

6.70 Definitions

In sections 6.70 to 6.109

"*antisapstain*" in reference to a pesticide, means any substance which is applied to freshly cut wood to control fungal growth;

"*closed system*" means a device and procedure for transferring a pesticide from one container to another in a manner that does not expose the operator to the pesticide;

"*field*" means any area, excluding a body of water, on or in which one or more crops are grown and includes but is not limited to a field of row crops, an orchard, a mushroom farm, a greenhouse, a nursery, a turf farm, a silviculture area and any similar area;

"*fumigant*" means a pesticide applied in the form of a gas or vapour to kill pests and which is typically applied in an enclosed space;

"*pest*" means an injurious, noxious or troublesome insect, fungus, weed, rodent, parasite or other organism;

"*pesticide*" means a micro-organism or material that is represented, sold, used or intended to be used to prevent, destroy, repel or mitigate a pest and includes

(a) a plant growth regulator, plant defoliator or plant desiccant, and

(b) a control product, other than a device, under the *Pest Control Products Act* (Canada);

"*restricted entry interval*" means the length of time representing a period of precaution that must elapse after the application of a pesticide, before an unprotected worker may be authorized to enter the treated portion of a building, structure, or field to which the pesticide has been applied;

"*slightly toxic*", "*moderately toxic*" or "*very toxic*" means, in reference to a pesticide, one containing active ingredients which have acute mammalian toxicities determined by an authority acceptable to the Board, expressed as the Lethal Dose 50% (LD₅₀) by oral or dermal routes of entry as follows:

Category	Oral LD ₅₀	Dermal LD ₅₀
Very toxic	0-50 mg/kg	0-200 mg/kg
Moderately toxic	over 50-500 mg/kg	over 200-1000 mg/kg
Slightly toxic	over 500 mg/kg	over 1000 mg/kg

and where the lowest LD₅₀ by the oral or dermal route of entry determines the category of the pesticide, and if the LD₅₀ is reported as a range, the lowest reported LD₅₀ is used.

6.71 Application

Sections 6.72 to 6.109 apply to any workplace where pesticides are used, stored or handled, except for disinfectants, germicidal products, cleaners, antifouling paints and first aid treatments which are issued Pest Control Product numbers.

General Requirements

6.72 Pesticide labels

The employer must ensure that a pesticide for use in the workplace has been registered and labelled by the manufacturer in accordance with the *Pest Control Products Act* (Canada).

6.73 Labels and signs for treated materials

If pesticide residues on treated seedlots, plants and similar materials supplied for planting may pose a hazard to workers, the employer must ensure labels, placards or signs are provided with the treated materials stating

(a) the pesticides applied,

(b) the date of last application, and

(c) the hazards and precautions required for handling these materials.

6.74 Pesticide use

The employer must ensure that a pesticide for use in the workplace is used in accordance with the requirements stated on the label and with good application practice.

6.75 SDS

The employer must make readily available to workers an SDS or its written equivalent for all pesticides used at the workplace.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

6.76 Informing workers

The employer must ensure that workers occupying a building or structure where a pesticide is to be applied are informed of

- (a) the intent to use the pesticide,
- (b) the hazards associated with its use, and
- (c) the precautions required during the operations.

Mixing, Loading and Applying Pesticides

6.77 Qualifications

(1) The employer must ensure that a worker or applicator who mixes, loads or applies a moderately or very toxic pesticide for use in a workplace or who cleans or maintains equipment used in the operations

- (a) is 16 years of age or over, and
- (b) holds a valid pesticide applicator certificate issued under the *Integrated Pest Management Act*.

(2) Subsection (1)(b) does not apply to the use of biocides and disinfectants in pulp and paper operations, or to antistain materials.

(3) Workers involved in training for the purposes of obtaining a valid pesticide applicator certificate who are directly supervised by a qualified person are exempt from the requirement of subsection (1)(b) during the training period.

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

6.78 Procedures

The employer must develop and implement written safe work procedures for the

- (a) handling, mixing, storage and application of pesticides,
- (b) cleanup and disposal of spilled pesticides, and
- (c) summoning of first aid and medical assistance for workers overexposed to pesticides.

6.79 Health protection

Where, in the opinion of the Board, it is necessary to provide health monitoring for workers exposed to pesticides, employers and workers must participate as required by the Board, and records must be maintained in a manner acceptable to the Board.

6.80 Rescue

If a worker applies a moderately or very toxic pesticide in a greenhouse or similar enclosed space and the worker may be incapacitated during the application, the work must be done in such a manner that a rescue can be effected by another worker equipped and able to do so.

Equipment

6.81 General requirements

The employer must ensure that equipment used to mix, load or apply pesticides is

- (a) constructed of materials which are chemically compatible with the pesticide in use if contact with the pesticide is likely to occur,
- (b) operated only by trained persons,
- (c) used in accordance with instructions from the pesticide supplier,

- (d) maintained in a safe operating condition,
- (e) cleaned, repaired and maintained by workers who have been adequately instructed in safe work procedures, and
- (f) in a safe condition before maintenance or repair work is carried out, including welding operations.

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

6.82 Fixed stations

A fixed pesticide mixing, loading or application station must have

- (a) openings on tanks secured as necessary to prevent accidental worker entry,
- (b) shut-off devices at the discharge end of hoses and pipes leading from mixing tanks, and
- (c) when required by the Board, a closed system for the mixing, loading or transferring of pesticides.

6.83 Mobile equipment

A tank, with a capacity of 200 litres (44 imp gal) or more, on mobile pesticide application equipment must have

- (a) a device which indicates the fluid level, for equipment sold for first use after January 1, 1999,
- (b) the openings secured to prevent spillage while the equipment is in use, and
- (c) shut-off devices at the discharge end of hoses and pipes leading from the mixing tanks.

Pesticide Application

6.84 Safe application practice

- (1) The employer must ensure that a pesticide is applied in a manner that controls the risk of adverse health effect or injury to any person.
- (2) Before a pesticide is applied, the employer must ensure that all workers in the area that is to be treated and who are not required for the application of pesticides are moved to a safe location.
- (3) If practicable, the employer must schedule a pesticide application in a building for a time when the building is unoccupied.

6.85 Posting warning signs

Before a moderately or very toxic pesticide or a fumigant is applied the employer must ensure that

- (a) warning signs acceptable to the Board are conspicuously posted at normal points of worker entry to the area to be treated, and
- (b) if a pesticide is applied in an enclosed space all entrances to the space are secured to prevent unauthorized persons from entering.

6.86 Design of warning signs

Warning signs must be of a design, construction and durability to be clearly identifiable for the prescribed posting period, and must provide information in a manner that can be readily understood by workers.

6.87 Warning signs for non-fumigants

Warning signs for the application of moderately and very toxic pesticides, other than fumigants in enclosed spaces, must display

- (a) a skull and crossbones symbol,
- (b) the word WARNING in a language that can be readily understood by the workers and in letters large enough to be read at a distance of 8 m (25 ft),
- (c) the name of the pesticide and the date of application,
- (d) the expiry date of the restricted entry interval as determined in section 6.89, and
- (e) instructions to obtain permission to enter before the expiry date of the restricted entry interval.

6.88 Warning signs for fumigants

The warning sign for the application of a fumigant in an enclosed space must display

- (a) a skull and crossbones symbol,
- (b) the words DANGER, DEADLY FUMIGANT GAS, KEEP OUT in a language that can be readily understood by the workers and in letters large enough to be read at a distance of 8 m (25 ft),
- (c) the name of the fumigant,
- (d) the name of the applicator, and
- (e) emergency telephone numbers for both day and night.

6.89 Restricted entry intervals

- (1) Except where entry is permitted by section 6.90 or 6.91, the employer must ensure that a person does not enter a workplace or portion of a workplace where a pesticide has been applied, until the restricted entry interval has elapsed.
- (2) The length of the restricted entry interval required by subsection (1) is a minimum of
 - (a) 24 hours for a pesticide which is classified as slightly toxic,
 - (b) 48 hours for a pesticide which is classified as moderately or very toxic, and for any mixture in which a moderately or very toxic pesticide is present, or
 - (c) the interval specified on a pesticide label if that interval is longer than the interval determined in paragraphs (a) or (b).

6.90 Authorization to enter

- (1) If, before the expiry of the restricted entry interval, the employer authorizes a worker to enter a field, building or structure in which a pesticide has been applied the employer must ensure that
 - (a) the hazards to workers have been assessed by a qualified person,
 - (b) the worker is provided with and wears the proper personal protective clothing and equipment required by this Regulation, and
 - (c) the worker follows proper procedures.
- (2) If the employer authorizes a worker to enter a building or structure in which a pesticide has been applied, the employer must ensure that
 - (a) where practicable, the treated area of the building is ventilated and the atmosphere has been tested or otherwise evaluated by a qualified person and declared safe to enter, and
 - (b) if a worker may be incapacitated after re-entry, provision has been made for rescue in a manner that meet the requirements of section 6.80.

6.91 Exemptions

- (1) In a structural pesticide application, the employer is exempt from sections 6.85 to 6.90 when small quantities of slightly toxic pesticides are applied in a manner that minimizes the release of aerosols and residues on work surfaces, or moderately toxic pesticides are safely applied in restricted exposure applications such as crack and crevice treatments provided that
 - (a) areas treated with these pesticides are clearly identified to workers,
 - (b) the treated indoor space has been adequately ventilated,
 - (c) safe work procedures are used, including applicable restricted entry intervals stated on pesticide labels or provided by an authority acceptable to the Board,
 - (d) a hazardous accidental release does not occur during the application, and
 - (e) a qualified person inspects the area following application to determine that paragraphs (a) to (d) have been complied with and notifies the employer of the applicable restricted entry intervals and any additional entry precautions, and the employer implements the instructions of the qualified person.
- (2) For a system used to handle and apply biocides and slimicides, the employer is exempt from the requirements of sections 6.85 to 6.90 with respect to warning signs and restricted entry intervals, provided that
 - (a) the system minimizes the release of aerosols and residues on work surfaces,

(b) areas where these pesticides are handled or used are identified to workers, and

(c) entry into these work areas is restricted to authorized workers.

