

2006/03/21-01**THE WORKERS' COMPENSATION BOARD OF BRITISH COLUMBIA****RESOLUTION OF THE BOARD OF DIRECTORS**

Re: Approval to Release to Public Hearing Proposed Amendments to the *Occupational Health and Safety Regulation* (BC Regulation 296/97, as amended)

WHEREAS:

Pursuant to section 225(1) of the *Workers Compensation Act* 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:

Pursuant to section 226(1)(a) of the *Act*, the WCB, before making a regulation, must give notice of the proposed regulation in the *BC Gazette* and in at least 3 newspapers, of which one must be published in the City of Victoria and one in the City of Vancouver;

AND WHEREAS:

Pursuant to section 226(1)(b) of the *Act*, the WCB, before making a regulation, must hold at least one public hearing on the proposed regulation;

AND WHEREAS:

The WCB has drafted proposed regulatory amendments to the *Occupational Health and Safety Regulation* ("*OHSR*"), as part of the ongoing regulation review process;

THE BOARD OF DIRECTORS RESOLVES THAT:

1. The proposed amendments to the *OHSR* set out in Appendix A be released to public hearing.
2. The Vice President, Policy and Research Division, is appointed to chair the public hearing and may designate additional members of the public hearing panel as necessary.

3. Public hearings on the proposed amendments will take place during the month of May, 2006.
4. A public hearing on the proposed amendments will be held in Kelowna, Prince George, Nanaimo, and Vancouver.
5. Notice of the proposed amendments will be published in the *BC Gazette* and in the Victoria Times Colonist, the Vancouver Sun, the Province and in local newspapers in the cities of Kelowna, Prince George, and Nanaimo.

Dated at Richmond, British Columbia, March 21, 2006.

By the Workers' Compensation Board

**DOUGLAS J. ENNS, CHAIR
BOARD OF DIRECTORS**

Appendix A
PROPOSED REGULATORY AMENDMENTS

Sections of the <i>OHSR</i> With Proposed Amendments
Part 1, Definitions Section 1.1, Definitions
Part 4, General Conditions Section 4.3, Safe machinery and equipment
Part 5, Chemical and Biological Substances Section 5.49, Excursion limits
Part 6, Substance Specific Requirements Section 6.33, Definitions Section 6.36, Control procedures
Part 8, Personal Protective Clothing and Equipment Section 8.24, High visibility apparel
Part 9, Confined Spaces Section 9.11, Qualifications Section 9.18, Isolation Section 9.22, Alternate procedures
Part 13, Ladders, Scaffolds and Temporary Work Platforms Section 13.23, Testing Section 13.33, Fall protection
Part 14, Cranes and Hoists Section 14.34, Operator qualifications Section 14.34.1, Operator certification Section 14.91, Hoisting ropes
Part 18, Traffic Control Rewrite of complete Part
Part 20, Construction, Excavation and Demolition Section 20.4, Safe access
Part 23, Oil and Gas Section 23.14, Pumps
Part 24, Diving, Fishing and Other Marine Operations Fishing Operations Section 24.93, Requirements for sensors and alarms Requirements for Specific Fishing Operations Section 24.104, Drums Section 24.106, Work areas
Part 26, Forestry Operations Section 26.11, Dangerous trees

PROPOSED AMENDMENTS FOR PART 1: DEFINITIONS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 1: DEFINITIONS

1.1 In this Occupational Health and Safety Regulation:

<i>"administrative controls"</i>	means the provision, use and scheduling of work activities and resources in the workplace, including planning, organizing, staffing and coordinating, for the purpose of controlling risk;
<i>"Board"</i>	means the Workers' Compensation Board;
<i>"combustible liquid"</i>	means a substance which meets the criteria for WHMIS Class B Division 3 combustible liquid (a flash point of 37.8°C (100°F) or more but less than 93.3°C (200°F));
<i>"contaminant"</i>	means a harmful or irritant material, or nuisance dust, foreign to the normal composition of a substance, or a material that varies the normal proportions of components in a mixture such as air;
<i>"controlled product"</i>	means a product, material or substance specified by regulations made pursuant to section 15(1)(a) of the <i>Hazardous Products Act</i> (Canada) as products, materials and substances included in any of the classes listed in Schedule II of that Act;
<i>"engineering controls"</i>	means the physical arrangement, design or alteration of workstations, equipment, materials, production facilities or other aspects of the physical work environment, for the purpose of controlling risk;
<i>"flammable liquid"</i>	means a substance which meets the criterion for WHMIS Class B Division 2 flammable liquid (a flash point less than 37.8°C (100°F));
<i>"hazard"</i>	means a thing or condition that may expose a person to a risk of injury or occupational disease;
"hazard area"	means a zone where a worker would be exposed to a hazard;
<i>"HEPA"</i>	means, in reference to air filtration, a high efficiency particulate air filter meeting the specifications of a nuclear grade filter, providing a 99.97% filtration efficiency at a 0.3 micrometre particle size;
<i>"IDLH atmosphere"</i>	means an atmosphere containing a substance at a concentration which is immediately dangerous to life or health (IDLH) because the concentration is greater than that from which one could escape without any escape-impairing symptoms or irreversible health effects, and includes an atmosphere with an unknown concentration with the potential to be immediately dangerous to life or health;
<i>"incident"</i>	includes an accident or other occurrence which resulted in or had the potential for causing an injury or occupational disease; [Amended by B.C. Reg. 185/99.]
<i>"material safety data sheet" or "MSDS"</i>	means a document disclosing the information referred to in section 13(a)(i) to (v) of the <i>Hazardous Products Act</i> (Canada) and section 12(1) to (3) of the Controlled Products Regulations (Canada);
<i>"mg/m³"</i>	means milligrams of a substance per cubic metre of air; [Amended by B.C. Reg. 315/2003.]
<i>"oxygen deficient"</i>	means, in relation to air, a condition in which there is less than 19.5% oxygen by volume, or the partial pressure of oxygen is less than 16.3 kPa (122 mm Hg);
<i>"ppm"</i>	means parts of a vapour or a gas per million parts of contaminated air by volume at a temperature of 25 degrees Celsius and an atmospheric pressure of 760 millimetres of mercury; [Amended by B.C. Reg. 315/2003.]

**PROPOSED AMENDMENTS FOR PART 1: DEFINITIONS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION**

<i>"practicable"</i>	means that which is reasonably capable of being done;
<i>"professional engineer"</i>	means a person who is registered or licensed to practice engineering under the provisions of the <i>Engineers and Geoscientists Act</i> ;
<i>"qualified"</i>	means being knowledgeable of the work, the hazards involved and the means to control the hazards, by reason of education, training, experience or a combination thereof;
<i>"rated capacity" or "rated load"</i>	means the load that machinery or a piece of equipment is, in accordance with its design, rated to bear under section 4.8; [Amended by B.C. Reg. 312/2003.]
<i>"risk"</i>	means a chance of injury or occupational disease;
<i>"sensitizer"</i>	means a substance that has been shown to elicit an allergenic type of response in humans after an initial exposure, resulting in development of symptoms upon subsequent exposure at much lower concentrations;
<i>"supervisor"</i>	means a person who instructs, directs and controls workers in the performance of their duties;
<i>"working load limit" or "WLL"</i>	means the maximum load which a product is authorized by the manufacturer to support in a particular service.

Explanatory note

The term "hazard area" is currently used in various Parts of the *Occupational Health and Safety Regulation* ("OHSR") but is not defined anywhere. The proposed definition of "hazard area" under Part 1 of the OHSR will add clarity wherever the term "hazard area" is used.

PROPOSED AMENDMENTS FOR PART 4: GENERAL CONDITIONS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 4: GENERAL CONDITIONS

BUILDINGS, STRUCTURES AND EQUIPMENT

- Safe machinery and equipment** **4.3** (1) The employer must ensure that each tool, machine and piece of equipment in the workplace is
- (a) capable of safely performing the functions for which it is used, and
 - (b) selected, used and operated in accordance with
 - (i) the manufacturer's ~~recommendations and~~ instructions, if available,
 - (ii) safe work practices, and
 - (iii) the requirements of this Regulation.
- (2) Unless otherwise specified by this Regulation, the installation, inspection, testing, repair and maintenance of a tool, machine or piece of equipment must be carried out
- (a) in accordance with the manufacturer's instructions and any standard the tool, machine or piece of equipment is required to meet, or
 - (b) as specified by a professional engineer.
- (3) A tool, machine or piece of equipment determined to be unsafe for use must be identified in a manner which will ensure it is not inadvertently returned to service until it is made safe for use.
- (4) Unless otherwise specified by this Regulation, any modification of a tool, machine or piece of equipment must be carried out in accordance with
- (a) the manufacturer's ~~recommendations and~~ instructions, if available,
 - (b) safe work practices, and
 - (c) the requirements of this Regulation.

Explanatory Note

Subsection 4.3 (1) (b) (i) states that the employer must select, use and operate tools and machines in accordance with the manufacturer's recommendations and instructions. The manufacturer normally recommends that only replacement parts or accessories made by the manufacturer be used with their product. In such cases the regulation, as currently worded, prohibits the use of after market or competing products which are compatible and safe for use. For example, a hand held circular saw can generally be fitted with a variety of different types of saw blades and other discs from various sources to meet the special needs of a particular task. It is standard practice for the user to obtain such components from a local supplier and often such components are not made by the tool or machine manufacturer. Similarly a manufacturer generally recommends that any service or repair to a product be done only by the manufacturer's authorized or recommended repair facility. Often necessary service or repair work can be done "in-house" or by a local service provider. Practice is not to enforce the requirement that "manufacturer's recommendations" be followed. The provision is "trade restrictive" and does not have any clear health and safety justification.

The current language of subsection 4.3 (4) (a) requires any modification of a tool, machine or piece of equipment to follow the manufacturer's recommendations and instructions. Instructions by the manufacturer are a "must do", however, recommendations from the manufacturer are once again generally self-serving. For example, a recommendation to use only the authorized dealer or the manufacturer's parts or services, when other options are readily available and equally safe, is self-serving and restricts trade. The proposed amendment would allow the use of competing

**PROPOSED AMENDMENTS FOR PART 4: GENERAL CONDITIONS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION**

products to modify a tool, machine or piece of equipment, provided the modification is carried out in accordance with the manufacturer's instructions, safe work practices and the requirements of the Regulation.

DRAFT

PART 5: CHEMICAL AND BIOLOGICAL SUBSTANCES**CONTROLLING EXPOSURE**

Excursion limits	5.49	If a substance referred to under section 5.48 has is provided only with an 8-hour TWA limit, the employer must, in addition to the requirement of section 5.48, ensure that a worker's exposure to the substance does not exceed <ul style="list-style-type: none">(a) three times the 8-hour TWA limit for more than a total of 30 minutes during the work period, and(b) five times the 8-hour TWA limit at any time.
-------------------------	-------------	--

Explanatory note

A previous regulatory amendment removed the phrase "is provided only with" from section 5.49, creating the effect that excursion limits apply to all substances with 8-hour time weighted average ("TWA") limits, regardless of whether or not they have short-term exposure limits ("STELs") or ceiling limits, which are intended to prevent excursions. This has led to a multiplicity of limits to prevent excursions, which are at times contradictory. It is proposed that the word "has" which currently appears after "under section 5.48" in the first sentence, be deleted, and the phrase "is provided only with" be reinserted in its place.

The intended rationale behind section 5.49 is that if a substance has only an 8-hour TWA, there is no control over excursions above that limit, as long as the 8-hour TWA exposure standard is not exceeded. This can lead to circumstances where a worker could be exposed to a very high concentration of a hazardous substance, even though the average exposure of a worker over an 8-hour period did not exceed the 8-hour TWA. It is generally recognized in such cases, that a substance is not considered to be under reasonable control, if short term exposures exceed three times the TWA exposure standard for more than a total of 30 minutes per 8-hour working day, or if a single short-term value exceeds five times the TWA exposure standard.

Section 5.49, which aimed at placing some restraint on concentration excursions, is not meant to supersede any STEL or ceiling limitation set.

