

# SAFETY BULLETIN

## Plant contacting overhead powerlines and structures

### BACKGROUND

In recent years there have been a number of incidents where the elevated trays on dump trucks undertaking haulage activities on mine sites have come into contact with overhead powerlines or structures.

Fortunately the majority of incidents have not caused injuries, but the potential for injury is high. The sites have also sustained substantial damage to powerlines or site infrastructure that has significantly affected mining and processing activities on site.

Investigations have identified common causes. These include:

- Risk assessments failed to identify the overhead hazard.
- Work procedures were not fully followed; for example, moving off with the tray in the elevated position.
- Tray warning devices were either not fitted or had been disabled.
- Human error/complacency; for example, trucks had been driven with the trays up for more than 100m.
- Poor supervision of the plant operators; for example, repeat breaches of site rules.
- Trucks had not been assessed with reference to *MDG15 – Guideline for mobile and transportable equipment for use in mines*.
- Failure to identify or effectively implement “exclusion zones” for overhead powerlines, poles and transformers.

*Photo 1: 22kV overhead powerlines leaving supply authority substation*



*Photo 2: Dump truck with damaged cables caught in tray*



## LEGISLATION

The *Work Health and Safety Regulation 2011* sets out legislative requirements for the person with management or control of powered mobile plant, including managing risks associated with the plant colliding with any person or thing, in accordance with part 3.1 Managing risks to health and safety. Refer to clause 214 (d).

The *Work Health and Safety (Mines) Regulation 2014* states that the mine operator of the mine must manage the risks to health and safety associated with the movement of mobile plant at the mine. When managing the risks to health and safety associated with the movement of mobile plant at the mine, the mine operator must have regard to all relevant matters including 'interactions between mobile plant and fixed plant or structures'. Refer to clause 28 (2) (d).

The *Work Health and Safety (Mines) Regulation 2014* also requires the mine operator to manage the risks to health and safety associated with electricity at the mine. Clause 32(2)(f)(ii) requires that plans showing the location of all high voltage cables, aerials and switchgear are kept and maintained as required and are easily accessible by each worker required to access them. In developing the Electrical Engineering Control Plan to manage risks from electricity at the mine, Schedule 2 Clause 3(3)(n)(iii) requires that procedures exist for work near overhead power lines and cables. These procedures should include all power lines that cross the mine including those owned by energy supply authorities.

## RECOMMENDATIONS

1. Identify all work activities on the work site where plant can or is likely to come into contact with overhead powerlines or structures.
2. Where there is an identified risk of plant coming into contact with overhead powerlines or structures, risk control measures must be implemented to manage those risks in accordance with the hierarchy of risk controls.
3. Where overhead powerlines are present on site, *EEA001 Audit checklist for management of overhead powerlines should be completed*. Non-conformances identified should be assessed and corrective actions taken to eliminate or minimise risks as per 2 above.
4. Ensure visual or audible warning devices are fitted and/or a device that will automatically stop or inhibit the movement of the truck while the tray is in the raised position. Refer to *MDG15 Guidelines for mobile and transportable equipment for use in mines*.
5. Provide for adequate supervision and training to ensure operators are aware of procedures should contact be made with powerlines i.e. emergency procedures and reference to local energy supplier for advice.
6. Exclusion zones must be established around the plant if contact occurs with energised power lines. These should remain in place for a minimum 24 hour period due to the risk of tyre explosion.
7. Consult with workers (in accordance with Section 47 of the *Work Health and Safety Act 2011*) in carrying out the recommendations.
8. Use a change management process to document any changes in the mine safety management plan / traffic management plan and communicate those changes to all employees.
9. Review the traffic management plan on a regular and planned basis.

## FURTHER INFORMATION

- [AS/NZS 3007:2013](#) Electrical equipment in mines and quarries - Surface installations and associated processing plant
- [Safety Alert SA 99-23](#) Truck driver raises tray under powerlines
- [Safety Alert SA 03-07](#) Drill rig strikes overhead powerlines
- [Safety Alert SA 04-03](#) Dump truck trays hit overhead structures
- [MDG15](#) Guideline for mobile and transportable equipment for use in mines
- [EEA001](#) Audit checklist for management of overhead powerlines

**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 notice board.

Signed



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MINE SAFETY OPERATIONS  
DIVISION OF RESOURCES & ENERGY  
NSW TRADE & INVESTMENT

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