

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 3 MUEs and the critical controls for assessment programs. This fact sheet provides information about the assessment program focussing on the MUE – uncontrolled fire or explosion on fixed-plant, structures, buildings or transportable equipment.

Principal hazard – fire and explosion

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 MUEs 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.

Fact sheet – principal hazard – fire and explosion – fixed plant, structures, buildings or transportable equipment

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

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

© State of New South Wales through the Department of Primary Industries and Regional Development 2024. You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose, provided that you attribute the Department of Primary Industries and Regional Development as the owner. However, you must obtain permission if you wish to charge others for access to the publication (other than at cost); include the publication in advertising or a product for sale; modify the publication; or republish the publication on a website. You may freely link to the publication on a departmental website.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (August 2024) and may not be accurate, current or complete. The State of New South Wales (including the Department of Primary Industries and Regional Development), the author and the publisher take no responsibility, and will accept no liability, for the accuracy, currency, reliability or correctness of any information included in the document (including material provided by third parties). Readers should make their own inquiries and rely on their own advice when making decisions related to material contained in this publication.