6.92 Cleanup of residues

The employer must ensure that surfaces used for food preparation and eating, and work surfaces likely to come in contact with workers' unprotected skin are cleaned and free of pesticide residues.

6.93 Pesticide drift

(1) An employer must ensure that all reasonable precautions are taken to prevent the drift or spread of a pesticide from a workplace under the employer's control.

(2) If a pesticide under the control of an employer has drifted or spread to a workplace occupied or used by another employer, the first employer must notify the second of the identity of the pesticide, the nature of its harmful characteristics and the precautions required for the safety of workers.

(3) The employer to whose property a pesticide has drifted or spread must take all reasonable steps to

(a) identify the pesticide and advise any persons who may be exposed to it of the nature of the pesticide, its harmful characteristics and the precautions required for safety, and

(b) ensure that any hazards to persons from exposure to the pesticide are eliminated or controlled.

6.94 Records

The employer must maintain a record of pesticide applications which includes, for each application,

(a) the pesticide used and location of application,

(b) the date and time at which the application was completed,

(c) the date on which workers were allowed to re-enter, and

(d) if applicable, the type of crop treated, rate of application and the number of acres or hectares treated.

Personal Hygiene

6.95 Wash and shower facilities

(1) The employer must supply and maintain adequate wash facilities and, if there is the risk of body contamination, shower facilities as required by section 5.82, to all workers when

(a) mixing, loading or applying pesticides, or handling concentrates or wet-treated lumber,

(b) cleaning, maintaining or handling equipment, materials or surfaces contaminated with pesticide residues, or

(c) entering fields where pesticides have been applied and where contact with pesticide residues may contaminate protective clothing and body areas.

(2) The wash and shower facilities required by subsection (1) must be in close proximity to the places where pesticides are used or handled, but must be separate from food preparation, lunchrooms and eating areas.

6.96 Worker cleanup

A worker must immediately cleanse any body area contaminated with pesticide.

6.97 Personal protective clothing and equipment

If a worker mixes, loads or applies pesticides or if a worker cleans, maintains or handles equipment, materials or surfaces contaminated with pesticide residues, the employer must ensure that

(a) the worker is provided with and wears suitable protective clothing and equipment,

(b) contaminated protective clothing and equipment is stored in a secure place and not used until it is laundered or otherwise cleaned,

(c) if required, adequate facilities or services to launder contaminated protective clothing are available,

(d) at least one change of outer protective clothing for each worker is available at the work site, and

(e) a change room or sheltered place is provided where workers can change clothes and store personal clothing while wearing protective clothing.

Avicides, Predicides, Rodenticides and Insecticidal Baits

6.98 Exemption

Sections section 6.80 and 6.85 to 6.91 do not apply where an avicide, predicide, rodenticide or insecticidal bait is used or applied in solid or liquid form, unless the pesticide label specifies otherwise.

6.99 Preventive measures

For a pesticide exempted in section 6.98 the employer must ensure that

(a) adequate measures are taken for the protection of the applicator including the use of safe work procedures, the provision and use of personal protective equipment and the provision of adequate hand washing facilities,

(b) the pesticide is applied, where practicable, in areas not readily accessible to unauthorized persons, and away from areas of normal work activity, and

(c) a worker who is required to enter the area or location where the pesticide has been applied is notified of the location of the pesticide application, the physical description of the pesticide and the device, if any, in which it is placed, and the precautions that must be observed.

Storage

6.100 Location

The employer must ensure that pesticides are not stored in areas where food preparation occurs, in lunchrooms, or in food storage areas.

6.101 Storage facilities

(1) The employer must supply a pesticide storage facility that meets the design criteria stated in the manual *Standard Practices for Pesticide Applicators*, published by the Workers' Compensation Board of BC, for the storage of bulk or reserve quantities of pesticides.

(2) Factors that must be considered in the facility design include

(a) maintenance of minimal quantities,

(b) compatibility of pesticides,

(c) strength of shelving materials, and

(d) containment of spills.

6.102 Retail displays

The employer must ensure that shelving and retail displays for pesticides are designed to provide safe storage and to minimize the possibility of spills.

Antisapstain Applications

6.103 Substitution

An employer must investigate antisapstain materials and, whenever practicable, substitute an alternate material for a material in use, if

(a) the hazards of the substitute are known, and

(b) the risk to workers is reduced.

6.104 Ventilation

(1) The employer must install and maintain an effective local exhaust ventilation system on all spray box application equipment to contain overspray and control worker exposure to the chemicals.

(2) The employer must ensure that the ventilation system for a spray box provides an inward air flow across the hood face at least equal to the velocity of the lumber on the outfeed conveyor.

6.105 Cleaning equipment

The employer must clean a metal surface of antispain material before any welding, burning or cutting operation is done on it.

6.106 Excess chemical

The employer must control the flooding of wood being treated by the use of

- (a) mist eliminators,
- (b) curtains on the spray box enclosure openings,
- (c) regulation of the spray flows, or
- (d) other acceptable measures.

6.107 Protective clothing

A worker handling wet treated lumber must remove protective equipment before leaving the restricted work area.

6.108 Records

The employer must keep records and SDSs on all previously used antispain materials if a change of chemical has occurred and the equipment or work areas have not been adequately decontaminated, and this information must be readily available to workers.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

6.109 Exemption

- (1) The requirements of sections 6.85 to 6.91 with respect to warning signs and restricted entry intervals do not apply to the application of antispain materials, unless the pesticide label specifies otherwise.
- (2) Areas of antispain application must be clearly identified to workers.
- (3) Entry into work areas where antispain materials are handled or applied must be restricted to authorized personnel.

6.116 Definitions

In sections 6.117 to 6.132

"*enclosure*" means a room, cabinet or separation designed to contain equipment, machinery and vessels and to isolate accidental releases of toxic gas;

"*toxic process gas*" means a gas which

- (a) meets the HPR Health Hazard Class — Acute Toxicity, Categories 1, 2 and 3 or the categories set out in the following table:

HPR Health Hazard Classes	Hazard categories					
		1A	1B	1C	2	
Skin corrosion / irritation						
Serious eye damage / irritation	1					2A 2B
Respiratory or skin sensitization		1A 1B				
Mutagenicity		1A 1B		2		
Carcinogenicity		1A 1B		2		
Reproductive toxicity		1A 1B		2		
Specific organ toxicity (repeated exposure)	1			2		

and

- (b) is used for purposes of
- (i) an industrial process in which a precursor is changed into a product,

- (ii) refrigeration by means of a piped installation, or
- (iii) treatment of materials, for example, in a disinfection system

[Amended by B.C. Reg. 253/2001, effective January 28, 2002.]

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

6.117 Application

Sections 6.118 to 6.132 apply to operations in which a toxic process gas is used, but do not apply to the handling or storage of flammable fuel gases or vapours, toxic waste emissions or the use of toxic process gases in manufactured articles.

6.118 Risk assessment

The employer must ensure that a risk assessment is conducted for toxic process gases.

6.119 Exposure control plan

If there is a risk of adverse health effect to workers from exposure to a toxic process gas, based on the risk assessment, the employer must develop and implement an exposure control plan meeting the requirements of [section 5.54](#).

6.120 Procedures

- (1) The employer must ensure that written work procedures providing instructions for the safe handling of the toxic process gas are prepared for all hazardous tasks in accordance with the risk assessment results, critical technical information and operations manuals.
- (2) The employer must ensure that emergency procedures designed for the safe evacuation and rescue of all workers are established and tested on a regular basis.
- (3) The procedures required by subsections (1) and (2) must be readily available to the workers at the workplace.

6.121 Education and training

The employer must ensure that

- (a) workers are capable of operating the equipment and machinery in a safe manner by providing effective education and training, and
- (b) records of education and training are maintained.

(c) Repealed. [B.C. Reg. 312/2003, effective October 29, 2003.]

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

6.122 Enclosure

Where practicable, the employer must locate equipment and machinery such as tanks and compressors, handling toxic process gases in a separate enclosure that is

- (a) designed, constructed and maintained to prevent fugitive emissions and accidental releases from entering occupied work areas,
- (b) provided with exhaust ventilation to ensure an effective inward air flow into the enclosure at all times,
- (c) provided with a safe means of entry and exit,
- (d) designated as a restricted work area limited to entry by authorized personnel, and
- (e) posted with signs which clearly identify the hazards and the precautions required for safe entry.

6.123 Testing

The employer must provide a safe means to check and test conditions inside an enclosure before entry by authorized workers.

6.124 Ventilation

The employer must

- (a) ensure that ventilation systems are designed to exhaust toxic process gases directly to the outdoors in a safe manner,

- (b) ensure that grilles providing makeup air from adjacent occupied areas are equipped with gas-rated, back-draft dampers,
- (c) monitor critical parts of the ventilation systems, such as fan, motor and air flow, to ensure that workers are alerted to a malfunction of the system,
- (d) ensure that ventilation ducting is vapour proof, dedicated and resistant to corrosion by the gas it carries, and
- (e) where practicable, locate the fans on the outside of the building or structure to maintain the duct work within occupied work areas under a negative pressure differential.

6.125 Emergency ventilation

The employer must provide emergency ventilation that can be safely activated in emergency situations to ensure containment and control of an accidental release of a toxic process gas.

6.126 Shut-down device

- (1) In the event of an emergency or accidental release, the employer must ensure that
 - (a) the gas supply can be shut down manually from a remote location or by the alarm system so as to isolate the reserve supply within the system and stop the generation or flow of the gas, or
 - (b) if the control measures required by paragraph (a) are not practicable, other effective measures, acceptable to the Board, are implemented to protect workers and other persons from exposure to the gas.
- (2) When an automated or remote shut-down device is activated, the employer must ensure that operators are alerted to the emergency shut-down of the system.

[Enacted by B.C. Reg. 381/2004, effective January 1, 2005.]

6.127 Personal protective equipment

- (1) The employer must provide appropriate personal protective equipment and ensure that workers wear it.
- (2) A worker performing a hazardous work procedure on equipment or machinery where there is the risk of toxic process gas being released directly into the breathing zone, such as cylinder changing, system or line purging or draining, and leak detection and repair, must wear an appropriate respirator.
- (3) A worker entering a restricted access enclosure must wear or carry an escape respirator.

