by the ACGIH creates or may create a risk to the safety or health of a worker in a workplace due to

- (a) conditions in the workplace, including,

- (i) heat,

- (ii) ultraviolet and ionizing radiation,

- (iii) humidity,

- (iv) pressure,

- (v) length of work shift, work-rest regime, or

- (vi) additive and synergistic effects of materials and workload; or

(b) the health or physical condition of a worker in the workplace known to an employer;

the employer must establish a lower occupational exposure limit for that substance than the limit established by the ACGIH. The occupational exposure limit established by the employer must ensure that the safety or health of workers who are exposed to the substance in that workplace at levels below that limit will not be placed at risk.

MONITORING AND CONTROL MEASURES

Monitoring

36.6(1) If a worker is, or may be, exposed to an airborne chemical or biological substance in the workplace at a concentration in excess of the occupational exposure limit for the substance established under section 36.5, an employer must

(a) conduct monitoring of the substance on a regular basis to determine the airborne concentration of the substance; or

(b) implement control measures in accordance with section 36.7 sufficient to ensure that no worker is exposed to the substance in excess of the occupational exposure limit for that substance.

36.6(2) When an employer conducts monitoring under subsection (1), the employer must ensure that

(a) the concentrations of the chemical or biological substance to which a worker is exposed are determined by a competent person from analyses of air samples representative of the worker's exposure; and

(b) the air sampling and the analyses of the air samples are conducted in accordance with the requirements of

(i) the National Institute for Occupational Safety and Health *Manual of Analytical Methods*, published by the United States Department of Health and Human Services, or

(ii) another method established by a recognized occupational hygiene practice.

36.6(3) An employer must make a record of all monitoring, which must include the following information:

(a) the type of monitoring;

(b) the type of equipment used;

(c) each result of the monitoring and the time each result was obtained;

(d) any interpretation of the monitoring data;

(e) the names of the workers whose exposure was measured.

36.6(4) An employer must provide the monitoring records to

(a) the committee at the workplace;

(b) the representative at the workplace;

(c) if no committee or representative exist, to affected workers; and

(d) upon request, to a worker who was exposed to a chemical or biological substance in the workplace.

36.6(5) An employer must maintain a monitoring record for a 30-year period after the monitoring was conducted.

Control measures

36.7 When monitoring under section 36.6 indicates that a worker has been exposed to an airborne chemical or biological substance at a concentration in excess of the occupational exposure limit established for the substance, an employer must implement control measures in the workplace sufficient to ensure that the exposure of the worker to the chemical or biological substance does not exceed the occupational exposure limit in the future.

Monitoring after control measures implemented

36.8 When an employer implements control measures to control the concentration of an airborne chemical or biological substance, the employer must monitor the concentration of the substance in the workplace for a period sufficient to determine that the control measures have reduced the concentration of the substance below the occupational exposure limit for the substance.

Personal protective equipment

36.9(1) When an employer is required to implement control measures under this Part to control a worker's exposure to an airborne chemical or biological substance, the control measures must not include a requirement for a worker to wear or use personal protective equipment to prevent or reduce exposure to a chemical or biological substance unless no other measure is reasonably practicable.

36.9(2) Any personal protective equipment required under subsection (1), including respiratory protective equipment, must meet the requirements of Part 6 (Personal Protective Equipment).

Definitions

36.10 The following definitions apply in this Part.

"control measure" means a measure used to prevent or reduce exposure of a worker to a chemical or biological substance and may include substitution of materials, work practice controls, engineering controls or the use of personal protective equipment. (« mesure de contrôle »)

"exposure" means exposure through inhalation, ingestion, injection, skin or mucosal contact, absorption or other route of entry to the human body. (« exposition »)

PART 37
ASBESTOS

Application

37.1(1) This Part applies to every workplace where asbestos is present.

37.1(2) For the purposes of this Part, any material likely to contain asbestos is deemed to be asbestos-containing material until it is determined to be asbestos-free.

37.1(3) Nothing in this Part limits or alters any provision of Part 36 (Chemical and Biological Substances).

Inventory of asbestos-containing material

37.2(1) An employer and an owner must ensure that a person who is competent in identifying asbestos-containing material

- (a) prepares an inventory of all the asbestos-containing material in the workplace;
- (b) keeps the inventory current by updating it each time asbestos-containing material is added to or removed from the workplace; and
- (c) at least annually, inspects the condition of all asbestos-containing material in the workplace.

37.2(2) The inventory prepared under subsection (1) must identify the location of all asbestos-containing material in the workplace and, without limitation, the location of any asbestos-containing material that may release asbestos into the atmosphere due to it being damaged or in poor repair.

Records

37.3 An employer and an owner must ensure that a copy of the records of the inventory and the annual inspection of the asbestos-containing material prepared under section 37.2 are

- (a) kept for 30 years from the date the records are made; and
- (b) made available for reference by a worker at the workplace.

