

Mining Health and Safety Regulatory Amendment Proposal

Summary of Proposal

The Ministry of Labour is proposing various amendments to Regulation 854 (Mines and Mining Plants) under the *Occupational Health and Safety Act*. If approved, the proposed amendments would:

- Implement recommendations made by the Mining Legislative Review Committee;
- Implement recommendations from the Mining Health, Safety and Prevention Review Final Report regarding risk assessments and requirements for certain high hazards, including water management, traffic management and recording of seismic events;
- Update training requirement for surface diamond drill operations to reflect changes to the modular training program made by the Ministry of Training, Colleges and Universities (MTCU);
- Make corrections to and include explicit reference to appropriate workplace parties in the offences listed under Schedule 68 of Regulation 950 under the *Provincial Offences Act*; and
- Amend miscellaneous requirements to update terminology and certain industry standards and/or clarify certain requirements.

Regulation 854 (Mines and Mining Plants) under the *Occupational Health and Safety Act* (OHSA) applies to all mines and mining plants and to mining development in Ontario. Due to the serious and in some cases unique hazards faced by workers in the mining sector, the regulation sets out sector-specific requirements that protect the health and safety of workers at Ontario mines and mining plants.

The Mining Legislative Review Committee (MLRC) is established under Section 21 of the OHSA to advise the minister about occupational health and safety issues related to the mining sector. The MLRC is comprised of both labour and management representatives from the mining industry. As part of its mandate, the MLRC reviews the mining regulation and makes consensus based recommendations to the Minister of Labour on an on-going, as-needed basis. This proposal has been developed in consultation with MLRC.

It also includes proposals that would, if approved, implement certain priority recommendations set out in the Mining Health, Safety and Prevention Review (“the Mining Review”) Final Report regarding risk assessments, water management, traffic management and recording seismic events. The Mining Review, led by the Ministry of Labour’s Chief Prevention Officer, conducted a comprehensive review of health, safety and prevention topics to help ensure an even stronger and safer underground mining

sector. The Final Report and recommendations were publicly released in April 2015.

The Ministry of Labour (MOL) is also proposing updates to the training requirements for surface diamond drill operations to reflect changes to the modular training program developed by MTCU and the Mining Tripartite Committee (MTC), which includes both labour and management representatives.

The proposal also includes proposed amendments to the existing offences listed in Schedule 68 of Regulation 950 under the *Provincial Offences Act*. The proposed amendments would correct typographical errors in the current schedule and clarify which workplace parties could be issued a ticket by a MOL health and safety inspector if the listed offence was observed to have occurred at a workplace.

Finally, the proposal includes various proposed amendments that would update and clarify certain provisions to ensure that the requirements are kept current.

Summary of Proposed Regulatory Amendments

1. Risk Assessment

Current Regulatory Requirements

None

Proposed Amendments

- The Ministry is proposing to add new provisions that would require an employer at a mine to assess and manage the risks of hazards that may arise from the nature of the workplace, the type of work or the conditions of work.
- The assessment would need to take into account circumstances that would be common to similar workplaces and circumstances specific to the workplace.
- An employer would need, in consultation with the joint health and safety committee or health and safety representative, if any, to develop and maintain written measures to control the risks and, where practicable, eliminate the hazards identified in the assessment as likely to expose a worker to injury or illness.
- The measures shall include provision and use of:
 - Engineering controls;
 - Work practices;
 - Industrial hygiene practices;
 - Administration controls;
 - Substitution or reduction (i.e., using one tool or device instead of another) and
 - Personal Protective Equipment (if the other measures listed above are not obtainable or are not practicable).

- An employer would need to reassess the risks as often as is necessary but at least annually to ensure that the measures continue to protect the health and safety of workers.
- The results of the assessment or reassessment would need to be provided, in writing, to the joint health and safety committee or health and safety representative, if any. If there is none, then workers would need to be advised of the results and a written copy provided to them on request.
- The new requirements regarding a risk assessment would be in addition to existing requirements relating to specific hazards set out in Regulation 854.
- This proposal, if approved, would address a recommendation contained in the final report from the Mining Health, Safety and Prevention Review.