PROPOSED AMENDMENTS FOR PART 6: SUBSTANCE SPECIFIC REQUIREMENTS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 6: SUBSTANCE SPECIFIC REQUIREMENTS

BIOHAZARDOUS MATERIALS

Definitions	6.33	In sections 6.33 to 6.41:
<i>"biohazardous material"</i>		means a pathogenic organism, including a bloodborne pathogen, which due to its known or reasonably believed ability to cause disease in humans, would be classified as Risk Group II, III or IV as defined by the Medical Research Council of Canada, or any material contaminated with such an organism;
<i>"occupational exposure"</i>		means reasonably anticipated, harmful contact with blood or other potentially biohazardous material that may result from the performance of a worker's duties duties ;
<i>"safety-engineered needle"</i>		includes a self-sheathing needle device and a retractable needle system.
Exposure control plan	6.34	The employer must develop and implement an exposure control plan meeting the requirements of section 5.54, if a worker has or may have occupational exposure to a bloodborne pathogen, or to other biohazardous material as specified by the Board.
Risk identification	6.35	The employer must maintain a list of all job classifications and must identify all tasks and procedures in which there is a potential for occupational exposure to a bloodborne pathogen, or to other biohazardous material specified by the Board.
Control procedures Controls	6.36	<p>(1) Engineering controls and work practice controls must be established to minimize or eliminate or minimize the potential for occupational exposure to a bloodborne pathogen or other biohazardous material.</p> <p>(1.1) On and after January 1, 2008, when hollow-bore needles are used in a workplace to access a vein or artery for the purpose of collecting blood or caring for or treating a person, the employer must ensure that</p> <p>(a) workers use only safety-engineered needles or substitute hollow-bore needles with needleless devices, unless it is not safe or practicable to do so, and</p> <p>(b) safe work procedures and practices relating to the use of those safety-engineered needles or needleless devices are implemented.</p> <p>(2) Personal protective equipment must be worn to shield workers from biohazardous material.</p> <p>(3) Housekeeping practices must be designed to keep the workplace clean and free from spills of biohazardous material.</p> <p>(4) Work procedures must ensure that laundry contaminated with biohazardous material is isolated and bagged, and handled as little as possible.</p> <p>(5) Repealed. [B.C. Reg. 312/2003.]</p> <p>(6) For bloodborne pathogens, the employer must implement a system of universal precautions for all tasks and procedures identified as having a potential for occupational exposure under section 6.35.</p>

PROPOSED AMENDMENTS FOR PART 6: SUBSTANCE SPECIFIC REQUIREMENTS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

Explanatory note

The primary intent of the proposed amendments is to make mandatory in all workplaces the use of safety-engineered hollow-bore needles to access a vein or artery for the purpose of collecting blood or caring for or treating a person. The proposal also provides for the replacement of safety-engineered needles with needleless devices, when it is practical and safe to do so, and requires the implementation of safe work procedures and practices.

This new requirement under 6.36 (1.1) is proposed to become effective on January 1, 2008, to provide sufficient time for implementation. Employers will still have to comply with existing provisions of the Regulation, notably, they have to control for any harmful exposures to workers by implementing appropriate engineering controls and work practice controls as per section 6.36 (1). The concept of neutral space is a work practice control and an example is provided in the proposed Guideline 6.36(1).

International studies using safety-engineered hollow-bore needle devices demonstrated a reduction in injuries from 23 to 100 per cent with an average of 71 per cent. Needleless devices are shown to be 79 per cent more effective in reducing needlestick injuries relating to the use of intravenous hollow-bore needles. This proposed amendment would address the greatest risk of bloodborne pathogen exposure for workers caused by conventional hollow-bore needles. In BC, all time lost needlestick claims that led to serious diseases during 1995-2004 related to hollow-bore needles. In the US, 85% of needlestick injuries that led to disease over the same period involved hollow-bore needles that accessed a vein or artery.

The proposed amendments also place emphasis on the use of both engineering controls and work practice controls, and a priority on eliminating, before minimizing, the potential for exposure to a bloodborne pathogen or other biohazardous material.

A definition of "safety-engineered needle" is proposed for clarity.

PROPOSED AMENDMENTS FOR PART 8: PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 8: PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

HIGH VISIBILITY AND DISTINGUISHING APPAREL

- High visibility apparel**
- 8.24** ~~(1) A worker directing traffic must wear~~
- ~~(a) high visibility apparel meeting the Type 1 or Type 2 criteria of *WCB Standard Personal Protective Equipment Standard 2-1997, High Visibility Garment*, and~~
 - ~~(b) wrist bands fitted with a minimum 5 cm (2 in) wide fluorescent retroreflective strip about their entire circumference, except that wrist bands are not required for workers who direct traffic on an emergency or a temporary basis and not as part of their normal duties.~~
- (2) A worker exposed to the hazards of vehicles travelling at speeds in excess of 30 km/h (20 mph) must wear high visibility apparel meeting the Type 1 or Type 2 criteria of ***WCB Standard Personal Protective Equipment Standard 2-1997, High Visibility Garment*** the standard referenced in subsection (1).
- (3) A worker whose duties on the work site result in exposure to the hazards of mobile equipment must wear high visibility apparel meeting at least the Type 3 criteria of ***WCB Standard Personal Protective Equipment Standard 2-1997, High Visibility Garment*** the standard referenced in subsection (1).

[Amended by B.C. Reg. 312/2003.]

Explanatory Note

It is proposed that section 8.24(1) be repealed from Part 8 of the *Occupational Health and Safety Regulation* ("OHSR") and the requirement be relocated to Part 18 Traffic Control in the OHSR, as the provision applies only to a person directing traffic. The requirement has been proposed as sections 18.9 (b) and (c) in the proposed new Part 18 Traffic Control in the OHSR.

Consequential amendments to sections 8.24(2) and (3) are required with repeal of 8.24(1).

PROPOSED AMENDMENTS FOR PART 9: CONFINED SPACES
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 9: CONFINED SPACES

HAZARD ASSESSMENT AND WORK PROCEDURES

- Qualifications 9.11**
- (1) The hazard assessment and written confined space entry procedures must be prepared
 - (a) by a qualified person who has adequate training and experience in the recognition, evaluation and control of confined space hazards, and
 - (b) in consultation with the person assigned overall responsibility for administration of the confined space entry program and with the joint committee or the worker health and safety representative, as applicable.
 - (2) For the purposes of subsection (1) (a) qualifications which are acceptable as evidence of adequate training and experience include
 - (a) certified industrial hygienist (CIH), ~~or registered occupational hygienist (ROH),~~ **certified safety professional (CSP), Canadian registered safety professional (CRSP) or professional engineer (P. Eng.), provided that the holders of these qualifications have experience in the recognition, evaluation and control of confined space hazards, or**
 - ~~(b) certified safety professional (CSP), Canadian registered safety professional (CRSP) or professional engineer (P. Eng.), provided that the holders of these qualifications have experience in the practice of occupational hygiene as it relates to confined space entry, or~~
 - (c) other combination of education, training and experience acceptable to the Board.

Explanatory Note

For the purposes of Part 9, section 9.11 (1) specifies that a hazard assessment and written confined space entry procedures must be prepared by a qualified person who has adequate training and experience in the recognition, evaluation and control of confined space hazards. Section 9.11 (2) (a) and (b) list qualifications which are acceptable as evidence of adequate training and experience.

There are two concerns with the current wording of section 9.11(2). The first is the acknowledgement that holders of CIH and ROH designations have had specific training in occupational hygiene principles as they apply to the recognition, evaluation and control of confined space hazards. However, there is no assurance that CIH or ROH holders have had direct experience in confined space entry work (e.g., in preparation of written entry procedures, in lockout, isolation or rescue procedures). Secondly, holders of CSP, CRSP or P. Eng. designations, who may lack knowledge of occupational hygiene principles as they apply to confined space entry, may also lack similar direct experience.

The proposed amendment combined subsection (2) (a) and (b). This proposed change will ensure that persons holding any of the listed qualifications will have an appropriate combination of education, training and experience. Subsection (2) (c) remains unchanged to allow the Board to recognize combinations of education, experience and training other than professional credentials. This recognizes that few individuals outside large urban centres have the professional qualifications listed in 9.11 (2).

Without guidance, it is difficult to determine what combination of education, training and experience is sufficient under section 9.11 (2) (c). The corresponding Guideline G9.11(2) has been revised accordingly to assist employers to exercise due diligence in choosing a qualified person and to provide direction to officers on how to address deficiencies in assessments and procedures.

PROPOSED AMENDMENTS FOR PART 9: CONFINED SPACES
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 9: CONFINED SPACES

LOCKOUT AND ISOLATION

- | | | |
|--------------------------|-------------|---|
| Isolation | 9.18 | <p>(1) Except as provided in subsections (2) and (3), before a worker enters a confined space, adjacent piping which contains or has contained a harmful substance must be controlled by</p> <ul style="list-style-type: none"> (a) disconnecting, blanking or blinding, or equivalent engineered system, or (b) if the adjacent piping contains a harmful substance that is not a gas or a vapour, nor a liquid of sufficient volatility to produce a hazardous concentration of an air contaminant in the discharge of the piping, a double block and bleed system. <p>(2) If adjacent piping contains or has contained a substance at a pressure exceeding 100 kPa gauge (15 psig) that is hazardous only because of its pressure, temperature or quantity, before a worker enters the space, the pressure must be controlled</p> <ul style="list-style-type: none"> (a) to meet the requirements of subsection (1), or (b) provided there is no other pressure source or head pressure, by de-energizing and locking out the pressure source and depressurizing the line, line, or (c) by other effective means. <p>(3) If adjacent piping contains or has contained a substance at a pressure not exceeding 100 kPa gauge (15 psig) that is hazardous only because of its temperature or quantity, before a worker enters the space, the hazard must be controlled</p> <ul style="list-style-type: none"> (a) to meet the requirements of subsection (1), or (b) by other effective means. <p>(4) Except when used in an acceptable double block and bleed system, the closing of one or more valves in a line is not an acceptable means of isolation.</p> <p>(5) Isolation of a confined space from gases found in a gravity-flow municipal or domestic sanitary or storm sewer system may be accomplished by a p-trap, provided that</p> <ul style="list-style-type: none"> (a) the integrity of the trap is ensured immediately upon entry, and (b) the atmosphere is continuously monitored and shown to contain clean respirable air. |
| Isolation points | 9.19 | <p>(1) The employer must keep a record which identifies the location of every isolation point.</p> <p>(2) Every isolation point must be visually checked or otherwise verified to ensure that the confined space is effectively isolated before a worker enters the space.</p> |
| Blanks and blinds | 9.20 | <p>(1) Unless certified by a professional engineer to provide adequate safety for the particular conditions of anticipated pressure, temperature and service, a blank or blind must be manufactured in accordance with the specifications of one of the following standards:</p> <ul style="list-style-type: none"> (a) <i>ANSI Standard API 590-1985, Steel Line Blanks;</i> (b) <i>ANSI Standard ASME/ANSI B16.5-1988, Pipe Flanges and Flanged Fittings;</i> (c) <i>ANSI Standard ASME B31.1-1992, Power Piping;</i> |

PROPOSED AMENDMENTS FOR PART 9: CONFINED SPACES
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

(d) *ANSI Standard ASME B31.3-1993, Chemical Plant and Petroleum Refinery Piping.*

- (2) If a blank or blind is certified by a professional engineer, the employer must keep a record of its certification, location and conditions of service.
- (3) If required, an allowance for corrosion must be made in the design of a blank or a blind.
- (4) A blank or blind must be stamped with or otherwise indicate its pressure rating.
- (5) If a line is to be opened for disconnection or to insert a blank or a blind, written safe work procedures must be prepared and followed to prevent hazardous exposure of workers to its contents.
- (6) Visual indication that a blank or blind has been installed must be provided at the point of installation.
- (7) If required to prevent leakage, gaskets must be installed on the pressure side of blanks or blinds and flanges must be tightened to make the blanks or blinds effective.
- (8) If threaded lines are used, threaded plugs or caps must be used to blind the lines.

**Double block
and bleed**

9.21

If a double block and bleed isolation system is used

- (a) the diameter of the bleed line must be no less than the diameter of the line being isolated, unless certified by a professional engineer,
- (b) the bleed for a liquid system must be at a lower elevation than the block valves,
- (c) all valves must be locked out in their proper open or closed position,
- (d) the downstream block valve must be checked to ensure that it is capable of safely withstanding the line pressure,
- (e) the bleed must be checked to ensure that it remains clear of obstructions while the confined space is occupied, either by continuous automatic monitoring or by manually checking within 20 minutes before worker entry, or before re-entry after the confined space has been vacated for more than 20 minutes, and
- (f) in the event of discharge from the bleed line resulting from failure of the upstream block valve, all workers must immediately exit the confined space and the space must be effectively re-isolated before a worker enters the space.

