

# Fact sheet

## Principal hazard – fire and explosion – fixed-plant, structures, buildings or transportable equipment

August 2024



The Resources Regulator has developed a broad-brush risk assessment and a program of bowties to review ‘Principal Hazard’ and ‘Control Plan’ topics.

The bowtie program identified the material unwanted events (MUE) and critical controls to prevent serious injury or death of mine workers.

The bowtie for the ‘Principal Hazard’ topic of ‘fire and explosion’ identified three MUE’s and the critical controls for assessment programs. This fact sheet provides information related to the assessment program focussing on the MUE – uncontrolled fire or explosion on fixed-plant, structures, buildings or transportable equipment.

### Principal hazard – Fire and explosion

(PH0201)

**MUE – Uncontrolled fire or explosion on fixed-plant, structures, buildings or transportable equipment**



### MUE critical controls

The Regulator’s assessment program will focus on the following critical controls to prevent an uncontrolled fire or explosion on fixed-plant, structures, buildings or transportable equipment:

- Hazardous area management (including elimination of ignition sources).
- Energy is removed from plant and equipment (shutdown).
- Equipment designed and operated to mitigate mechanically generated heat.
- Fire detection and suppression.
- Electrical Protection.
- Spontaneous combustion management (underground coal mine critical only).

### Considerations

Mine operators should consider the material unwanted events above as a minimum and ensure that the review of critical controls to prevent serious injury or death is included within the site principal hazard management plans and associated documentation.

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Other relevant safety alerts and bulletins published by the Resources Regulator:

Date published	Reference	Title
December 2023	SA23-06	Potential heating of acetylene cylinder raises potential for underground explosion
December 2023	SB23-10	Methane gas incidents occurred in NSW coal mines
October 2023	SA23-03	Conveyor tail pulley fire
June 2023	SB23-05	Contraband identified in underground coal mines
April 2023	SB23-03	Ignition risks from rare earth magnets
February 2023	SB23-02	Ongoing monitoring and reporting for escape breathing apparatus
February 2023	SB23-01	Explosion risk of battery units for underground battery electric vehicles
December 2022	SB22-17	Fires on battery powered tools increase
October 2022	SA22-06	Operator unable to activate fire suppression system during emergency
September 2022	SB22-12	Fires occurring on mobile manufacturing unit trucks
August 2022	SB22-11	Photovoltaic and battery energy supply systems and their connection to a mine electricity system
June 2022	SA22-01	Worker burnt during hot work

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