2. Water Management

Current Regulatory Requirements

- 87.** (1) A workplace in an underground mine shall,
- (a) be kept free from accumulations or flow of water which might endanger a worker in the area; and
 - (b) have a drainage system to conduct excess water to a pumping system capable of pumping the water to surface for disposal.
- (2) Where accumulations of water are likely to be present,
- (a) a borehole shall be drilled at least six metres ahead of the working face to protect against a sudden breakthrough of the water; and
 - (b) precautions shall be taken to control the flow of water.
- (3) A positive displacement water pump shall be equipped with a relief valve or system.
- (4) Precautions shall be taken to guard against an accumulation of water in a chute or raise where the material in the chute or raise may block drainage.

Proposed Amendments

- It is proposed that the existing section 87 would be revoked and replaced with new requirements that would maintain the substance of existing requirements relating to accumulations and unwanted flows of water while enhancing protections for workers from these hazards as follows:
 - Owners of underground mines would be required to have a written water management program that includes measures and procedures to:
 - Identify areas of the mine where water is likely to accumulate;

- Control the volume of water that may enter the mine (both naturally occurring and by mining process);
- Prevent unwanted/uncontrolled flows of water in all areas of the mine;
- Effectively and safely manage and remove water that poses a risk of injury to workers; and
- Maintain water removal and drainage systems and components, including but not limited to sumps and drain holes
- The program would need to be developed in consultation with the joint health and safety committee or health and safety representative, if any, and would need to be provided to them. The program would need to be kept readily available at the mine and would need to be reviewed after any significant alteration is made to the water removal and drainage system, and at least annually.
- An employer or supervisor in an underground mine would be required to take precautions to prevent accumulations and flows of water that may endanger a worker.
- If an accumulation of water that may endanger a worker occurs in any area of an underground mine, an employer shall ensure that:
 - the supervisor for the area is informed of the accumulation of water;
 - all workers in the area are notified of the accumulation of water; and
 - the area of the mine is adequately barricaded to prevent access.
- An employer or supervisor shall not allow any worker to do work in an area of an underground mine where there is an accumulation of water that may endanger a worker unless
 - the purpose of that work directly relates to managing and removing the accumulation of water, and
 - precautions have been taken to protect the health and safety of a worker performing this work.
- An underground mine would be required to have and maintain a water removal and drainage system that is capable of conducting excess water to surface for disposal.
- Any drain hole in an underground mine would be required to be:
 - Clearly marked by signs that are visible to and readable by workers and clearly distinguished from their surroundings
 - Identified on any drawings, plans and specifications relating to that area of the mine.
- In areas of an underground mine where water is likely to accumulate, an employer and supervisor shall ensure that a bore hole is drilled at least six metres ahead of the working face to protect against a sudden breakthrough of the water.

- Any drill or blast holes that may allow water to enter into a raise, chute or ore pass must be capped or grouted.
- The current requirement that a positive replacement water pump must be equipped with a relief valve or system would remain unchanged.
- This proposal, if approved, would address a recommendation contained in the final report from the Mining Health, Safety and Prevention Review and several recommendations from recent Coroner's Jury Inquests.

3. Traffic Management Program

Current Regulatory Requirements

None

Proposed Amendments

- The Ministry is proposing to add a new requirement that an employer at a mine would need to develop and maintain a written traffic management program.
- The traffic management program would need to include measures and procedures to:
 - Prevent collisions of motor vehicles by addressing hazards related to reduced or impeded visibility of motor vehicle operators; and
 - Protect the health and safety of workers and pedestrians who may be endangered by the movement of a motor vehicle.
- The program would need to be developed in consultation with the joint health and safety committee or health and safety representative, if any, and would need to be provided to them. The program would also need to be reviewed at least annually and a copy would have to be kept readily available at the mine.
- These new provisions are not intended to replace any existing requirements, and would be in addition to and supplement existing provisions in Regulation 854 that address specific motor vehicle hazards.
- This proposal, if approved, would address a recommendation contained in the final report from the Mining Health, Safety and Prevention Review.