**Alternate
procedures**

9.22

(1) If isolation using the measures specified in section 9.18 is not possible **practicable**, the employer may implement alternate measures, if acceptable to the Board, which ensure equivalent protection to all workers exposed to the hazard.

- (2) All workers affected by measures implemented under subsection (1) must be informed of the measures taken and instructed in any applicable work procedures.

**Discharge
area**

9.23

The area of potential discharge from a disconnected line or from the bleed of a double block and bleed isolation system must be controlled to ensure that any accidental discharge will not present a hazard to workers.

PROPOSED AMENDMENTS FOR PART 9: CONFINED SPACES
IN THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*

Explanatory Note

Section 9.18 sets out methods which can be used to isolate adjacent piping from a confined space prior to worker entry. Because this section is intended to cover a wide range of circumstances – from the most to the least hazardous, the level of protection specified by section 9.18 assumes the highest hazard level in order to protect workers in all situations. Section 9.22 allows an employer to implement isolation measures other than those listed in section 9.18 in certain circumstances.

Sections 9.18 (2) and (3) provide different control measures for adjacent piping when the substance in the pipe is over or under 15 psig and is hazardous because of its pressure, temperature or quantity. Since the distinction of pressure over or under 15 psig is artificial, the proposal is to delete the reference to the level of pressure in subsection (2) and to delete subsection (3) in its entirety.

The first proposed change to existing section 9.22 (1) is to replace the word “possible” with “practicable”. “Practicable” is a defined term in Part 1 of the *Occupational Health and Safety Regulation* (“OHSR”) and means “that which is reasonably capable of being done”. In ordinary usage, “practicable” suggests that under present circumstances or by available means something can easily or effectively be done, while “possible” means that with suitable conditions and methods, something may be done. Using a defined term rather than ordinary usage is more precise and should be less confusing to readers.

The second proposed amendment to section 9.22 (1) is to delete the phrase “which ensure equivalent protection to all workers exposed to the hazard”. Under the current regulation, alternate procedures or measures must meet a standard of providing “equivalent protection” to those specified in existing section 9.18. This wording does not allow for consideration of a range of protective measures suitable to control the identified hazards, as high hazards were assumed in section 9.18, and only protection which is the same to that specified will meet this test.

The proposed wording in section 9.22 (1) will allow the alternate measures and the corresponding level of protection to vary according to the circumstances, while ensuring that workers are protected in ways that are “acceptable to the Board”.

PART 13: LADDERS, SCAFFOLDS AND TEMPORARY WORK PLATFORMS**DIVISION 5 – MOVABLE WORK PLATFORMS**

- | | | |
|----------------|--------------|---|
| Testing | 13.23 | <p>(1) A vehicle-mounted elevating work platform and a self-propelled boom-supported elevating work platform must be</p> <ul style="list-style-type: none"> (a) inspected in accordance with good engineering practice at least every 12 months, and (b) certified in writing by the equipment manufacturer or a professional engineer as complying with this Part and safe for use. <p>(2) An insulated elevating work platform must be dielectrically tested at least annually in accordance with the edition of <i>CSA Standard CAN/CSA-C225 Vehicle-Mounted Aerial Devices</i> that the device was designed to meet, or the most recent edition, as the circumstances require.</p> <p>(3) The insulating capability of an insulated elevating work platform must be certified by the testing agency.</p> <p>(4) If an insulated elevating work platform does not pass the testing method required by subsection (2) and subsection (3),</p> <ul style="list-style-type: none"> (a) the platform must be considered non-insulated, (b) any markings or identification on the device indicating insulated capability must be removed or effectively covered over, and (c) the user must be informed of the non-insulated status of the device. <p>(5) In the tenth year after the date of manufacture, and every fifth year after that, or more frequently if specified by the manufacturer, the inspection required by subsection (1) must include a structural inspection to ensure the platform still meets the standard to which the platform was manufactured to verify</p> <ul style="list-style-type: none"> (a) the integrity of critical components of the platform, and (b) the platform's stability. |
|----------------|--------------|---|

Explanatory Note

The proposed amendment is to delete the requirement for pre-set structural inspections of the critical components of vehicle-mounted elevating work platforms and self-propelled boom-supported elevating work platforms. Rather than provide a pre-set schedule for such structural inspections, professional judgment during each annual inspection will determine when a more detailed structural inspection is appropriate. The need for such a structural inspection will vary depending on the operating time on the machine and the severity of the conditions in which it is used. These factors are covered in the proposed guideline which discusses the concept of “good engineering practice” as it applies to the required inspection and certification process set out in section 13.23(1). This amendment will improve safety as a machine would likely receive a more detailed inspection earlier than the 10 year and subsequent 5 year intervals, where warranted. It will also be more cost effective as a machine which has seen limited use, has been well maintained and parked in a garage or similar protected shelter when not in use may not need a detailed structural inspection at the currently prescribed 10 year interval.

Other requirements under the Regulation continue to apply. For example, the general requirements of Part 4 require equipment to meet the standard applicable when it was manufactured and for it to be used in accordance with manufacturers' instructions and safe work practices, and Section 13.2 states that this equipment must meet and be used in accordance with the standard in effect when the equipment was

**PROPOSED AMENDMENTS FOR PART 13: LADDERS, SCAFFOLDS AND TEMPORARY WORK PLATFORMS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION**

manufactured. Subsection 13.23 (1) will continue to require annual inspection and certification.

A new Guideline G13.23 (1) has been drafted to outline the quality of annual inspection required to comply with subsection 13.23 (1), to provide a definition of critical components and to provide guidance on the acceptable wording of certificates. A draft of this revised guideline is attached for reference.

It should be noted that section 13.23 (5) was a new requirement introduced on January 1, 2005 as part of the redraft of Part 13. Since enactment, numerous employers, suppliers and professional engineers have contacted the Board seeking an interpretation. Industry has said the provision is unclear and has repeatedly asked whether a teardown inspection to expose all critical components is required in order to comply with subsection 13.23 (5). The cost of this type of inspection could range from \$5,000 for smaller elevating platforms, \$50,000 for large platforms and exceeding \$100,000 in rare cases for large elevating platforms. These estimates do not include the downtime costs.

In July 2005, the enforcement of subsection 13.23 (5) was suspended by Vice-President Directive pending regulatory reform.

DRAFT

PART 13: LADDERS, SCAFFOLDS AND TEMPORARY WORK PLATFORMS**DIVISION 5 – MOVABLE WORK PLATFORMS**

- Fall protection** **13.33** (1) A worker on a ~~boom-supported~~ **an** elevating work platform must wear a personal fall arrest system secured to an anchor meeting the requirements of Part 11 (Fall Protection).
- (1.1) Despite subsection (1), a worker on a scissor lift, or on an elevating work platform with similar characteristics to a scissor lift, that is on a firm level surface with no irregularities to cause platform instability, is exempt from wearing a personal fall arrest system, provided that all manufacturer's guardrails and chains are in place.**
- (2) If a worker is supported on a work platform suspended by fewer than four suspension lines, the worker must use a personal fall arrest system secured to an anchor meeting the requirements of Part 11 (Fall Protection) and independent of the work platform and its suspension system.
- (3) If a worker is supported on a work platform suspended by four or more suspension lines, the worker must use a personal fall arrest system secured to an anchor on the platform or to an anchor meeting the requirements of Part 11 (Fall Protection) and independent of the work platform and its suspension system.
- (4) Each person on a work platform suspended from a crane or hoist must use a personal fall arrest system with a shock absorbing lanyard, secured to
- (a) an anchor above the load hook, or
 - (b) ~~if the failure of any component does not allow the platform to drop more than 15 cm (6 in),~~ an anchor **attached to** on the platform **and** designated **for that purpose** by the manufacturer or a professional engineer, **provided that the platform has a safety strap that will prevent the platform from falling more than 15 cm (6 in) if the platform becomes dislodged from the hook.**
- (5) Each person on a work platform attached to a crane boom must use a personal fall arrest system secured to an anchor on the boom or on the platform.
- (6) The personal fall arrest system referred to in subsection (5) must be secured on the boom or on the platform to an anchor that is designated by
- (a) the manufacturer, or
 - (b) a professional engineer.

Explanatory Note

The amendment to section 13.33 (1) is to clarify that a worker on any elevating work platform must wear a personal fall arrest system. (Note: an amendment to Section 13.33 (1) was approved by the Board of Directors at its January 27, 2006 meeting. When the amendment comes into effect later in 2006, this section will read: "A worker on a boom-supported elevating work platform must wear a personal fall arrest system secured to a suitable and substantial anchorage point.") The current proposal is to remove the reference to boom-supported elevating work platforms, thereby expanding the requirement to workers on all elevating work platforms.

PROPOSED AMENDMENTS FOR PART 13: LADDERS, SCAFFOLDS AND TEMPORARY WORK PLATFORMS
IN THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*

A new section 13.33 (1.1) is proposed to correct an inadvertent omission when Part 13 of the *Occupational Health and Safety Regulation* ("OHSR") was redrafted and came into effect on January 1, 2005. Although the standards which apply to elevating work platforms specify fall protection provisions, the requirements in the standards vary. Without clear language in the *OHSR*, there has been confusion about whether workers on scissor lifts and similar equipment are required to wear a personal fall arrest system. This proposed new provision clarifies that the only time a worker on a scissor lift or elevating work platform with characteristics similar to a scissor lift is not required to wear a personal fall arrest system is when guardrails and chains are in place and the equipment is operating on a firm level surface with no irregularities to cause the platform to tip or expel the worker. If these conditions are not met, subsection (1) applies and a worker on a scissor lift or similar elevating work platform must wear a personal fall arrest system.

Section 13.33 (4) is proposed to clarify that a worker on a work platform suspended from a crane or hoist may anchor his or her personal fall arrest system to an anchorage on the work platform designated for that purpose by the manufacturer or a professional engineer provided the work platform has a safety strap to prevent it from falling more than 15 cm (6 in).

DRAFT

PROPOSED AMENDMENTS FOR PART 14: CRANES AND HOISTS
IN THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*

PART 14: CRANES AND HOISTS

EQUIPMENT OPERATION

Operator qualifications	14.34	<p>(1) A crane or hoist must only be operated by a qualified person who has been instructed to operate the equipment.</p> <p>(2) A person worker must demonstrate competency, including familiarity with the operating instructions for the crane or hoist and the code of signals for hoisting operations authorized by the Board before operating the equipment.</p> <p>(3) The operator of a crane must have an appropriate trade qualification valid in British Columbia or be an apprentice indentured in the appropriate trade in British Columbia, or have equivalent qualifications as determined by the Industry Training and Apprenticeship Commission after the following dates:</p> <p style="margin-left: 40px;">(a) for a mobile crane operator, except a boom truck operator, after January 1, 1999;</p> <p style="margin-left: 40px;">(b) for a tower crane operator in the construction industry, after January 1, 1999;</p> <p style="margin-left: 40px;">(c) for an operator of a boom truck with a rated capacity of more than 40 tonnes (11 tons), after January 1, 2000.</p>
Operator certification	14.34.1	<p>On and after July 1, 2007, a mobile crane, tower crane or boom truck must be operated only</p> <p style="margin-left: 40px;">(a) by a person with a valid operator's certificate issued by a person acceptable to the Board, and</p> <p style="margin-left: 40px;">(b) in accordance with any conditions stipulated on the certificate.</p>

Explanatory Note

Section 14.34 (1) and (2) of the *Occupational Health and Safety Regulation* ("OHSR") requires that a crane or hoist operator be qualified, instructed to operate the equipment, and to demonstrate competency in the operating instructions and code of signals for hoisting operations. These two sections apply to all types of cranes and hoists.

It is proposed that section 14.34 (2) be amended by deleting the word "worker" and replacing it with "person". This amendment broadens the scope of the section to clearly apply to anyone who operates a crane or hoist in a workplace under WorkSafeBC jurisdiction, including an owner/operator who may not be a worker within the context of the *Workers Compensation Act* ("Act"), but is required by the *Act* and the *OHSR* to comply with the *OHSR*. The *Interpretation Act* defines a "person" to include an individual, a corporation, or a partnership.

