Improving Health and Safety Requirements for Mines and Mining Plants

Comparison of Current Regulatory Requirements with Proposed Regulatory Changes

Summary of Proposal

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

- Harmonize requirements in Regulation 854 with other regulations under the OHSA, including amending the definition of nondestructive test and related requirements to harmonize with O. Reg. 213/91 (Construction Projects), thereby improving the clarity, consistency and transparency of these provisions;
- Revoke several provisions that are redundant or duplicative with other requirements, thereby reducing regulatory burden;
- Update various references to recognized industry standards to keep the Regulation up-to-date;
- Amend existing requirements regarding the allowable height of working faces at surface mines and regarding oxygen/acetylene containers, providing
 workplaces with alternate ways of complying with requirements, thereby increasing flexibility for mines and mining plants; and
- Amend miscellaneous requirements to update terminology and/or clarify certain requirements.

The Ministry is accepting feedback on the proposed amendments until **March 29, 2019**. For more information on how to submit your comments please see the "How to Participate" section at the end of this document.

Background

The MOL regularly reviews the OHSA and its regulations to ensure accuracy and consistency with current industry practices and standards to increase clarity for stakeholders and to improve enforcement.

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 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.

Important Information

To view this document in an accessible format, please see the official consultation paper "Mining Health and Safety Regulatory Amendment Proposal". Alternatively, you may request a copy by:

Email: WebHSpolicy@ontario.ca

Fax: 416-326-7650

Write to us:

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

Current Requirements	Proposed Regulatory Changes	Comments
1. "nondestructive test" means the examination of a part without subjecting it to physical distortion, damage or destruction;	 Replace the current definition of "nondestructive test" with the one currently found in O. Reg. 213/91 (Construction Projects), which is: "non-destructive test" means one of the following methods of testing or examining a material, component or part to evaluate its condition without subjecting it to physical distortion, damage or destruction: Eddy current testing. Magnetic particle testing. Liquid penetrant testing. Radiographic testing. Ultrasonic testing; Add a new provision, similar to subsection 1(1.1) of O. Reg. 213/91, which states: Every non-destructive test required by this Regulation shall be carried out and interpreted by a person who has been certified by Natural Resources Canada to the appropriate level in accordance with CAN/CGSB Standard 48.9712-2014, Non-destructive Testing – Qualification and Certification of Personnel. 	The proposed amendments would harmonize the definition of non-destructive test with O. Reg. 213/91 and improve clarity and transparency by more clearly reflecting the Ministry's current expectations regarding requirements related to these types of tests.
11. (8) A document issued by the Ministry of Advanced Education and Skills Development showing that a worker has successfully completed a module of a program referred to in subsection (1) or (7) is conclusive proof for the purposes of this section of the worker's successful completion of the module.	Revoke existing subsections 11(8), 11.1(4), 11.1.1(4), 11.2(5), 11.2.1(4) and 11.2.2(4) and replace them with a single provision stating that a document issued by the Ministry of Training, Colleges and Universities showing a worker has successfully completed a module of a program	The proposed amendments would help streamline existing requirements by replacing six subsections with a single provision that clarifies what constitutes conclusive proof of

Current Requirements	Proposed Regulatory Changes	Comments
11.1. (4) A document issued by the Ministry of Advanced Education and Skills Development 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.	referenced in sections 11 to 11.2.2 is conclusive proof of the worker's successful completion of that module. • References to "Ministry of Advanced Education and Skills Development" in modular training requirements would be replaced with "Ministry of Training, Colleges and	successful completion of this training. These amendments would be purely administrative intended to streamline existing provisions without affecting
11.1.1. (4) A document issued by the Ministry of Advanced Education and Skills Development showing that a worker has successfully completed a module of the program referred to in subsection (1) is conclusive proof for the purposes of this section of the worker's successful completion of the module.	Universities".	 their application. The proposed changes would also keep the regulation up-to-date by reflecting the current name of the ministry responsible for developing,
11.2. (5) A document issued by the Ministry of Advanced Education and Skills Development 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.		maintaining and issuing documents related to the training programs set out in these sections.
11.2.1. (4) A document issued by the Ministry of Advanced Education and Skills Development showing that a worker has successfully completed a module of the program referred to in subsection (1) is conclusive proof for the purposes of this section of the worker's successful completion of the module.		
11.2.2. (4) A document issued by the Ministry of Advanced Education and Skills Development showing that a worker has successfully completed a module of the program referred to in subsection (1) is conclusive proof for the purposes of this section of the worker's successful completion of the module.		
11.2.3. The training programs described in sections 11 to 11.2.2 must be developed jointly by labour and management in		