[Amended by B.C. Reg. 312/2010, effective February 1, 2011.]

6.128 Monitors and alarms

- (1) Where practicable, the employer must install continuous monitoring systems that detect fugitive emissions and accidental releases and effectively determine work conditions within the restricted access area.
- (2) Continuous monitors must be connected to alarm systems to adequately warn workers of hazardous conditions and, when practicable, must be designed to safely activate appropriate control measures when emergency situations are detected.
- (3) Monitoring and alarm systems must be
 - (a) tested at least monthly for proper operation, and
 - (b) calibrated at least annually

by authorized personnel using procedures set out in section [4.3 \(2\)](#) or other procedures acceptable to the Board.

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

6.129 Pressure relief alarm systems

- (1) The employer must ensure that all pressure relief valves or similar safety-release devices direct relief gases to the outdoors in a safe manner.
- (2) The employer must ensure that an alarm or any other reporting system designed to inform the operators of a malfunction or emergency activates if a pressure relief safety device is engaged.

6.130 Identification of controls

The employer must ensure that

- (a) all critical components of equipment and machinery handling toxic process gases are clearly identified, and
- (b) the function of every control device can be readily determined.

6.131 Piping systems

(1) The employer must ensure that a piping system is

- (a) constructed of compatible materials resistant to corrosion by the gas it carries,
- (b) constructed to withstand the system pressures to which it will be subjected, and
- (c) safely routed, supported and protected from impact damage, shock and vibration.

(2) The employer must ensure that piping and valve systems are leak and pressure tested, as required, before the system is put into operation.

(3) The employer must ensure that piping systems are equipped with isolation, pressure venting or bleed valves designed to purge the lines safely of residual gases before maintenance or servicing procedures.

6.132 Maintenance

The employer must ensure that the servicing and maintenance of equipment and machinery addresses all critical components.

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

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6.110 Definitions

(1) In this section and sections 6.111 to 6.112.7:

"abrasive blasting" means the cleaning, smoothing, roughening or removing of a surface or part of a surface by the use of an abrasive that is

- (a) comprised of a jet of sand, metal shot, grit, or another material, and
- (b) propelled by compressed air or steam, or by a wheel;

"blasting enclosure" means a chamber, barrel, cabinet or a purpose-built structure in which abrasive blasting occurs;

"cleaning of castings" means, in connection with making metal castings,

- (a) the freeing of metal castings from adherent sand or another substance containing silica, other than the freeing of metal castings from scale formed during annealing or heat treatment,
- (b) the removal of cores from metal castings, and
- (c) the smoothing of metal castings where freeing is done;

"control measures" include the measures set out in section 6.112.2;

"dust reduction system" means the following, alone or in combination:

- (a) the use of a process or material that prevents the creation of RCS dust;
- (b) the use of an enclosure, including a blasting enclosure, to
 - (i) contain RCS dust, or
 - (ii) physically separate a worker from a source of RCS dust;
- (c) the use of local exhaust ventilation, being a system of ventilation designed to capture and remove process emissions or RCS dust before the emissions or dust escapes into the workplace environment;
- (d) the use of wet systems, being
 - (i) the use of water or another liquid to increase moisture content in material to prevent RCS dust from becoming airborne, or

(ii) the addition of moisture to the air to capture RCS dust particles that are already airborne;

"*exposure limit*" means the applicable exposure limit as referred to in section 5.48;

"*exposure monitoring*" means air monitoring conducted in accordance with section 5.53(4) or 6.112.3;

"*RCS dust*" means any of the following that can be deposited in the lower gas exchange regions of the lung when inhaled:

(a) respirable crystalline silica;

(b) respirable α -quartz;

(c) respirable cristobalite;

"*risk assessment*" means a written risk assessment conducted in accordance with section 6.112;

"*sandblasting*" means an abrasive blasting process that uses silica sand as an abrasive;

"*silica flour*" means the fine powder produced by the crushing, grinding or ball milling of a siliceous substance;

"*silica process*" means the following processes, as well as any other process that may result in the release of RCS dust in concentrations likely to exceed the exposure limit;

(a) sandblasting;

(b) cleaning of castings;

(c) abrasive blasting, grinding, sanding or dressing of any surface that contains crystalline silica;

(d) blasting, cutting, crushing, drilling, grinding, milling, scaling, splitting or sieving, or other mechanical pulverizing or shattering, of rock, siliceous stone or gravel;

(e) concrete or asphalt milling, shotcreting, pneumatic drilling, tunnelling or other large-scale mechanical processes that may generate RCS dust;

(f) using heavy equipment or pneumatics to transfer sand, earth, aggregate or other material that contains silica, and associated transport, recycling and disposal operations;

(g) a process in which silica flour is used, including using it as an additive in product manufacturing;

(h) manufacturing, dismantling, demolishing or repairing of concrete, masonry or other material that contains silica;

(i) using power tools or equipment to abrade, cut, grind, core or drill concrete, masonry or other material that contains silica;

"*siliceous*" means any group of sedimentary rocks that consist largely or almost entirely of silicon dioxide (SiO_2), including diatomite.

(2) In this section, a reference to concrete, masonry or other material refers to a hard stone-like building material made

(a) of clay, or

(b) by mixing, with water or another liquid,

(i) cement, or

(ii) a combination of cement, sand, gravel, broken stone or another aggregate.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.111 Application

Sections 6.112 to 6.112.7 apply to a workplace where a worker is or may be

(a) engaged in a silica process, or

(b) exposed to potentially harmful levels of RCS dust.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.112 Risk assessment

(1) In this section, "*existing monitoring data*" means data

(a) gathered under section 5.53 or 6.112.3, or

(b) as described in section 6.112.4(2)(b).

(2) An employer must not permit workers to engage in a work activity or a silica process that may expose workers to RCS dust unless a risk assessment has first been completed by a qualified person.

(3) The risk assessment must include consideration of all of the following:

(a) the hazards of RCS dust, including the exposure limit;

(b) any information contained on a label or in a safety data sheet provided by a supplier, manufacturer or employer in respect of

(i) the crystalline silica content in the materials to be used in the silica process, and

(ii) the health effects of RCS dust exposure;

(c) the scope, circumstances and nature of the work activity or silica process, including

(i) whether section 5.50 applies, given the length of a shift,

(ii) any changes between shifts in the scope, circumstances or nature of the work activity or silica process, and

(iii) the potential level and duration of exposure to RCS dust during the work activity or while engaging in the silica process;

(d) the effectiveness of existing and planned control measures, as determined through exposure monitoring, to prevent or minimize worker exposure to RCS dust, including with respect to access to the workplace by unprotected workers;

(e) any additional information the employer needs to complete the risk assessment.

(4) A qualified person may rely on existing monitoring data for the purpose of assessing control measures under subsection (3)(d) only if it is reasonable to do so based on

(a) the relevance of the existing monitoring data, and

(b) whether additional air monitoring may be needed to reassess the effectiveness of existing and planned control measures because of changes in personnel or to the scope, circumstances or nature of the work activity or silica process.

(5) An employer must ensure that the risk assessment is reviewed by a qualified person if any of the following occur:

(a) there is reason to believe the risk assessment is no longer valid;

(b) there has been a significant change in the scope, nature or circumstances of the work activity or silica process to which the risk assessment relates;

(c) the results of any exposure monitoring show it to be necessary.

(6) If changes to the risk assessment are necessary as a result of the review under subsection (5), the employer must ensure that the risk assessment is changed accordingly.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.112.1 Exposure control plan

(1) If a risk assessment indicates that a worker is or may be exposed to RCS dust, the employer must

(a) ensure that a qualified person develops an exposure control plan meeting the requirements of sections 5.54 and 5.57(2), and of subsection (3) of this section, and

(b) implement the exposure control plan.

(2) If a risk assessment is changed under section 6.112(6), the employer must ensure that

(a) the exposure control plan is amended to address the changes to the risk assessment, and

(b) the amendments to the exposure control plan are implemented.

(3) For the purposes of section 5.54(2)(d), the written work procedures within an exposure control plan must address at least the following:

(a) the containment of silica processes, if used as a control measure;

- (b) the effective control of worker exposure to RCS dust using dust reduction systems;
- (c) safe work practices and procedures;
- (d) the correct selection, use, care and maintenance of any required personal protective equipment and clothing;
- (e) emergency procedures;
- (f) the removal, cleanup and disposal of RCS dust and debris, including the measures that will be used for the purposes of meeting the requirements of section 6.112.6.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.112.2 Elimination or control of exposure

- (1) An employer must, to the extent practicable, avoid the use of products or materials containing crystalline silica by replacing them with substances or processes that, under normal conditions of use, eliminate the risk of worker exposure to RCS dust.
- (2) If it is not practicable to eliminate the risk of worker exposure to RCS dust, the employer must control the risk below the applicable exposure limit under section 5.48 by applying control measures that
 - (a) are appropriate to the work activity,
 - (b) are consistent with the risk assessment and with sections 5.55 and 5.57, and
 - (c) include, in order of priority,
 - (i) the design and use of engineering controls, including appropriate dust reduction systems, containment of silica processes, and the provision and use of suitable work equipment and materials,
 - (ii) the control of RCS dust exposure through administrative controls, including work practice controls, and
 - (iii) if the control measures set out in paragraphs (i) and (ii) are not adequate to control exposure, the provision and use of suitable personal protective equipment in addition to those control measures.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.112.3 Air monitoring for RCS dust

- (1) If there is a potential for hazardous exposure to RCS dust in a work activity or silica process, the employer must
 - (a) ensure that air monitoring is conducted using a sampling and analytical method referred to in subsection (2)
 - (i) during the first shift of the work activity or silica process, and
 - (ii) as necessary throughout the work activity or silica process to ensure that control measures are effective to prevent or minimize worker exposure to RCS dust, and
 - (b) keep, for at least 10 years, records of the results of air monitoring conducted under this section.
- (2) Acceptable sampling and analytical methods for the purpose of subsection (1) are as follows:
 - (a) a method detailed in a standard occupational hygiene reference published by
 - (i) the National Institute for Occupational Safety and Health, or
 - (ii) the Occupational Safety and Health Administration;
 - (b) another method acceptable to the Board.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.112.4 Exceptions to monitoring requirement

- (1) In this section, "*equivalent work operations*" means work operations closely matching the silica processes, types of materials, work practices, control measures and environmental conditions prevailing in the employer's current work operations.
- (2) Despite section 6.112.3, an employer is not required to monitor the exposure of workers to RCS dust if a qualified person determines that
 - (a) existing control measures are effective in keeping worker exposure as low as reasonably achievable below the exposure limit, and

(b) the employer

(i) has previously monitored for RCS dust exposure during equivalent work operations and there is no reason to believe that the results of the previous monitoring would not continue to apply, or

(ii) has objective air monitoring data that was collected during equivalent work operations through industry surveys or peer-reviewed or scientific studies that use sampling and analytical methods referred to in section 6.112.3(2).

