

2021/07/14-03

**WORKERS' COMPENSATION BOARD
(WorkSafeBC)**

RESOLUTION OF THE BOARD OF DIRECTORS

RE: 2020 and 2021 Amendments to the *Occupational Health and Safety Regulation*

WHEREAS:

Pursuant to section 110(1) of the *Workers Compensation Act*, R.S.B.C. 2019, c. 1 (*Act*), WorkSafeBC may make regulations it considers necessary or advisable in relation to occupational health and safety and occupational environment;

AND WHEREAS:

WorkSafeBC, pursuant to its mandate under the *Act*, has proposed amendments to the following Parts of the *Occupational Health and Safety Regulation*, B.C. Reg. 296/97 (*OHSR*), and has given notice of the proposed amendments, conducted consultations and held public hearings on the following proposed amendments in accordance with section 113(1) of the *Act*:

- Parts 1, 5, 22 and 23, Combustible and flammable liquid,
- Part 7, Ionizing radiation – dose limits for the lens of the eye,
- Parts 14, 24, and 25, Housekeeping amendments,
- Part 18, Traffic control,
- Part 20, Certification of concrete pump operators, and
- Part 26, Logging truck load securement;

AND WHEREAS:

Pursuant to section 115 of the *Act*, a review of the above Parts was undertaken by WorkSafeBC 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:

Pursuant to section 117 of the *Act*, regulations may be made applicable to certain persons, may be different for different categories, may delegate a matter to, or confer a discretion on, the Board, an officer of the Board or another person, and may adopt a standard, code or rule, in whole, in part or with any changes considered appropriate;

AND WHEREAS:

WorkSafeBC, after due consideration of all presentations, considers it necessary and advisable in relation to occupational health and safety and occupational environment to amend Parts 1, 5, 7, 14, 18, 20, 22, 23, 24, 25, and 26 of the *OHSR*;

AND WHEREAS:

Pursuant to section 114 of the *Act*, WorkSafeBC must specify the date on which its regulations come into force, which date must be at least 90 days after their deposit under the *Regulations Act*;

AND WHEREAS:

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

THE BOARD OF DIRECTORS RESOLVES THAT:

Effective December 1, 2021, the *OHSR* is amended as set out in Appendices A to F attached to this resolution.

I, Jeff Parr, hereby certify for and on behalf of the Board of Directors of WorkSafeBC that the above resolutions were duly passed at a meeting of the Board of Directors hosted in British Columbia on July 14, 2021.

Original signed by Jeff Parr

JEFF PARR

Chair, Board of Directors

Workers' Compensation Board

APPENDIX A

- 1** *Section 1.1 (1) of the Occupational Health and Safety Regulation, B.C. Reg. 296/97, is amended by repealing the definition of “flammable liquid” and substituting the following:*

“flammable liquid” means a liquid that has a flash point below 37.8 degrees Celsius (100 degrees Fahrenheit) and a vapour pressure of not more than 275.8 kPa at 37.8 degrees Celsius; .

- 2** *Section 5.27 (1) and (3) is amended by adding “a combustible liquid normally used as fuel,” before “a flammable gas”.*
- 3** *Section 5.28 is repealed and the following substituted:*

Bonding or grounding of containers

- 5.28** If a metallic or other conductive container is used to transfer a combustible liquid normally used as fuel, a flammable liquid or a flammable gas to another metallic or other conductive container, the containers must be electrically bonded to each other or electrically grounded while the liquid or gas is being transferred.
- 4** *Section 5.32 is amended by adding “and” at the end of paragraph (c), by striking out “and” at the end of paragraph (d) and by repealing paragraph (e).*
- 5** *Section 22.54 (c) is amended by striking out “oil, grease and flammable liquids with a flash point below 52°C (126°F)” and substituting “combustible liquids with a flash point below 52°C (126°F), flammable liquids, oil and grease”.*
- 6** *Section 23.78 (5) is amended by striking out “vapourizing”.*

APPENDIX B

- 1** *Section 7.19 (1) of the Occupational Health and Safety Regulation, B.C. Reg. 296/97, is amended by repealing paragraphs (a) and (b) and substituting the following:*

- (a) an effective dose of 20 mSv over any period of 12 consecutive months;
- (b) with respect to exposure to the lens of an eye,
 - (i) an equivalent dose of 50 mSv over any period of 12 consecutive months that starts on or after December 1, 2021, and
 - (ii) an equivalent dose of 100 mSv over any period of 60 consecutive months that starts on or after December 1, 2021;
- (c) with respect to exposure to the skin, averaged over any 1 cm² area at a nominal depth of 7 mg/cm², regardless of the area exposed, an equivalent dose of 500 mSv over any period of 12 consecutive months;
- (d) with respect to exposure to the hands and feet, an equivalent dose of 500 mSv over any period of 12 consecutive months.