Current Requirements	Proposed Regulatory Changes	Comments
the mining industry and the Ministry of Advanced Education and Skills Development and must be approved by that Ministry.		
22. (1) For the purpose of subsection 29 (2) of the Act, drawings, plans and specifications to be kept and maintained shall be,	Revoke subsections 22(4) and 22(5).	Subsections 22(4) and (5) and clause 23(3)(e) are duplicative
(a) a surface plan showing,		and do not reflect current industry practice.
(i) the boundaries of a mining property,		maddity practice.
(ii) the co-ordinates of the section of a mining property under which mining has been done,		Copies of closure plans are already required to be filed with
(iii) all lakes, streams, roads, railways, electric power transmission lines, main pipe lines, buildings, adits, surface workings, diamond drill holes, out-croppings of rock, dumps, tailing- disposal sites and openings to an underground mine, and		the Ministry of Energy, Northern Development and Mines under the <i>Mining Act</i> . The proposed revocation of subsection 22(4) would mean the removal of a requirement to also file those plans with the Ministry of
(iv) stopping of openings on the surface to an underground mine;		Labour.
(b) plans on a horizontal plane with separate drawings for each level showing all underground workings, including shafts, tunnels, diamond drill holes, dams and bulkheads;		 Revoking these provisions would eliminate duplicative or out-of-date requirements, thereby reducing unnecessary burden on businesses.
(c) plans on a vertical plane of all mine sections at suitable intervals and azimuths, showing all shafts, tunnels, drifts, stopes and other mine workings in relation to the surface, including the location of the top of the bedrock,		Burdon on businesses.

Current Requirements	Proposed Regulatory Changes	Comments
the surface of the overburden and the bottom and surface of any known watercourse or body of water; and		
(d) a plan or diagram showing,		
(i) the position of all fixed electrical apparatus and communication systems in the mine,		
(ii) the routes of all fixed power feeders and fixed branch feeders properly noted and referenced, and		
(iii) the rating of all electrical feeder control apparatus and equipment.		
(2) The surface plan prescribed by clause (1) (a) shall show,		
(a) the boundaries of the mining property,		
(i) related to the lot fabric where the property is in a subdivided township,		
(ii) connected to the nearest mile post on a surveyed township boundary where the property is in an unsubdivided township, or		
(iii) connected to the nearest,		
(A) mile post on a surveyed township boundary,		
(B) base line, or		
(C) meridian line,		
where the property is in unsurveyed territory, and		

Current Requirements	Proposed Regulatory Changes	Comments
(iv) connected to a co-ordinate control survey monument if one exists within ten kilometres of the property; and		
(b) the position and form of a permanent bench mark to which all elevations are related, and the permanent bench mark shall be related,		
(i) where a Canadian Geodetic Datum bench mark exists within ten kilometres, to that bench mark, and		
(ii) to the permanent bench mark of each adjoining property.		
(3) The measurements under clause (2) (a) shall be consistent with accuracy standards for third order horizontal control surveys based on Ontario Specifications for Horizontal Control Surveys, 1979.		
(4) Where operation at a mine is terminated or suspended, copies of the plans mentioned in subsection (1) shall be filed with the Ministry.		
(5) Copies of all plans shall be on a legible scale and suitable for microfilming.		
23. (3) Where operations at a mine or mining plant are discontinued or suspended, the notice mentioned in subsection (2) shall advise whether,	Revoke clause 23(3)(e).	Revoking this provision would be consequential to the proposed revocation of
(a) stopping and protection has been done as prescribed in section 18;		subsection 22(4).

