



Significant Incident Report No. 221

Subject: Operator struck by rolling rock at stope draw point - fatal accident

Date: 11 June 2015

Summary of incident

Note: The Department of Mines and Petroleum's investigation is ongoing. The information contained in this significant incident report is based on knowledge and understanding at the time of writing.

A load-haul-dump (LHD or bogger) operator was fatally injured when he was struck by a rock weighing about 700 kg that rolled from an open stope. The LHD was parked in the stope access drive and the driver was on foot in front of the loader bucket.

There was a substantial gap between the brow and the rill at the stope draw point. The rill extended well into the draw point. The rock appears to have rolled down the rill and struck the operator, who was using a hose to water down the rill.

Direct causes

- There was a large open stope with the hazard of falling rocks.
- The LHD operator was working outside the cabin at the base of the rill.

Contributory causes

- Any rocks that fell inside the open stope could drop and eject from the stope. A small bund was in place but it did not prevent the rock from rolling down the rill with sufficient momentum to strike the operator.
- Loading operations were almost complete for the day and the brow was open.
- There was no written procedure for clearing stope draw points that were blocked or hung up.
- The procedure for loading at stope draw points allowed free bogging to a location where the top edge of the loader bucket was below the stope brow. This allowed a gap of several metres between the brow of the draw point and the rill.

Actions required

- Mine managers should ensure that written procedures are available for the clearing of any chute, pass, millhole or stope draw point, as required by r. 10.31 of the Mines Safety and Inspection Regulations 1995.
- A detailed risk assessment should be undertaken to address the hazard of a rock falling from the backs or walls of open stopes, and rolling and hitting workers at the draw point. The actions recommended below should prevent similar incidents.

- Where bunds are used as protection, they should be designed and positioned to catch any rocks that are ejected from the stope into areas where workers could be present.
- In large open stopes with a history of rock falls, set the loading limit so that free bogging ceases when the brow cracks (opens) and natural free rilling ceases. Remote bogging should commence at this time or the next ring should be blasted.
- Develop a procedure to protect workers at stope draw points where they could be struck by falling, rolling or bouncing rocks from the stope.

Further information

Visit www.dmp.wa.gov.au/ResourcesSafety for information on occupational safety and health in the resources sector.

This Significant Incident Report was approved for release by the State Mining Engineer on 11 June 2015