APPENDIX C

- 1 *Section 14.2 (7) of the Occupational Health and Safety Regulation, B.C. Reg. 296/97, is amended by striking out “Pillar” and substituting “Pedestal”.*
- 2 *Section 24.70 (b) is repealed and the following substituted:*
 - (b) be built in accordance with the applicable regulations under the *Canada Shipping Act, 2001*.
- 3 *The Note under Part 25 is amended*
 - (a) *by striking out “Regional Health Boards and Community Health Services Societies” and substituting “Health Authorities”,*
 - (b) *by striking out “Industrial Camps Health Regulation” and substituting “Industrial Camps Regulation”, and*
 - (c) *by striking out “Industrial Camps Health Regulation” in both places and substituting “Industrial Camps Regulation”.*

APPENDIX D

- 1 *Section 18.1 of the Occupational Health and Safety Regulation, B.C. Reg. 296/97, is amended by repealing the definitions of “traffic control” and “traffic control person or TCP” and by adding the following definitions:*
 - “barrier”** means a solid or continuous installation designed to prevent errant vehicles from entering a closed or hazardous work zone;
 - “brief duration work”** means planned work in a work zone that requires 15 minutes or less to complete;
 - “emergency”** means an incident that requires immediate action to protect lives or prevent serious injury;
 - “emergent work”** means quick response work necessitated by an unanticipated occurrence, other than an emergency, if the total time required for workers to complete the quick response work is less than 5 minutes;
 - “long duration work”** means planned work in a work zone that requires
 - (a) more than one daylight period to complete,
 - (b) night work, or
 - (c) mobile work;
 - “mobile work”** means continuously slow-moving work or intermittently moving work with stops of 30 minutes or less;
 - “risk assessment”** means a risk assessment in accordance with section 18.3.1;
 - “short duration work”** means planned work in a work zone that requires more than 15 minutes during a single daylight period to complete;

“temporary traffic control device” means a sign, signal, marking or other device used to regulate, warn or guide traffic through or around a work zone for a limited period of time;

“traffic assistant” means a person who

- (a) has completed the training described in section 18.6.3, and
- (b) assists or directs motorists within parking or holding areas in a specified workplace, such as a parking lot or roadway terminus used for vehicle holding prior to boarding a vessel;

“traffic control” means the use of temporary traffic control devices, traffic arrangements or layouts and procedures to protect workers and move traffic safely through a work zone;

“traffic control person” means a person who

- (a) has completed the training described in section 18.6.2, and
- (b) is designated or assigned by the employer to direct traffic;

“traffic control plan” means a workplace-specific plan that documents how traffic control is to be achieved, including

- (a) a combination of text, layouts and, if required, drawings that describe specifically the traffic control measures and devices that will be provided to mitigate the risks from hazards identified in the risk assessment,
- (b) how the traffic control measures are to be implemented, and
- (c) on what schedule the traffic control measures are to be implemented;

“Traffic Management Manual” means the latest edition of the *Traffic Management Manual for Work on Roadways* issued by the Ministry of Transportation and Infrastructure;

“work zone” means an area where a worker is or may be exposed to a moving vehicle, with the exception of

- (a) a parking lot, and
- (b) a roadway terminus used for vehicle holding prior to boarding a vessel.

2 ***Section 18.2 is amended by striking out “used” and substituting “implemented”.***

3 ***Section 18.3 is repealed and the following substituted:***

Standards for traffic control

- 18.3** (1) The Traffic Management Manual applies to all work zones.
- (2) An employer must ensure that traffic control equipment, arrangements or layouts and procedures, to the extent practicable, meet the requirements of the Traffic Management Manual unless otherwise specified in this Regulation or in the Act.