4. Recording Seismic Events

Current Regulatory Requirements

72. A record of the occurrence of a rockburst or of an uncontrolled fall of ground at an underground mine shall be kept in writing setting out,

- (a) the time, location and extent of the occurrence;

- (b) injury, if any, caused to a worker thereby; and
- (c) any other relevant information, including the records of any monitoring instruments or devices before the occurrence.

Proposed Amendments

- In addition to a rockburst and an uncontrolled fall of ground, require that the following events be included in the record required in section 72:
 - A seismic event that is of a magnitude that is likely to cause significant rock mass damage, or
 - A seismic event that occurs in or near an active area of the mine.
- This proposal, if approved, would address a recommendation contained in the final report from the Mining Health, Safety and Prevention Review.

5. Surface Diamond Drill Training

Current Regulatory Requirements

11.1 (1) Employers engaged in the following types of mining operations shall establish and maintain the following training programs:

1. Underground diamond drilling operations,
 - i. Common Core for Underground Diamond Driller — Helper Level (Program #P770150),
 - ii. Common Core for Underground Diamond Driller — Runner Level (Program #P770150).
2. Surface diamond drilling operations,
 - i. Common Core for Surface Diamond Driller — Helper Level (Program #P770200),
 - ii. Common Core for Surface Diamond Driller — Runner Level (Program #P770200).

(2) An employer shall train each worker who commences employment after March 31, 1996 in the programs described in subsection (1) appropriate for that worker, and the training shall be completed before the worker has completed a total of 12 months of employment as a helper or runner in diamond drilling operations

(3) Subsection (2) does not apply if the worker successfully completed a program described in subsection (1) before being employed by the employer.

(4) A document issued by the Ministry of Training, Colleges and Universities showing that a worker has successfully completed a module of a program referred to in subsection (1) is conclusive proof for the purposes of this section of the worker's successful completion of the module.

Proposed Amendments

- The proposal would amend the modular training program requirements for surface diamond drill operations so that:
 - Employers at surface diamond drill operations would have to establish and maintain a three-part Common Core program as well as Speciality Modules;
 - Employers would need to ensure all workers who perform work as a diamond driller at a surface operation complete the appropriate modules in the program;
 - Part 1 (Basic) of the Common Core program would need to be completed before the worker begins performing work covered by the modules.
 - Part 2 (Helper) of the Common Core program would need to be completed within 12 months of the worker performing work covered by the modules.
 - Part 3 (Runner) of the Common Core program would need to be completed within 12 months of the worker performing work covered by the modules.
 - Each speciality module would need to be completed within 12 months of performing work covered by that module.
 - A worker who completed a module prior to being employed by the employer and shows proof of completion, or who has been accredited under a predecessor section and shows proof of accreditation, would be exempt from training.
 - A document issued by MTCU would be conclusive proof of successful completion of the modules.
- These proposed amendments would reflect changes made to the actual modular training program by the Mining Tripartite Committee and the Ministry of Training, Colleges and Universities.
- The current modular training program requirements for underground diamond drill operations would remain unchanged.

6. Miscellaneous

Current Regulatory Requirement

1 “non-combustible” means material or an assembly of materials that conforms to National Standard of Canada, CAN4-S114-80, “Standard Method of Test for Determination of Non-combustibility in Building Materials”;

Proposed Amendment

- Propose that the definition of “non-combustible” be amended to be consistent with the definition of the same term that is in Section 1.4.1.2 of the Building Code (that definition currently refers to the most recent (2005) version of the relevant standard).

