

## Draft Regulations

### Draft Regulation

An Act respecting occupational health and safety (R.S.Q., c. S-2.1)

#### Occupational health and safety in mines — Amendments

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (R.S.Q., c. R-18.1) and section 224 of the Act respecting occupational health and safety (R.S.Q., c. S-2.1), that the Regulation to amend the Regulation respecting occupational health and safety in mines, the text of which appears below, may be made by the Commission de la santé et de la sécurité du travail and submitted to the Government for approval on the expiry of 45 days following this publication.

The purpose of the draft Regulation is to ensure the health and safety of workers in the mining sector and to prescribe standards that are more appropriate for that sector.

The draft Regulation adds new definitions relating to explosives, in particular regarding the place of loading, the loading area and the blasting area. It amends certain air quality provisions and provisions relating to equipment, such as equipment powered by internal combustion or diesel engines, and hoists. Safety measures are increased as regards fire prevention, the storing and loading of explosives, fuel and other combustible materials, and electrical equipment. Two modules (IV and VI) are added that concern the training of underground mine workers.

To remove ambiguities resulting from the use of certain words, the draft Regulation clarifies tunnel faces, combustible liquids and grease, and certain terms such as materials and equipment.

To date, study of the matter has shown little impact on small and medium-sized businesses.

Further information may be obtained by contacting Gilles Gagnon, Commission de la santé et de la sécurité du travail, 524, rue Bourdages, Québec (Québec) G1K 7E2; telephone: (418) 266-4699; fax: (418) 266-4698.

Any interested person having comments to make on the matter is asked to send them in writing, before the expiry of the 45-day period, to Alain Albert, Vice-president, Programs and Consultancy, Commission de la santé et de la sécurité du travail, 1199, rue De Bleury, 14<sup>e</sup> étage, Montréal (Québec) H3B 3J1.

GÉRARD BIBEAU,  
*Chair of the Board of Directors and  
Chief Executive Officer  
Commission de la santé et de la  
sécurité du travail*

### Regulation to amend the Regulation respecting occupational health and safety in mines\*

An Act respecting occupational health and safety (R.S.Q., c. S-2.1, s. 223, 1st par., subpars. 1, 7, 8, 10, 14, 19, 41, 42, 2nd and 3rd pars.)

1. The Regulation respecting occupational health and safety in mines is amended in section 1

(1) by inserting the following definition after the definition of “non-combustible material”:

““place of loading”: any place where workers load drill holes; (*lieu de chargement*)”;

(2) by inserting the following definitions after the definitions of “blasting agent” and “insulated” respectively:

““blasting area”: any place or space that presents a projection or blast hazard to a person or where a hazard exists because of the effects of the blasting; (*zone de tir*)”

““loading area”: any space that includes the place of loading, drill holes loaded or being loaded and any space occupied by the material and equipment necessary for the loading; (*zone de chargement*)”.

\* The Regulation respecting occupational health and safety in mines, approved by Order in Council 213-93 dated 17 February 1993 (1993, *G.O.* 2, 1757), was last amended by the regulation approved by Order in Council 42-2004 dated 14 January 2004 (2004, *G.O.* 2, 821). For previous amendments, refer to the *Tableau des modifications et Index sommaire*, Québec Official Publisher, 2004, updated to 1 September 2004.

**2.** Section 27 is amended by replacing “, 412 and 437” by “, 412, 437 and 476.1”.

**3.** Section 27.1 is amended

(1) by inserting “IV,” after “III,” in subparagraph 1 of the first paragraph;

(2) by replacing “V” in the second paragraph by “IV, V”.

**4.** The following is inserted after section 27.1 :

“**27.2.** Within 12 months following (*insert the date of coming into force of this Regulation*), any person using underground drilling equipment shall

(1) undergo training in occupational health and safety in accordance with Module VI of the modular course for miners published by the Commission scolaire de l’Or-et-des-Bois; and

(2) hold an attestation to that effect issued by the Commission scolaire de l’Or-et-des-Bois.

The conditions prescribed in subparagraphs 1 and 2 of the first paragraph also apply to a person hired after the expiry of the 12-month period provided for in the first paragraph; the person shall receive the training within 6 months of the date of hiring.

That person shall, so long as he has not undergone training in accordance with Modules I, II and III as provided in section 27.1, be accompanied by a person who has already received that training.”.

**5.** Section 40 is amended

(1) by replacing “working faces” in paragraph 2 by “tunnel faces”;

(2) by replacing “working face” in subparagraph *b* of paragraph 3 by “tunnel face”;

(3) by replacing “working faces” in paragraph 4 by “tunnel faces”;

(4) by replacing “working face” in subparagraph *b* of paragraph 4 by “tunnel face”.

**6.** Section 55 is amended by replacing “be free” in subparagraph 1 of the first paragraph by “except at the collar, be free”.

**7.** Section 87 is amended by adding the following at the end of the second paragraph:

“For the purposes of the first paragraph, a system that automatically shuts off the fresh air supply fan must be installed when the monitor referred to in subparagraph 4 of the second paragraph indicates that the carbon monoxide concentration exceeds 11.4 milligrams per cubic metre (10 ppm).”.