4 *The following sections are added:*

Risk assessment

- 18.3.1** (1) An employer must not permit workers to engage in a work activity that may expose workers to traffic unless a risk assessment has first been completed by a qualified person and the risk assessment
- (a) meets the requirements of subsection (2) or (3), as applicable, and
 - (b) takes into account the risks to worker health and safety whenever traffic control is required for
 - (i) emergent work,
 - (ii) brief duration work,
 - (iii) short duration work, or
 - (iv) long duration work.
- (2) An employer responsible for emergent work or brief duration work must
- (a) determine that the emergent work or brief duration work can be performed safely in less than 5 minutes or 15 minutes or less, respectively,
 - (b) develop written work procedures applicable to the emergent work or brief duration work, including specifying
 - (i) the temporary traffic control devices and layouts required, if applicable, and
 - (ii) instructions and procedures to follow when a worker encounters an unanticipated occurrence that prevents the work from being completed in the time allocated, and
 - (c) require workers to follow the written work procedures described in paragraph (b).
- (3) An employer responsible for short duration work or long duration work must ensure that the risk assessment is in writing and includes consideration of at least the following:
- (a) work duration and time of day the work activity is scheduled to occur;
 - (b) whether the nature of the work activity is expected to create a hazard;
 - (c) whether any of the following is expected to create a risk of worker injury:
 - (i) traffic volume;
 - (ii) lines of sight;
 - (iii) vehicles travelling at the posted speed limits;
 - (iv) configuration of the work zone, including the number of lanes and lane widths;
 - (v) equipment movement and storage;
 - (d) environmental conditions or hazards that could present a risk to workers during the installation or removal of temporary traffic control devices, including
 - (i) avalanche or rock fall areas,
 - (ii) overhead structures, and

- (iii) roadway surface conditions;
 - (e) coordination of overlapping work activities;
 - (f) any other reasonably foreseeable hazard;
 - (g) whether traffic control persons are required, and, if so,
 - (i) the availability of escape routes for those traffic control persons,
 - (ii) environmental conditions or hazards,
 - (iii) the locations at which traffic control persons can be positioned to direct traffic and avoid the risk of being struck by traffic,
 - (iv) requirements for breaks by those traffic control persons, including hygiene breaks,
 - (v) shift duration and the number of traffic control persons required for the work, and
 - (vi) what site-specific orientation and training are required for traffic control persons at the work zone;
 - (h) the level of supervision required.
- (4) An employer referred to in subsection (2) or (3), as applicable, must ensure that the risk assessment is reviewed and updated by a qualified person if
- (a) there is reason to believe the risk assessment is no longer valid, or
 - (b) there has been a significant change in the scope or nature of the work to which the risk assessment relates.

Traffic control plan

- 18.3.2** (1) An employer responsible for short duration work or long duration work must ensure that a written traffic control plan is developed based on the risk assessment.
- (2) The traffic control plan required under subsection (1) must specify
- (a) traffic control measures to mitigate the hazards identified in the risk assessment,
 - (b) instructions for implementation of the traffic control measures,
 - (c) clear statements of roles and responsibilities for implementing the traffic control plan, and
 - (d) a schedule, for the traffic control plan, for
 - (i) implementation, and
 - (ii) regular review and updating.
- (3) If the risk assessment is updated under section 18.3.1 (4), the employer must ensure that
- (a) the traffic control plan is amended to address the changes to the risk assessment, and
 - (b) the amendments to the traffic control plan are implemented.
- (4) The employer must ensure that the traffic control plan is accessible at all times to workers at the work zone.

Order of control measures

- 18.3.3** (1) An owner and an employer each must, to the extent practicable, eliminate the risk of worker exposure to traffic in a work zone by isolating the work zone using constructed detours, alternative routes, barriers or other effective measures.
- (2) If it is not practicable to eliminate worker exposure to traffic in a work zone by using the measures described in subsection (1), worker exposure to traffic must be minimized by applying control measures that
- (a) are appropriate to the work activity,
 - (b) are consistent with the risk assessment, and
 - (c) include, in order of priority,
 - (i) the use of temporary traffic control devices and traffic arrangements or layouts and procedures to effectively protect workers from traffic travelling by or through a work zone without the use of traffic control persons,
 - (ii) administrative controls that reduce the number of workers exposed to traffic, such as scheduling work during off-peak hours, and
 - (iii) the use of traffic control persons only after the control measures set out in subparagraphs (i) and (ii), either alone or in combination, have been considered and determined to be insufficient to manage traffic in the circumstances.

5 *Sections 18.4 to 18.6 are repealed and the following substituted:*

Supervision

- 18.4** (1) An employer must ensure that a qualified supervisor is designated whenever traffic control is required.
- (2) The employer must ensure that the supervisor designated under subsection (1) ensures that the following requirements are met:
- (a) traffic arrangements or layouts and procedures are implemented in accordance with the traffic control plan set out in section 18.3.2;
 - (b) the required temporary traffic control devices are in place before the start of work and are removed or covered immediately when they are no longer required;
 - (c) the work zone is inspected at intervals appropriate to the risks;
 - (d) it has been verified that any person assigned to direct traffic can provide evidence of having completed the traffic control training program in accordance with section 18.6.2;
 - (e) if traffic control persons are assigned, the traffic control persons are, before their first shift, provided orientation and training at the work zone that are
 - (i) documented or otherwise recorded, and
 - (ii) consistent with the risks identified in the risk assessment;
 - (f) if 2 or more traffic control persons are expected to work as a team, responsibility is assigned to one traffic control person to coordinate any changes in traffic flow.