Signage

37.4 An employer and an owner must ensure that all asbestos-containing material present in a workplace is identified by signs, labels or by other effective means.

Asbestos control plan

37.5 An employer must ensure that

- (a) an asbestos control plan is developed to
 - (i) prevent asbestos-containing material from becoming airborne in the workplace, and
 - (ii) protect the safety and health of a worker if an asbestos-containing material becomes airborne in the workplace; and
- (b) the asbestos control plan is implemented.

Employer's general obligation

37.6(1) An employer must ensure that every process carried out in the workplace is done in such a manner as to prevent, to the extent possible, an asbestos-containing material from becoming airborne in the workplace.

37.6(2) An employer must ensure that a worker who is or is likely to be exposed to an asbestos-containing material, or to be employed in a process which may result in an asbestos containing material becoming airborne, is provided information, instruction and training in

- (a) the hazards of asbestos;
- (b) the means of identifying asbestos-containing material at the workplace;
- (c) the use of personal protective equipment; and
- (d) the purposes and significance of any health monitoring that the worker may be required to participate in.

Abatement or removal

37.7 An employer must ensure the abatement or removal of asbestos-containing material is done in a manner that does not create a risk to the safety or health of any person.

Alteration, renovation or demolition

37.8(1) An employer and an owner must ensure that, before proceeding with

- (a) the alteration or renovation of a building or structure, measures are taken to prevent any asbestos-containing material in the area of the alteration or renovation from being released into the atmosphere; and
- (b) the demolition of a building or structure, any materials with the potential to release asbestos-containing material into the atmosphere are removed in a manner that does not create a risk to the safety or health of any person.

37.8(2) An employer or an owner must notify the director at least five days before beginning the work to alter, renovate or demolish a building or structure that contains asbestos-containing material that may release asbestos-containing material into the atmosphere.

Prohibitions

37.9(1) An employer must not require or permit

- (a) friable asbestos-containing materials to be applied in any location at a workplace;
- (b) asbestos or asbestos-containing material to be sprayed at a workplace;
- (c) crocidolite asbestos or material containing crocidolite asbestos to be brought into a workplace;
- (d) the use of pressure spraying equipment of any type to remove asbestos-containing material;
- (e) the use of compressed air to clean up asbestos-containing material; or
- (f) dry sweeping or dry mopping of asbestos-containing material.

37.9(2) Clause (1)(c) does not apply to a workplace that is authorized to handle waste asbestos-containing material that is intended for disposal.

PART 38
ELECTRICAL SAFETY
GENERAL

Application

38.1 This Part applies to every workplace where electrical work is performed.

Safe work procedures

38.2 An employer must

- (a) develop and implement safe work procedures for electrical work;
- (b) train workers who do electrical work in those safe work procedures; and
- (c) ensure that workers comply with those safe work procedures.

Emergency procedures re contact with energized electrical equipment

38.3(1) Without limiting section 38.2, an employer must

- (a) develop emergency procedures to be followed if an electrical worker or other person may come in contact with exposed energized electrical equipment and that contact may affect his or her safety or health; and
- (b) implement those procedures if such contact occurs.

38.3(2) The emergency procedures under subsection (1) must include the procedures to be followed for rescuing, administering first aid and obtaining further medical assistance for the worker.

38.3(3) An employer must ensure that workers who will implement the emergency procedures are trained in the procedures.

Electrical workers must do electrical work

38.4 An employer must ensure that, in the workplace, only an electrical worker performs electrical work.

Other requirements to be met

38.5 An employer must ensure that the electrical work performed in the workplace conforms to the requirements of

- (a) *The Electricians' Licence Act*;
- (b) the *Manitoba Electrical Code*; and
- (c) where applicable, the by-laws of the municipality.

Equipment location and protection

38.6 An employer and an owner must ensure that energized electrical equipment is suitably located and guarded so that it is not contacted by a worker.

PROCEDURES

Working near exposed energized electrical equipment

38.7 When work is being done near exposed, energized electrical equipment, an employer must ensure that the work is done in a manner that prevents a worker from contacting the equipment.

Defect or unsafe condition

38.8(1) If a defect or unsafe condition is identified in electrical equipment, an employer must ensure that

- (a) steps are immediately taken to protect the safety and health of any worker who may be at risk; and
- (b) the defect is repaired or the unsafe condition is corrected as soon as is reasonably practicable.

38.8(2) Where an unsafe condition is identified in a portable power cable, cable coupler or cable component, an employer must ensure that the cable, coupler or component is repaired or removed from service.