Section 14.34 (3) requires an operator of certain types of cranes to have an appropriate trade qualification, be an indentured apprentice or have equivalent qualifications as determined by the Industry Training and Apprenticeship Commission ("ITAC"). In practice, this requirement cannot be met as ITAC has been abolished, apprenticeships are not available for all the crane types specified, and trade qualifications cannot be accessed by all industries that use mobile cranes. Where trade qualification is available it takes many hours of operating experience before being permitted to challenge the written trade qualification exam (for example, 4.5 years to obtain mobile crane qualification, if not apprenticed).

In 2004, an amendment was proposed to delete section 14.34 (3), the requirement that crane and hoist operators have specific qualifications, and replace it with a requirement that the employer determine if a person is qualified to operate a crane or hoist of the types specified by applying training criteria and

**PROPOSED AMENDMENTS FOR PART 14: CRANES AND HOISTS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION**

evaluation processes acceptable to the Workers' Compensation Board. This proposal was not supported by either the employer or the worker communities. Instead, many submissions suggested that the *OHSR* include a requirement that operators complete a mandatory, standardized training and certification program administered by a third party.

In July 2004, the Board of Directors ("BOD") directed WorkSafeBC Administration, specifically Industry and Labour Services, to work with industry to develop a program model to address the issue of mobile and tower crane and boom truck operator qualification. In June 2005, the BOD was apprised of the progress made and the BOD approved the continued development of a program that supports the assessment and documentation of an operator's competency. The development process has resulted in the formation of the BC Association for Crane Safety ("BCACS"), which includes representatives of employers and workers from many of the industries that use this type of equipment, as well as representatives of WorkSafeBC and other government agencies concerned with the issue. The BOD also approved the inclusion of the crane and boom truck operator certification/competency issue in the 2006 regulation review process.

The proposed regulatory amendment is to delete section 14.34 (3) and create a new section 14.34.1 to provide the regulatory framework for the program model that is under development.

DRAFT

PROPOSED AMENDMENTS FOR PART 14: CRANES AND HOISTS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 14: CRANES AND HOISTS

TOWER CRANES

- Hoisting ropes** **14.91** (1) ~~The~~ **A rotation resistant** hoisting rope on a tower crane must be shortened by the removal of 3 m (10 ft) **of rope** at the dead end after every **500 hours** ~~3 months~~ of use unless
- (a)** otherwise specified by the ~~manufacturer~~ **rope manufacturer,**
 - (b)** **the rope has 14 or more outer strands, or**
 - (c)** **the rope has a plastic coated inner core.**
- (2) The hoisting rope on a tower crane must be properly seized before cutting.

Explanatory Note

The first proposed change to section 14.91 (1) is to clarify the interval for shortening the hoisting rope to take into account actual operating time. The original intent of section 14.91 (1) to require the rope to be shortened “after every 3 months of use” was based on the tower crane being used regularly during a normal “8 hour” shift, five days a week over the 3 month period. This is equivalent to approximately 500 hours of operating time for the crane. Under current wording, if the crane is used more than 8 hours each working day (for example for a “double shift” of 16 hours each work day) the employer is under no obligation to adjust this 3 month period to take into account this increase in service time. The hoisting rope would not necessarily be shortened at an interval that would maintain the integrity of the rope and thus ensure worker health and safety. On the other hand, if the crane is not used regularly throughout each shift, or is not used every day of the normal work week, the employer is still required to shorten the rope after 3 months of use even though this procedure is not needed to maintain the integrity of the rope at that time. This proposed change requires the employer to track the hours of use for the crane and to shorten the rope when the number of hours in service reaches 500 hours. If the employer uses the crane for an 8 hour shift for 5 days a week, shortening of the hoisting rope would continue to be required approximately every 3 months.

The second proposed change is to create further exemptions from the requirement to shorten a rotation resistant hoisting rope periodically. Up until the 1990s, only two-layer non-rotating wire rope load lines of 19x7 and 8x19 construction were typically used on tower cranes. The construction of the rope was problematic because the strands on the outer layer cross over the strands of the inner layer to give the wire rope the non-rotating characteristic. This causes very high notching stresses which result in nicking on the individual wires. The nicking reduces the cross-sectional area of the individual wires and increases the stress. This problem is compounded by the rope path that includes several reverse bends over a short rope distance, creating a fatigue problem. The damage occurs inside the rope and cannot be detected by visual inspection.

By removing a portion of the wire rope at the dead end, the section of rope subjected to the worst wear is periodically shifted, somewhat reducing the compound problem of abrasion and fatigue and mitigating the risk of premature catastrophic failures. These types of hoisting ropes are still in use.

Wire rope now available has characteristics that make it far more durable for the same operating conditions and meet *CSA Standard Z248-04*. This three-layer non-rotating wire rope has 14 or more outer strands or has an inner core that is coated with plastic. It does not benefit from periodically removing a short length from the dead end. Also, it is difficult to cut this type of wire

**PROPOSED AMENDMENTS FOR PART 14: CRANES AND HOISTS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION**

rope, seize the end and re-reeve it without causing damage to the rope. These types of hoisting ropes are also in use on tower cranes.

The proposed amendment to section 14.91 (1) of the *Occupational Health and Safety Regulation* would specify which rope is subject to periodic shortening. This would mean that the non-rotating wire ropes that have 14 strands or more or that have a plastic coated inner core would not be subject to this requirement.

DRAFT

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 18: TRAFFIC CONTROL

GENERAL REQUIREMENTS

- Traffic control manual** 18.1 Traffic control procedures in British Columbia must meet the requirements of the latest edition of the *Traffic Control Manual for Work on Roadways* (the "*Traffic Control Manual*") issued by the Ministry of Transportation and Highways (MOTH), Highway Engineering Branch, and the requirements of this Regulation for matters not covered by the manual.
- Employer's responsibility** 18.2 The employer must ensure that effective traffic control is provided and used whenever the uncontrolled movement of vehicle traffic could be hazardous to workers.
- Traffic control supervisor** 18.3 During a traffic control operation a supervisor must be designated to be responsible for ensuring that
- (a) the required traffic control devices are in place,
 - (b) each member of the traffic control crew wears the required personal protective clothing and equipment,
 - (c) traffic control persons are positioned in a safe location clear of potential environmental hazards such as a slide or avalanche,
 - (d) traffic control persons perform traffic control duties competently and safely, and
 - (e) if 2 or more traffic control persons are required to work as a team at the worksite, responsibility for coordination of changes in traffic flow is assigned.
- Traffic control devices** 18.4
- (1) Traffic control devices must be put in place before commencing operations and must be removed when they are no longer required.
 - (2) Traffic control devices must be spaced at the intervals specified in the *Traffic Control Manual* and signs must be located so as to allow motorists to come to a controlled stop, with due regard for the prevailing weather and road conditions.

TRAFFIC CONTROL PERSONS (TCPS)

- When required** 18.5
- (1) Except as permitted by subsection (2) traffic control persons must be used when any of the following conditions prevail:
 - (a) traffic is required to pass a worker, equipment or other obstruction which may block all or part of the travelled roadway;
 - (b) workers or equipment are employed on the travelled way over the brow of a hill, around a sharp curve, or at any other location where sight distance is not adequate for oncoming traffic to have adequate warning of their presence;
 - (c) it is necessary to institute a one-way traffic system through a construction zone where traffic volumes are heavy, approach speeds are high, and a traffic signal system is not used;
 - (d) construction vehicle traffic is not coordinated with an existing traffic control system, or an existing traffic signal light system is not adequate to regulate traffic, or the work encroaches into an intersection so as to interfere with regular traffic movement;
 - (e) traffic speed or volume is a hazard to workers while setting up or removing other traffic control devices;
 - (f) other traffic control devices are not available for emergency protection;
 - (g) workers are not adequately protected by other traffic control devices.

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

- ~~(2) The requirements for traffic control persons may be waived where~~
- ~~(a) adequate protection for workers is provided by other traffic control devices or procedures, or~~
 - ~~(b) circumstances allow self-regulating single lane traffic controlled by signs as specified in the *Traffic Control Manual*.~~

Note: ~~Circumstances where subsection (2) applies may include emergency or brief duration obstruction (usually less than 15 minutes) of one traffic lane where traffic is light and sight distance is adequate. Typical activities would include: unblocking catch basins, removing fallen tree limbs, water valve operation, cleanup of material spills or filling isolated potholes.~~

Selection and instruction

18.6

- ~~(1) A traffic control person must be a responsible person who has been instructed in, and has demonstrated an adequate knowledge of, this Regulation and the relevant procedures from the *Traffic Control Manual*.~~
- ~~(2) Employers of traffic control persons must train and instruct those workers in a course acceptable to the Board which covers~~
 - ~~(a) environmental factors such as heat, cold and sun,~~
 - ~~(b) personal protective clothing and safety equipment,~~
 - ~~(c) communication with the travelling public,~~
 - ~~(d) working around heavy equipment,~~
 - ~~(e) setting up traffic control devices at a worksite,~~
 - ~~(f) applicable requirements of the *Transportation of Dangerous Goods Act, 1992 (Canada)* and the regulations made under it,~~
 - ~~(g) proper positioning of traffic control persons, and~~
 - ~~(h) proper hand signals.~~

Remain on duty

18.7

~~During traffic control operations a traffic control person must remain on duty at the assigned station until relieved.~~

Location of TCPs

18.8

- ~~A traffic control person must~~
- ~~(a) stand in a safe position, preferably on the driver's side of the lane under the TCP's control, be clearly visible, and have an unobstructed view of approaching traffic, and~~
 - ~~(b) be positioned at least 25 m (80 ft) away from the work area unless circumstances or space requirements such as working at or near an intersection dictate otherwise.~~

Signs

18.9

- ~~(1) Unless otherwise specified, all traffic control signs must be installed and removed in a sequence which best protects workers during this phase of traffic control.~~
- ~~(2) Except for brief traffic control operations, or in an emergency, signs advising of a traffic control person ahead must be placed in advance of each traffic control person's station, and removed promptly when traffic control persons are no longer on duty at that station.~~

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

EQUIPMENT FOR TRAFFIC CONTROL PERSONS

Daytime operations	18.10	<p>Each traffic control person must be provided with and must use</p> <ul style="list-style-type: none"> (a) a traffic control paddle having a retroreflective finish on both sides and, if necessary to relieve fatigue, a non-conductive support staff for the paddle; (b) Repealed. [B.C. Reg. 312/2003.] <See section 8.24 of the OHS Regulation.> (c) safety headgear of a high visibility colour with a strip of retroreflective tape about the crown, and (d) an effective means of communication when traffic control persons are not visible to each other, which under no circumstances means a system of passing batons or similar items to indicate the last vehicle travelling through the zone under control. <p style="text-align: center;">[Amended by B.C. Reg. 312/2003.]</p>
Poor visibility operations	18.11	<p>During the hours of darkness, or in other conditions of poor visibility, each traffic control person must be provided with and must use, in addition to the equipment required by section 18.10, a flashlight fitted with a red signalling baton, and with spare batteries.</p>
Equipment maintenance	18.12	<p>All traffic control equipment, including signs, traffic control paddles and personal protective equipment, must be kept clean and in working condition.</p>

SIGNALS FOR TRAFFIC CONTROL PERSONS

Precise motions	18.13	<p>A traffic control person must make all traffic control motions and signals precisely and deliberately so that the meaning of signals can be clearly understood.</p>
Standard signals between TCPs	18.14	<p>If manual signals are used between traffic control persons to initiate changes in the direction of traffic flow, the signals shown in Figure 18-1 must be used.</p>
Traffic control signals	18.15	<ul style="list-style-type: none"> (1) All signalling of traffic must conform with the requirements of the <i>Traffic Control Manual</i> and this Regulation. (2) A traffic control person (TCP) must use the normal signals shown in Figure 18-2 when stationed on the driver's (left) side of the traffic lane under the TCP's control. (3) The alternative signals shown in Figure 18-2 must only be used when the traffic control person is stationed on the passenger's (right) side of the traffic lane under the TCP's control. (4) The traffic control person's paddle must not be used to wave traffic on and must never be displayed to traffic in other than a static manner.

