



Mines Safety Significant Incident Report No. 178

Water cart loss of control at portal – inadvertent access to underground

Summary of incident

An on-highway water truck was being used to water down the decline portal at an underground mine. The truck brakes were applied before reversing down to the portal and appeared to operate satisfactorily. However, the primary braking system failed when nearing the portal. An attempt to apply the secondary braking system (i.e. handbrake) also failed, allowing the water truck to roll over a hundred metres backwards into the decline, narrowly avoiding a light vehicle travelling towards the portal.

There were no injuries but the incident had the potential to cause serious injury to personnel in the area.

Probable causes

Direct

- The primary and secondary braking systems failed.

Contributory

- The scheduling of brake maintenance and component replacement was not adequate for vehicles operating in an underground mine.
- Formal procedures and training did not cover the use of a water truck in the box cut of the mine.
- There was no risk assessment or change management covering maintenance demands, absent maintenance personnel or training of maintenance personnel.
- There was no audit process to confirm the thoroughness or effectiveness of the pre-start process.

Action required

Before using an on-highway truck in an underground environment, the mine operator must ensure that competent people assess the vehicle to determine its suitability for the load and other local operating factors. Compliance with the Australian Design Rules and Australian Standards may not be sufficient to confirm its suitability, because the standard operating conditions used to determine compliance may differ from those experienced during underground use.

To avoid a recurrence of this type of incident, the following preventative actions should be considered.

- Develop and implement schedules for the maintenance of vehicles and the component replacement on vehicles, based on the risk assessment undertaken to determine suitability.
- Persons performing work on vehicles must be suitably experienced, trained and competent to perform the task.
- Persons driving vehicles must be suitably experienced, trained and competent to perform the task.
- Responsible persons should conduct an on-site audit of the pre-start process for vehicles and assess the adequacy of procedures.

Further information

Visit the publication section of the Resources Safety website at www.dmp.wa.gov.au/ResourcesSafety for the following safety alerts.

Mines Safety Bulletin No. 073 Loss of control on highway-type vehicles

Mines Safety Bulletin No. 072 Loss of control LME on gradients

Mines Safety Bulletin No. 052 Operation of water trucks in open pit mines (quarries)

Significant Incident Report No. 139 Loss of control of service vehicles

Significant Incident Report No. 84 Loss of control of water cart – fatal accident

A handwritten signature in black ink, appearing to read 'S. Ridge'.

Simon Ridge

STATE MINING ENGINEER

18 April 2012