(3) An employer must keep, for at least of 10 years, a record documenting the following, as applicable:

(a) the previous monitoring data used for the purpose of subsection (2)(b)(i);

(b) the source of the objective air monitoring data, and the data itself, referred to in subsection (2)(b)(ii).

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.112.5 Blasting enclosures

An employer must ensure that a blasting enclosure is used for the following activities only:

(a) abrasive blasting;

(b) maintenance of the blasting enclosure and all associated equipment, including ventilation and blasting equipment.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.112.6 Housekeeping

(1) In addition to the requirements of section 5.82(2), an employer must ensure that all of the following requirements are met:

(a) all workplaces and work-related areas and equipment where RCS dust may accumulate must be cleaned at the end of every shift, if practicable, using one or a combination of

(i) a vacuum or similar device,

(ii) wet cleanup methods, or

(iii) another method that is effective and in accordance with the safe work practices contained in the exposure control plan;

(b) if a vacuum or similar device is used, the vacuum or device must be

(i) designed, maintained, tested and used in accordance with

(A) the manufacturer's specifications, or

(B) the instructions of a professional engineer, and

(ii) equipped with an effective HEPA filter on the exhaust;

(c) if wet cleanup methods are used, any slurry generated by those methods must be removed when the work is completed in such a manner as to avoid a secondary RCS dust exposure hazard;

(d) waste material must be placed in sealable containers and promptly disposed of to prevent RCS dust from re-entering the workplace.

(2) An employer must not permit the use of blowers, compressed air, dry sweeping or dry mopping to clean up or remove RCS dust.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.112.7 Instruction and training

An employer must ensure that a worker who is or may be exposed to RCS dust receives adequate instruction and training in all of the following:

(a) the hazards and health effects of inhaling RCS dust;

(b) safe work practices and procedures;

(c) the correct operation and use of any required equipment and engineering controls;

(d) the purpose and limitations of personal protective equipment, and the correct selection, fitting, use, care and maintenance of that equipment;

(e) housekeeping practices described in section 6.112.6.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.113 Rock drills

A rock drill, other than a manually-powered rock drill, must be equipped with a dust suppression system, acceptable to the Board, that

- (a) uses water jet, spray, or other equally effective means to suppress drilling dust effectively, and
- (b) operates whenever the drill is in use.

6.114 Crushing plants

Crushing plants must be equipped with the following dust controls:

- (a) crushers, including jaw, roll, cone, or hammer-mills must have an effective mechanical exhaust system;
- (b) screens releasing dust must be partially covered and have an effective mechanical exhaust system or an effective water spray system;
- (c) the screen discharge hopper must be enclosed and if dust is released must have an effective mechanical exhaust system or an effective water spray system;
- (d) material transfer points releasing dust must have an effective mechanical exhaust system or an effective water spray system;
- (e) a suitable dust collector must be installed on a mechanical exhaust system;
- (f) dust discharged from a mechanical exhaust ventilation system must not be recirculated into work areas;
- (g) when practicable, the operator must be enclosed in a pressurized cab equipped with air filtration and noise suppression.

[Amended by B.C. Reg. 9/2017, effective May 1, 2017.]

6.115 Asphalt mixing plants

Asphalt mixing plants must be equipped with the following dust controls:

- (a) a dust-tight seal must be installed at the dryer discharge to the hot stone elevator;
- (b) the screen enclosure must have a mechanical exhaust system that maintains a negative pressure within the screen enclosure and the elevator feed system;
- (c) the mixing chamber must have a mechanical exhaust system that maintains a negative pressure on the bin discharge to the mixer or elevator feed system;
- (d) on continuous-mix plants the conveyor feeding the mixing chamber must be enclosed and connected to the mechanical exhaust system;
- (e) the screen overflow chutes and hoppers handling screen overflow must be enclosed, and the waste fines conveyor system must be enclosed at all material transfer and discharge points;
- (f) the discharge of overflow or waste fines material must be to an enclosed container, which must be emptied in a manner that prevents contamination of the work area;
- (g) material transfer points between sections of the asphalt mixing plant must be fitted with effective dust seals;
- (h) conveyor and elevator cover seals must be dust-tight;
- (i) on batch-mix plants, dust-tight seals must be installed on manual draw chute levers and on the weigh-hopper and bin;
- (j) a suitable dust collector must be installed on the mechanical exhaust system, with the discharge from the dust collector located so as to prevent the recirculation of contaminated air to areas occupied by workers.

6.115.1 Application of RCS dust provisions

For greater certainty, in respect of a workplace described in section 6.111, the requirements set out in sections 6.113 to 6.115 are in addition to the requirements set out in sections 6.112 to 6.112.7.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.1 Definitions

In this section and sections 6.2 to 6.32:

"asbestos-containing material" means the following:

(a) a manufactured article or other material, other than vermiculite insulation, that would be determined to contain at least 0.5% asbestos if tested in accordance with one of the following methods:

(i) [Asbestos, Chrysotile by XRD, Method 9000](#) (Issue 2, dated August 15, 1994) in the NIOSH Manual of Analytical Methods, published by the United States National Institute for Occupational Safety and Health, Centre for Disease Control;

(ii) [Asbestos \(bulk\) by PLM, Method 9002](#) (Issue 2, dated August 15, 1994) in the NIOSH Manual of Analytical Methods, published by the United States National Institute for Occupational Safety and Health, Centre for Disease Control;

(iii) [Test Method for the Determination of Asbestos in Bulk Building Materials](#) (EPA/600/R-93/116, dated July 1993) published by the United States Environmental Protection Agency;

(b) vermiculite insulation that would be determined to contain any asbestos if tested in accordance with the [Research Method for Sampling and Analysis of Fibrous Amphibole in Vermiculite Attic Insulation](#) (EPA/600/R-04/004, dated January 2004) published by the United States Environmental Protection Agency;

"clean room" means a room in a high risk decontamination facility which is used by workers to change from street clothes into protective work clothing and equipment prior to entering the designated work area;

"clearance air sampling" means sampling to determine if the air inside a containment of a high risk work activity is sufficiently free of asbestos fibre to permit the dismantling of the containment;

"containment" means an isolation system designed to effectively contain asbestos fibre within a designated work area where asbestos-containing material is handled, removed, encapsulated or enclosed, and includes a glove bag;

"decontamination facility" means a series of rooms constructed so as to allow a person to enter and leave a containment without spreading asbestos fibre or waste material beyond the designated work area;

"designated work area" means an area for work with asbestos-containing material which is restricted to access by authorized persons by warning signs and by barricades, enclosures or other means of isolation, with due regard for the level of risk;

"encapsulation" means treatment of an asbestos-containing material or surface with a sealant which penetrates the material and binds the fibres together;

"enclosure" means isolation of asbestos-containing material from adjacent occupied areas in a building by physical barriers such as gyproc, plywood, or metal sheeting, to prevent the release of airborne asbestos fibres into these areas;

"friable asbestos-containing material" means asbestos-containing material that is crumbled or powdered or can be crumbled or powdered by hand pressure;

"high risk work activity" means a work activity that involves working with or in proximity to asbestos-containing material if a high level of control is necessary in respect of that activity to prevent exposure of a worker to airborne asbestos fibre;

"low risk work activity" means a work activity that involves working with or in proximity to asbestos-containing material if, at the time the work activity is being carried out, both of the following apply:

(a) the asbestos-containing material is not being

(i) cut, sanded, drilled, broken, ground down or otherwise fragmented, or

(ii) disturbed such that the asbestos-containing material may release airborne asbestos fibre;

(b) it is not necessary to use personal protective equipment or engineering controls in respect of that activity to prevent exposure of a worker to airborne asbestos fibre;

"moderate risk work activity" means a work activity, other than a high risk work activity, that involves working with or in proximity to asbestos-containing material if, at the time the work activity is being carried out, one or both of the following apply:

(a) the asbestos-containing material is being

(i) cut, sanded, drilled, broken, ground down or otherwise fragmented, or

(ii) disturbed such that the asbestos-containing material may release airborne asbestos fibre;

(b) it is necessary to use personal protective equipment or engineering controls, or both, in respect of that activity to prevent exposure of a worker to airborne asbestos fibre;

"qualified person" means a person who

(a) has knowledge of the management and control of asbestos hazards through education and training, and

(b) has experience in the management and control of asbestos hazards.

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

[Amended by B.C. Reg. 19/2006, effective May 17, 2006.]

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

6.2 Application

Sections 6.3 to 6.32 apply to a workplace where a worker is or may be exposed to potentially harmful levels of asbestos fibre, including a workplace where asbestos-containing material is present.

[Enacted by B.C. Reg. 188/2011, effective February 1, 2012.]

General Requirements

6.3 Exposure control plan

(1) If a worker is or may be exposed to potentially harmful levels of asbestos, the employer must develop and implement an exposure control plan meeting the requirements of section 5.54.

(2) To ensure adequate coordination of the overall plan, the employer must ensure that it is administered by a properly trained person.