OTHER REQUIREMENTS

Dust control	18.16	<p>Where traffic is diverted onto dusty surfaces, the principal contractor, or if there is no principal contractor, the owner of the road must maintain good visibility by the periodic application of water or other acceptable material to the grade surface to suppress dust.</p>
Long periods of delay	18.17	<p>Sufficient signs and signals must be used during long periods of traffic delay to keep the travelling motorist advised.</p>

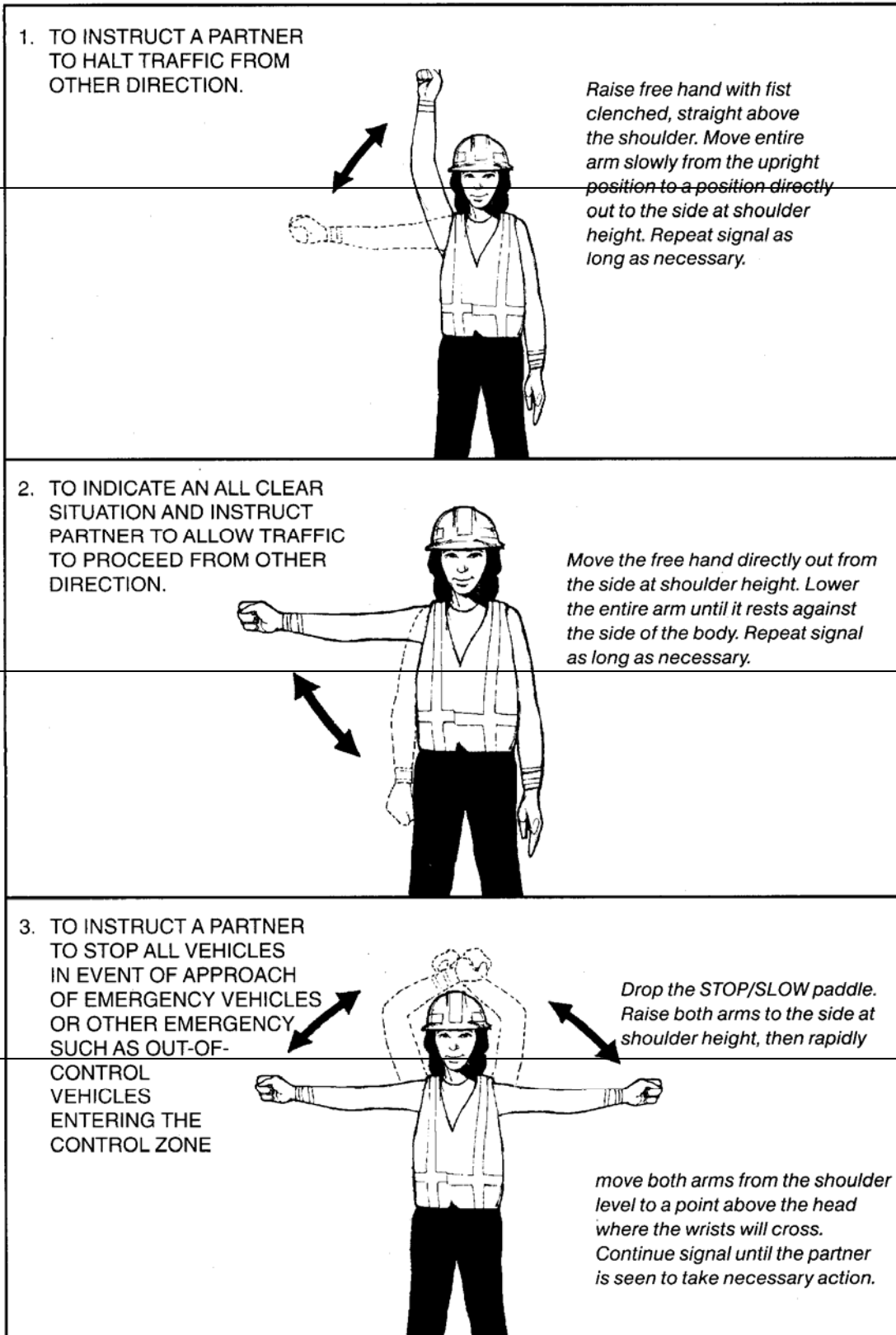
PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION**Towing and
recovery**

- 18.18** If the recovery of a disabled or damaged vehicle prevents the safe passage of motorists or if passing motorists pose a danger to the workers engaged in the recovery operation, the person in charge must
- (a) warn travelling motorists of the recovery operation by displaying appropriate signs and a 360° flashing light,
 - (b) ensure that workers wear appropriate personal protective equipment, and
 - (c) ensure that any other procedures required by the *Traffic Control Manual* are followed if the activity exceeds the limits for emergency or brief duration work.

DRAFT

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

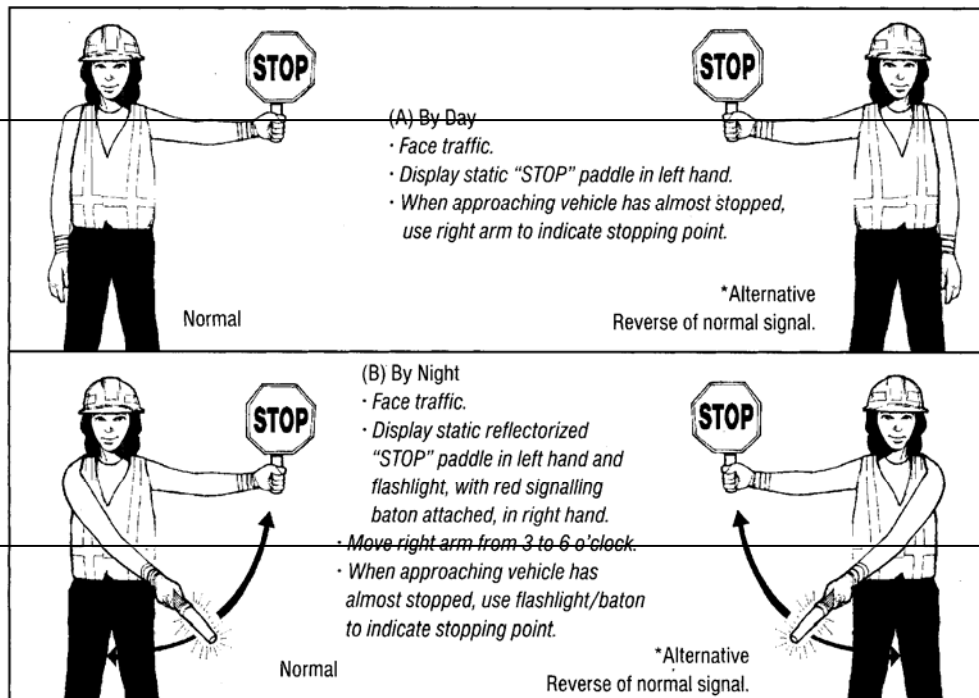
Figure 18-1: Hand signals between traffic control persons



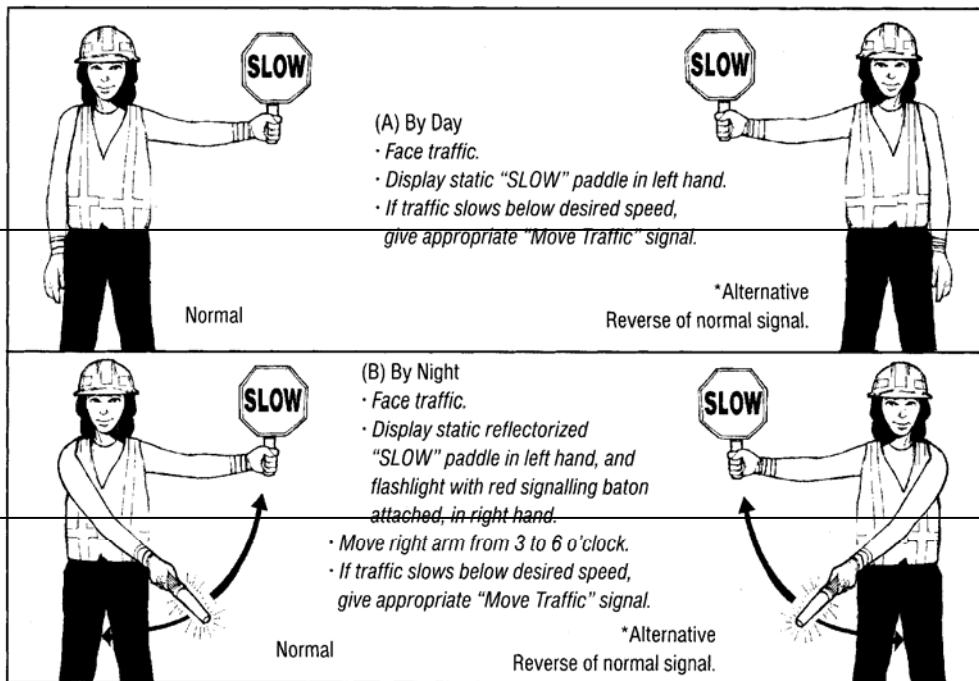
PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

Figure 18-2: Hand signals for traffic control

1. TO STOP TRAFFIC



2. TO SLOW TRAFFIC

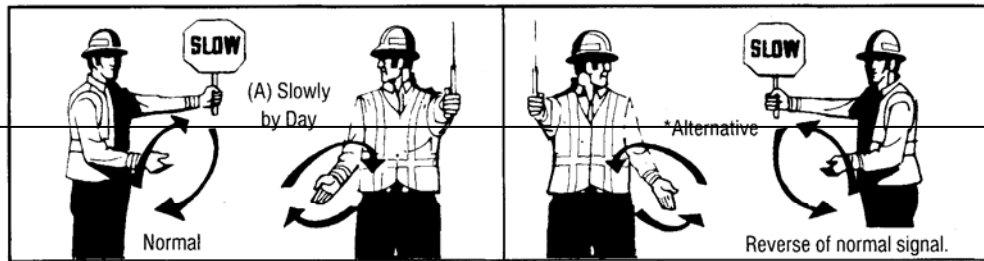


*Use Alternative Signal only when traffic control person's station is located on the right side of traffic under his or her control.

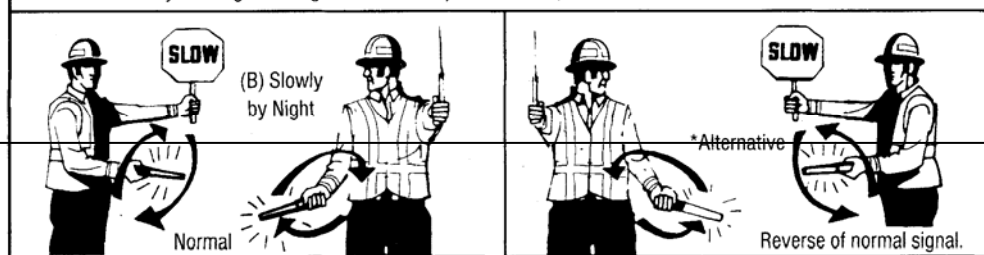
PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

Figure 18-2 (continued): Hand signals for traffic control

3. TO MOVE TRAFFIC



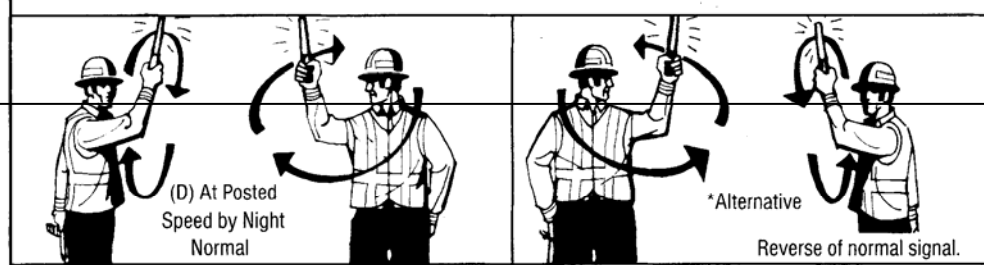
- Face across the approach traffic lane and look across right shoulder at traffic to be moved.
- Display static "SLOW" paddle in left hand.
- Advance traffic by rotating lower right arm in an elliptical manner, in the direction vehicle wheels will rotate.



