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2007/10/04-03

THE WORKERS' COMPENSATION BOARD OF BRITISH COLUMBIA

RESOLUTION OF THE BOARD OF DIRECTORS

RE: Amendments to requirements of the *Occupational Health and Safety Regulation* (BC Regulation 296/97, as amended)

WHEREAS:

Pursuant to section 225(1) of the *Workers Compensation Act*, R.S.B.C. 1996, c. 492 and amendments thereto (*"Act"*), the Workers' Compensation Board ("WCB") may make regulations it considers necessary or advisable in relation to occupational health and safety and occupational environment;

AND WHEREAS:

The WCB, pursuant to its mandate under the *Act,* has proposed amendments to the following Parts of the *Occupational Health and Safety Regulation* (*"OHSR"*), and has given notice of the proposed amendments, conducted consultations and held a public hearing on the proposed amendments in accordance with section 226(1) of the *Act:*

- Part 6, with consequential amendments to Part 5, relating to biohazardous materials; and
- Part 30 relating to fume hoods.

AND WHEREAS:

Pursuant to section 228 of the *Act*, a review of the above Parts was undertaken by the WCB as part of the process of ongoing review of and consultation on its regulations to ensure they are consistent with current workplace practices, technological advances and other changes affecting occupational health and safety and occupational environment;

AND WHEREAS:

The BOD, after due consideration of all presentations to the WCB, considers it necessary and advisable in accordance with the WCB's mandate under the *Act* in relation to occupational health and safety and occupational environment, to amend Parts 5, 6 and 30 of the *OHSR;*

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AND WHEREAS:

The WCB must specify the date on which regulations come into force, which date must be at least 90 days after their deposit under the *Regulations Act*, as per section 227 of the *Act*;

AND WHEREAS:

Pursuant to the Provincial Government's *Regulatory Reform Policy,* the BOD has evaluated the proposed regulatory amendments according to the established regulatory criteria.

THE BOARD OF DIRECTORS RESOLVES THAT:

1. The regulatory amendments to the *OHSR,* as set out in Appendices A and B, are approved.

2. The Regulatory Criteria Checklist in Appendix C is approved.

3. The above regulatory amendments will be deposited with the Registrar of Regulations in such form as may be required by the Registrar.

4. The above regulatory amendments come into force on February 1, 2008.

Dated at Richmond, British Columbia, October 4, 2007.

By the Workers' Compensation Board

DOUGLAS J. ENNS, CHAIR
BOARD OF DIRECTORS

APPENDIX A

THE BOARD OF DIRECTORS RESOLVES THAT:

1 ***Part 5 of the Occupational Health and Safety Regulation, B.C. Reg. 296/97, is amended by striking out the heading*** **"Chemical and Biological Substances"** ***and substituting*** **"Chemical Agents and Biological Agents".**

2 ***Section 5.1 is amended by adding the following definition:***

"adverse health effect" means an acute or chronic injury, acute or chronic disease, or death; .

3 ***The following section is added:***

Designation as hazardous substances

5.1.1 For the purposes of sections 5.2 and 6.33 to 6.40, the following biological agents are designated as hazardous substances:

(a) a liquid or solid material that is contaminated with a prion, virus, bacterium, fungus or other biological agent that has a classification given by the World Health Organization or Health Canada, as amended from time to time, as a Risk Group 2, 3 or 4 human pathogen that causes an adverse health effect;

(b) a biological toxin that causes an adverse health effect.

4 ***Section 5.2 is amended***

(a) by striking out "chemical or biological substance" ***and substituting*** "chemical agent or biological agent, designated as a hazardous substance in section 5.1.1,", ***and***

(b) by repealing paragraphs (a) to (d) and substituting the following:

(a) the identity of the chemical agent or biological agent, its possible effects on worker health and safety and any precautions required to protect the health and safety of the worker are clearly indicated by labels, MSDSs, or other similar means,

(b) the information required by paragraph (a) is clearly communicated to the worker,

(c) written procedures are prepared and implemented to eliminate or minimize a risk of exposure to a chemical agent or biological agent by any route that could cause an adverse health effect, and to address emergency and cleanup procedures in the event of a spill or release of a chemical agent or biological agent, and

(d) the supervisor and the worker are trained in and follow the measures required in this Part and Part 6 of this Regulation for the safe handling, use, storage and disposal of the chemical agent or biological agent, including emergency and spill cleanup procedures.