Electrical equipment to be protected and properly installed

38.9 An employer and an owner must ensure that

- (a) each electrical panel and switch controlling a service supply, feeder or branch circuit is protected from physical or mechanical damage and is
 - (i) securely mounted in a vertical position to a substantial support in an area free from an accumulation of water,
 - (ii) readily accessible to an electrical worker and clear of any obstructions, and
 - (iii) fitted with an approved cover over any uninsulated part carrying a current and an approved filler in any unused opening; and
- (b) electrical distribution switches, including main circuit breakers, have a suitable means for being locked-out in the open or de-energized position.

Temporary electrical equipment

38.10 An employer must ensure that

- (a) a cable or wire used for temporary electrical distribution at a workplace is adequately guarded or securely suspended overhead to provide adequate clearance for workers and material;
- (b) a temporary light or other temporary electrical device
 - (i) is assembled, installed and maintained in a safe manner and in accordance with the manufacturer's instructions, if any,
 - (ii) is suitably located and guarded to prevent damage to the lamp or device, and
 - (iii) if suspended, is suspended by its electrical cord only if designed to be suspended in that manner;
- (c) an electrical extension cord used by a worker is
 - (i) of an approved type with a proper grounding connection,
 - (ii) visually inspected each day before it is used for possible damage and repaired or replaced, if necessary,

- (iii) not used if the grounding post has been removed or made inoperative, and
- (iv) where it passes through a work area, covered or elevated to protect it from damage and prevent a tripping hazard; and
- (d) a receptacle for an attachment plug has a concealed contact and is properly grounded.

Work at damp location

38.11 When work is being done in a damp location or in a metallic enclosure, including a drum, tank, vessel or boiler, an employer must ensure that electrical circuits are protected by a class "A" ground fault circuit interrupter.

High voltage switch gear

38.12 An employer and an owner must ensure that, where high voltage electrical switch gear or transformers are located in a workplace,

- (a) access to the gear or transformers is restricted to persons authorized by the employer; and
- (b) a warning sign is posted.

Switch not to be locked in closed position

38.13 An employer must ensure that no worker locks or otherwise fixes an electrical switch in the closed or energized position unless the design specifications of the switch require it to remain locked in the closed position.

Electrical equipment must be de-energized

38.14(1) Subject to subsection (2), an employer must ensure that an electrical worker doing electrical work

- (a) de-energizes and locks-out electrical equipment on which work is to be done in a manner that meets the requirements of Part 16 (Machines, Tools and Robots);
- (b) removes any potential stored power; and
- (c) does not re-energize the equipment until the work has been completed and all persons in the immediate vicinity are in a safe location.

38.14(2) If it is not reasonably practicable to de-energize electrical equipment before electrical work is done, an employer must ensure that no electrical worker begins work on energized electrical equipment until

- (a) the employer, in consultation with the worker, has
 - (i) assessed the conditions or circumstances under which the electrical worker is required to work, and
 - (ii) developed safe work procedures that include the use of safety equipment appropriate for the task;
- (b) the safe work procedures developed under subclause (a)(ii) have been agreed to by the employer and the worker;
- (c) the worker has been trained in the safe work procedures;
- (d) the employer has designated a worker who is trained in emergency response procedures as a standby worker at the location where the electrical work is to be done;
- (e) the standby worker designated under clause (d) is present at the location where the work is to be done; and

(f) the worker wears all personal protective equipment appropriate for the work to be done.

38.14(3) The standby worker designated under clause (2)(d) must be present at the location of the electrical work at all times when the work is being done.

38.14(4) This section does not apply to electrical equipment that

(a) operates at extra-low voltage — being voltage of 30 volts or less; and

(b) when energized, is not considered a risk to the safety or health of a worker.

Application

38.15 Subsection 38.14(1) does not apply to Manitoba Hydro or an electrical worker employed by Manitoba Hydro where Manitoba Hydro complies with CAN/CSA-Z460-05, *Control of Hazardous Energy — Lockout and Other Methods*.

Appropriate electrical equipment and protection

38.16(1) An employer must ensure that the environmental conditions at a workplace are assessed to determine

(a) the type of protection required to safely use electrical equipment and electrical tools; and

(b) the appropriate electrical equipment and electrical tools to be used at the workplace.

38.16(2) Without limiting subsection (1), an employer must ensure that a worker only uses electrical equipment and electrical tools

(a) in accordance with the manufacturer's specifications; and

(b) that are properly grounded, unless the electrical equipment and tools are double-insulated or bear a CSA certified label.