- Position as above (A).
- Display static reflectorized "SLOW" paddle in left hand and flashlight, with red signalling baton, in right hand.
- Advance traffic as above.



- Position as for moving traffic slowly by day (A).
- Lower left arm to conceal paddle and motion traffic on with right arm at shoulder level.



- Position as above (C).
- Hold flashlight, with red signalling baton, in right hand.
- Motion traffic on as above (C).

*Use Alternative Signal only when traffic control person's station is located on the right side of traffic under his or her control.

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

GENERAL REQUIREMENTS

Definitions	18.1	In this Part:
“traffic”		means any vehicle, bicycle, pedestrian or other mobile thing in or near a workplace;
“traffic control”		means the use of signs, flashing arrow boards, sign boards, buffer or shadow vehicles, barricades, cones, barriers, detours, traffic lights, traffic control persons (TCPs) or other techniques and devices to manage the flow of traffic;
“traffic control person” or “TCP”		means any person designated or assigned by the employer to direct traffic.

Explanatory Note

Proposed section 18.1 “Definitions” is new and intended to clarify some of the terms used in this Part. In particular, people tend to think of traffic control only as the control of public automobile and truck traffic. Other types of traffic frequently need to be controlled, and Part 18 is intended to cover all types of traffic which may cause a hazard to workers, including work-related traffic. Similarly, people often think of traffic control as the use of a traffic control person, when most traffic control requirements can and should be met by use of signs and other devices and procedures. Finally, this section sets out that any person designated or assigned by the employer to direct or control traffic is a traffic control person.

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 18: TRAFFIC CONTROL

GENERAL REQUIREMENTS

Responsibility 18.2 The employer must ensure that effective traffic control is provided and used whenever traffic could be hazardous to a worker.

Explanatory Note

Section 18.2 refers to the employer's responsibility but often situations requiring traffic control are multi-employer workplaces, and in such circumstances someone will be the prime contractor. If the workplace is a multi-employer workplace as defined in section 118 of the *Workers Compensation Act*, then the prime contractor must ensure the requirements of this Part are met. If there is no prime contractor established for a multi-employer workplace, under section 118 the owner is the prime contractor.

DRAFT

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 18: TRAFFIC CONTROL

GENERAL REQUIREMENTS

Standards for traffic control	18.3	Traffic control equipment, arrangements and procedures must meet the requirements of the latest edition of the <i>Traffic Control Manual for Work on Roadways</i> (the " <i>Traffic Control Manual</i> ") issued by the Ministry of Transportation, unless otherwise specified by this Regulation.
-------------------------------	------	--

Explanatory Note

Section 18.3 continues the adoption of the *Traffic Control Manual* issued by the Ministry of Transportation as the standard for planning and executing traffic control operations to ensure uniform use of signs, devices and procedures for traffic control across BC. If there is a conflict between the provisions of the *Traffic Control Manual* and a specific provision in the *Occupational Health and Safety Regulation* ("OHSR"), the OHSR takes precedence. It is the intention of the Workers' Compensation Board to work with the Ministry of Transportation to, as far as possible, eliminate conflicts between requirements in the OHSR and the *Traffic Control Manual* to ensure provisions in both documents jointly contribute to worker health and safety.

DRAFT

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE *OCCUPATIONAL HEALTH AND SAFETY REGULATION*

PART 18: TRAFFIC CONTROL

GENERAL REQUIREMENTS

- Supervision** **18.4** **(1)** The employer must ensure that whenever traffic control is required, all of the following requirements are implemented:
- (a)** the traffic control arrangements and procedures for the work are made known to all the people involved in the work;
 - (b)** the required traffic control devices and procedures are in place before the start of work and are removed when they are no longer required;
 - (c)** any person assigned to be a traffic control person is adequately trained in a course acceptable to the Board and effectively performs their role in the traffic control arrangements and procedures for the work;
 - (d)** a traffic control person is positioned in a safe location clear of potential environmental hazards such as a slide or avalanche;
 - (e)** if 2 or more traffic control persons are required to work as a team at the worksite, responsibility for coordination of changes in traffic flow is assigned.
- (2)** The employer must ensure that during traffic control operations a supervisor is designated to ensure the requirements of subsection **(1) (b) to (e)** are met.
-

Explanatory Note

Section 18.4 (1) blends a number of existing provisions and draws attention to responsibilities under other provisions of the *Workers Compensation Act* and the *Occupational Health and Safety Regulation* (“OHSR”) to ensure that when traffic control is required, the employer’s responsibilities for supervision and control are broad and involve all management, supervisory and other people involved in the work.

Section 18.4 (1) (a) is intended to ensure every person working at or contributing to the work is aware of the traffic control provisions. When everyone involved in the work is familiar with the traffic control arrangements for the workplace, any person will be able to recognize when traffic control signs, devices and/or procedures are not in place or are not working and can initiate corrective action.

Sections 18.4 (1) (b) will require the employer to provide sufficient overall supervisory control to ensure traffic control is implemented when needed and removed when it is not. The current regulation (section 18.3) requires a supervisor be designated responsible for this task, and this specific provision is continued by section 18.3 (2). However, this proposed change reminds the employer that all management and supervisory personnel have responsibility for ensuring work arrangements required to provide for a safe workplace are effectively implemented, and this includes traffic control. All supervisory and management persons need to understand the traffic control arrangements for the work and ensure persons under their control are aware of the traffic control arrangements and work within the protection provided by it. If traffic control is not effective, a supervisor needs to be able to recognize this and react promptly to correct the problem.

Section 18.4 (1) (c) to (e) are similar to existing section 18.4 (1) (a) but set out specific requirements for training and supervision of a person designated to be traffic control person (“TCP”).

Section 18.4 (c) includes the requirement that a TCP be adequately trained in a course acceptable to the Workers’ Compensation Board (“WCB”). The WCB is aware of and supports the comprehensive, standardized training for TCPs developed by a tripartite committee and implemented by the BC Road Construction and Maintenance Safety Network. The Safety Network program provides for the people successfully completing their training program to be registered in the Safety Network’s “system” and to receive a certificate valid for three years, indicating successful completion of the training. The WCB has been advised the Safety Network is developing a process for certificate holders to renew their certificate.

**PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION**

The WCB is also aware a number of employers find the Safety Network training exceeds their requirements, providing training for procedures and techniques not required for their operations. The WCB wants to ensure there is flexibility for alternative courses to be recognized, and believes the *OHSR* allows for this. Employers or industry associations are encouraged to bring forward alternative courses for review by the WCB if the Safety Network program does not meet their needs. However, the WCB also wants to remind employers and workers that training and instructing a TCP in a course acceptable to the WCB is only part of the overall training necessary for a TCP. Traffic control plans and arrangements will vary from job to job and as work changes or progresses on a job, so each traffic control person needs to be oriented to each assignment and to the specific procedures to be used. In addition, sufficient supervision must be provided in the workplace to ensure training and instruction has been effective and traffic control is being done effectively and safely.

DRAFT

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 18: TRAFFIC CONTROL

GENERAL REQUIREMENTS

- | | | |
|--|------|--|
| Placement of traffic control signs and devices | 18.5 | <p>(1) Traffic control signs and devices must be positioned and used as specified in the <i>Traffic Control Manual</i> and signs and devices must be located so as to allow traffic to move by or through the work area in a controlled manner and, if necessary, to come to a controlled stop with due regard for the prevailing weather and road conditions.</p> <p>(2) Unless otherwise specified, all traffic control signs and devices must be installed and removed in a sequence which best protects workers during this phase of a traffic control operation.</p> <p>(3) A sign advising of a traffic control person ahead must be placed in advance of each traffic control person's station, and this sign must be removed promptly when a traffic control person is no longer on duty at that station.</p> <p>(4) Subsection (3) does not apply during emergency or brief duration work when it is not practicable to place such a sign, provided that sight lines and traffic speed allow oncoming traffic adequate warning of the work activity taking place.</p> |
|--|------|--|

TRAFFIC CONTROL PERSONS (TCPS)

- | | | |
|---------------------------------|------|--|
| Use of a traffic control person | 18.6 | <p>(1) A traffic control person may only be used</p> <ul style="list-style-type: none"> (a) if the use of signs and other traffic control devices and procedures alone cannot provide effective traffic control, or (b) during emergency or brief duration work if it is not practicable to control traffic with signs and other devices and procedures. <p>(2) Without limiting the generality of subsection (1), one or more traffic control persons must be used if</p> <ul style="list-style-type: none"> (a) it is necessary to institute a one-way traffic system by or through a work zone and the circumstances do not allow self-regulating single lane traffic controlled by signs and other devices as specified in the <i>Traffic Control Manual</i>, and a traffic signal system is not used, (b) work-related traffic cannot safely self-regulate to move in or out of the work area or safely coordinate with other traffic, (c) an existing traffic control system, or an existing traffic signal light system, is not adequate to regulate traffic, (d) the work encroaches into an intersection so as to interfere with regular traffic movement, (e) traffic speed or volume is a hazard to workers while setting up or removing other traffic control devices, or (f) other traffic control devices are not available in an emergency situation. |
|---------------------------------|------|--|

Explanatory Note

Section 18.6 is intended to establish (consistent with the planning and selection criteria set out in the *Traffic Control Manual*) traffic control arrangements for a workplace should only use a traffic control person when the use of signs, devices and/or procedures is not sufficient to provide effective traffic control.

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 18: TRAFFIC CONTROL

TRAFFIC CONTROL PERSONS (TCPS)

Traffic control person to remain on duty	18.7	The employer must ensure that a traffic control person is on duty at the assigned station whenever a traffic control person is required as part of the traffic control plan for the work.
--	------	---

Explanatory Note

If the traffic control plan for the work requires a traffic control person (TCP) to be continuously on duty throughout the work shift, the employer must ensure there are adequate arrangements in place to allow the person normally assigned to that station to have breaks at reasonable intervals throughout the shift.

DRAFT

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 18: TRAFFIC CONTROL

TRAFFIC CONTROL PERSONS (TCPS)

- | | | |
|--|-------------|---|
| Location of traffic control persons | 18.8 | <p>A traffic control person must</p> <ul style="list-style-type: none"> (a) stand in a safe position, preferably on the driver's side of the lane under the TCP's control, be clearly visible, and have an unobstructed view of approaching traffic, and (b) be positioned at least 25 m (80 ft) away from the work area unless circumstances or space requirements, such as working at or near an intersection, dictate otherwise. |
|--|-------------|---|

EQUIPMENT FOR TRAFFIC CONTROL PERSONS

- | | | |
|-----------------------------------|-------------|---|
| Operations during day time | 18.9 | <p>Each traffic control person must be provided with, and must use, all of the following:</p> <ul style="list-style-type: none"> (a) a traffic control paddle meeting the requirements for a C-27H Traffic Control Paddle as specified in the <i>Traffic Control Manual</i> and, if necessary to control fatigue, a non-conductive support staff for the paddle; (b) high visibility apparel meeting <ul style="list-style-type: none"> (i) the Type 1 or Type 2 criteria of WCB Standard Personal Protective Equipment Standard 2-1997, High Visibility Garment, or (ii) the Class 2 or 3 garment criteria of CSA Standard Z96-02, High-Visibility Safety Apparel, with a fluorescent background colour; (c) wrist and lower leg bands fitted with a minimum 5 cm (2 in) wide fluorescent retroreflective strip about their entire circumference, except that wrist and lower leg bands are not required for a traffic control person performing this function on an emergency or a temporary basis and not as part of their normal duties; (d) safety headgear of a high visibility colour with a strip of retroreflective tape across the top from front to back and on the sides; (e) an effective means of communication when traffic control persons are not visible to each other, which under no circumstances means a system of passing batons or similar items to indicate the last vehicle traveling through the zone under control. |
|-----------------------------------|-------------|---|

Explanatory Note

Section 18.9 (b) is a relocation of section 8.24 (1) to Part 18 because it only applies to "a worker directing traffic", which means a traffic control person. It is proposed this provision be deleted from Part 8. This provision specifies apparel must meet a Workers' Compensation Board Standard or the recently published CSA standard for high visibility clothing.

Section 18.9 (c) has been modified to include lower leg bands.