**8.** Section 102 is amended by inserting the following after subparagraph 3 of the first paragraph:

“(3.1) the addition of an additive to the diesel fuel must not result in the flash point of the fuel being lower than 37.8° Celsius (100° Fahrenheit);”.

**9.** Section 103.2 is amended by replacing paragraph 1 by the following:

“(1) the concentration of carbon monoxide in the undiluted exhaust gases of the engine exceeds 750 parts per million for haulage, clearing or service equipment;”.

**10.** Section 127 is amended by replacing paragraph 7 by the following:

“(7) be connected to a line equipped with a muffler capable of providing a continuous supply of compressed air from the surface and equipped with a single air flow control valve located inside the refuge station;

(7.1) not be supplied with air by a backup compressor located underground;”.

**11.** Section 130 is amended by replacing paragraph 8 by the following:

“(8) the combustible liquids and grease depot;”.

**12.** Section 133 is amended

(1) by replacing subparagraph 2 of the first paragraph by the following:

“(2) in a depot containing more than 1,000 litres (220.0 gallons) of combustible liquids and grease;”;

(2) by inserting the following after subparagraph 3 of the first paragraph:

“(4) on every motorized vehicle used to transport combustible liquids in a portable tank, as defined in NFPA 30-1996, Flammable and Combustible Liquids Code;

(5) on every motorized vehicle used in the supply of depots or the loading of explosives underground;

(6) at portable combustible liquid supply stations with an electric pumping system, unless the system is explosion-proof.”.

**13.** Section 134 is amended by replacing subparagraph 2 of the first paragraph by the following :

“(2) in a depot containing between 101 and 1,000 litres (between 22.2 and 220.0 gallons) of combustible liquids and grease.”.

**14.** Section 138 is replaced by the following :

“**138.** A fire door must be installed

(1) in a drift leading to a shaft as soon as the travelway is 100 metres (328.1 feet) from a shaft station such that it is isolated from the other parts of the mine in case of fire ; and

(2) at every access to a garage designed in accordance with the mine engineering plans and built after (*insert the date of coming into force of this Regulation*).

The door must

(1) be built of fireproof materials or covered with steel sheet on both sides ;

(2) be free of any obstruction ;

(3) have an automatic closing device in the case of a garage referred to in subparagraph 2 of the first paragraph ; and

(4) contain a small door for the circulation or evacuation of persons or have such a door alongside it.

For the purposes of this section, “garage” means the place where maintenance and mechanical repair are performed on the main mobile equipment, such as boom drills and scoop trams.”.

**15.** The following is inserted after section 151 :

“**151.1.** When more than 10 tires or more than 2,000 kilograms (4,409 litres) of other combustible materials, such as conveyor belts or ventilation ducts, are stored underground in the same location, the tires or materials must be stored in a depot or enclosure that

(1) is identified ;

(2) has a fire hose or fire extinguishing system ; and

(3) is located at least 15 metres (49.2 feet) from any place where welding or cutting work is carried out.

In addition, no person may park an unsupervised motorized vehicle less than 30 metres (98.4 feet) from a depot or enclosure referred to in the first paragraph or carry out repair or maintenance work inside the depot or enclosure.”.

**16.** The following is inserted after section 156 :

“**156.1.** The quantity of diesel fuel stored in a depot located underground may not exceed 7 days’ fuel requirements or exceed 9,000 litres (1,980 gallons).”.

**17.** The following is inserted after section 170 :

“**170.1.** In addition to complying with the standards referred to in Division XXVII of the Regulation respecting occupational health and safety, welding and oxygen cutting must comply with chapter 10 of CSA Standard W117.2-94, Safety in Welding, Cutting and Allied Processes, except section 10.10 of the standard.”.

**18.** Section 183 is amended by adding the following paragraph at the end :

“For the motorized vehicles referred to in the first paragraph that were manufactured before 1 April 1993, section 278 of the Regulation respecting occupational health and safety applies.”.

**19.** Section 225 is amended by replacing “or material” in the first paragraph by “, materials or equipment”.

**20.** Section 228 is amended by striking out “, the cage calling device”.

**21.** Section 242 is amended by replacing the second paragraph by the following :

“A greater speed that does not exceed the rated speed of the conveyance is permitted for the transportation of persons if

(1) alignment tests are carried out on the shaft guides with a decelerometer and recorded at intervals not exceeding 6 months ; an alignment test is also required following any incident damaging the shaft structure ; and

(2) the results of the tests performed at the speed referred to in the second paragraph with a load corresponding to the maximum number of persons permitted in the conveyance show a deceleration lower than 0.5 G in the vertical, lateral and longitudinal axes.

Where the rated speed of the conveyance is greater than 8 metres (26.2 feet) per second, a speed limiting device must be installed to be activated automatically when the hoistman responds to a three-bell signal.”.

**22.** Section 250 is amended by replacing “material” in the first paragraph by “materials”.

**23.** Section 293 is amended by adding the following after paragraph 4:

“(5) the loss of torsion strength exceeds 85%, unless an independent specialized enterprise performs electromagnetic inspections at intervals the enterprise determines and the inspections are documented.”.