Definitions

38.17 The following definitions apply in this Part.

"**approved**", "**electrical equipment**", and "**electrical work**" have the same meaning as in *The Electricians' Licence Act*. (« approuvé », « matériel électrique » et « travaux électriques »)

"**damp location**" means an exterior or interior location that is normally or periodically subject to condensation of moisture in, on, or adjacent to electrical equipment and includes partially protected locations under canopies, marquees, roofed open porches and other similar locations. (« endroit humide »)

"**guarded**" means covered, shielded, fenced, enclosed or otherwise protected by suitable covers, casings, barriers, rails, screens, mats, platforms or other equally effective means. (« protégé »)

"**high voltage**" means a voltage over 750 volts. (« haute tension »)

"**readily accessible**" means capable of being reached quickly for operation, renewal or inspection, without requiring a person to climb over or remove obstacles or resort to portable ladders, chairs or other temporary means of access. (« facilement accessible »)

PART 39
HEALTH CARE FACILITIES

Application

39.1 This Part applies to every workplace that is a health care facility.

Safe work procedures

39.2 An employer must

- (a) develop and implement safe work procedures in accordance with sections 39.3 to 39.6;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures .

Safe work procedures for infectious materials

39.3(1) If a worker at a health care facility may be exposed to infectious materials, an employer must develop and implement safe work procedures to eliminate or, so far as is reasonably practicable, reduce the worker's risk of exposure to infectious materials.

39.3(2) The safe work procedures on infectious materials must include the following:

- (a) procedures for storing, handling, using and disposing of infectious materials;
- (b) procedures for identifying workers at the workplace who may be exposed to infectious materials;
- (c) infection control measures at the workplace, such as:
 - (i) vaccination,
 - (ii) engineering controls,
 - (iii) personal protective equipment,
 - (iv) personal hygiene,
 - (v) management of the environment and equipment,
 - (vi) patient accommodation,
 - (vii) precautions for blood-borne pathogens, and
 - (viii) infection control practices based on specific modes of transmission that may be used in situations where certain diseases or micro-organisms require extra caution;
- (d) procedures to be followed if any of the following occurs:
 - (i) there has been a spill or leak of infectious material,
 - (ii) a worker has been exposed to infectious material,
 - (iii) a worker believes that he or she has been exposed to infectious material;
- (e) procedures to be followed when a worker has been exposed to blood or bodily fluids;

(f) procedures for cleaning, disinfecting or disposing of clothing, personal protective equipment or other equipment contaminated with an infectious material;

(g) procedures for investigating and documenting any incident where a worker is exposed to infectious material; and

(h) procedures for investigating and documenting any occurrence of an occupationally transmitted infection or infectious disease.

Safe work procedures for waste and laundry

39.4(1) If a worker may be exposed to waste or contaminated laundry, an employer must develop and implement safe work procedures with respect to the handling of waste or contaminated laundry.

39.4(2) The safe work procedures on waste and contaminated laundry must include the following:

(a) measures to ensure that waste or contaminated laundry is

(i) segregated at the place where the waste or contaminated laundry is located or produced,

(ii) contained in a clearly identified, secure package or container that holds the contents safely until the waste or contaminated laundry is cleaned, disposed of or decontaminated, and

(iii) cleaned, decontaminated or disposed of in a manner that will not create a risk to the safety or health of a worker or other person;

(b) procedures respecting the use of personal protective equipment appropriate to the risks associated with waste or contaminated laundry at the workplace.

Safe work procedures for patient handling

39.5(1) If a worker is required or permitted to lift, hold, turn or transfer a patient, an employer must develop and implement safe work procedures respecting patient handling.

39.5(2) The safe work procedures on patient handling must include procedures for assessing whether a patient requires assistance to move.

Safe work procedures for lasers

39.6(1) If laser equipment is used in a health care facility, an employer must develop and implement safe work procedures respecting the use of laser equipment.

39.6(2) The safe work procedures on lasers must meet the requirements of CSA Standard Z386-01 (R2006), *Laser Safety in Health Care Facilities*.

Employer to inform worker and arrange for vaccine

39.7 If a worker has been, may have been or may be, exposed to an infectious material, an employer must

(a) provide the worker with

(i) information about any vaccine recommended in the *Canadian Immunization Guide* published under authority of the Minister of Health (Canada), and

(ii) the risks associated with the vaccine; and

(b) with the worker's consent, arrange for the worker to receive the recommended vaccine and pay any associated costs.

Sharps containers

39.8(1) An employer must provide readily accessible containers for waste needles and sharps such as syringes, blades, scissors and other items that are capable of causing a cut or puncture.

39.8(2) The containers must be specifically designed for the storage and handling of waste needles or other sharps.

Sorting areas to be separate

39.9 An employer must ensure that the area of a laundry facility where contaminated laundry is sorted is separated from the clean laundry area by one or more of the following:

- (a) a physical barrier;
- (b) a negative air pressure system in the contaminated laundry area;
- (c) a positive air flow from the clean laundry area through the contaminated laundry area.

Moving patients

39.10(1) When a patient has been assessed as requiring assistance to move, the employer must ensure that the current status of the patient and the appropriate techniques to move the patient are clearly identified in writing or by other visual means at or near the location of the patient.