Placement of temporary traffic control devices

18.5 An employer must ensure that

- (a) temporary traffic control devices are positioned and used as specified in the traffic control plan,
- (b) temporary traffic control devices are positioned to allow traffic to move by or through the work zone in a safe manner,
- (c) temporary traffic control devices are in place before the start of the work and are removed or covered immediately when they are no longer required,
- (d) temporary traffic control devices are installed and removed in a sequence that best protects workers during each phase of a traffic control operation, and
- (e) the distance between the Traffic Control Person Ahead C-001-1 sign and the first traffic control person does not exceed 150 metres, unless this is not practicable.

Traffic Control Persons

Prohibitions

18.6 An employer must ensure that

- (a) traffic control persons are not used to control traffic when speed limits in effect are greater than 70 km/h,
- (b) traffic control persons do not direct traffic contrary to any sign, signal or traffic control device, and
- (c) traffic control persons are not positioned in an intersection open to traffic flow or the travelled portion of a roadway.

Emergency management

18.6.1 (1) In this section, “**emergency responder**” includes, when present at an emergency scene in a work zone, a firefighter, paramedic, highway rescue worker, search and rescue worker, tow truck worker, utility owner’s worker, road authority worker and road maintenance worker.

- (2) Subject to subsections (3) and (4), emergency responders may be assigned to direct traffic during an emergency.
- (3) An emergency responder, other than a peace officer, may not direct traffic under subsection (2) unless the emergency responder has completed training that includes
 - (a) basic traffic control principles,
 - (b) instructions on the use, set-up and take down of temporary traffic control devices,
 - (c) traffic management principles described in the Traffic Management Manual,
 - (d) use of a buffer vehicle to protect the work zone during an emergency,
 - (e) safe work procedures, and
 - (f) appropriate selection, use and maintenance of personal protective clothing and safety equipment.

- (4) An emergency responder, other than a peace officer, may not direct traffic under subsection (2) for more than 2 hours after the start of the emergency unless the emergency responder has completed the training described in section 18.6.2.

Traffic control person training

- 18.6.2** (1) An employer must ensure that a traffic control person has completed a Board-approved traffic control training program.
- (2) On and after December 1, 2023, the traffic control training program must be based on
- (a) analysis of the knowledge, skills, abilities and other requirements to perform the job, and
 - (b) training and competency assessment criteria contained in any one of the following:
 - (i) *ISO/IEC 17024:2012, Conformity Assessment – General Requirements for Bodies Operating Certification of Persons*;
 - (ii) *ANSI/ICE 1100: 2019(E), Standard for Assessment-Based Certificate Programs*;
 - (iii) *ASTM International ASTM E2659-18, Standard Practice for Certificate Programs*;
 - (iv) *CAN/CSA Z1001-18, Occupational health and safety training*;
 - (v) another standard acceptable to the Board.
- (3) Successful completion of the traffic control training program must include an assessment of the trainee's
- (a) knowledge of the subject matter, and
 - (b) practical competency.

Traffic assistant training

- 18.6.3** (1) An employer must ensure that a traffic assistant receives workplace training that addresses the hazards specific to the workplace and that includes coursework and a practical component.
- (2) The coursework for a traffic assistant referred to in subsection (1) must include
- (a) basic traffic control principles,
 - (b) instructions on the use, set-up and take down of temporary traffic control devices,
 - (c) safe work procedures that include identifying an escape route, and
 - (d) appropriate selection, use and maintenance of personal protective clothing and safety equipment.

6 *Sections 18.8 and 18.9 are repealed and the following substituted:*

Location of traffic control persons

- 18.8** (1) Subject to section 18.6 and subsection (3) of this section, an employer must ensure that a traffic control person is in a position that has been identified in the risk assessment as a safe location.

- (2) A safe location referred to in subsection (1) is one that
 - (a) is
 - (i) on the shoulder or curb adjacent to the traffic being controlled, or
 - (ii) in a lane that has been closed by means of barriers or other temporary traffic control devices,
 - (b) provides the traffic control person with an unobstructed route to escape errant vehicles or traffic,
 - (c) is 25 metres or more from the work zone, unless circumstances or space requirements, such as working at or near an intersection open to traffic flow or in an urban setting, make this distance not practicable, and
 - (d) makes the traffic control person stand out against the background or appear as conspicuous as possible to approaching traffic.
- (3) If a risk assessment identifies that it is not practicable to position the traffic control person in a location as described in subsection (2), the employer must ensure that the positioning of the traffic control person is based on a written risk assessment of site-specific conditions completed to determine an alternative position to provide safety for the traffic control person.