5 ***Part 6 is amended by striking out the subheading*** **"Biohazardous Materials" before section 6.33** ***and substituting*** **"Biological Agents".**

6 ***Section 6.33 is amended***

(a) by striking out "In sections 6.33 to 6.41:" ***and substituting*** "In sections 6.33 to 6.40:",

(b) by striking out the definition of **"biohazardous material",**

(c) by striking out the definition of **"occupational exposure"** ***and substituting the following definition:***

"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; ***, and***

(d) by adding the following definitions:

"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;

"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.

7 Section 6.34 is repealed and the following substituted:

Exposure control plan

6.34 (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 Manual* issued by the World Health Organization, as amended from time to time, and the *Laboratory Biosafety Guidelines* issued by Health Canada, as amended from time to time;

(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.

8 Section 6.35 is repealed.

9 Section 6.36 is amended by repealing subsections (1), (2), (3), (4) and (6).

10 Section 6.37 is repealed and the following substituted:

Labels and identification

6.37 (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 *Controlled 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).

11 Section 6.38 is repealed.

12 Section 6.39 is repealed and the following substituted:

Vaccination

6.39 (1) An employer must offer vaccination against the 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.

13 Section 6.40 is repealed and the following substituted:

Medical evaluation

6.40 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.

14 Section 6.41 is repealed.

15 The above amendments come into force on February 1, 2008.

Dated at Richmond, British Columbia, October 4, 2007.

By the Workers' Compensation Board

DOUGLAS J. ENNS, CHAIR
BOARD OF DIRECTORS

APPENDIX B

THE BOARD OF DIRECTORS RESOLVES THAT:

1 Part 30 of the Occupational Health and Safety Regulation, B. C. Reg. 296/97, is amended by adding the following section:

Definitions

30.7.1 In sections 30.8 to 30.11:

"laboratory fume hood" means an enclosed and mechanically ventilated workspace located in a laboratory, that is designed to

(a) draw air into the workspace and to prevent or minimize the escape of airborne contaminants out of the workspace, and

(b) allow a worker to conduct physical, chemical and biological manipulations inside the workspace;

"operational face opening" means an opening in a laboratory fume hood through which a worker may conduct work inside the hood;

"sash" means a vertical or horizontal panel on a laboratory fume hood that defines the operational face opening and provides a protective barrier between the worker conducting work inside the hood and the contents of the hood.

2 Section 30.8 is amended

(a) by repealing subsections (1) and (2) and substituting the following:

(1) A laboratory fume hood and its related ductwork must be designed, installed and maintained in accordance with the *Industrial Ventilation, A Manual of Recommended Practice*, published by the American Conference of Governmental Industrial Hygienists, as amended from time to time. ,

(2) A laboratory fume hood must

(a) be connected to a local exhaust ventilation system,

(b) provide average face velocities of 0.4 m/s (80 fpm) to 0.6 m/s (120 fpm) across the operational face opening,

(c) not have face velocities of less than 80% of the average face velocity required in paragraph (b) at any point across its operational face opening, and

(d) not have face velocities of more than 120% of the average face velocity required in paragraph (b) at any point across its operational face opening. ,

(b) by adding the following subsections:

(2.1) A laboratory fume hood must have a sash that is positioned to protect the upper body and face of a worker working in the laboratory fume hood from accidental releases of the contents of the hood while allowing hand and arm access to equipment inside the hood.

(2.2) A laboratory fume hood with a movable sash must be clearly marked to identify the maximum size of the operational face opening that will maintain the average face velocities required in subsection (2) (b).

(2.3) The employer must ensure

(a) that before it is used, a commercially manufactured laboratory fume hood has been certified as being tested by the manufacturer, and

(b) following installation and before it is used, a custom built laboratory fume hood is tested on site by a qualified person.

(2.4) A laboratory fume hood tested under subsection (2.3) must demonstrate containment not greater than the control level of 0.05 ppm when tested under "as manufactured" test conditions in accordance with the methods described in *ANSI/ASHRAE Standard 110-1995, Method of Testing Performance of Laboratory Fume Hoods*.