Section 18.9 (d) has been modified to specify retroreflective tape across the top and on the sides of the safety headgear.

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 18: TRAFFIC CONTROL

EQUIPMENT FOR TRAFFIC CONTROL PERSONS

- | | | |
|--|--------------|---|
| Operations during night time or poor visibility | 18.10 | <p>(1) During the hours of darkness, or in other conditions of poor visibility, each traffic control person must be provided with and must use, in addition to the equipment required by section 18.9, a flashlight fitted with a red signalling wand.</p> <p>(2) For the purpose of subsection (1), the traffic control person must have immediate access to spare batteries for the flashlight.</p> |
| Equipment maintenance | 18.11 | All traffic control equipment and devices, including signs, traffic control paddles and personal protective equipment, must be kept clean and in working condition. |

DIRECTIONS AND SIGNALS BY TRAFFIC CONTROL PERSONS

- | | | |
|---|--------------|--|
| Precise motions | 18.12 | A traffic control person must make all traffic control directions and signals precisely and deliberately so that the meaning can be clearly understood. |
| Standard signals between traffic control persons | 18.13 | If manual signals are used between traffic control persons to initiate changes in the direction of traffic flow, the signals shown in Figure 18-1 must be used. |
| Standard signals for traffic | 18.14 | <p>(1) All traffic control directions and signals made by a traffic control person for the purpose of controlling traffic must conform to the requirements of this Regulation and the <i>Traffic Control Manual</i>.</p> <p>(2) A traffic control person must use the normal signals shown in Figure 18-2 when stationed on the driver's (left) side of the traffic lane under the TCP's control.</p> <p>(3) The alternative signals shown in Figure 18-2 must only be used when the traffic control person is stationed on the passenger's (right) side of the traffic lane under the TCP's control.</p> <p>(4) A traffic control person must not use their traffic control paddle to wave traffic on and must never display the paddle to traffic in other than a static manner.</p> |

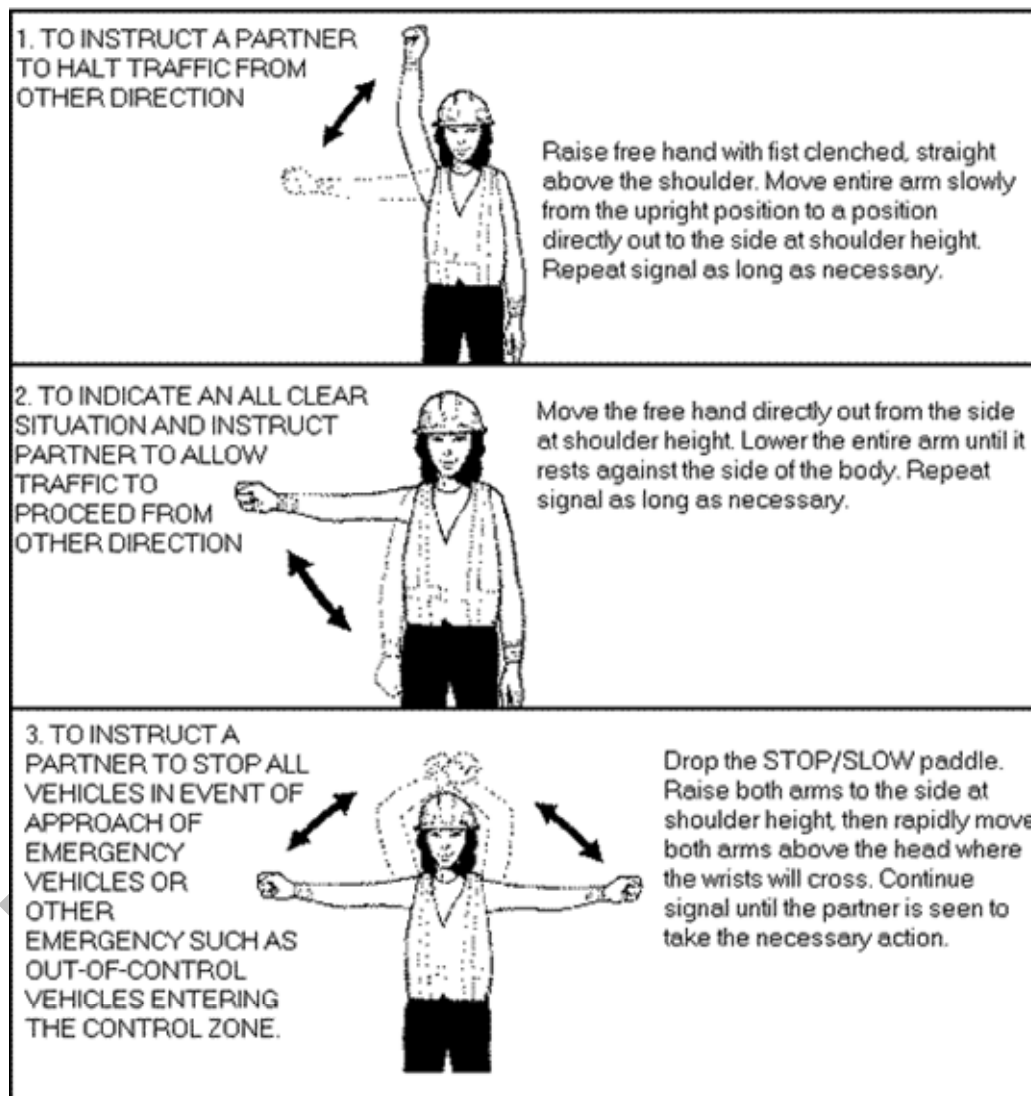
OTHER REQUIREMENTS

- | | | |
|---------------------------------------|--------------|---|
| Dust control | 18.15 | If traffic causes airborne dust to the extent visibility is reduced and interferes with effective traffic control or creates a hazard to workers, the employer must control the dust by the periodic application of water or other acceptable material to the grade surface to suppress dust. |
| Long periods of delay | 18.16 | If traffic control operations will result in long periods of traffic delay, appropriate signs or other effective means must be used to inform the traffic of the situation. |
| Towing and recovery operations | 18.17 | <p>If the recovery of a disabled or damaged vehicle prevents the safe passage of other vehicles or if a passing vehicle is a danger to the workers engaged in the recovery operation, the person in charge must</p> <p>(a) warn traffic of the recovery operation by displaying appropriate signs and a 360° flashing light,</p> <p>(b) ensure that workers wear appropriate personal protective equipment, and</p> |

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

- (c) ensure that any other procedures required by the *Traffic Control Manual* are followed if the activity exceeds the limits for emergency or brief duration work.

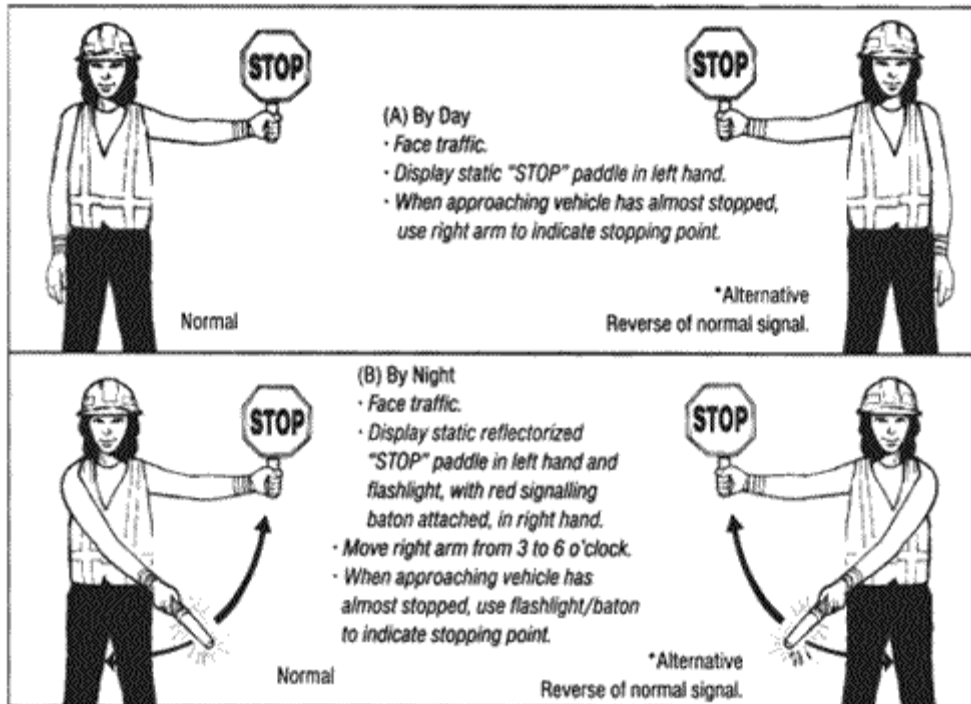
Figure 18-1: Arm signals between traffic control persons



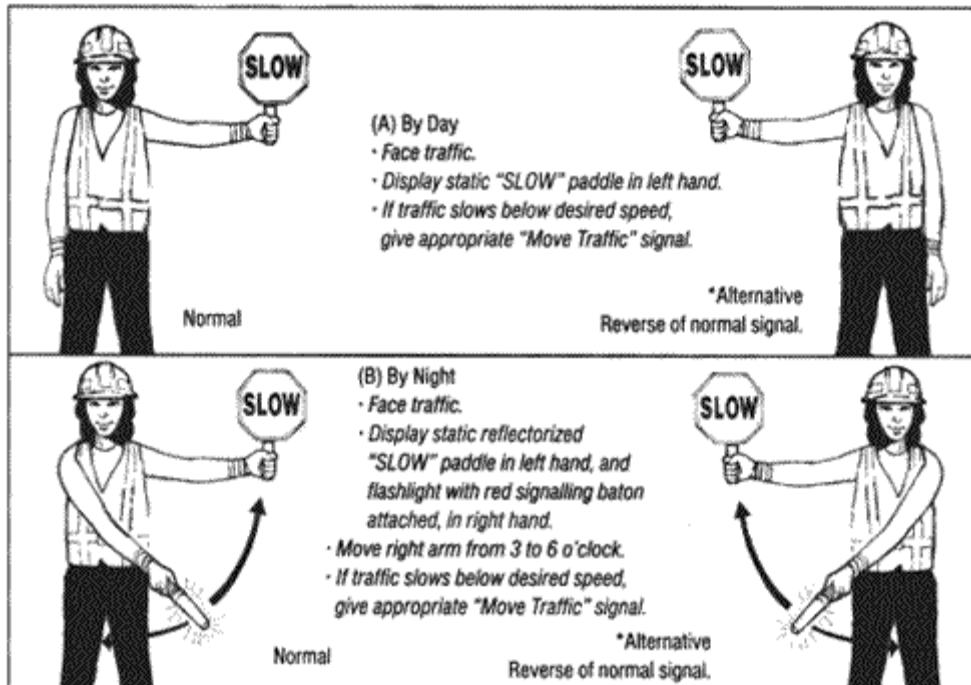
PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

Figure 18-2: Arm signals for traffic control

1 TO STOP TRAFFIC



2. TO SLOW TRAFFIC



*Use Alternative Signal only when traffic control person's station is located on the right side of traffic under his or her control.

PROPOSED AMENDMENTS FOR PART 18: TRAFFIC CONTROL
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

Figure 18-2: Arm signals for traffic control (Continued)

3. TO MOVE TRAFFIC

<p>(A) Slowly by Day</p> <p>Normal</p> <p>*Alternative</p> <p>Reverse of normal signal.</p>	
<ul style="list-style-type: none"> - Face across the approach traffic lane and look across right shoulder at traffic to be moved. - Display static "SLOW" paddle in left hand. - Advance traffic by rotating lower right arm in an elliptical manner, in the direction vehicle wheels will rotate. 	
<p>(B) Slowly by Night</p> <p>Normal</p> <p>*Alternative</p> <p>Reverse of normal signal.</p>	
<ul style="list-style-type: none"> - Position as above (A). - Display static reflectorized "SLOW" paddle in left hand and flashlight, with red signalling baton, in right hand. - Advance traffic as above. 	
<p>(C) At Posted Speed by Day</p> <p>Normal</p> <p>*Alternative</p> <p>Reverse of normal signal.</p>	
<ul style="list-style-type: none"> - Position as for moving traffic slowly by day (A). - Lower left arm to conceal paddle and motion traffic on with right arm at shoulder level. 	
<p>(D) At Posted Speed by Night</p> <p>Normal</p> <p>*Alternative</p> <p>Reverse of normal signal.</p>	
<ul style="list-style-type: none"> - Position as above (C). - Hold flashlight, with red signalling baton, in right hand. - Motion traffic on as above (C). 	