Current Regulatory Requirement

24. A notice under subsection 57 (9) of the Act shall be in the following form:

Take Notice that this
.....
(specify the “place”, “matter” or “thing”, as the case may be)
.....
is a danger or hazard to the safety of workers employed in or having access to these premises and the use thereof shall be discontinued immediately until the inspector’s order of
.....
(date)
to
(name of employer or owner)
.....
(address of employer or owner)
has been complied with.
No person, except an inspector appointed under the <i>Occupational Health and Safety Act</i> , shall remove this notice unless authorized by an inspector under that Act.
Dated the day of , 20....
.....
.....
(signature of inspector)

Proposed Amendment:

- Propose to revoke this provision to reflect previous amendments that were made to section 57(9) of the OHSA which repealed the phrase "a notice in the prescribed form" and substituted "a notice of the order, in a form obtained from the Ministry".
- As a result of those legislative amendments, this form, which is used only by MOL inspectors, can be removed from this regulation as these “stop work tag” forms are no longer need to be prescribed.
- A similar provision was already revoked in O. Reg. 213/91 (Construction Projects).

Current Regulatory Requirement

71 (3) An overhead protective device required by subsection (1) shall comply with the falling-object protective structures requirements of International Standard ISO 3449;1992 (E) “Earth-Moving Machinery — Falling-Object Protective Structures — Laboratory Tests and Performance Requirements”.

Proposed Amendment

- Propose to update reference of the relevant standard to the current version, and specifically ISO 3449-05 (R2014) “Earth-Moving Machinery — Falling-Object Protective Structures — Laboratory Tests and Performance Requirements”
- The update would reflect current industry practice and is required as the 1992 version is no longer in use.

Current Regulatory Requirement

167. Clause 36-204 of CSA Standard C22.1-1982 is modified to the extent that a single pole disconnecting fuse of adequate interrupting capacity may be used to protect a transformer whose capacity is 100 kilovoltamperes per phase or less when operating at a voltage less than 7,500 volts.

Proposed Amendment

- Propose to revoke this provision as this standard is not specifically adopted in the regulation and therefore cannot be modified by regulation.

Current Regulatory Requirement

188. (1) Devices commonly known as “manlifts” shall meet the standards set out in the Code for Manlifts dated the 25th day of September, 1979 and issued by the Ministry.

(2) A manlift shall not be used before drawings showing its arrangements are completed and readily available.

(2.1) After the manlift’s initial use, the drawings shall be kept readily available at the mine site.

(3) Each component which may affect the safe operation of a manlift shall be examined and tested by a competent person,

- (a) before initial use; and
- (b) at intervals not exceeding one month.

Proposed Amendment

- Propose to revoke provision as manlifts are no longer in use in Ontario mines.

Current Regulatory Requirement

248 (10) A record of a failure and accident involving a mechanical part of a mine hoisting plant shall be made in the Hoisting Machinery Record Book by the supervisor in charge of the mechanical hoisting equipment.

Proposed Amendment

- Propose to change from “failure and accident” to “failure or accident” to make provision consistent with similar requirement in section 247(5) and to reflect current industry practice.

Current Regulatory Requirement

281.1 (3) A first aid room shall be in the charge of a person,

- (a) who is certified in Advanced St. John Ambulance First Aid and in cardio-pulmonary resuscitation or who holds an equivalent qualification;
- (b) who is readily available; and
- (c) who does not perform other work of a nature that is likely to adversely affect the person’s availability to administer first aid.

Proposed Amendments

- Propose to amend 281.1(3)(a) to read “who is certified in Standard St. John Ambulance First Aid – Mine Rescue and in oxygen administration or who holds an equivalent qualification”;
- The Advanced First Aid course currently referenced is no longer offered by St. John Ambulance and needs to be replaced;
- The Standard First Aid – Mine Rescue course includes cardio-pulmonary resuscitation so that lesson does not have to be listed separately;
- In addition to the lessons that make up the Standard First Aid – Mine Rescue course, it is felt that the person in charge of a first aid room should also complete the oxygen administration lesson.