(2.5) The installation of a laboratory fume hood must be certified by a professional engineer. ,

(c) in subsection (3) by adding "laboratory" ***before*** "fume hood" ***and by striking out*** "operational face to unacceptable levels." ***and substituting*** "operational face opening to unacceptable levels.",

(d) in subsection (4) by adding "laboratory" ***before*** "fume hood",

(e) by repealing subsection (5) and substituting the following:

(5) A laboratory fume hood that will be or is being used for working with

(a) radioactive material in amounts that exceed the exemption quantity specified by the Canadian Nuclear Safety Commission, or

(b) perchloric acid

must be clearly labelled with applicable restrictions on its use. ,

(f) in subsection (6) by adding "laboratory" ***before*** "fume hood", ***and***

(g) by adding the following subsections:

(7) Controls for the operation of a laboratory fume hood and its service fixtures must be

(a) located on the outside of the laboratory fume hood, and

(b) immediately accessible to the worker conducting work in the laboratory fume hood.

(8) Despite subsection (7), water taps may be located inside a laboratory fume hood if the main shutoff valve for the water is located outside the laboratory fume hood.

(9) Equipment being used in a laboratory fume hood must

(a) be kept at least 15 cm (6 in.) from the operational face opening of the laboratory fume hood, and

(b) not adversely affect airflow into the laboratory fume hood.

(10) Written procedures must be developed and implemented to ensure safe use and operation of a laboratory fume hood.

3 Section 30.9 is repealed and the following substituted:

(1) Face velocities over the operational face opening of a laboratory fume hood must be quantitatively measured and recorded.

(2) The ability of a laboratory fume hood to

(a) maintain an inward flow of air across the operational face opening, and

(b) contain contaminants

must be assessed and recorded using a smoke tube or other suitable qualitative method.

(3) The actions described in subsections (1) and (2) must be performed

(a) after the laboratory fume hood is installed and before it is used,

(b) at least once in each 12 month period after installation, and

(c) after any repair or maintenance that could affect the air flow of the hood. , ***and***

(4) If a laboratory fume hood is found to be operating with an average face velocity of less than 90% of the average face velocity required in section 30.8 (2), the employer must immediately take corrective action to bring the average face velocity within the required range of velocities.

(5) Airflow in a laboratory fume hood must be monitored continuously if loss of airflow will result in risk to a worker. ,

(6) A laboratory fume hood that is being installed must have an alarm capable of indicating when the average face velocity falls below the minimum average face velocity level required in section 30.8 (2) when the hood is in use.

4 Section 30.10 is amended

(a) by repealing subsections (1) and (2) and substituting the following:

(1) Laboratory fume hoods located in the same room or separate rooms may be connected to a common exhaust duct or manifold system if the following conditions are satisfied:

(a) the requirements of section 5.3.2 of *ANSI/AIHA Standard Z9.5-2003, Laboratory Ventilation* are met;

(b) controls to prevent backdrafts and pressure imbalances between rooms are installed;

(c) the ventilation design and installation of the common exhaust duct or manifold system is certified by a professional engineer.

(2) Despite subsection (1), laboratory fume hoods that are or will be used for working with

(a) radioactive materials in amounts that exceed the exemption quantity specified by the Canadian Nuclear Safety Commission, or

(b) perchloric acid

must not be connected to a manifold system. , ***and***

(b) in subsection (3) by adding "laboratory" ***before*** "fume hood".

5 Section 30.11 is amended by striking out "Fume hood" and substituting "Laboratory fume hood".

6 Section 30.12 is amended

(a) in subsection (3) by striking out *"National Sanitation Foundation (NSF) Standard 49-1992, Class II (Laminar Flow) Biohazard Cabinetry"* ***and substituting*** *"National*

Sanitation Foundation (NSF) Standard 49-2002, Class II (Laminar Flow) Biohazard Cabinetry",

(b) in subsection (4) by striking out "or where radioactive materials are used in amounts greater than specified by the Atomic Energy Control Board, or any successor agency." ***and substituting*** "or where volatile radioactive materials are used in amounts that exceed the exemption quantity specified by the Canadian Nuclear Safety Commission.",

(c) by repealing subsection (5), and

(d) by repealing subsection (6) and substituting the following:

(6) Biological safety cabinets used for handling a biological agent that is designated as a hazardous substance in section 5.1.1 must be operated and ventilated in accordance with the *Laboratory Biosafety Manual* issued by the World Health Organization, as amended from time to time, and the *Laboratory Biosafety Guidelines* issued by Health Canada, as amended from time to time.

7 The above amendments come into force on February 1, 2008.

Dated at Richmond, British Columbia, October 4, 2007.

By the Workers' Compensation Board

DOUGLAS J. ENNS, CHAIR
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