Current Requirements	Proposed Regulatory Changes	Comments
(b) explosives have been disposed of as prescribed in subsection 122 (5);		
(c) removal and disposition of hoisting ropes has been done as prescribed in subsection 228 (17);		
(d) disconnection from the electrical power source has been done and has been confirmed in writing by the appropriate electrical utilities inspection department; and		
(e) plans required by section 22 have been filed with the Ministry.		
89. Where metallic or non-metallic rock is being removed from a surface mine,	to exceed a vertical height of 25 metres if a professional engineer certifies that the safety of workers would not be endangered as a result. would provide surface n with an alternative to ex requirements, thereby increasing flexibility, wh	The proposed amendment would provide surface mines
(a) the vertical height of the working face shall not be more than twenty-five metres; and		1
(b) except where a tunnelling method is used to remove the rock, no undercutting of the working face shall be permitted or done.		maintaining worker health and
		The proposal would align Ontario with other jurisdictions such as Alberta and Nova Scotia.
194. (11) The regulators and manifolds of oxygen and acetylene cylinders shall be disconnected when the cylinders	Amend subsection 194(11) to allow the regulators and manifolds of oxygen and acetylene cylinders to remain	The proposed amendment would update requirements to
are being transported underground.	connected during transportation of these cylinders if the construction of the cylinder caps is such that remaining	reflect current technology. Modern design for these cylinders precludes removing
		regulators and manifolds.

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	connected would not endanger worker health and safety during transportation.	Disconnecting the manifolds and regulators on these cylinders could inadvertently create hazards to worker health and safety.
		The proposal would provide flexibility to workplaces, address compliance issues with current requirements and reflect current technology and design of these cylinders.
 195. (8) A trained person shall examine, using non-destructive testing techniques, the shafting of each hoist drive train of a production crane to determine if it is in sound condition before the crane is first used. (8.1) After a production crane has been first used, a trained person shall examine, using non-destructive techniques, the shafting of each hoist drive train of the crane at a frequency at least equal to that recommended by its manufacturer or, if 	Consequential amendments would be made to subsections 195(8) and (8.1) to reflect the proposed amended definition of "non-destructive test". The amendments would clarify that the shafting of each hoist drive train of a production crane would need to be examined using the appropriate methods of testing or examining set out in the proposed new definition of non-destructive test. Subsection (8.1) would further be amended to clarify that the frequency would need to be specified by a professional engineer.	The proposed amendments to subsections 195(8) and (8.1) would be consequential to the proposed adoption of a revised definition of "non-destructive test" and would not substantially change the requirements.
there is no manufacturer's recommendation, at a frequency at least equal to that specified by a competent person in order to determine if it is in sound condition. (13) A person operating a production crane shall,	 The medical certificate form prescribed in subsection 195(15) would be revoked. Consequential amendments would be made to subsections 195(13) and (14) to clarify that the physician must state on the certificate that he/she examined the person and certifies 	The proposed amendments to subsections 195 (13) – (15) would streamline existing requirements and increase flexibility by removing the requirement for a prescribed form for the medical certificate.

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 (a) be physically and mentally fit to discharge the duties of a crane operator; (b) undergo a medical examination by a physician before commencing work as a crane operator and every twelve months thereafter; (c) obtain a crane operator's medical certificate from the physician certifying that the person is physically fit to operate a crane and is not subject to any infirmity of body or mind that may interfere with the duties of a crane operator. (14) The crane operator's medical certificate shall, (a) expire one year from its date; and (b) be kept on file and recorded on a posted list of active crane operators. (15) The crane operator's medical certificate shall be in the following form: Occupational Health and Safety Act CRANE OPERATOR'S MEDICAL CERTIFICATE I have this day examined name:	dated and signed by the physician. Additional amendments would streamline the remaining provisions.	 Current protections would not be affected as physicians would still need to examine production crane operators and certify their physical fitness in writing, just not using the prescribed form for the medical certificate. Copies of a medical certificate form that could be used by physicians for this purpose would remain available online for those who choose to use them.

