

Coal Mining Safety and Health (Use of Particular Electrical Equipment in Sealed Underground Mines) Amendment Regulation 2019

Explanatory notes for SL 2019 No. 232

made under the

Coal Mining Safety and Health Act 1999

General Outline

Short title

Coal Mining Safety and Health (Use of Particular Electrical Equipment in Sealed Underground Mines) Amendment Regulation 2019

Authorising law

Section 282 of the *Coal Mining Safety and Health Act 1999* (the Act)

Policy objectives and the reasons for them

The objective of the *Coal Mining Safety and Health (Use of Particular Electrical Equipment in Sealed Underground Mines) Amendment Regulation 2019* (the Amendment Regulation) is to permit the safe use of non-explosion protected electrical equipment in a sealed underground coal mine, or sealed part of an underground coal mine, if the atmosphere is not explosive.

The Act establishes a legislative framework aimed at protecting the safety and health of persons at coal mines and persons who may be affected by coal mining operations; requiring that the risk of injury or illness to any person resulting from coal mining operations be at an acceptable level (i.e. to be within acceptable limits and as low as reasonably achievable); and providing a way of monitoring the effectiveness and administration of provisions relating to safety and health under the Act and other mining legislation.

The *Coal Mining Safety and Health Regulation 2017* (the Regulation) supports the operation of the Act and prescribes requirements including in relation to managing risks associated with methane, including ignition potential, in underground coal mines.

The Regulation establishes three explosion risk zone categories based on the methane concentration levels in an area: a NERZ (less than 0.5 per cent methane); an ERZ1 (0.5 per cent to 2 per cent methane); and an ERZ0 (greater than 2 per cent methane). An ERZ0 considers the minimum methane concentration, but does not include an upper concentration limit. These regulatory requirements were developed with regard to conditions in an operating underground mine, with coal mine workers present. However, there is a legislative gap concerning inert or other atmospheres that are not explosive, particularly in relation to sealed mines (i.e. an underground mine, or part of an underground mine, that has been sealed and where workers are not present and physically prevented from entering). Atmospheres in sealed mines typically have very low levels of oxygen and high levels of methane, far exceeding the upper explosive limit.

An aspect of managing ignition potential includes ensuring electrical equipment used in an explosion risk zone is appropriately certified as explosion protected, so that it does not pose a risk of potentially causing an explosion. The certification of electrical equipment is a long and costly process, which can result in lengthy delays for the adoption of new and innovative technology at underground mines. The Regulation currently does not allow use of such new technology in an underground coal mine until it has been certified as explosion protected.

While appropriate certification is required for electrical equipment used in an operating underground mine, certification is not considered necessary where the equipment can be used safely in a sealed mine that does not have an explosive atmosphere. Where the equipment is known to be safe through gas monitoring, for use in such an application, the certification requirement adds unnecessary regulatory burden on industry.

Further, the safe use through continuous gas monitoring of uncertified electrical equipment within a sealed underground mine could provide potential safety benefits for workers, particularly in relation to gathering information to assist with risk assessment for potential future re-ventilation of, or re-entry into, the sealed mine. In practice, a sealed mine, or sealed part of a mine, will be an ERZ0.

Achievement of policy objectives

The Amendment Regulation achieves the policy objective by amending the Regulation to permit the safe use of non-explosion protected electrical equipment in a sealed underground coal mine, or sealed part of an underground coal mine, that does not have an explosive atmosphere. In practice a sealed mine, or sealed part of a mine, will be an ERZ0. It is therefore not relevant for the certification exemption to be included in relation to a NERZ or an ERZ1.

The proposed amendments will provide appropriate safety considerations by limiting the use of non-explosion protected electrical equipment for the purpose of assessing the risk of re-ventilating, or of persons re-entering an underground mine, or part of an underground mine, that has been sealed. The proposed amendments will also require risk assessment prior to operating the equipment; controlling identified hazards associated with operating the equipment; continuous gas monitoring of the atmosphere around the equipment while it is in use; and the automatic activation of an alarm to warn if oxygen levels around the equipment exceed 60 per cent of the oxygen nose point identified in the risk assessment, which will require the electrical supply to the equipment to be immediately switched off and the equipment withdrawn to a safe location.

Consistency with policy objectives of authorising law

The Amendment Regulation is consistent with the main objects of the Act.

Inconsistency with policy objectives of other legislation

There is no inconsistency with policy objectives of other legislation.

Benefits and costs of implementation

The Amendment Regulation will enable the safe use of non-explosion protected electrical equipment in a sealed underground coal mine. This change will permit a coal mine operator to use non-explosion protected electrical equipment, such as a camera down a borehole, to gather information about a sealed part of an underground coal mine that does not have an explosive atmosphere. The information gathered will help inform risk assessment activities necessary for re-ventilating, or planning the safe re-entry into, the sealed mine. The amendment will ensure coal mine operators are able to obtain critical safety related information about the conditions present in a sealed mine, without placing coal mine workers at risk.

Implementation costs for government are minimal and will be met within existing budget allocations. There are no implementation costs for industry or the community.

Consistency with fundamental legislative principles

The Amendment Regulation has been drafted with regard to fundamental legislative principles and is not considered to breach any fundamental legislative principles.

Consultation

The Construction, Forestry, Maritime, Mining and Energy Union has been consulted and the amendments reflect its feedback about the risk assessment process, requiring a gas monitoring device to provide an audible or visible alarm, and for the tripping of electricity to the equipment, at the alarm warning point, which is if the general body concentration of oxygen exceeds 60 per cent of the oxygen nose point..

The Queensland Resources Council has also been consulted and did not raise any concerns in relation to the proposed amendment.

The Office of Best Practice Regulation (OBPR) within the Queensland Productivity Commission was consulted regarding the need to prepare a Regulatory Impact Statement. The OBPR considered the proposed amendment is unlikely to result in significant adverse impacts, and advised that no further regulatory impact assessment is required under the *Queensland Government Guide to Better Regulation*.