*Use Alternative Signal only when traffic control person's station is located on the right side of traffic under his or her control.

PART 20: CONSTRUCTION, EXCAVATION AND DEMOLITION**SAFE WORK AREAS AND SAFE ACCESS**

- Safe access** **20.4** **(1)** Where practicable, suitable ladders, work platforms and scaffolds meeting the requirements of Part 13 (Ladders, Scaffolds and Temporary Work Platforms) must be provided for and used by a worker for activities requiring positioning at elevations above a floor or grade.
- (2)** **There must be suitable access for the safe delivery of equipment and materials to locations in the workplace where they will be used.**
-

Explanatory Note

Suppliers of gypsum board have expressed concern about poor access to construction sites. In many cases, typically on wood frame residential construction sites, suppliers have difficulty obtaining safe access to all areas within the structure to which they must deliver gypsum board. As a result, workers often employ unsafe work practices and risk injury, including musculoskeletal injuries. It is recognized that the concerns regarding safe access, both to the inside and outside of a structure under construction, apply equally to the delivery of other materials such as appliances, bathroom fixtures, cabinets, and trusses.

In accordance with section 118 of the *Workers Compensation Act*, prime contractors are primarily responsible for ensuring that processes are in place to ensure compliance with the *Occupational Health and Safety Regulation* ("OHSR") on multi-employer worksites. This includes coordinating work arrangements, schedules and sub-trade activities to ensure compliance with sections 4.32 and 4.33 of the OHSR which require there be safe means to get to and from each place where work is performed and that work areas allow for the safe movement of people and materials. However, some prime contractors view sections 4.32 and 4.33 simply as general requirements and not as requirements to be addressed to ensure that safe access to and on a construction site is provided to accommodate the safe delivery of materials.

It is proposed that section 20.4 of the OHSR be amended by including a new subsection (2) to specifically address the need for adequate access at a construction site rather than rely on the general requirement established in sections 4.32 and 4.33. Proposed section 20.4 (2) requires that there be suitable access sufficient to allow for the safe delivery of equipment and materials. A guideline will provide examples of what constitutes adequate access at a construction site for the safe delivery of materials.

PROPOSED AMENDMENTS FOR PART 23: OIL AND GAS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION**PART 23: OIL AND GAS**

- | | | |
|--------------|--------------|---|
| Pumps | 23.14 | <ol style="list-style-type: none">(1) A positive displacement pump and attachments must have valves, pipes and fittings capable of withstanding the pump's maximum working pressure.(2) A quick closing type valve must not be used on the discharge line of a positive displacement pump.(3) A positive displacement pump must be protected against freezing.(4) Except for a pumping wellhead, A pressure relief device must be installed on the discharge side of a positive displacement pump, but a valve must not be installed between them.(5) For a wellhead utilizing a down-hole positive displacement pump, the employer must implement measures to prevent the pump from causing pressures that exceed the pressure rating of the system. |
|--------------|--------------|---|
-

Explanatory note

Section 23.14 (4) is not meant to apply to pumping wellheads because a wellhead has been determined to be a de facto valve. Section 23.14 (4) requires a pressure relief device to be installed on the discharge side of a positive displacement pump, but does not specify that this requirement does not apply to pumping wellheads. It is proposed that the requirement in this section be changed with an insert "Except for pumping wellheads", and that new section 23.14 (5) be added to require safe practices at the wellhead, as section 23.14 (4) no longer applies to pumping wellheads.

PART 24: DIVING, FISHING AND OTHER MARINE OPERATIONS**FISHING OPERATIONS****GENERAL REQUIREMENTS**

Requirements for sensors and alarms	24.93	<ul style="list-style-type: none"> (1) An owner of a fishing vessel must ensure that a heat sensor, connected to an alarm system, is installed <ul style="list-style-type: none"> (a) above the galley stove or near the stove pipe, and (b) in proximity to the engine exhaust. (2) The owner must ensure that a water level sensor, connected to an alarm system, is installed <ul style="list-style-type: none"> (a) in the machinery space bilges, and (b) in the shaft log or lazarette. (3) The owner must ensure that main engines are fitted with low oil pressure and high temperature sensors connected to an alarm system. (4) The owner must ensure that a sensor and alarm system is installed if the Board considers this necessary to detect leaks of potentially explosive fuel used in engines or appliances. (5) The owner must ensure that an audible marine grade carbon monoxide sensor, connected to an alarm system where practicable, is installed in crew quarters.
--	--------------	--

Explanatory Note

Section 24.93 of the Occupational Health and Safety Regulation requires that fishing vessels must have sensors and alarm systems to monitor a variety of possible dangers such as galley stove and engine exhaust overheating, high water levels in machinery space bilges and lazarettes, low oil pressure or high temperatures related to the main vessel engine, and, if required by the Board, to detect leaks of potentially explosive fuel used in engines or appliances.

Workers on fishing vessels are also subject to a risk of overexposure to carbon monoxide. Such overexposure can affect a worker's cognitive function and lead to unsafe worker behaviour or could result in the death of a sleeping worker. Accordingly, it is proposed that new subsection 24.93(5) be added, requiring the owner of a fishing vessel to install a marine grade carbon monoxide sensor in crew quarters to provide a warning in the event of elevated carbon monoxide levels.

PROPOSED AMENDMENTS FOR PART 24: DIVING, FISHING AND OTHER MARINE OPERATIONS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 24: DIVING, FISHING AND OTHER MARINE OPERATIONS

REQUIREMENTS FOR SPECIFIC FISHING OPERATIONS

GILLNETTING

Salmon

Drums	24.104	The owner of a gillnet vessel must ensure that drums are fitted with <ul style="list-style-type: none"> (a) an effective ratchet device for picking up the net under heavy strain, (b) an effective brake to maintain control when setting out the net, and (c) a hold-to-run control.
Pin rollers	24.105	<ul style="list-style-type: none"> (1) The owner must ensure that pin rollers are of a design to prevent their inadvertent lifting. (2) The master must ensure that pin rollers are maintained to prevent their inadvertent lifting.

Herring

Work areas Work areas and safeguarding	24.106	<ul style="list-style-type: none"> (1) Work areas on herring skiffs and punts must be arranged to prevent contact with moving equipment such as beaters and live rollers. (2) The owner of a herring gillnet vessel must ensure that drums are fitted with <ul style="list-style-type: none"> (a) an effective ratchet device for picking up the net under heavy strain and an effective brake to maintain control when setting out the net, and (b) a hold-to-run control or other equally effective safeguard to stop the drums if a worker becomes entangled in the net or lines being wound in by the drum.
---	---------------	---

Explanatory Note

Salmon gillnetting vessels have for many years used a bow-type net retrieval system whereby a drum, mounted in the stern of the vessel, is operated to set and retrieve the gillnet. The *Occupational Health and Safety Regulation* (“OHSR”) establishes drum, and associated pin roller, requirements to provide for worker safety. In particular, it is required that the drum be operated with a “hold-to-run” control to protect a worker from being wound in by the drum in the event the worker gets caught up in the net. If a worker became entangled in the net, the worker would be pulled away from the hold-to-run control and the drum would cease to operate.

In recent years the herring fishery has adopted drum operated gillnetting, but the OHSR does not currently provide requirements for safeguarding when the net is being wound in during herring gillnetting operations. As a result, some herring gillnetting vessels have drum operated gillnets with controls that are not hold-to-run controls. This allows an operator to engage the drums and then move away from the controls and work close to the moving net, lines and drums, with a risk of being pulled into the net drum in the event the worker gets caught by the net or lines.

It is proposed that the OHSR be amended to require appropriate safeguarding be provided for drum operations on herring gillnet vessels by adding a new subsection (2) to section 24.106. This proposal recognizes that a herring gillnet operation is different from a salmon gillnet operation. In salmon gillnetting, the worker tending the net frequently has to stop the net to manually remove a fish from the net, and then start the drum to spool in the net until the next fish caught in the net comes along. For this operation, a hold-to-run control works well and is the industry standard. For herring gillnet operations, the

PROPOSED AMENDMENTS FOR PART 24: DIVING, FISHING AND OTHER MARINE OPERATIONS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

fish are shaken from the net as it passes over a “beater drum” before the net is wound onto the net drum so the person tending the net does not have to regularly stop the process. The operation works best if the net speed and net tension is kept constant. The operation needs to be stopped only if the worker tending the net needs to remove debris from the net, or to adjust the cork or lead line, or when some other net adjustment needs to be made. The net speed is slower than for a salmon gillnet operation, but there still is the hazard of a worker caught by the net or lines being pulled over the beater drum and into the net drum. The industry is concerned that if a worker has to operate a hold-to-run switch while tending the herring gillnet, there may be ergonomic issues due to extended periods holding the control with no change of position. There are other options to safeguard the operation, such as having a “trip bar” positioned just before the beater drum that would stop the drums if contacted by the girth of a worker being pulled by the net or lines into the area just before the beater drum. Or the worker could be tethered to a disconnect switch which would activate to stop the drums if the worker was caught up in the net or lines and pulled beyond a safe point towards the beater drum. The use of a tether system is less desirable as it requires the worker to remember to connect to the switch tether for the safeguarding system to work.

It is proposed that existing section 24.104 (a) be amended by inserting the words “the net” for clarity, and to be consistent with the wording in proposed new section 24.106 (2) (a).

DRAFT

PROPOSED AMENDMENTS FOR PART 26: FORESTRY OPERATIONS
IN THE OCCUPATIONAL HEALTH AND SAFETY REGULATION

PART 26: FORESTRY OPERATIONS

GENERAL REQUIREMENTS

Dangerous trees

- 26.11**
- (1) If work in a forestry operation will expose a worker to a dangerous tree, the tree must be removed.
 - (2) Trees that will interfere with rig-up, the movement of lines and equipment, or that could be pushed or pulled into the work area must be removed.
 - (3) Saplings over 6 m (20 ft) tall, in an area where cable logging is being done, must be removed before yarding commences.
 - (4) If it is not practicable to comply with subsection (3), such as during partial cutting operations, alternative work methods or procedures which minimize the risk to workers may be used, and the work must be directed by a supervisor who has, as far as practicable, controlled the danger to any worker.
 - (5) Any dangerous tree, regardless of height, located within an active hand falling or cable logging operation must not interfere with safe falling or yarding practices, and if it does interfere, it must be removed.
 - (6) A dangerous tree in a forestry operation may be left standing during operations other than construction or harvesting if
 - (a) no significant ground vibrations are likely to be produced,
 - (b) no work will be done within ~~reach~~ **the hazard area** of the **dangerous** tree when wind speed exceeds ~~20~~**40** km/h (~~42~~**24** mph), and
 - (c) a tree assessor who has completed a training program acceptable to the Board determines that the tree will not be dangerous to workers during the planned activity.
 - (7) If tree planting is to be done in an area that has more than 500 dangerous trees per hectare, the Board may approve a request to work without removing all the dangerous trees if, before work commences,
 - (a) a representative sample of the dangerous trees is assessed by a tree assessor who has completed a training program acceptable to the Board,
 - (b) any findings of the assessment as to the removal of dangerous trees or other trees are implemented, and
 - (c) no silviculture is done within ~~reach~~ **the hazard area of the** dangerous trees when wind speed exceeds ~~20~~**40** km/h (~~42~~**24** mph).

Explanatory note

Sections 26.11 (6) (b) and 26.11 (7) (c) mandate that no work will be done within reach of a dangerous tree if wind speeds exceed 20km/h. These sections are proposed to be amended to refer to a wind speed of 40km/h as stated in the Wildlife/Danger Tree Assessors' ("WDTA") training course which is approved by the Workers' Compensation Board and recognized by the BC Wildlife Tree Committee. It is also proposed that 26.11 (6) (b) and 26.11 (7) (c) be made consistent with existing practices, that no work will be done within "the hazard area of a dangerous tree", instead of "within reach of the tree".