39.10(2) When an assessment specifies the use of a mechanical device or the assistance of another worker to move a patient, the employer must ensure that a worker does not move the patient without the use of the device or the assistance of another worker.

Laser equipment standards

39.11 An employer must ensure that all laser equipment at a health care facility is operated and maintained in accordance with CSA Standard Z386-01 (R2006), *Laser Safety in Health Care Facilities*.

Definition: "waste"

39.12 In this Part, "**waste**" means any chemical or biological substance that may create a risk to the safety or health of a worker, including

- (a) human anatomical waste;
- (b) animal anatomical waste;
- (c) microbiological laboratory waste;
- (d) blood and body fluid waste; and
- (e) used or contaminated needles and sharps such as knives, blades, scissors and other items that are capable of causing a cut or puncture.

PART 40

FORESTRY AND ARBORICULTURE

Application

40.1 This Part applies to every workplace where forestry or arboriculture operations take place.

Safe work procedures

40.2 An employer must

- (a) develop and implement safe work procedures respecting the forestry or arboriculture operations that occur in the workplace;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

Restricted access

40.3 An employer must ensure that only persons involved in the forestry or arboriculture operation have access to the area where those operations take place.

No work on hillside

40.4 When forestry or arboriculture operations take place on a hillside, an employer must ensure that no logs or trees are allowed to roll downhill if the logs or trees would create a risk to any person below the site of the operations.

Lodged tree procedures

40.5 Where a tree has become lodged, an employer must ensure that

- (a) the lodged tree is felled immediately;
- (b) the lodged tree is not climbed;
- (c) the lodged tree is not lowered by felling another tree onto it; and
- (d) the lodged tree is not removed by cutting the supporting tree.

Position of signal person

40.6 When a signal person is used in the loading or unloading of logs, an employer must ensure that the signal person stands at one end of the logs at a safe distance from the logs and remains visible to the operator of powered mobile equipment who is loading or unloading the logs.

Operation of powered mobile equipment

40.7(1) An employer must ensure that the operator of powered mobile equipment used in forestry or arboriculture operations

- (a) determines that any worker in the area is in a safe position before initiating or continuing the motion of the equipment; and
- (b) only operates the equipment from the position or seat intended for that purpose.

40.7(2) An employer must ensure that powered mobile equipment is only started and operated by the worker designated by the employer to operate the equipment.

Designated checkpoints

40.8(1) An employer must designate checkpoints marked with signs along a haul road,

including a checkpoint at each entrance to a highway.

40.8(2) The operator of powered mobile equipment or another vehicle hauling forest products on a haul road must stop at each checkpoint to inspect the load and, if necessary, resecure the tie-down assemblies.

Haul roads

40.9(1) An employer must

- (a) ensure that a haul road is constructed and maintained so as to provide for the safe movement of persons, vehicles and forest products;
- (b) provide sufficient bypasses or turnout spaces on the haul road to allow vehicles to pass safely;
- (c) erect and maintain conspicuous, legible, reflectorized signs to provide adequate warning of each bridge, crossroad, rail crossing, blind curve or steep grade on the haul road; and
- (d) place signs at suitable locations along the route indicating
 - (i) the minimum allowable distance to be maintained between vehicles, and
 - (ii) the maximum allowable speed.

40.9(2) When a haul road is located on ice, an employer must instruct each worker driving a vehicle on an ice road about the hazards involved, the precautions to be taken and the rescue techniques required in case of an ice breakthrough.

40.9(3) An employer and prime contractor must ensure that

- (a) a bridge on a haul road is designed and constructed to safely support any load that may pass over the bridge; and
- (b) a bridge on a haul road is inspected and maintained on a regular basis to ensure its structural integrity.

Speed limit on haul road

40.10(1) No operator of powered mobile equipment or another vehicle used in a forestry operation may operate it on a haul road in excess of

- (a) the posted maximum allowable speed; or
- (b) the speed at which the vehicle can be brought to a complete stop within a distance of one-half of the length of the worker's unobstructed view of the haul road.

40.10(2) When driving on a haul road, the operator of powered mobile equipment or another vehicle used in a forestry operation must

- (a) when following another vehicle, do so at a distance that is reasonable and prudent having due regard for the speed of the vehicle, the traffic and the condition of the haul road; and
- (b) when meeting or overtaking another vehicle, pass the other vehicle with due caution.

Means of warning vehicles

40.11 An employer must ensure that powered mobile equipment and any other vehicle used in a forestry operation is provided with an effective means of warning oncoming vehicles on a haul road.