6.4 Inventory

(1) The employer and the owner must ensure that a qualified person

(a) collects representative samples of the materials in the workplace that the qualified person suspects contain asbestos, and

(b) determines whether each of the samples is asbestos-containing material in accordance with,

(i) in the case of a sample that is not vermiculite insulation, one of the methods set out in paragraph (a)(i) to (iii) of the definition of "asbestos-containing material" in section 6.1, and

(ii) in the case of a sample that is vermiculite insulation, the method set out in paragraph (b) of the definition of "asbestos-containing material" in section 6.1., and

(c) prepares an inventory of all asbestos-containing materials in the workplace that includes the following information:

(i) with respect to each representative sample collected under paragraph (a),

(A) the specific location of the sample,

(B) a description of the sample,

(C) whether the sample is asbestos-containing material as determined under paragraph (b),

(D) the method, set out in paragraph (a)(i) to (iii) or (b) of the definition of "asbestos-containing material" in section 6.1, used to determine if the sample is asbestos-containing material, and

(E) if the sample is determined to be asbestos-containing material, the type of asbestos, as determined under paragraph (b), and the percentage of the sample that is comprised of that asbestos;

(ii) with respect to each material that, under subsection (2), is treated under this Part as asbestos-containing material because it is inaccessible or not practicable to sample,

(A) the specific location of the material or, if the specific location is not known, the presumed location of the material,

(B) a description of the material, and

(C) how it is determined that the material is inaccessible or not practicable to sample;

(iii) the location of each of the asbestos-containing materials, including by using drawings, plans or specifications.

(2) If a qualified person suspects that a material in the workplace contains asbestos but determines that the material is inaccessible or not practicable to sample, the material must be treated under this Part as asbestos-containing material unless a qualified person, in accordance with subsection (1), determines that the material is not asbestos-containing material.

(3) The employer or the owner satisfies his or her obligations under subsection (1) if the employer or the owner ensures that an existing inventory of all asbestos-containing materials in the workplace meets the requirements of subsection (1).

(4) The employer and the owner must

(a) keep the inventory current, and

(b) make a record of any changes made to the inventory.

(5) The employer and the owner must provide each other with a copy of the inventory and record referred to in subsection (4) if the other does not already have a copy.

(6) The employer must ensure that a copy of the current version of the inventory is readily available at the workplace.

(7) The employer and the owner must retain

(a) the current version of the inventory until all the asbestos-containing materials are removed from the workplace, and

(b) the record referred to in subsection (4)(b).

[Enacted by B.C. Reg. 188/2011, effective February 1, 2012.]

[Amended by B.C. Reg. 9/2017, effective May 1, 2017.]

6.5 Identification

The employer and the owner must ensure that all asbestos-containing materials present in the workplace are identified by signs, labels or, when these are not practicable, other effective means.

[Amended by B.C. Reg. 9/2017, effective May 1, 2017.]

6.6 Assessment and classification

(1) The employer must ensure that a risk assessment is conducted by a qualified person on asbestos-containing material identified in the inventory referred to in section 6.4(1)(c) or (3), as applicable, with due regard for the condition of the material, its friability, accessibility and likelihood of damage, and the potential for fibre release and exposure of workers.

(2) The employer must ensure that a risk assessment has been conducted by a qualified person before any demolition, alteration, or repair of machinery, equipment, or structures where asbestos-containing material may be disturbed.

(3) Before a work activity that involves working with or in proximity to asbestos-containing material begins, the employer must ensure that a qualified person assesses the work activity and classifies it as a low risk work activity, a moderate risk work activity or a high risk work activity.

(4) Repealed. [B.C. Reg. 188/2011, effective February 1, 2012.]

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

[Amended by B.C. Reg. 9/2017, effective May 1, 2017.]

6.7 Control of asbestos fibre

(1) The employer must ensure that all friable asbestos-containing materials in the workplace are controlled by removal, enclosure or encapsulation so as to prevent the release of airborne asbestos fibre.

(2) The employer must not allow any work that would disturb asbestos-containing material unless necessary precautions have been taken to protect workers.

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

6.8 Procedures

(1) The employer must ensure that procedures for handling or using asbestos-containing material prevent or minimize the release of airborne asbestos fibres.

(2) The employer must ensure that the procedures for control, handling or use of asbestos are in accordance with procedures acceptable to the Board.

(3) The procedures must address

- (a) containment of asbestos operations where applicable,
- (b) control of the release of asbestos fibre,
- (c) provision, use and maintenance of appropriate personal protective equipment and clothing,
- (d) means for the decontamination of workers, and
- (e) removal of asbestos waste and cleanup of asbestos waste material.

(4) The procedures must provide a worker with task-specific work direction that addresses both hazards and necessary controls.

6.9 Prohibitions

(1) Except for waste intended for disposal, the employer must ensure crocidolite asbestos or material containing crocidolite asbestos is not brought into or used in a workplace.

(2) The spraying of asbestos or asbestos-containing material is not permitted.

(3) Pressure spraying equipment of any type must not be used to remove asbestos insulation or other asbestos-containing material from buildings or structures.

(4) The employer must not permit the use of compressed air to clean up or remove asbestos dust or debris, or dry sweeping or dry mopping of asbestos waste.

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

6.10 Substitution

(1) The employer must substitute material less hazardous than asbestos-containing material when practicable.

(2) If such substitution is not practicable, the employer must document the reasons why less hazardous material cannot be substituted for asbestos-containing material, and make this documentation available to workers and to the joint committee or the worker health and safety representative, as applicable.

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

6.11 Instruction and training

The employer must ensure that a worker who is at risk of exposure to asbestos is adequately instructed and trained in

- (a) the hazards of asbestos,
- (b) the means of identifying asbestos-containing material at the worksite,
- (c) the work procedures to be followed,
- (d) the correct use of the required personal protective equipment, and operation of the required engineering controls, and
- (e) the purpose and significance of any required health monitoring.

6.12 Monitoring

(1) Repealed. [B.C. Reg. 312/2003, effective October 29, 2003.]

(2) During a high risk work activity, except where glove bags are used as the containment, the employer must sample for airborne asbestos fibre in

- (a) areas outside of the containment but in its vicinity, at least daily if there are unprotected workers in the area,
- (b) the clean room, at least daily during removal and cleanup operations, and
- (c) contaminated areas inside the containment, as necessary during removal and cleanup to ensure that workers are adequately protected.

(3) The employer must make the results of all air samples taken during a high risk work activity available to the workers involved, within 24 hours

of completing the collection of the samples.

(4) Except where glove bags are used as the containment, prior to dismantling a containment used in a high risk work activity and after all asbestos waste has been cleaned up, removed or otherwise controlled, the employer must ensure that

(a) clearance air sampling is conducted in previously contaminated areas inside the containment, and

(b) the airborne asbestos fibre levels in these areas do not exceed 0.02 f/ml.

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

Designated Work Areas and Containments

6.13 Designated area

(1) Before starting work with asbestos-containing material, the employer must, with due regard for the level of risk,

(a) identify and mark the boundary of the designated work area by barricades, fences, or similar means,

(b) ensure that the immediate work area is cleared of objects, materials and equipment other than that required to do the work, and

(c) ensure that windows, doorways and all other openings are adequately secured to prevent the release of asbestos fibre into other work areas.

(2) The employer must post signs at the boundaries of the designated work area indicating asbestos work is in progress, the hazards, and the precautions required for entering the work area.

(3) The employer must restrict entry into the designated work area to authorized persons who are adequately protected against the level of risk within the designated work area.

6.14 Permanent enclosure design

When asbestos-containing material in the workplace is controlled by a permanent enclosure, the employer must ensure that the enclosure is airtight, and if practicable, that electrical, plumbing, ventilation and similar services are located outside the enclosure.

6.15 Glove bags

The employer must ensure that when a prefabricated glove bag is used for the removal of asbestos insulation from pipes, ducts and similar structures

(a) the glove bag is sealed to prevent the release of asbestos fibres into the work area outside the bag,

(b) waste materials on surfaces are washed to the bottom of the glove bag and all exposed asbestos insulation is encapsulated while inside the glove bag enclosure,

(c) all glove bags are evacuated through a HEPA vacuum to remove the air inside the bag, prior to removal of the bag, and

(d) after removing the glove bag, all exposed surfaces are cleaned again.

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

6.16 High risk work

(1) For high risk work activity the employer must provide and maintain a containment and a decontamination facility, except that a decontamination facility is not required if the containment is a glove bag.

(2) The employer must inspect a containment and a decontamination facility used for high risk work activity at least daily to ensure their effectiveness is maintained.

(3) The employer must ensure that the design of the decontamination facility includes

(a) a physical connection to the containment,

(b) a shower facility, and

(c) provision for the safe entry and exit of workers.

(4) If the high risk work activity involves encapsulation of asbestos-containing material, the employer must ensure that the encapsulant penetrates

the material and effectively binds the asbestos fibres together, and has not disturbed the bonding of the material to the supporting surface.

(5) At the completion of a high risk work activity and before dismantling the containment, the employer must

(a) visually inspect the area inside the containment to ensure that an effective cleanup has been completed, and

(b) treat all exposed surfaces inside the containment with a sealant to bind any remaining asbestos fibres and prevent them from becoming airborne.

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

Ventilation

6.17 Containment ventilation

The employer must, with the exception of a glove bag, ventilate a containment to ensure that

(a) air flows only from clean outside areas into the contaminated area,

(b) exhaust air from the containment ventilation system is directed to the outdoors through an effective HEPA filter, and

(c) there is an inward airflow through the decontamination facility into the containment.

6.18 Local exhaust ventilation

The employer must provide local exhaust ventilation with exhaust air discharged through a HEPA filter for all dust-producing operations outside a containment where asbestos-containing material is handled or used.

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

6.19 Filter testing

(1) The employer must assess the effectiveness of HEPA filters by DOP (dioctyl phthalate) testing or similar means at least annually, after a HEPA filter is replaced in a vacuum cleaner or ventilation system, and before use in high risk work activity.

(2) Repealed. [B.C. Reg. 312/2003, effective October 29, 2003.]

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

Other Means of Controlling Exposure to Asbestos

6.20 Protecting work surfaces

(1) Before starting work where exposed friable asbestos-containing material is present or asbestos-containing material has been handled, the employer must remove all asbestos dust from contaminated work surfaces with a damp cloth or similar material, or with a vacuum cleaner equipped with a HEPA-filtered exhaust.