Current Regulatory Requirements

287. In sections 288 to 293,

“radon daughters” means polonium-218 (RaA), lead-214 (RaB), bismuth-214 (RaC) and polonium-214 (RaC’);

“WL” means working level of radon daughters as determined in accordance with subsection 288 (1);

“WLM” means working level month of radon daughters as determined in accordance with subsection 288 (2).

288. (1) One working level of radon daughters is the amount of any combination of radon daughters in one litre of air that will release 1.3×10^5 mega electron volts of alpha particle energy during their radioactive decay to lead-210 (RaD).

(2) One working level month of radon daughters is the amount of a person's exposure to radon daughters resulting from breathing air that contains one WL for a period of 170 hours.

289. (1) Samples of air to which workers may be exposed in an underground mine shall be tested for the presence of radon daughters by a competent person.

(2) The air to which workers may be exposed in an underground mine shall be tested,

- (a) before work begins in a mine that is being reopened; and
- (b) within six months after the commencement of excavation of a new mine.

(3) The air to which workers may be exposed in an underground mine shall be retested,

- (a) at least monthly, if the concentration of radon daughters in a sample exceeds 0.1 WL; and
- (b) at least quarterly, if the concentration of radon daughters in a sample is greater than 0.06 WL up to and including 0.1 WL.

(4) If the concentration of radon daughters in a sample is less than or equal to 0.06 WL, a competent person shall assess once a year whether to retest the air in the work area in the underground mine and in making the assessment shall consider previous test results and changes in the mine or its operations.

(5) An employer shall keep a record of the results of all tests of samples of air in an underground mine and shall give a copy of all results to the joint health and safety committee or the health and safety representative, if any.

(6) An employer shall post the results of all testing in a place where they are likely to come to the attention of workers as soon as the results become available and shall keep them posted for at least fourteen days.

(7) Samples of air in an underground mine shall be tested for the presence of radon daughters by a competent person within one year after the date that this section comes into force.

(8) Subsection (7) does not apply with respect to an underground mine if in a previous test the concentration of radon daughters was less than or equal to 0.06 WL, if a competent person considers that a test is not necessary in the circumstances, having assessed previous test results and changes in the mine or its operations.

290. (1) Every employer shall ensure that the airborne concentration of radon daughters to which workers may be exposed in an underground mine is reduced to the lowest practical level in accordance with good industrial hygiene practice.

(2) An employer shall ensure that no worker who is continuously employed by the employer during a year inhales air which exposes the worker to more than one WLM.

291. If the concentration of radon daughters to which a worker may be exposed in an underground mine exceeds 0.33 WL, the employer,

- (a) shall immediately remove all workers from the affected area of the mine;
- (b) shall give written notice of the occurrence to the joint health and safety committee or health and safety representative, if any;
- (c) shall implement the measures and procedures required by subsection 255 (1);
- (d) shall provide the written instructions required by subsection 255 (3) to all workers assigned to do remedial work; and
- (e) shall provide to workers doing remedial work and require the use of respiratory equipment appropriate to prevent or limit the workers' exposure to radon daughters.

292. (1) An employer shall develop and implement in consultation with the joint health and safety committee or the health and safety representative, if any, a written description of work practices for a workplace at which the airborne concentration of radon daughters exceeds 0.1 WL.

(2) The written description of work practices shall include procedures for investigating the cause of and reducing the level of the airborne concentration of radon daughters to the lowest practical level in accordance with good industrial hygiene practice.

(3) An employer shall post the written description of work practices in a place where it is likely to come to the attention of all workers who may be affected by exposure to radon daughters.

293. (1) This section applies with respect to a workplace where a written description of work practices referred to in section 292 has been implemented.

(2) An employer shall train workers in radiation hazards and protection practices.

(3) An employer shall calculate in WLMs the annual cumulative level of exposure of a worker who is exposed to an average concentration of radon daughters greater than 0.1 WL over a period of eight hours.

(4) An employer shall keep a record of the information calculated under subsection (3) and shall give a copy of the record,

- (a) to the worker or the next of kin or personal representative of a deceased worker, on receipt of a written request; and
- (b) to the joint health and safety committee or the health and safety representative, if any.

