

# Fact sheet

## Assessment program – Coal outburst, rock burst and coal burst stage 1

June 2023

### Assessment program fact sheet

#### Coal outburst, rock burst and coal burst stage 1



Coal outburst, rock burst and coal burst are principal mining hazards that can cause incidents in underground coal mining operations and can place workers at risk if not controlled effectively. The risks associated with coal outburst, rock burst and coal burst should be considered in conjunction with other principal hazards at underground coal mine sites.

The NSW Resources Regulator will commence a program of planned inspections and targeted assessments at underground coal mines focussing on the critical controls associated with coal outburst, rock burst and coal burst. The assessments will be look at the following criteria:

#### Risk assessments

Risk assessments are conducted to identify and mitigate the outcomes of an outburst, rock burst or coal burst. Those consulted in the risk assessments included subject matter experts, mine workers and mine supervisors with appropriate technical knowledge and experience of the hazards associated with the strata management issues.



#### Hazard identification

Hazards to mine workers exposed to coal outburst, rock burst or coal burst events include:

- asphyxiation
- engulfment
- impact by material
- being crushed by material

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Hazards that may contribute to coal outburst, rock burst or coal burst risk include:

- large amounts of energy stored in the strata e.g. rock stress and gas volumes
- the presence of geological structures such as faults and dykes
- the presence of low friction planes
- changes in geotechnical loading conditions.

## Identification and implementation of controls

The controls identified to protect mine workers from coal outburst, rock burst or coal burst risks include exploration of the strata, geotechnical strata assessment, gas quantity assessment, gas composition assessment, mine design, strata support methods, separation of mine workers from the event, gas pre/post-drainage, strata pre-treatment and monitoring.

The controls are to be documented in the appropriate principle hazard management plans and control plans.



## Considerations

Mine operators should consider the above criteria as a minimum and ensure that such information is included within their respective principal hazard management plans and associated documentation.

Following investigations of previous incidents within the mining industry, it is evident that non-compliance to these key control measures has contributed to incident outcomes, which has caused both severe and fatal injuries to workers.

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When identifying and implementing control measures, mine operators are also reminded to follow the hierarchy of controls to ensure health and safety risks are minimised so far as is reasonably practicable.

### Other relevant safety alerts and safety information published by the NSW Resources Regulator:

DATE PUBLISHED	REFERENCE	TITLE
April 2023	Technical reference guide	<a href="#"><u>TRG-gas-outbursts-principal hazard management plans</u></a>
December 2022	Investigation information release IIR 22-07	<a href="#"><u>Outburst at NSW underground coal mine</u></a>
2019	Learning from disasters – case study	<a href="#"><u>2014 Austar pressure burst</u></a>
2019	Learning from disasters – case study	<a href="#"><u>1991 South Bulli Colliery Outburst</u></a>
April 2018	Fact sheet Legislation advice	<a href="#"><u>Dangerous incidents - coal burst or rock burst</u></a>
18 January 2017	Safety Alert 17-01	<a href="#"><u>Gas outburst on longwall face</u></a>
October 2015	Investigation report	<a href="#"><u>Investigation report- deaths of J. Mitchell and P. Grant at the Austar Coal Mine on 15 April 2014</u></a>
February 2015	NSW code of practice	<a href="#"><u>Strata control in underground coal mines</u></a>

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