(2) Work surfaces in the work area must be kept as free as practicable from accumulations of asbestos dust.

(3) Work surfaces in a designated work area must, with due regard for the level of risk, be covered with plastic sheets, tarpaulins or similar materials to help control the spread of asbestos-containing material.

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

6.21 Preventing spread

The employer must prevent the spread of asbestos dust and debris to other work areas during the work.

6.22 Wetting material

Asbestos-containing material that is to be removed or disturbed must be effectively wetted before and during the work, whenever practicable.

6.23 Repairing damaged material

When damaged asbestos-containing material is repaired, the employer must ensure that

(a) the repair methods will seal all exposed, friable ends or edges, and

(b) the methods used disturb the least amount of asbestos-containing material necessary to complete the repair.

6.24 Friction materials

If automotive service procedures may involve friction material that is asbestos-containing material or dust arising from such material, the employer must ensure that the following control measures are implemented:

- (a) dry removal of friction material dust from automotive assemblies using compressed air, brushes, or other similar means is prohibited;
- (b) service work areas where friction material is handled are posted with signs to advise workers of the hazards and required precautions;
- (c) suitable work procedures are followed to minimize the generation of airborne dust;
- (d) a worker handling equipment or assemblies contaminated with dust from friction material, outside of a HEPA-filtered vacuum enclosure system, wears suitable personal protective equipment, including disposable coveralls and at least a HEPA-filtered dual cartridge half face respirator;
- (e) waste material that may be contaminated with asbestos is promptly collected and disposed of in accordance with applicable requirements;
- (f) contaminated tools, equipment and work surfaces are cleaned after work is completed.

[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

Waste Handling and Disposal

6.25 Sealed containers

The employer must ensure that all asbestos waste and other waste contaminated with asbestos, including disposable protective clothing and cleanup equipment, is placed into sealed containers which are labelled as containing asbestos.

6.26 Cleaning containers and equipment

- (1) The employer must ensure that the exterior of a container of asbestos waste is cleaned with a damp cloth or a vacuum cleaner equipped with a HEPA-filtered exhaust before being removed from a designated work area.
- (2) Reusable tools and equipment contaminated with asbestos must be cleaned after work is completed.

6.27 Waste removal

- (1) Before any work involving asbestos takes place, the employer must ensure that procedures for the safe removal of asbestos dust and debris from the work area are set out in writing by a qualified person.
- (2) The written procedures must
 - (a) comply with the requirements set out in section 6.8,
 - (b) provide for removal of asbestos dust and debris from the work area
 - (i) while work is in progress, at intervals necessary to eliminate or minimize the risk of exposure,
 - (ii) at the end of each work shift, and
 - (iii) at the completion of work involving asbestos, and
 - (c) consider the nature of the asbestos dust and debris to be removed and provide specific direction regarding which of the following removal methods, or combination of the following removal methods, is most appropriate for safe removal of that asbestos dust and debris in relation to each of the times set out in paragraph (b) (i), (ii) and (iii):
 - (i) using a vacuum cleaner, or similar device, that is equipped with a HEPA-filtered exhaust;
 - (ii) wiping surfaces with a damp cloth or sponge to remove residual amounts of asbestos dust and debris;
 - (iii) wet sweeping or wet mopping to remove larger amounts of asbestos dust and debris;
 - (iv) using a shovel or similar device to place larger amounts of dampened asbestos debris into the sealed container required by section 6.25;
 - (v) using another method that is acceptable to the Board.
- (3) The employer must ensure that
 - (a) every worker who is engaged in asbestos dust and debris removal at the work area is adequately instructed and trained in the written procedures of the qualified person under this section, and

(b) the written procedures of the qualified person are followed.

[Enacted by B.C. Reg. 188/2011, effective February 1, 2012.]

6.28 Waste disposal

The employer must dispose of containers of asbestos waste promptly to prevent the accumulation of large amounts of asbestos waste.

Personal Protective Clothing and Equipment

6.29 Respiratory protection

(1) The employer must supply, and ensure that workers within a designated work area wear, respirators which are adequate for the anticipated level of exposure.

(2) The employer must ensure that a single use respirator is not used for protection against asbestos.

[Amended by B.C. Reg. 312/2010, effective February 1, 2011.]

6.30 Protective clothing

(1) The employer must ensure that all persons within a designated work area wear protective clothing which is made of material resistant to penetration by asbestos fibres, fits snugly at the neck, wrists and ankles, and as necessary to protect against the risk, covers the head and feet as well as the body.

(2) The employer must replace or repair any torn or damaged protective clothing immediately.

(3) Before a worker removes protective clothing and equipment, the employer must ensure that the worker cleans this gear with a damp cloth or a vacuum cleaner equipped with a HEPA-filtered exhaust.

(4) The employer must ensure that a worker removes protective clothing and equipment before leaving the designated work area.

(5) The employer must ensure that protective clothing contaminated with asbestos is, before reuse, cleaned with a vacuum cleaner equipped with a HEPA-filtered exhaust, and placed in a water-soluble plastic bag, which is sealed and labelled before being sent to an acceptable laundry facility.

6.31 Information to laundry workers

The employer must ensure that workers who launder clothing contaminated with asbestos are informed of the hazards of asbestos and the precautions required for handling the clothing.

Documentation

6.32 Types of records

The employer must maintain, for at least 10 years, the following records respecting asbestos-containing materials:

- (a) risk assessments;
- (b) inspections;
- (c) air monitoring results;
- (d) instruction and training of workers;
- (e) incident investigation reports.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

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6.33 Definitions

In sections 6.33 to 6.40:

"*medical sharp*" means a needle device, scalpel, lancet or any other medical device that can reasonably be expected to make parenteral contact;

"*occupational exposure*" means reasonably anticipated contact with a biological agent, that is designated as a hazardous substance in section 5.1.1, resulting from the performance of a worker's duties;

"*parenteral contact*" means piercing of mucous membranes or the skin;

"*precautionary principle*" means adopting provisional precautions covering all routes of transmission, based on a higher level of protection, when the identity, aetiology or routes of transmission of the biological agent designated as a hazardous substance in section 5.1.1 have not been established;

"*route of transmission*" means any route by which a biological agent designated as a hazardous substance in section 5.1.1 may be transmitted including contact, droplet or airborne transmission;

"*safety-engineered medical sharp*" means a medical sharp with a built-in safety feature or mechanism that eliminates or minimizes the risk of accidental parenteral contact while or after the sharp is used;

"*safety-engineered needle*" includes a self-sheathing needle device and a retractable needle system.

"*standard or routine infection control precautions*" means safe work practices as defined by the *Practical Guidelines for Infection Control in Health Care Facilities* issued by the World Health Organization, as amended from time to time, and the *Infectious Diseases, Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care* guidelines issued by Health Canada, as amended from time to time;

"*transmission-based precautions*" means safe work practices based on the route of transmission as defined by the *Practical Guidelines for Infection Control in Health Care Facilities* issued by the World Health Organization, as amended from time to time, and the *Infectious Diseases, Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care* guidelines issued by Health Canada, as amended from time to time.

[Amended by B.C. Reg. 241/2006, effective January 1, 2007.]

[Amended by B.C. Reg. 106/2007, effective July 26, 2007.]

[Amended by B.C. Reg. 319/2007, effective February 1, 2008.]

6.34 Exposure control plan

- (1) If a worker has or may have occupational exposure, the employer must develop and implement an exposure control plan, based on the precautionary principle, that meets the requirements of section 5.54 and that includes the following:
 - (a) a risk assessment conducted by a qualified person to determine if there is a potential for occupational exposure by any route of transmission;
 - (b) a list of all work activities for which there is a potential for occupational exposure;
 - (c) engineering controls and administrative controls to eliminate or minimize the potential for occupational exposure;
 - (d) standard or routine infection control precautions and transmission-based precautions for all work activities that have been identified as having a potential for occupational exposure, including
 - (i) housekeeping practices designed to keep the workplace clean and free from spills, splashes or other accidental contamination,
 - (ii) work procedures to ensure that contaminated laundry is isolated, bagged and handled as little as possible, and
 - (iii) work procedures to ensure that laboratory or other samples containing a biological agent designated as a hazardous substance in section 5.1.1 are handled in accordance with the *Laboratory Biosafety Guidelines 3rd edition, 2004*, issued by the Public Health Agency of Canada;
 - (e) a description of personal protective equipment designed to eliminate or minimize occupational exposure;
 - (f) a program to inform workers about the contents of the exposure control plan and to provide them with adequate education, training and

supervision to work safely with, and in proximity to, a biological agent designated as a hazardous substance in section 5.1.1;

(g) a record of all training and education provided to workers in the program described in paragraph (f);

(h) a record of all workers who have been exposed, while performing work activities, to a biological agent designated as a hazardous substance in section 5.1.1.

[Enacted by B.C. Reg. 319/2007, effective February 1, 2008.]

[Amended by B.C. Reg. 312/2010, effective February 1, 2011.]

6.35 Risk identification

Repealed. [B.C. Reg. 319/2007, effective February 1, 2008.]

6.36 Controls

(1) Repealed. [B.C. Reg. 319/2007, effective February 1, 2008.]

(1.1) On and after January 1, 2008, a needleless device or safety-engineered hollow bore needle must be used for the following procedures performed to care for or treat a person:

(a) withdrawal of body fluids;

(b) accessing a vein or artery;

(c) administration of medications or fluids;

(d) any other procedure involving the potential for an exposure to accidental parenteral contact for which a needleless system or safety-engineered hollow bore needle system is available.

(1.2) On and after October 1, 2008, any medical sharp used to care for or treat a person must be a safety-engineered medical sharp.

(1.3) Subsections (1.1) and (1.2) do not apply if

(a) use of the required device, needle or sharp is not clinically appropriate in the particular circumstances, or

(b) the required device, needle or sharp is not available in commercial markets.

(1.4) If more than one type of safety-engineered hollow bore needle or safety-engineered medical sharp is available in commercial markets, the needle or sharp that provides the highest level of protection from accidental parenteral contact must be used.

(1.5) For purposes of subsection (1.4), an employer must make a determination of the highest level of protection available based on information provided by manufacturers, independent testing agencies, objective product evaluation, or other reliable sources.