PART 41
OIL AND GAS

Application

41.1 This Part applies to every workplace where a well is drilled, operated or serviced.

Safe work procedures

41.2 An employer must

- (a) develop and implement safe work procedures respecting the drilling, operating or servicing of wells;
- (b) train workers in the safe work procedures; and
- (c) ensure that workers comply with the safe work procedures.

Breathing apparatus

41.3 An employer must ensure that at least two SCBAs operating in a positive pressure mode that meet the requirements of Part 6 (Personal Protective Equipment) are readily available at a rig for use in a rescue.

General requirements for rig

41.4 An employer must ensure that a rig and all of its components are designed, constructed, installed, inspected, maintained and operated in accordance with the manufacturer's specifications or the specifications certified by a professional engineer.

Maximum safe operating load limit

41.5(1) An employer must ensure that the maximum safe operating load of a derrick or mast — as specified by the manufacturer or a professional engineer — is prominently displayed at the derrick or mast site.

41.5(2) An employer must ensure that the maximum safe operating load of a derrick or mast is not exceeded.

Structural modification or repair

41.6 If a structural modification or repair is made to a derrick or mast, an employer must ensure that

- (a) the modification or repair is certified by a professional engineer;
- (b) the maximum safe operating load of the derrick or mast is determined and certified by a professional engineer; and
- (c) the load marking at the derrick or mast site is replaced if the maximum safe operating load is changed.

Supervisor must be present

41.7 An employer must ensure that a supervisor is present at a derrick site whenever the derrick is raised or lowered.

Rig sites and foundations

41.8 An employer must ensure that

- (a) the site of a rig is constructed and maintained so that oil, water, drilling fluid or other fluids will drain away from the wellbore; and

(b) the foundation of a rig is capable of safely supporting the gross weight of the derrick under the maximum anticipated load and any load imposed on it when a derrick is raised or lowered.

Securing parts of rig

41.9(1) An employer must ensure that any part of a rig or any equipment attached to it that may endanger a worker if it fails, moves or falls is secured to eliminate any risk to the safety or health of a worker.

41.9(2) An employer must ensure that the driller on a rig and all workers on a drilling rig floor are protected from any risk to their safety or health created by the cathead or tong lines.

Routine inspections

41.10(1) An employer must ensure that a rig is inspected by a competent person

(a) before it is placed in service; and

(b) at least once every 30 working days when the rig is in service.

41.10(2) An employer must provide and maintain a logbook for a rig and keep the logbook with the rig. The following information must be recorded in the logbook:

(a) the date and time when any work is performed on the rig;

(b) the length of time in hoisting service;

(c) all defects and deficiencies in the rig, including the date each defect or deficiency is detected;

(d) all inspections performed on the rig, including all examinations, checks and tests;

(e) a record of any certification of repairs or modifications under section 41.6;

(f) a description of the work performed on the rig each day;

(g) any matter or incident that may affect the safe operation of the rig.

Escape line

41.11(1) An employer must ensure that a derrick is equipped with a specially rigged and securely anchored auxiliary escape line that provides a ready, safe and convenient means of escape from any work platform on the rig.

41.11(2) An employer must ensure that the escape line is inspected by a competent person at least once a week.

No sliding down rig

41.12 An employer must ensure that a worker does not slide down the escape line or slide down a pipe, tube, rod, kelly, cable or rope line on a rig, except in an emergency.

Drawworks

41.13 An employer must ensure that the drawworks on a drilling rig is equipped with an automatic feed control.

Catheads

41.14 An employer must ensure that rope-operated friction catheads are not used for hoisting on a rig.

Rotary tables

41.15 If visibility on the derrick floor is obscured, an employer must ensure that a worker does not work on a derrick floor while the rotary table is in motion.

Pressure relief devices

41.16 An employer must ensure that

- (a) drilling fluid pumps and servicing fluid pumps are equipped with a pressure relief device; and
- (b) fluid pumps that use a pressure relief device are routinely inspected by a competent person to ensure the safe functioning of the pressure relief device.

Rig tanks or pits

41.17 An employer must ensure that a rig tank or pit used to circulate drilling fluids contaminated with flammable material is protected from a source of ignition.

No internal combustion engines near well

41.18(1) An employer must ensure that an internal combustion engine air intake or exhaust is located at least 5 m from a well that is open to the atmosphere or any other source of ignitable vapour.

41.18(2) An employer must ensure that an internal combustion engine located within 10 m of a well that is open to the atmosphere or any other source of ignitable vapour has

- (a) air intake shut-off valves equipped with a remote control easily accessible from the operator's station;
- (b) a system for injecting an inert gas into the engine's cylinders equipped with a remote control easily accessible from the operator's station;
- (c) a duct that provides air for the engine from a distance of at least 10 m from the well or any source of ignitable vapour; or
- (d) any other device approved for the purpose of section 37 of the *Drilling and Production Regulation*, Manitoba Regulation 111/94.

