

March 2023

Response to stakeholder feedback

Technical reference guide: Gas outburst principal hazard management plan

The Resources Regulator circulated the technical reference guide (TRG) Gas outburst principal hazard management plan for targeted consultation in 2021. This document summarises the issues raised by stakeholders and details the Regulator's response.

The feedback has been categorised into themes and the Regulator's responses are set out below:

1. Correlations that are drawn between changes in gas composition and changes in the risk of an outburst.

A stakeholder indicated the TRG identified that gas composition contributed to the risk of gas outburst. In the Bulli seam early work identified a relationship between desorption rate and gas content at set gas compositions. However, this work did not examine the assumption that gas composition plays a role in outburst risk. The data supporting the concept that carbon dioxide was more prone to outburst than methane, was derived from indirect measurements. Recent evaluation of this data does not support the theory that coal rich in carbon dioxide is more prone to outburst than coal rich in methane.

Resources Regulator response

The Regulators view is this TRG applies to the risk of gas outbursts in all coal seams in NSW including the Bulli Seam. Both carbon dioxide and methane represent potential outburst risk. It is up to the mine operator to correctly assess outburst risks and develop appropriate management controls. As TRGs are guidance documents, the Regulator did not require amendment.

2. TRG recommendation to use gas flow monitoring as part of a gas outburst compliance programme

A stakeholder expressed the view that flow monitoring does not provide a sufficient level of data to accurately determine gas content to the level required for outburst management. As this TRG could be considered to represent an expert opinion it is important that flow monitoring not be specifically identified as an outburst compliance method.

Resources Regulator response

Gas flow monitoring is one of the tools available to assist with evaluating the effectiveness of gas drainage operations. Gas content compliance cores are more representative of the remnant gas content of the sampled area. This document provides mine operators with guidance on developing and documenting a principal hazard management plan (PHMP) for gas outbursts in underground coal mining operations. Per the above response, the Regulator has not amended this TRG.

3. Interpretation of and weighting applied to selection of core sample location as a key control measure

A stakeholder expressed a view that it is important the TRG identify that coring in the 'worst-case location' is not in fact *conservative*, but simply applies an outburst assessment to the area(s) most

likely to outburst. This is not conservative. Failing to core in 'worst-case location' could easily be argued to be reckless. The act of applying basic outburst management (coring in 'worst-case location') is not a conservative assessment, it is a realistic assessment.

Resources Regulator response

The Regulator agreed to amend section 3 to indicate that core samples should be undertaken such that the mine has a high degree of confidence that the test location is representative of the area to be mined based on the compliance test. The final version of the TRG reflects this.

4. Prescriptive elements associated with defining outburst risk based on the 'coal strength index';

A stakeholder argued the draft TRG identifies that 'gassy seams with a coal strength index off (sic) <0.5 are highly liable to outburst' based on one index. Endorsement of the risk tolerance inherent in the industries where this index has been applied using 0.5 as the critical value.

Resources Regulator response

The Regulator agreed to amend section 6.2.2, which now indicates that coal mine operators should use a valid coal strength measure.

5 Identification of ventilation, remote mining and grunching as preventative controls when they are mitigating controls

A stakeholder identified that preventative controls and mitigating controls had been mixed together. For example ventilation, remote mining and crunching are mitigating controls.

Resources Regulator response

The Regulator agreed to amend section 6.3 to separate preventative controls from mitigating controls rather than combining them. Mitigating controls include ventilation and remote mining methods/shotfiring (grunching).

6. Targeted consultation on the TRG

A stakeholder expressed the view that targeted consultation was not adequate for the TRG.

Resources Regulator response

The Regulator undertook the targeted consultation in line with its published policy on engagement and consultation.

7. clarification on the role of the document

TRG's are guidance material. Mine operators may use alternative risk and hazard management methods as appropriate. It is up to the mine operator to ensure they correctly assess outburst risks and develop appropriate controls. This includes any recent advances in understanding associated with outburst risk management.

8. Use of up-to-date references

A stakeholder requested that further reference to current information be included in the TRG.

Resources Regulator response

The Regulator agreed to provide links to further ACARP Reports in section 7, recent material from 2019, and the University of Wollongong Resource Operator Conference outburst papers. The Regulator has updated the TRG to reflect the remade WHS (MPS) Regulation 2022.