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subject to any infirmity of body or mind that may interfere with the duties of a crane operator.		
(signature of physician)		
(date)		
 197. (9) The main shafting of the drive train of a raise climber shall be subjected to a nondestructive test by a competent person to determine if it is in sound condition, (a) before the raise climber is first put into service; and (b) during every major overhaul of the raise climber and not less frequently than once for every 4,000 hours of use. 	Consequential amendment would be made to subsection 197(9) to reflect the proposed amended definition of "non-destructive test". The amendment would clarify that the main shafting of the drive train of a raise climber would need to be examined using the appropriate methods of testing or examining set out in the proposed new definition of non-destructive test.	The proposed amendments would be consequential to the proposed adoption of a revised definition of "non-destructive test" and would not substantially change the requirements.
225. (5) The shaft of a sheave shall be examined for flaws by a non-destructive test by a person competent in such testing,(a) before being put into service in a particular location;(b) after installation; and(c) at a regular frequency as recommended by a person competent in such testing.	Consequential amendment would be made to subsection 225(5) to reflect the proposed amended definition of "non-destructive test". The amendment would clarify that the shaft of a sheave would need to be examined using the appropriate methods of testing or examining set out in the proposed new definition of non-destructive test and to clarify that the frequency would need to be specified by a professional engineer.	The proposed amendments would be consequential to the proposed adoption of a revised definition of "non-destructive test" and would not substantially change the requirements.

Current Requirements	Proposed Regulatory Changes	Comments
 228. (1) A shaft rope shall not be used unless, (a) a 2.5 metre representative sample has been subjected to a destructive test in accordance with CSA Standard G4-00 "Steel Wire Rope for General Purpose and for Mine Hoisting and Mine Haulage"; and (b) a Certificate of Test has been obtained from a cable testing laboratory approved by the Minister. (2.1) A piece of the rope at least 2.5 metres long located at the lower end above the attachment to the conveyance shall be cut off, have its ends fastened to prevent unravelling and be tested in accordance with CSA Standard G4-00 "Steel Wire Rope for General Purpose and for Mine Hoisting and Mine Haulage". 	 The references to the CSA Standard for wire rope testing in subsections 228 (1) and (2.1) would be updated to the most recent (2015) version of the standard. However, new requirements in the 2015 standard for high tensile wire ropes in shaft sinking applications, which are not currently required to be tested under Regulation 854, would not be adopted. 	 The updates to seizing methodology and testing validation requirements in the latest CSA standard improve the quality of destructive testing and improve the safety of end users. Adopting the latest version of CSA Standard G4 is not anticipated to result in any substantive change to employers, as the testing is performed by the Ministry's Materials Testing Laboratory. The proposal is consistent with Ontario's regulatory principles to adopt recognized industry standards as appropriate.
229. (3) No wedge type attachments shall be used unless the attachments are,(a) in sound condition; and(b) certified at least once every six years of use as being in sound condition by a competent person or by the manufacturer.	Amend clause 229(3)(b) to require that wedge type attachments be certified every six years by a competent person or the manufacturer as meeting manufacturer's specifications rather than the current "being in sound condition".	 Clause 229(3)(a) already requires that wedge type socket attachments be in sound condition. The proposal would reflect current industry practice and would not substantially change current requirements.