41.18(3) An employer must ensure that the exhaust pipe of any internal combustion engine located within 10 m of a well that is open to the atmosphere or any other source of ignitable vapour is

- (a) directed away from the well or source of ignitable vapour; and
- (b) constructed to prevent a flame from emerging along its length or at its end.

Drill stem testing

41.19(1) During drill stem testing, an employer must ensure that

- (a) monitoring for the presence of hydrogen sulfide and hydrocarbons takes place;
- (b) the hydrogen sulfide monitor is
 - (i) capable of detecting hydrogen sulfide at a concentration equal to the occupational exposure limit for hydrogen sulfide established under Part 36 (Chemical and Biological Substances),
 - (ii) calibrated and tested before use, and
 - (iii) properly maintained; and
- (c) if hydrogen sulfide or hydrocarbons are present at levels that may pose a risk to a worker's safety or health, the formation fluids in the drill stem are displaced with drilling fluid and

circulated to a flare pit or holding tank that is at least 25 m from the well.

41.19(2) An employer must ensure that, if test fluid recovery is encountered during darkness,

- (a) recovered liquids are reverse circulated; or
- (b) if reversed circulation is not practicable because the pump-out sub has failed, additional drill pipe is not pulled and disconnected until daylight.

Well swabbing operations

41.20(1) An employer must ensure that during well swabbing operations

- (a) workers anchor auxiliary swabbing units securely against movement;
- (b) fluids are piped directly to a battery, skid tank, mobile trailer or tank truck; and
- (c) the battery, skid tank, mobile trailer or tank truck is at least 25 m from the well bore.

41.20(2) An employer must ensure that if fluids are piped to a tank truck during well swabbing operations,

- (a) the engine of the truck is shut off; and
- (b) the driver or any other person is not in the cab of the truck while fluids are transferred.

Well operation and servicing

41.21 Before fluids are unloaded into a well, an employer must ensure that the lines between the pump and the well are:

- (a) designed and constructed to sustain the maximum anticipated pressure during use; and
- (b) hydraulically pressure tested at a pressure that is at least 10% above the maximum pressure anticipated during use.

Drilling and servicing piping systems at well site

41.22 An employer must ensure that piping systems at a well site are designed, constructed, installed, operated and maintained to safely contain any material at the maximum operating pressures anticipated.

Gas sample containers

41.23 An employer must ensure that containers, piping and fittings used to collect gas samples are

- (a) of sufficient strength to withstand the pressures to which they may be subjected; and
- (b) designed, used and transported so that their contents cannot be released inadvertently.

PART 42
FIREFIGHTERS

Application

42.1 This Part applies to firefighters and their employers, but does not apply to a person employed to suppress an underground fire at a mine or the employer of such persons.

Safe work procedures

42.2(1) An employer of a firefighter must

- (a) develop and implement safe work procedures to be followed by firefighters responding to an emergency;
- (b) train firefighters in the safe work procedures; and
- (c) ensure that firefighters comply with the safe work procedures.

42.2(2) The safe work procedures must include

- (a) firefighting procedures;
- (b) procedures to be followed in responding to other types of emergencies, including water rescue, confined space entry, high-angle rescue and emergencies involving hazardous materials, if the employer provides emergency response services for other types of emergencies;
- (c) for each type of emergency to which firefighters will or are likely to respond, the number and type or types of firefighting vehicles and firefighters required
 - (i) for initial response,
 - (ii) to be subsequently dispatched, and
 - (iii) to safely perform an identified emergency response procedure;
- (d) a system for initiating, if required, procedures necessary to protect the safety and health of firefighters at the site of an emergency; and
- (e) a personnel accountability system that provides a mechanism of accounting for the number and location of all personnel involved at the site of an emergency.

42.2(3) An employer must provide a firefighter with ready access to the safe work procedures at the fire station or other base of operations for firefighters.

Training

42.3 An employer must ensure that a written record is kept of all training provided to firefighters.

Firefighting vehicle and equipment requirements

42.4(1) An employer must ensure that

- (a) a firefighting vehicle is operated by a competent person;
- (b) the firefighting vehicles and equipment used to respond to an emergency are designed and operated to ensure the safety and health of a firefighter;
- (c) equipment provided, including any personal protective equipment, safety ropes, harnesses

and hardware, is appropriate to the risks to the firefighter's safety and health;
(d) the equipment provided under clause (c) is used by firefighter when responding to an emergency; and

(e) equipment carried within a seating area of a firefighting vehicle, if any, is secured

(i) by a positive mechanical means of holding it in a stowed position, or

(ii) in a compartment that is equipped with a positive latching door and that has been designed, in the event of an accident, to minimize injury to a firefighter in the seating area of the vehicle.