(1.6) Safe work procedures and practices relating to the use of safety-engineered hollow bore needles and safety-engineered medical sharps must be developed and implemented before use of these devices.

(2) Repealed. [B.C. Reg. 319/2007, effective February 1, 2008.]

(3) Repealed. [B.C. Reg. 319/2007, effective February 1, 2008.]

(4) Repealed. [B.C. Reg. 319/2007, effective February 1, 2008.]

(5) Repealed. [B.C. Reg. 312/2003, effective October 29, 2003.]

(6) Repealed. [B.C. Reg. 319/2007, effective February 1, 2008.]

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

[Amended by B.C. Reg. 241/2006, effective January 1, 2007.]

[Amended by B.C. Reg. 106/2007, effective July 26, 2007.]

[Amended by B.C. Reg. 319/2007, effective February 1, 2008.]

6.37 Labels and identification

(1) A container holding a known or suspected biological agent designated as a hazardous substance in section 5.1.1 must be clearly identified by the biohazard symbol as described in the Hazardous Products Regulations (Canada) or by other means that indicates the presence of a biological

agent.

(2) A laboratory sample of a known or suspected biological agent designated as a hazardous substance in section 5.1.1 must be transported only in accordance with the federal *Transportation of Dangerous Goods Act, 1992 (Canada)*.

[Enacted by B.C. Reg. 319/2007, effective February 1, 2008.]

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

6.38 Education and training

Repealed. [B.C. Reg. 319/2007, effective February 1, 2008.]

6.39 Vaccination

(1) An employer must offer vaccination against hepatitis B virus to all workers who are at risk of occupational exposure to that virus.

(2) If the *Communicable Disease Control Immunization Program Manual* issued by the BC Centre for Disease Control, as amended from time to time, lists a vaccine that protects against infection by a biological agent that is designated as a hazardous substance in section 5.1.1, the employer must offer the vaccination to all workers who are at risk of occupational exposure to that biological agent.

(3) Vaccinations offered under subsections (1) and (2) must be provided without cost to workers.

[Enacted by B.C. Reg. 319/2007, effective February 1, 2008.]

6.40 Medical evaluation

If a worker may have been exposed to the human immunodeficiency virus (HIV), hepatitis B virus or any other biological agent designated as a hazardous substance in section 5.1.1, the employer must advise the worker to seek immediate medical evaluation.

[Enacted by B.C. Reg. 319/2007, effective February 1, 2008.]

6.41 Records

Repealed. [B.C. Reg. 319/2007, effective February 1, 2008.]

6.58.1 Definitions

(1) In this section and sections 6.59 to 6.69:

"*coating*" means paint or any similar material that

- (a) contains lead, and
- (b) forms a film when dry;

"*exposure limit*" means the applicable exposure limit as referred to in section 5.48;

"*exposure monitoring*" means

- (a) air and surface monitoring conducted in accordance with section 5.53(4) and
- (b) air monitoring conducted in accordance with section 6.61;

"*health monitoring*" means that part of a health protection program that monitors and assesses individual workers through clinical medical examinations, by measuring and determining lead amounts in capillary or venous blood, and by other tests, for the purpose of identifying changes in the worker's health status due to occupational exposure to lead;

"*inorganic lead*" means elemental lead, inorganic compounds of lead and lead chromate, but does not include organic compounds of lead;

"*lead process*" means the following work activities and processes, as well as any other work activity or process, involving the manufacturing, processing or handling of lead, or of materials, products or coatings containing lead that may expose a worker to lead dust, fumes or mist:

- (a) abrasive blasting;
- (b) applying electric arc, oxy-acetylene, oxy gas, plasma arc or a flame for the purpose of welding, cutting or cleaning the surface of any structure;
- (c) demolishing, removing or encapsulating materials;

- (d) dry sanding or scraping, grinding, cutting or buffing;
- (e) using lead in fire assay;
- (f) cleaning up contamination;
- (g) hot cutting in demolition, dismantling or salvage operations;
- (h) manufacturing, assembling, handling or repairing lead-acid storage batteries, and sorting, packing and handling plates or other lead-containing parts that are removed or recovered from lead-acid storage batteries;
- (i) manufacturing, assembling, handling, testing or firing of lead-containing weapons, detonators or other explosives;
- (j) mixing and blending lead in plastics, coatings, moulding powders and stabilizers;
- (k) mixing and melting processes in the glass industry;
- (l) constructing, installing, altering, repairing or renovating structures, substrates, mechanical or engineered systems, or parts of any of these;
- (m) smelting, refining, alloying, melting and casting;
- (n) spray painting;
- (o) repairing radiators;
- (p) recycling or scrap-processing;
- (q) transporting, disposing, storing or containing lead or materials containing lead;
- (r) using a power tool, high pressure water jets or other mechanical means to cut, sand, buff or remove a surface coating;

"medical removal" means the temporary removal of a worker from a work activity involving a lead process if health monitoring, conducted under the supervision of a physician, indicates that the worker is at risk of suffering adverse health effects from continued exposure to lead;

"risk assessment" means a risk assessment conducted under section 6.59.1.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.59 Application

Sections 6.59.1 to 6.69 apply to any workplace where a worker is or may be

- (a) engaged in a lead process, or
- (b) exposed to potentially harmful levels of lead dust, fumes or mist.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.59.1 Risk assessment

(1) In this section, "existing monitoring data" means data

- (a) gathered under section 5.53 or 6.61, or
- (b) as described in section 6.61.1(2)(b).

(2) An employer must not permit workers to engage in a work activity or lead process that may expose workers to lead dust, fumes or mist unless a risk assessment has first been completed by a qualified person.

(3) The risk assessment must include consideration of all of the following:

- (a) the hazards of lead, including the exposure limit;
- (b) any information contained on a label or in a safety data sheet provided by a supplier, manufacturer or employer in respect of
 - (i) the lead content in the materials, coatings or products to be used in the lead process, and
 - (ii) the health effects of lead exposure;
- (c) the scope, circumstances and nature of the work activity or lead process, including

- (i) whether section 5.50 applies, given the length of a shift,
 - (ii) any changes between shifts in the scope, circumstances or nature of the work activity or lead process,
 - (iii) whether the work activity involves welding, soldering, brazing, cutting or other hot work processes,
 - (iv) the potential routes of exposure to lead dust, fumes or mist during the work activity, or while engaging in the lead process, including by inhalation or ingestion,
 - (v) the potential level and duration of the exposure referred to in subparagraph (iv), and
 - (vi) the results of any relevant health monitoring, if applicable, conducted
- (A) in relation to an exposure control plan under section 5.54(2)(f), or
 - (B) as part of a health protection program under section 6.67;
- (d) the effectiveness of existing and planned control measures, as determined through exposure monitoring, to prevent or minimize worker exposure to lead dust, fumes or mist, including with respect to access to the workplace by unprotected workers;
 - (e) any additional information the employer needs to complete the risk assessment.

(4) A qualified person may rely on existing monitoring data for the purpose of assessing control measures under subsection (3)(d) only if it is reasonable to do so based on both of the following:

- (a) the relevance of the existing monitoring data and whether additional exposure monitoring may be needed to reassess the effectiveness of existing and planned control measures because of changes in personnel or to the scope, circumstances or nature of the work activity or lead process;
- (b) if applicable and available, the results of any health monitoring conducted on workers since the existing monitoring data was gathered;

(5) An employer must ensure that a risk assessment is reviewed by a qualified person if any of the following occur:

- (a) there is reason to believe the risk assessment is no longer valid;
 - (b) there has been a significant change in the scope, circumstances or nature of the work activity or lead process to which the risk assessment relates;
 - (c) the results of any exposure monitoring or health monitoring show it to be necessary.
- (6) If changes to the risk assessment are necessary as a result of the review under subsection (5), the employer must ensure that the risk assessment is changed accordingly.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.60 Exposure control plan

- (1) If a risk assessment indicates that a worker is or may be exposed to lead dust, fumes or mist, the employer must
 - (a) ensure that a qualified person develops an exposure control plan meeting the requirements of sections 5.54 and 5.57(2), and of subsection (3) of this section, and
 - (b) implement the exposure control plan.
- (2) If a risk assessment is changed under section 6.59.1(6), the employer must ensure that
 - (a) the exposure control plan is amended to address the changes to the risk assessment, and
 - (b) the amendments to the exposure control plan are implemented.
- (3) For the purposes of section 5.54(2)(d), the written work procedures within an exposure control plan must address at least the following:
 - (a) the containment of lead processes through the use of enclosures, barriers or encapsulation, if used as a control measure;
 - (b) the effective control of worker exposure to lead dust, fumes or mist, including worker decontamination and personal hygiene;
 - (c) safe work practices and procedures;
 - (d) the correct selection, use, care and maintenance of any required personal protective equipment and clothing;
 - (e) emergency procedures;

(f) the removal, cleanup and disposal of lead dust and debris, including the measures that will be used for the purposes of meeting the requirements of section 6.64.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.60.1 Elimination or control of exposure

(1) An employer must, to the extent it is practicable,

(a) avoid the use of materials, products or coatings containing lead that may expose a worker to lead dust, fumes or mist, and

(b) replace materials, products and coatings referred to in paragraph (a) with substances or processes that, under normal conditions of use, eliminate the risk of worker exposure to lead dust, fumes or mist.

(2) If it is not practicable to eliminate the risk of worker exposure to lead dust, fumes or mist, the employer must control the risk below the applicable exposure limit under section 5.48 by applying control measures that

(a) are appropriate to the work activity,

(b) are consistent with the risk assessment and with sections 5.55 and 5.57, and

(c) include, in order of priority

(i) the design and use of engineering controls, including appropriate lead dust, fumes or mist reduction systems, containment of lead processes, and the provision and use of suitable work equipment and materials,

(ii) the control of exposure to lead dust, fumes or mist through administrative controls, including work practice controls, and

(iii) if the control measures set out in paragraphs (i) and (ii) are not adequate to control exposure, the provision and use of suitable personal protective equipment in addition to those control measures.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.61 Air monitoring for lead

(1) If there is a potential for hazardous exposure to airborne lead dust, fumes or mist in a work activity or lead process, the employer must

(a) ensure that air monitoring is conducted using a sampling and analytical method referred to in subsection (2)

(i) during the first shift of the work activity or lead process, and

(ii) as necessary throughout the work activity or lead process to ensure that control measures are effective to prevent or minimize worker exposure to lead dust, fumes or mist, and

(b) keep, for at least 10 years, records of the results of air monitoring conducted under this section.