Current Requirements	Proposed Regulatory Changes	Comments
 238. (2) A person operating a hoist shall, (a) undergo a medical examination by a physician before commencing work as a hoist operator and every twelve months thereafter; and (b) obtain a hoist operator's medical certificate from the physician certifying that the person is physically fit to operate a hoist and is not subject to any infirmity of body and mind that may interfere with the duties of a hoist operator. (3) A hoist operator's medical certificate shall, (a) be kept available for inspection; and (b) expire twelve months after its date. (4) A hoist operator's medical certificate shall be in the following form: Occupational Health and Safety Act HOIST OPERATOR'S MEDICAL CERTIFICATE I have this day examined Name	 The medical certificate form in subsection 238(4) would be revoked. Consequential amendments would be made to subsections 238(2) and (3) to clarify that the physician must state on the certificate that he/she examined the person and certifies his or her physical fitness, and that the certificate must be dated and signed by the physician. Additional amendments would streamline the remaining provisions. 	 The proposed amendments would streamline existing requirements and increase flexibility by removing the prescribed form for the medical certificate. Current protections would not be affected as physicians would still need to examine hoist operators and certify their physical fitness in writing, just not using the prescribed form for the medical certificate. Copies of a medical certificate form that could be used by physicians for this purpose would remain available online for those who choose to use them.

Current Requirements	Proposed Regulatory Changes	Comments
and certify he/she is physically fit to operate a hoist and is not subject to any infirmity of body or mind that may interfere with the duties of a hoist operator.		
Signature of physician		
(date)		
248. (7) An examination shall be made by a competent person, using non-destructive methods acceptable to a professional engineer, to determine the condition of the,	 Consequential amendments would be made to subsections 248(7) and (7.1) to reflect the proposed amended definition of "non-destructive test". The amendments would clarify that the items listed in subsection (7) must be examined using 	The proposed amendments would be consequential to the proposed adoption of a revised
(a) mine hoist shafting, brake pins and linkages; and	the appropriate methods of testing or examining set out in	definition of "non-destructive test" and would not
(b) structural parts, attachment pins and draw bars of a shaft conveyance and counterweight.	the proposed new definition of non-destructive tests and to clarify that the intervals would need to be recommended by a professional engineer.	substantially change the requirements.
(7.1) The examination shall be made before the parts are first used and at regular intervals that are no greater than those recommended by the competent person performing the examination.		

Current Requirements	Proposed Regulatory Changes	Comments
251. (2) A direct gas fired non-recirculating make-up heater being used for heating a mine or a mining plant shall be installed, operated and maintained to conform to CSA Standard 3.7-77, Direct Gas-Fired Non-Recirculating Make-Up Air Heaters.	 The CSA Standard for air heaters would be updated to the most recent (2015) version. However, the provision would be amended to clarify that the 1977 version of the standard continues to apply to those air heaters currently found in mines and mining plants, while the newer version would apply to equipment on a go-forward basis. 	 The proposal would keep the Regulation up-to-date, while minimizing impact on businesses by "grandfathering" existing equipment. The proposal is consistent with Ontario's regulatory principles to adopt recognized industry standards as appropriate.
265. An air supplied respirator that provides compressed air for breathing purposes shall comply with CSA Standard Z180.1-00, "Compressed Breathing Air and Systems".	The CSA Standard for compressed breathing air and systems would be updated to the most recent (2018) version).	The latest version of the CSA Standard provides greater clarity to stakeholders and improves worker health and safety in respect of ambient air systems (AAS) and sampling and analysis requirements for compressed breathing systems.
		The proposal is consistent with Ontario's regulatory principles to adopt recognized industry standards as appropriate.
285. Where a box, drum or other container contains a biological or chemical agent which is likely to affect the health or safety of a worker, the box, drum or other container shall be labelled in clear legible print to identify the agent and the label shall state the precautions to be taken in the handling, use, storage and disposal of the agent.	Revoke section 285.	Section 285 would be revoked as requirements for labelling are covered by Reg. 860 (Workplace Hazardous Material Information System (WHMIS)).

