

Fact sheet

Principal hazard – ROVOA – collision of equipment in autonomous function

May 2025



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 roads or other vehicle operating areas (ROVOA) identified 3 MUEs and the critical controls for assessment programs. This fact sheet provides information related to the assessment program focussing on the MUE – collision of (autonomous and manned) equipment in autonomous function.

Principal hazard – roads or other vehicle operating areas (ROVOA)

MUE – collision of (autonomous and manned) equipment in autonomous function



MUE critical controls

The Regulator’s assessment program will focus on the following critical controls to prevent a collision of (autonomous and manned) equipment in autonomous function.

- Mine (vehicle operating areas) design (layout and construction).
- Separation/segregation (people to the vehicles or equipment).
- Proximity detection and collision avoidance.
- Fit-for-purpose autonomous systems.
- Provision of effective isolation, energy dissipation and verification.

Considerations

Mine operators should consider the MUE 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.

Other relevant safety alerts, safety bulletins and guidance material published or referenced by the Resources Regulator:

Fact sheet – ROVOA – collision of equipment in autonomous function (autonomous and manned)

DATE PUBLISHED	REFERENCE	TITLE
May 2025	Code of practice - EECP	<u>Code of practice: Electrical engineering control plan</u>
October 2022	University of Queensland report	<u>Human-system integration risk assessment for automation in mining</u>
July 2022	Compliance priority report	<u>Proximity awareness and collision avoidance technology – open cut coal mines</u>
2009 Part 1 & 2 2013 Part 3	Australian standard AS/NZS 4240	Part 1:2009 – design, construction, testing, installation and commissioning Part 2: 2009 -operation and maintenance - UG METEX Part 3: 2013- operation and maintenance - UG COAL

© State of New South Wales through the Department of Primary Industries and Regional Development 2025. 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 (May 2025) 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.