Operations during daytime

18.9 Each traffic control person must be provided and must use, when directing traffic, the following:

- (a) a traffic control paddle meeting the requirements set out in the Traffic Management Manual and, if determined by a risk assessment as required to control fatigue, an extension pole for the paddle;
- (b) a Traffic Control Person Ahead C-001-1 sign, which must be immediately removed or covered when traffic control persons are not actively controlling traffic;
- (c) high visibility apparel meeting the requirements for the Class 3 garment criteria of *CSA Standard Z96-15, High-Visibility Safety Apparel* and that
 - (i) is in fluorescent yellow-green or fluorescent orange-red background colour,
 - (ii) covers fully, at a minimum, the upper torso,
 - (iii) has, in a contrasting colour, combination retroreflective-fluorescent stripes/bands that are at least 100 millimetres wide, made up of an at least 50 millimetre-wide retroreflective band with 2 at least 25 millimetre-wide fluorescent stripes in a contrasting colour to the background colour, in fluorescent yellow-green or fluorescent orange-red, on each side of the retroreflective band,
 - (iv) is worn as a torso vest, jacket or coveralls, with the combination retroreflective-fluorescent stripes/bands described in subparagraph (iii) laid out in the following pattern:
 - (A) a symmetric X, on the back of the garment, from shoulders to waist;
 - (B) 2 vertical stripes/bands on the front and extending over the shoulders to the waist;

- (C) waist-level, horizontal stripes/bands extending entirely around the circumference of the torso, from the back to the bottom of the vertical stripes/bands on the front where they end at the front garment-fastening mechanism;
- (D) with no gaps, in the retroreflective-fluorescent material, that exceed 50 millimetres, and
- (v) has horizontal combination retroreflective-fluorescent stripes/bands encircling both arms and legs, that are of the measurements set out in subparagraph (iii) and that are placed below the elbows and below the knees, respectively;
- (d) safety headgear of a high visibility colour with a strip of retroreflective tape across the top from front to back and a strip of retroreflective tape on each side;
- (e) any other equipment required by the risk assessment.

Operations during darkness or poor visibility

7 *Section 18.10 is amended by adding the following subsections:*

- (0.1) In this section, “**darkness**” means the period from a half hour after sunset to a half hour before sunrise.
- (3) During the hours of darkness, or in other conditions of poor visibility, a location from which a traffic control person directs traffic must be illuminated by
 - (a) overhead street lighting, or
 - (b) if overhead street lighting is not available, temporary lighting that does not subject approaching road users to excessive glare.

8 *Section 18.11 is amended*

- (a) by adding “temporary” after “All”, and*
- (b) by adding “good” before “working condition”.*

9 *Section 18.13 and Figure 18-1 are repealed and the following substituted:*

Communication between traffic control persons

18.13 If more than one traffic control person is controlling traffic at the same work zone, the employer must ensure that an effective means of communication is provided to and used by those persons for communication between them.

10 *Sections 18.14, 18.16 and 18.17 and Figure 18-2 are repealed.*

APPENDIX E

1 The Occupational Health and Safety Regulation, B.C. Reg. 296/97, is amended by adding the following sections:

Duty to ensure operator's competence

- 20.26.4** (1) The employer must ensure, before a person operates, or supervises a person who operates, a concrete pump or placing boom at a workplace, that the person can operate the concrete pump or placing boom at that workplace in a competent and safe manner, taking into account
- (a) the class or type of concrete pump or placing boom being operated, and
 - (b) the circumstances of the workplace.
- (2) The duty imposed on the employer under subsection (1) also applies to the following:
- (a) in the case of a multiple-employer workplace, the prime contractor for the workplace;
 - (b) in any other case, the owner of the workplace.

Certification authority

- 20.26.5** (1) The Board may designate an organization to be the certification authority for the purposes of section 20.26.6 if
- (a) the Board has reviewed the certification program proposed by the organization and is satisfied that the certification program meets the requirements of
 - (i) *ISO/IEC 17024:2012, Conformity assessment – General requirements for bodies operating certification of persons*, or
 - (ii) *ANSI/ICE 1100:2019, Standard for Assessment-Based Certificate Programs*, and
 - (b) the Board is satisfied that the organization will be able to provide, throughout British Columbia, the written tests and practical assessments that applicants must take to obtain a concrete pump operator's certificate.
- (2) The Board may revoke the designation of an organization as the certification authority if
- (a) the Board is satisfied that
 - (i) the certification program provided by the organization does not meet the certification requirements of either of the standards referred to in subsection (1) (a),
 - (ii) the organization is not providing, throughout British Columbia, the written tests or practical assessments that applicants must take to obtain a concrete pump operator's certificate, or
 - (iii) the organization is not performing or exercising the organization's duties and powers with respect to concrete pump operator's certificates in accordance with section 20.26.6, or
 - (b) the organization requests the revocation.

