

FACT SHEET

Worker exposure to carbon dioxide in underground coal mines

September 2022



A re-make of the existing Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 has recently been undertaken. The new Regulations will take effect from 1 September 2022. This fact sheet outlines the obligations of operators of underground coal mines in relation to carbon dioxide, including minimising worker exposure, monitoring requirements, exposure standards and notification of an exceedance of the exposure standard to the Regulator.

Obligations of underground coal mine operators

Operators of underground coal mines have obligations under the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 in addition to obligations under the *Work Health and Safety Act 2011* and Regulation to:

- manage airborne contaminants, such as carbon dioxide, in a principal hazard management plan
- continuously monitor the ratio of carbon monoxide and carbon dioxide
- monitor the content of carbon dioxide in the air and exposure of workers
- maintain oxygen at normal levels and above 19.5%
- provide suitable ventilation
- implement trigger action response plans (TARPs) which are activated in response to changing conditions.

Obligations to minimise exposure of workers

For underground coal mine operators to meet their obligations they must develop and implement safety management systems and procedures to manage worker exposures to carbon dioxide. The current exposure standards for carbon dioxide in underground coal mines is prescribed in cl 41(2) of the WHS (MPS) 2022, as follows:

cl 41(2) The operator of an underground coal mine must –

- (a) as far as reasonably practicable, minimise the exposure of persons to carbon dioxide in the mine
- (b) ensure no person in the mine is exposed to an 8-hour time-weighted average atmospheric concentration of carbon dioxide that is more than –
 - i. for short term exposure limits – 30,000 parts per million, or
 - ii. otherwise – 12,500 parts per million.

Obligations to monitor exposure of workers

Operators of underground coal mines also have an obligation to monitor the exposure of workers to carbon dioxide under clause 50 of the WHS Regulations, as per cl 42 (b) of the WHS (MPS) 2022.

Obligations for notification of an exceedance

Any exceedance of the abovementioned exposure standard is required to be reported to the Regulator as a ‘high potential incident’ under clause 124 of the WHS(MPS) Regulation 2022, as follows:

cl 124(5) Duty to notify regulator of certain incidents

- (r) a person has been exposed to an 8-hour time-weighted average atmospheric concentration of carbon dioxide that is more than the amounts specified in cl 42(2)(b).

The requirement for notification commenced on 1 September 2022. Notifications of an exceedance incident should be made using the Safety and Health Reporting function of the [Regulator Portal](#). Further information about the notification of incidents can be found in the *Notification of incident and injury guide* on the [Regulator website](#).

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