Anticipated Impact on Business

All ministries are subject to requirements set out in the Reducing Regulatory Costs for Business Act, 2017 (RRCBA), which came into force January 1, 2018. As part of its obligations under the RRCBA, the Ministry of Labour is conducting a Regulatory Impact Analysis (RIA) of these proposed amendments. A RIA is a process of identifying and assessing the potential benefits and costs of proposed regulations.

It is anticipated that most of the proposed amendments outlined above would not result in any additional costs to workplaces.

There may be some minimal additional costs associated with the proposal to update the CSA Standard for air supplied respirators. Changes to the standard may result in additional costs of approximately \$1,000 to upgrade existing air cylinder filling stations, at those mines where these stations exist, but it is not expected that these would exceed \$20,000 total for all mines. Any additional upfront costs (estimated at a further \$1,000 per mine) that are anticipated as a result of the changes to the standard are expected to be offset by long term cost savings associated with other changes in the standard, and therefore are assumed to be neutral.

In addition, although the proposal to amend requirements for non-destructive testing would include a new provision that persons who conduct this testing need to be certified in accordance with the applicable CSA Standard, the administrative costs associated with this proposal are anticipated to be minimal, if any. It is estimated that the costs of certification would be approximately equal to the current administrative and training costs of ensuring these people are "competent" or "trained" within the meaning of the current regulatory requirements.

The impact of these proposed changes would be limited. The requirements for non-destructive tests apply only in underground mines or to production cranes, of which there are a limited number in the province. In addition, many mines contract with a third party to conduct this type of testing or have one worker "in-house" who performs these tests at multiple mine sites. Many of these persons are assumed to already be, or could easily become, certified at minimal to additional direct cost to business.

Workplaces would need to spend approximately one to two hours to review and learn about the proposed changes, including reading the updated industry standards where applicable. The estimated administrative costs associated with this is expected to be between \$30-60 per mine, or approximately \$150,000-\$330,000 for all Ontario.

Some of the proposals that would revoke certain out-of-date provisions could result in cost savings to mines and mining plants. For example, the proposed elimination of duplicative requirements to file certain closure plans with the Ministry could result in savings to business. In order to comply with the existing filing requirements, as written, it is estimated that it costs a mine approximately \$200-500 (including copying documents, filing a hard copy in person or via courier, etc.). As the requirement applies to all underground and surface mines in the province, it is estimated that revoking these provisions could result in savings over \$1,000,000 associated with complying with the Regulation as currently written.

There are not expected to be any increased costs to the public, not-for-profit sector or government as a result of these proposed amendments.

As part of this consultation, the Ministry is seeking your comments and feedback pertaining to the anticipated costs and benefits of implementing these proposed amendments. We would be particularly interested in receiving information about whether or not you agree with our assessment, as set out above, or how you think the proposed amendments would impact costs associated with: capital and equipment; training and education; maintenance of new or previously owned equipment; labour; record keeping and reporting; other operating costs; and, other administrative costs. The Ministry will consider the information provided as we develop the proposal and the associated RIA.

How to Participate

The consultation period ends on March 29, 2019.

Send us your comments:

Email: WebHSpolicy@ontario.ca

Fax: 416-326-7650

Write to us:

Ministry of Labour Health and Safety Policy Branch Mining Health and Safety Regulatory Amendment Project 400 University Ave., 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 and to facilitate the Ministry's development of proposed new regulatory requirements related to Regulation 854 (Mines and Mining Plants). This process may involve the Ministry publishing (in hard copy and on the internet) your submissions, comments, or summaries of them during and after the public consultation period. In addition, the Ministry may disclose your submissions, comments or summaries of them to third parties as part of the consultation process or where required by law. 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.

If you identify yourself or other individuals in the body of the submission, this identifying information may be published or otherwise disclosed to the public. Any name and contact information provided outside of the body of the submission will not be disclosed by the Ministry unless required by law. Any individual who provides a submission and indicates an affiliation with an organization will be considered a representative of that organization and his or her name and other identifying information may be published or otherwise disclosed.

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.