Operator certification

- 20.26.6** (1) In this section, “**certification authority**” means an organization designated as the certification authority under section 20.26.5 (1).
- (2) On and after January 1, 2024, a person must not operate a concrete pump or placing boom at a workplace unless the person
- (a) holds a valid concrete pump operator’s certificate, issued by the certification authority, for the class or type of concrete pump or placing boom being operated and operates the concrete pump or placing boom in accordance with any conditions set out on the certificate, or
 - (b) operates the concrete pump or placing boom
 - (i) under the supervision of a person who holds a valid concrete pump operator’s certificate for the class or type of concrete pump or placing boom being operated, and
 - (ii) in accordance with the directions of the certificate holder.
- (3) The employer must ensure that a person who operates a concrete pump or placing boom at a workplace complies with subsection (2).
- (4) The duty imposed on the employer under subsection (3) also applies to the following:
- (a) in the case of a multiple-employer workplace, the prime contractor for the workplace;
 - (b) in any other case, the owner of the workplace.
- (5) The certification authority must issue a concrete pump operator’s certificate to an applicant for a class or type of concrete pump or placing boom if the applicant
- (a) has reached the minimum age specified by the certification authority,
 - (b) takes a written test established by the certification authority and achieves a minimum score established by the certification authority,
 - (c) takes a practical assessment administered by the certification authority and achieves a minimum score established by the certification authority, and
 - (d) pays to the certification authority a fee that is established by the certification authority to cover the costs of administering the written test and practical assessment.
- (6) The certification authority must determine the term of a concrete pump operator’s certificate and must set out on the certificate the date that it expires.
- (7) The certification authority must renew a concrete pump operator’s certificate if the certificate holder
- (a) submits, before the certificate has expired, a completed application, in a form established by the certification authority, to take the written test for the renewal of the certificate,
 - (b) takes a written test established by the certification authority and achieves a minimum score established by the certification authority,
 - (c) subject to subsection (8), takes a practical assessment administered by the certification authority and achieves a minimum score established by the certification authority, and

- (d) pays to the certification authority a fee that is established by the certification authority to cover the costs of administering the written test and, if the practical assessment is required, the assessment.
- (8) The requirement to take the practical assessment under subsection (7) (c) does not apply if the certificate holder has, during the term of the certificate, acquired practical experience of a type and in an amount established by the certification authority.
- (9) The certification authority may, at any time, set out conditions on the concrete pump operator's certificate that deal with the following matters:
 - (a) the classes or types of concrete pumps or placing booms to which the certificate applies;
 - (b) safety matters applicable to a particular certificate holder.
- (10) The certification authority may cancel a concrete pump operator's certificate if the certification authority is satisfied that one or both of the following apply:
 - (a) the certificate holder has contravened one or more of the conditions of the certificate;
 - (b) the certificate holder does not have the knowledge or skill to operate the equipment specified in the certificate in a competent and safe manner.

APPENDIX F

1 Section 26.1 of the Occupational Health and Safety Regulation, B.C. Reg. 296/97, is amended

(a) by repealing the definition of “binder”,

(b) by repealing the definition of “bunk” and substituting the following:

“bunk” means a horizontal bolster that is fitted with a stake at each end; ,

(c) by adding the following definitions:

“federal cargo securement standard” has the same meaning as “Standard” in section 35.02 (1) [*adoption of National Safety Code for Motor Carriers Standard 10 – Cargo Securement*] of the Motor Vehicle Act Regulations;

“highway” has the same meaning as in the *Motor Vehicle Act*;

“log load” means a load of one or more logs on a log transporter;

“log stack” means a log load that is a separate pile of logs of at least 2 layers lying lengthwise or crosswise on a log transporter; ,

(d) by repealing the definition of “log transporter” and substituting the following:

“log transporter” means any of the following that is used on roads to transport logs, other than within a fully enclosed container:

- (a) a truck;
- (b) a trailer;
- (c) a truck and trailer assembly; , ***and***

(e) *by adding the following definitions:*

“**tiedown**” means chain, wire rope, synthetic rope or webbing, together with a tensioning device, that is

- (a) placed over a log load on a log transporter, and
- (b) attached to one or more anchor points on the log transporter;

“**transportation route**”, in relation to a log transporter, means a route taken by the log transporter from the place where it is first loaded with logs to the place where its load of logs is fully off-loaded;

“**wrapper**” means chain, wire rope, synthetic rope or webbing, together with a tensioning device, that is

- (a) wrapped securely around a log load on a log transporter, and
- (b) not attached to the log transporter; .

