# Safety Bulletin

Date: March 2025

Supporting video: www.youtube.com/watch?v=gMD5zTIXCwI

## Underground vehicle interaction with high voltage cables puts mine workers at risk

This safety bulletin provides safety advice for the NSW mining industry.

### Issue

A recent series of incidents involving collision between underground mobile plant and high voltage (HV) 11 kilo Volt (kV) power cables have been reported to the Resources Regulator, raising concerns about putting workers at risk of injury.

### Circumstances

**Incident 1**

During a longwall move and transporting roof supports (shields) along the main travel road, the mine lost power to mine feeds (11kV HV cables) at the surface. An electrician in the area had passed a shield carrier and went looking for the issue, finding marks on an 11kV HV cable near 41 cut-through on the main travel road.

### Incident 2

A load haul dump (LHD) vehicle with a man basket attached hit an energised HV cable when the LHD operator tilted the man basket to the point where it touched the cable that was suspended from the roof.

### Incident 3

An MH40 loader was travelling out of the mine at 16 cut-through 100 panel (the main travelling road). The loader was towing 2 longwall monorail frame sleds. The rear monorail frame hit a 250 mm water-filled poly-pipe causing pipe fracture. The poly-pipe was not pressurised above gravity feed pressure. The damaged poly pipe then impacted the HV cable above.

Figure 2: Monorail sled

Figure 3: The 250 mm pipe hit by the monorail sled has impacted HV cable

### Incident 4

A mine's power tripped on earth leakage at a section isolator. A deputy conducting further inspections of the cable run found evidence to suggest the HV cable had been hit recently. There was evidence to suggest the HV cable was hit at 5 cut-through and pulled, causing the HV cable to move and supporting straps were broken.

## Investigation

Movement of large mobile plant transporting heavy loads has resulted in multiple incidents where HV cables have been hit, resulting in cable damage and protection trips. These incidents expose mine workers to serious risk of injury from the release of high voltage energy.

## Recommendations

Mine operators must:

- ensure that high voltage cables are installed in line with site standards to minimise the risk of contact by mobile plant, are clearly delineated with signs and are adequately secured, including using solid protection when crossing active vehicular movement areas

- develop a safe system of work under the roads and other vehicle operating areas principal hazard management plan to control the movement of large loads through mines using a process of risk management for each specific task that considers load dimensions, roadway profile, services and alternate travel routes
- consider the elevated risk of contact with HV cables during longwall moves and take necessary actions to protect them
- develop towing procedures that ensure loads are securely retained before they are transported
- consider additional controls including using spotters and maintaining positive communication between observers and vehicle operators when transiting through mines with large loads.

**Note:** Please ensure all relevant people in your organisation receive a copy of this safety bulletin and are informed of its content and recommendations. This safety bulletin should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's common area, such as your notice board where appropriate.

Visit our website to:

- find more safety alerts and bulletins
- use our searchable safety database

| **Document control** | |
|---|---|
| CM10 reference | D24/7430 |
| Mine safety reference | SB25-02 |
| Date published | 24 March 2025 |
| Authorised by | Chief Inspector<br>Office of the Chief Inspector |

© 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 (March 2025) and may not be accurate, current or complete. The State of New South Wales (including 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.