(5) An employer shall forward a copy of a record kept under subsection (4) to the National Dose Register established under the *Atomic Energy Control Act* (Canada).

Note: On January 1, 2016, subsection 293 (5) of the Regulation is amended by striking out "National Dose Register established under the *Atomic Energy Control*

Act (Canada)” and substituting “National Dose Registry administered by Health Canada’s Radiation Protection Bureau”.

Proposed Amendments:

- Propose to replace the term “radon daughters” with “radon progeny” to reflect current nomenclature.
- The substance of these provisions would remain unchanged.

7. Schedule of Offences under the Provincial Offences Act

Current Schedule

SCHEDULE 68

Regulation 854 of the Revised Regulations of Ontario, 1990 under the *Occupational Health and Safety Act*

Item	Column 1	Column 2
1.	Fail to use fall arrest system	subsection 14 (1)
2.	Unprotected hazardous opening in floor or other surface	subsection 54 (2)
3.	Fail to use fall arrest system while in container of bulk material	clause 54 (2) (a)
4.	Fail to make workplace safe by scaling or other measures	subsection 67 (1)
5.	Unguarded opening in an underground mine	section 74
6.	Vertical height of working face more than 1.5 metres above equipment	clause 88 (1) (b)
7.	Fail to slope working face at angle of repose	clause 88 (2) (a)
8.	Vertical height of working face greater than 3 metres	clause 88 (2) (b)
9.	Undercut the working face	subsection 88 (3)
10.	Fail to remove loose material from rim of surface mine	subsection 91 (1)
11.	Fail to remove trees or vegetation from rim of surface mine	subsection 91 (1)
12.	Fail to sound warning of motor vehicle running on rails	clause 103 (d)
13.	Fail to wash face	subsection 136 (1)
14.	Fail to examine face for misfires and holes	subsection 136 (1)
15.	Drill within 160 mm of blasted holes	subsection 136 (4)
16.	Sample within 160 mm of blasted holes	subsection 136 (4)
17.	Electrical switches not locked and tagged	subsection 160 (1)
18.	Fail to provide flow of air to diesel unit by mechanical ventilation	subsection 183 (2)
19.	Unguarded moving part of machinery	subsection 185 (1)
20.	Fail to have automatic protective device on machinery	subsection 185 (2)
21.	Fail to guard conveyor pulley	clause 196 (2) (d)

Proposed Amendments

- Propose to include reference to specific workplace parties for each of the existing offences listed in the schedule, consistent with other schedules in Regulation 950 of the POA set out offences relating to OHSA and its regulations.
- Propose to correct typographical errors and erroneous references to incorrect sections of Regulation 854 in respect of the offences listed in the schedule.

Comments Due Date

January 15, 2016

Address

Mining Health and Safety Regulatory Amendment Project
Health and Safety Policy Branch
Ministry of Labour
400 University Avenue, 12th Floor
Toronto ON M7A 1T7

Notice to Consultation Participants

Submissions and comments provided to the Ministry of Labour are part of a public consultation process to solicit views on the proposed new regulatory requirements related to Regulation 854 (Mines and Mining Plants). This process may involve the ministry disclosing submissions, comments, or summaries of them, to other parties during and after the public consultation period. However, personal information in the ministry's possession, such as names and contact details, will not be disclosed except as required by law.

If you, as an individual, want to make a submission or provide comments and you do not want personal information to be made public, you should not include it or other information by which you could be identified in the main body of the submission. As well, you should not include the names of other individuals or any other information from which other individuals could be identified. By submitting your comments you are consenting to the use of your information, which may include personal information, by the Ministry of Labour.

Personal information collected during this consultation is under the authority of Section 70 of the *Occupational Health and Safety Act* and is in compliance with section 38 (2) of the *Freedom of Information and Protection of Privacy Act*.

If you have any questions regarding freedom of information or privacy matters, you may contact the ministry's Freedom of Information and Privacy Office at 416-326-7786.