2 *Section 26.61 (1) (b) is amended by striking out “trucks” and substituting “log transporters”.*

3 *The heading “Hauling” is moved to immediately before section 26.64.*

4 *Section 26.66 is amended*

(a) *by repealing subsection (1) and substituting the following:*

- (1) A log transporter carrying a log load must be equipped with bunks and stakes of adequate design and construction to safely perform their intended function. ,

(b) *in subsections (3) and (7) by striking out “lines” and substituting “cables”, and*

(c) *by repealing the table after subsection (7) (b) and substituting the following:*

Bunk width	Stake cable minimum diameter
< 2.6 m (8 ft 6 in)	22 mm (7/8 in)
≥ 2.6 m (8 ft 6 in) and ≤ 2.9 m (9 ft 6 in)	25 mm (1 in)
> 2.9 m (9 ft 6 in) and ≤ 3.7 m (12 ft)	29 mm (1 1/8 in)
> 3.7 m (12 ft)	32 mm (1 1/4 in)

5 *Sections 26.67 to 26.69 are repealed and the following substituted:*

Loading logs

26.67 (1) If logs are being loaded on a log transporter,

- (a) there must be an effective means of communication between the transporter operator and any workers involved in the loading, and
- (b) each worker involved in or in the vicinity of the loading must
 - (i) be in a safe location, and
 - (ii) without limiting subparagraph (i),

- (A) be clear of any moving logs or logs that might move or fall,
 - (B) not be standing on the cab of a truck or between the cab of the truck and a log being loaded, and
 - (C) not be resting any part of the worker's body on a log.
- (2) A log load on a log transporter must meet the following requirements:
 - (a) the log load and the log transporter
 - (i) are stable, without the use of wrappers or tiedowns, during loading and prior to transportation, and
 - (ii) will remain stable, after the log load is secured in accordance with section 26.68, during transportation;
 - (b) the log load does not impair the free and full movement of the log transporter;
 - (c) the working load limits of stakes and stake cables are not exceeded;
 - (d) to ensure that stakes remain at a safe angle, the bottom layer of logs is laid tight and arranged to minimize slack in the stake cables;
 - (e) the bottom layer and side rows of the log load extend horizontally beyond at least 2 sets of stakes
 - (i) at least 30 cm (11.8 in) on compensating-reach-type trailers, or
 - (ii) at least 15 cm (5.9 in) on other types of log transporters;
 - (f) a log whose length is shorter than the distance between the stakes is not loaded above the top of the stakes unless the log is in a secure position;
 - (g) the horizontal centreline of the top log in a side row that is immediately adjacent to a stake is not higher than the top of the stake;
 - (h) if wrappers or tiedowns are used to secure a log stack of 3 or more layers, the top of the log stack is curved so that the middle part of the curve is higher than the sides of the curve;
 - (i) the length of each log does not exceed the design limitations of a highway or other surface that the log transporter travels on;
 - (j) the log load does not include limbs that
 - (i) pose a risk of injury to a person, or
 - (ii) impair the safe operation of the log transporter.

Securing log loads – general

- 26.68** (1) Subject to subsection (2), a log load must be secured in accordance with
- (a) this section, and
 - (b) whichever of the following sections applies:
 - (i) section 26.68.1 [*highways and mixed transportation routes*];
 - (ii) section 26.68.2 [*entirely off-highway transportation routes*].
- (2) A log transporter carrying a log load that is not yet secured as required by subsection (1) may be moved within a loading area if no person is exposed to the risk of logs, log chunks or debris falling off the log transporter.

- (3) If a log load is secured on a log transporter using wrappers or tiedowns, the following requirements must be met:
- (a) the wrappers and tiedowns must be installed
 - (i) in the loading area or at a location that is close to the loading area,
 - (ii) as soon as practicable after the log load is loaded on the log transporter and, if the log transporter is a trailer, before the trailer is connected to a truck, and
 - (iii) so that
 - (A) the log load is secure and no logs, log chunks or debris will fall off the log transporter while the log load is being transported,
 - (B) the wrappers and tiedowns can be safely removed while load restraining equipment is in position,
 - (C) no working load limit of a wrapper or tiedown is exceeded and each anchor point for a tiedown has at least the working load limit of the tiedown, and
 - (D) each tiedown is located within 60 cm (23.6 in) horizontally from a bunk, flatdeck or other load supporting surface;
 - (b) during transportation, the wrappers and tiedowns must be checked and kept tight;
 - (c) logs in the log load must not be shifted or moved while the wrappers and tiedowns are installed or adjusted.
- (4) A tiedown must not be used to secure a log load on a log transporter unless the tiedown is marked with its working load limit.
- (5) Subject to subsection (6), bundle straps and banding must not be used to secure a log load on a log transporter.
- (6) Bundle straps and banding may be used to secure a log load on a log transporter in a loading area if no person is exposed to the risk of logs, log chunks or debris falling off the log transporter.