(2) Acceptable sampling and analytical methods for the purpose of subsection (1) are as follows:

(a) a method detailed in a standard occupational hygiene reference published by

(i) the National Institute for Occupational Safety and Health, or

(ii) the Occupational Safety and Health Administration;

(b) another method acceptable to the Board.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.61.1 Exception to air monitoring requirements

(1) In this section, "equivalent work operations" means work operations closely matching the lead processes, types of materials, products or coatings, work practices, control measures and environmental conditions prevailing in the employer's current work operations.

(2) Despite section 6.61, an employer is not required to monitor the concentration of airborne lead if a qualified person determines that

(a) existing control measures are effective in keeping worker exposure as low as reasonably achievable below the exposure limit, and

(b) the employer

(i) has previously monitored for airborne concentrations of lead during equivalent work operations and there is no reason to believe that the results

of the previous monitoring would not continue to apply, or

(ii) has objective air monitoring data that was collected during equivalent work operations through industry surveys or peer-reviewed or scientific studies that use sampling and analytical methods, referred to in section 6.61(2).

(3) An employer must keep, for at least 10 years, a record documenting the following, as applicable:

(a) the previous monitoring data used for the purpose of subsection (2)(b)(i);

(b) the source of the objective air monitoring data, and the data itself, referred to in subsection (2)(b)(ii).

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.62 Warning signs

Warning signs describing the hazards and health consequences of lead exposure and prohibiting the entry of unauthorized workers must be posted at the boundary of any work area where hazardous lead exposures could occur.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.63 Personal hygiene

If exposure to lead dust, fumes or mist or lead compounds results in the contamination of exposed skin or work clothing, the requirements for personal hygiene in sections 5.82 to 5.84 must be met.

[Amended by B.C. Reg. 9/2017, effective May 1, 2017.]

6.64 Housekeeping

An employer must ensure

(a) that all surfaces in the work area are kept as free as practicable from accumulations of lead dust, and

(b) that, if vacuuming methods are selected as a control measure, vacuums must be

(i) designed, maintained, tested and used in accordance with

(A) the manufacturer's specifications, or

(B) the instructions of a professional engineer, and

(ii) equipped with an effective HEPA filter on the exhaust

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.65 Prohibited cleaning methods

A person must not use blowers, compressed air, compressed gas or dry sweeping cleaning methods in areas where lead processes are conducted.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.66 Instruction and training

An employer must ensure that a worker who is or may be exposed to lead dust, fumes or mist receives adequate instruction and training in all of the following:

(a) the hazards and health effects of exposure to lead dust, fumes and mist;

(b) the specific nature of the work activity or lead process and the potential routes of lead exposure that may result;

(c) safe work practices and procedures;

(d) the correct operation and use of any required equipment and engineering controls;

(e) the purpose and limitations of personal protective equipment, and the correct selection, fitting, use, care and maintenance of that equipment;

(f) personal hygiene and decontamination procedures;

(g) the purpose and significance of health monitoring;

(h) housekeeping practices as described in section 6.64.

[Enacted by B.C. Reg. 9/2017, effective May 1, 2017.]

6.67 Health protection

The employer must develop and implement an effective health protection program, in a manner acceptable to the Board, if a worker is exposed to potentially hazardous levels of lead.

6.68 Records

The employer must

- (a) maintain records of risk assessments, worker exposures and worker training, and
- (b) ensure that health monitoring records are maintained in a manner acceptable to the Board.

6.69 Primary lead smelters

An employer engaged in primary lead smelting is exempt from the requirement to maintain airborne lead concentrations at or below the exposure limit in lead processing areas, provided that in these areas the employer

- (a) maintains the airborne lead concentrations as low as is reasonably achievable using the best available technology,
- (b) establishes and maintains an acceptable health protection plan including the elements in section 5.54, to ensure that workers' blood lead levels are minimized,
- (c) establishes provisions acceptable to the Board for the medical removal of workers, and
- (d) submits a summary of the annual review to the Board.

6.42 Definition

In sections 6.43 to 6.58

"*cytotoxic drug*" means an agent that possesses a specific destructive action on certain cells or that may be genotoxic, oncogenic, mutagenic, teratogenic, or hazardous to cells in any way and includes most anti-cancer drugs.

6.43 Exposure control plan

If a worker is or may be occupationally exposed to a cytotoxic drug, the employer must develop and implement an exposure control plan meeting the requirements of [section 5.54](#).

6.44 Information

If a cytotoxic drug is received, prepared, administered, stored or disposed of at a workplace, the employer must maintain and make readily available to workers information on its

- (a) acute and chronic toxicity, including any potential reproductive hazard,
- (b) acute exposure treatment, and
- (c) safe handling.

[Amended by B.C. Reg. 21/2006, effective May 17, 2006.]

6.45 Labels

A container of a cytotoxic drug and a shelf or bin where a cytotoxic drug is regularly stored must be appropriately labelled.

6.46 Signs

Warning signs which are clearly visible and clearly state the identified hazards must be posted in all areas where cytotoxic drugs are stored or mixed.

6.47 List

Storage and preparation areas for cytotoxic drugs must be posted with a list of all cytotoxic drugs present in the workplace.

6.48 Procedures

- (1) When a cytotoxic drug is received, prepared, administered, stored or disposed of, written safe work procedures must be developed and implemented for applicable aspects of receiving, storage, preparation, administration and waste handling.
- (2) The work procedures required by subsection (1) must be readily available for reference by workers and where practicable, summaries of relevant procedures must be posted in the appropriate work areas.

[Amended by B.C. Reg. 21/2006, effective May 17, 2006.]

6.49 Reproductive toxins

- (1) At any worksite where a worker is occupationally exposed to a cytotoxic drug that is a reproductive toxin, the employer must develop policy and procedures appropriate to the risk, which may include protective reassignment.
- (2) The policy and procedures must inform workers about the reproductive toxin and identify ways to minimize exposure to the reproductive toxin for a worker who has advised the employer of pregnancy or intent to conceive a child.

6.50 Instruction

- (1) A worker involved in any aspect of handling a cytotoxic drug must receive pre-job education and on-the-job training on the handling of this substance.
- (2) The instruction required by subsection (1) must address the
 - (a) known health risks, including any potential reproductive hazards,
 - (b) relevant techniques and procedures for safe handling,
 - (c) proper use of protective equipment and materials, and
 - (d) spill and waste disposal procedures.
- (3) The adequacy of instruction must be assessed when required by a change in the substance used, information available on the substance or a change in work procedures, and retraining provided where necessary.

6.51 Supervision

A worker involved in any aspect of cytotoxic drug handling must be effectively supervised.

6.52 Records

- (1) The employer must maintain a record of all workers who prepare or administer cytotoxic drugs, including the name of the drugs handled, and when practicable, the number of preparations or administrations per week.
- (2) Exposure records must be maintained for the duration of employment plus 10 years, and training records for 3 years from the date that the training occurred.

6.53 Drug preparation and administration

- (1) All mixing, preparation and priming of administration sets with a cytotoxic drug must be performed in one centralized area in a specially designated Class II Type B biological safety cabinet that
 - (a) is exhausted to the outside atmosphere in a manner that prevents recirculation into any work area,
 - (b) has exhaust and ventilation systems that remain in operation for a sufficient period of time to ensure that no contaminants escape from the biological safety cabinet into the workplace, and
 - (c) is equipped with a continuous monitoring device to permit confirmation of adequate airflow and cabinet performance.
- (2) The administration of cytotoxic drugs must be done by following safe work procedures.

[Amended by B.C. Reg. 21/2006, effective May 17, 2006.]

6.54 Disconnects

Syringes and intravenous sets used for cytotoxic drugs must have appropriate fittings, such as Luer locking fittings, which prevent accidental disconnection.

[Amended by B.C. Reg. 21/2006, effective May 17, 2006.]

6.55 Personal protective equipment

- (1) Adequate personal protective equipment must be provided and worn whenever there is a risk of contact with a cytotoxic drug.
- (2) For the purposes of subsection (1) personal protective equipment includes
 - (a) medical gloves that are manufactured and designed for use when handling cytotoxic drugs,
 - (b) a moisture resistant, long-sleeved gown with cuffs,
 - (c) if there is a risk of contact with aerosols, an approved respirator, and
 - (d) if there is a risk of eye contact, eye and face protection.
- (3) Used gowns and gloves must not be worn outside the preparation, administration or storage area and must be handled as hazardous waste or contaminated linen.
- (4) All other non-disposable personal protective equipment must be cleaned immediately after use.

[Amended by B.C. Reg. 21/2006, effective May 17, 2006.]

6.56 Personal hygiene

Eating, drinking, smoking, application of cosmetics or storage of food is prohibited in any area where a cytotoxic drug is mixed, administered or stored.

6.57 Waste disposal

- (1) Adequate, leak-proof waste disposal containers, including sharps and solids containers, and distinctive plastic waste bags must be available in every area where cytotoxic drugs are prepared, administered or stored, and all cytotoxic drug-related waste must be placed into these containers or bags.
- (2) Any excreta from a patient being treated with cytotoxic drugs that is handled by a worker must be treated as cytotoxic drug-related waste.

[Amended by B.C. Reg. 21/2006, effective May 17, 2006.]

6.58 Spills

- (1) Written emergency procedures to address spills of a cytotoxic drug must be developed and implemented which address requirements for small spill cleanup, both inside and outside the biological safety cabinet, large spill cleanup, and personal decontamination.
- (2) Spill kits, clearly labelled, must be kept in or near cytotoxic drug preparation, administration and storage areas and a sign detailing spill procedures must be posted in all such areas.

[Amended by B.C. Reg. 21/2006, effective May 17, 2006.]

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