42.4(2) An employer must ensure that

(a) firefighting vehicles and equipment are inspected by a competent person according to the manufacturer's specifications;

(b) a written record of the inspection that is signed by the person who performed the inspection is readily available to firefighters at the workplace; and

(c) where a defect or unsafe condition is identified,

(i) the defect or unsafe condition is repaired or corrected in accordance with the manufacturer's specifications by a competent person, as soon as is reasonably practicable,

(ii) a written record of the repair or correction is readily available at the workplace, and

(iii) steps are taken in the interim to protect the safety and health of a firefighter.

Transportation of firefighters

42.5(1) An employer must ensure that

(a) a firefighting vehicle has safe crew accommodations within the body of the vehicle and is equipped with properly secured seats and seat belts; and

(b) when the vehicle is in motion,

(i) every firefighter is seated and uses a seat-belt, and

(ii) no person rides on the tailstep, side steps, running boards or in any other exposed position on the vehicle.

42.5(2) Subsection (1)(b) does not apply

(a) if there is an insufficient number of seats and seat belts available, but only if the employer ensures that there is a safe alternate means of transporting any firefighter who is not able to use a seat and seat belt; or

(b) to a firefighter fighting a prairie, grassland, forest or crop fire from a moving firefighting vehicle, but only if the employer ensures that

(i) the firefighting vehicle is provided with, and the firefighter uses, a restraining device that prevents the firefighter from falling from the vehicle,

(ii) an effective means of communication between the firefighter and the operator of the vehicle is provided, and

(iii) the vehicle is not operated at a speed that exceeds 20 km/h.

Specific firefighting requirements

42.6(1) An employer must ensure that firefighters work in a team, and a suitably equipped rescue team is readily available, when firefighters are required or permitted to engage in

- (a) fire suppression and rescue, where a firefighter must enter a building, enclosed structure, vehicle, vessel, aircraft or other large object; or
- (b) emergency responses that require specific and advanced training and specialized equipment, such as water rescue, confined space entry, high-angle rescue and incidents involving hazardous materials.

42.6(2) An employer must ensure that every firefighter who enters a structure to fight a fire is provided with and uses a personal alert safety system that meets the requirements of NFPA 1982, *Standard on Personal Alert Safety Systems (PASS)*, 1998 Edition for Fire Fighters.

42.6(3) An employer must ensure that the personal alert safety system required under subsection (2) is

- (a) tested at least weekly and before each use; and
- (b) maintained in accordance with the manufacturer's specifications.

Definitions: "emergency"

42.7 In this Part, "**emergency**" has the same meaning as in *The Fires Prevention and Emergency Response Act*.

PART 43
DIVING OPERATIONS

Application

43.1 This Part applies to every workplace where diving operations take place.

Safe work procedures

43.2 An employer must

- (a) develop and implement safe work procedures for a diving operation that meet the requirements of CSA Standard Z275.2-04, *Occupational Safety Code for Diving Operations*; and
- (b) train workers who may perform diving operations in those safe work procedures; and
- (c) ensure that workers comply with those safe work procedures.

Competency

43.3(1) An employer must ensure that a diver working at a diving operation under the employer's supervision

- (a) provides written evidence to the employer that he or she meets the requirements of CAN/CSA Standard-Z275.4-02, *Competency Standard for Diving Operations*; and
- (b) is competent to use any diving equipment used in the diving operation.

43.3(2) The employer must keep copies of the written evidence required under clause (1)(a) while the diver is employed by the employer.

PART 44

REPEAL AND COMING INTO FORCE

Repeal

44.1 The following regulations are repealed:

- (a) *Construction Industry Safety Regulation*, Manitoba Regulation 189/85;
- (b) *Derrick, Crane and Other Hoisting Equipment Regulation*, Manitoba Regulation 99/88 R;
- (c) *Fibrosis and Silicosis Regulation*, Manitoba Regulation 100/88 R;
- (d) *First Aid Regulation*, Manitoba Regulation 140/98;
- (e) *Forestry, Logging and Log Hauling Regulation*, Manitoba Regulation 102/88 R;
- (f) *Hearing Conservation and Noise Control Regulation*, Manitoba Regulation 227/94;
- (g) *Sanitary and Hygienic Welfare Regulation*, Manitoba Regulation 104/88 R;
- (h) *Workers Working Alone Regulation*, Manitoba Regulation 105/88 R;
- (i) *Workplace Hazardous Materials Information System Regulation*, Manitoba Regulation 52/88;
- (j) *Workplace Health Hazard Regulation*, Manitoba Regulation 53/88;
- (k) *Workplace Safety and Health Committee Regulation*, Manitoba Regulation 106/88 R;
- (l) *Workplace Safety Regulation*, Manitoba Regulation 108/88 R.

Coming into force

44.2 This regulation comes into force on February 1, 2007.