Securing log loads – highways and mixed transportation routes

- 26.68.1** (1) This section applies in relation to the transportation of a log load if all or part of the transportation route, other than a crossing, is a highway.
- (2) A log load must be secured in accordance with the federal cargo securement standard and, for the purposes of this section, a reference in the standard to a highway is to be read as a reference to any road.
- (3) Section 2.3 [*conflict with code or standard*] does not apply in relation to the federal cargo securement standard.

Securing log loads – entirely off-highway transportation routes

- 26.68.2** (1) This section applies in relation to the transportation of a log load if no part of the transportation route, other than a crossing, is a highway.

- (2) A log load must be secured on a log transporter
 - (a) by installing, on each log stack and on any logs that are not part of a log stack, the following number of wrappers or tiedowns that conform to subsection (3):
 - (i) if the longest log that is to be secured by the wrappers or tiedowns is no more than 10.7 m (35 ft) long, at least 2 wrappers or tiedowns, each of which has a working load limit of at least 8.9 kN (2 000 lbf);
 - (ii) if the longest log that is to be secured by the wrappers or tiedowns is more than 10.7 m (35 ft) long, at least 3 wrappers or tiedowns, each of which has a working load limit of at least 13.3 kN (3 000 lbf), or
 - (b) without the use of wrappers or tiedowns by loading the logs
 - (i) lengthwise with the horizontal centrelines of all of the logs below the top of the stakes on the log transporter, and
 - (ii) in accordance with the requirements set out in a current risk assessment that conforms to subsection (4) for the log hauling operation.
- (3) A wrapper or tiedown installed for the purposes of subsection (2) (a) must
 - (a) have a safety factor of at least the following:
 - (i) if wire rope, 4;
 - (ii) if polyester rope, 7;
 - (iii) if any other synthetic rope, 12;
 - (iv) if synthetic webbing, 3;
 - (v) if chain, 4, and
 - (b) if chain, have a grade of at least 70.
- (4) For the purposes of subsection (2) (b), a risk assessment for a log hauling operation must
 - (a) be in writing,
 - (b) be prepared by a qualified person, based on the circumstances of the log hauling operation, including, without limitation,
 - (i) the speeds of the log transporters used in the operation,
 - (ii) the type, design and condition of the surfaces that the log transporters will travel on, including their grades,
 - (iii) the weather, and
 - (iv) the log characteristics,
 - (c) specify requirements for the loading, transportation and unloading of logs, and
 - (d) set out the opinion of the qualified person that no logs, log chunks or debris will fall off a log transporter during loading, transportation or unloading of logs if the specified requirements are met.
- (5) A log load that is secured under subsection (2) (b) in reliance on a current risk assessment must be transported and unloaded in accordance with the requirements set out in that assessment.

Removing wrappers and tiedowns and releasing stakes

- 26.69** (1) In this section, “**removal station**” means a structure that is designed to protect a person from being struck by logs, log chunks or debris falling off a log transporter when
- (a) a wrapper or tiedown installed on a log load is removed, or
 - (b) a stake securing logs on a log transporter is released.
- (2) The following activities must be conducted in accordance with written safe work procedures prepared by a qualified person:
- (a) removing a wrapper or tiedown installed on a log load;
 - (b) releasing a stake securing logs on a log transporter;
 - (c) using a removal station.
- (3) The written safe work procedures referred to in subsection (2) must be
- (a) posted in a conspicuous location at any place where the activities referred to in that subsection take place and maintained in a legible condition, or
 - (b) effectively communicated to the workers and supervisors who conduct those activities if it is not practicable to post the safe work procedures in a conspicuous location.
- (4) Wrappers and tiedowns must not be removed and stakes securing logs on a log transporter must not be released when a person is preparing to unload logs from a log transporter unless
- (a) the person is using a removal station, or
 - (b) the logs are otherwise restrained to prevent them from falling on the person who is removing the wrappers or tiedowns or releasing the stakes.
- (5) Once a wrapper or tiedown has been removed from a log load, the log load must not be moved if any person is exposed to the risk of logs, log chunks or debris falling off the log transporter.
- (6) A removal station must not be used unless it is certified by a professional engineer as capable of performing its intended function.

6 *Section 26.76 is repealed and the following substituted:*

Securing trailers

- 26.76** (1) Empty log transporter trailers, when loaded onto truck tractors, must be adequately secured against dislodgment.
- (2) If a worker is required to manually assist in coupling a trailer reach to a truck tractor of a log transporter, handholds or other devices must be installed on the trailer reach to aid the worker.