**24.** Section 331 is amended by replacing “material is” in paragraph 2 by “materials are”.

**25.** Section 373 is amended by replacing “material” in paragraph 2 by “materials”.

**26.** Section 387 is amended in the part that precedes paragraph 1

(1) by inserting “materials or” after “transportation of”;

(2) by replacing “the side where the equipment is loaded or unloaded” by “the side where the materials or equipment are loaded or unloaded”.

**27.** Section 401.1 is amended in the French text by replacing “matériel” in paragraph 6 by “matériau”.

**28.** The following is inserted after section 404:

“**404.1.** Portable tanks used to transport, store or load water-based bulk explosives must

(1) be constructed in such manner that the surfaces in contact with the explosives are of a material that will not react with the explosives;

(2) be used only to transport the explosives;

(3) be identified on all sides by the word “EXPLOSIFS” in letters at least 102 millimetres (4 inches) high;

(4) except while loading, have hatches and valves closed and locked at all times; and

(5) have a maximum capacity of 1,500 kilograms (3,307 pounds) of explosives.”.

**29.** Section 410 is amended by adding “, except reusable wrappings considered to contain explosives; the wrappings must be returned to an explosives magazine.”.

**30.** The following is inserted after section 415:

“**415.1.** Underground, vehicles or pumping equipment used to load bulk explosives must be parked in a storage site that must

(1) be used solely for that purpose;

(2) be located at least 60 metres (196.9 feet) from the places referred to in paragraph 2 of section 423;

(3) be identified as provided in paragraph 5 of section 415; and

(4) be laid out so that no other vehicle may collide with the vehicles or equipment.

The vehicles and equipment referred to in the first paragraph may contain only explosives residues that cannot be placed in a magazine.”.

**31.** Section 424 is amended

(1) by replacing “oil or grease” wherever those words appear in subparagraph *g* of paragraph 1 by “combustible liquids and grease”, with the necessary modifications;

(2) by replacing paragraph 2 by the following:

“(2) at least 15 metres (49.2 feet) from a main travelway for off-track motorized vehicles in the case of a magazine installed as of (*insert the date of coming into force of this Regulation*);

(3) such that it is impossible for a vehicle to collide with the explosives; and

(4) subject to paragraphs 1 and 2, according to the plans and specifications of an engineer in the case of a magazine installed as of (*insert the date of coming into force of this Regulation*).

No person may park a motorized vehicle in front of an explosives magazine, except to allow explosives to be transported without interruption.”.

**32.** Section 439 is amended in the French text by replacing “matériel” in subparagraph 3 of the first paragraph by “matériau”.

**33.** The following is inserted after section 443:

“**443.1.** To drill a drill hole or a round in a cemented rock fill,

(1) the controls of the drill must be equipped with a protective screen designed or manufactured according to the plans and specifications of an engineer; and

(2) the operator must remain at the controls of the drill for the duration of the drilling.”.

**34.** Section 448 is amended

(1) by striking out “and a blasting” after “in a loading”;

(2) by adding “; during the loading operation, no other equipment may come into contact with the loaded portion of the drill holes” at the end after “completed”.

**35.** The following is inserted after section 448:

“**448.1.** During any interval between loading and blasting, the explosives used must retain their inherent properties until the blasting.”.

**36.** Section 449 is amended

(1) by inserting “drill” after “loaded” in the part preceding paragraph 1;

(2) by replacing “the detonating cords” in paragraph 1 by “explosives”.

**37.** The following is inserted after section 449.1:

“**449.2.** No motorized vehicle may be driven, parked or stopped under loaded drill holes in the roof of an underground working unless

(1) the detonator wires and explosives are completely inserted in the holes; and

(2) the collar of the holes is capped.”.

**38.** Section 450 is amended in the French text

(1) by replacing “le lieu de sautage doit être évacué” in the first sentence by “la zone de tir doit être évacuée”;

(2) by replacing “les accès au lieu de sautage doivent être surveillés” in the second sentence by “l'accès à la zone de tir doit être surveillé”.

**39.** Section 455 is amended by replacing paragraph 2 by the following:

“(2) all drill holes must be loaded and workers and equipment not required must be evacuated from the blasting area before the primer detonators are connected to the main fuse or shock tubes.”.

**40.** Section 458 is amended in the French text by replacing “du lieu de sautage” by “de la zone de tir”.

**41.** Section 464 is replaced by the following:

“**464.** Before firing, all access routes and approaches to the blasting area must be closed using identified barricades or be guarded to prevent any unexpected arrival of persons in the blasting area.”.

**42.** Section 473 is amended in the French text by replacing “matériel” by “matériau”.

**43.** The following is inserted after section 476:

“**476.1.** Electrical equipment having a voltage of 440 volts or more, such as stations, substations or control panels of motorized equipment, must be maintained under a preventive maintenance program specific to the establishment that includes periodic inspections in accordance with the manufacturer’s specifications, if any.

The inspection results must be recorded in a register.”.

**44.** This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

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