



## Significant Incident Report No. 199

**Subject:** Manned loader drives into open stope - fatal accident

**Date:** 17 June 2014

### Summary of incident

In April 2010, an operator was driving a loader in an ore drive in an underground mine when the loader fell over the edge of an open stope. The loader fell about 25 m and landed on the lower level of the stope. The operator suffered fatal injuries as a result of this accident.

It is likely that the operator was in the process of building a rock bund at the edge of the stope at the time of the accident, as he had removed warning signage and wall bollards before operating the loader in the drive. There was no other physical barrier in place to prevent access to the void.

This accident was the subject of a coronial inquest held in February 2014, with findings and recommendations documented in the Coroner's record of investigation.

### Direct causes

- There was no physical barrier in place near the edge of the stope void.
- The loader operator did not detect the location of the stope void.

### Contributory causes

- Warning controls had been removed without implementing alternative temporary methods of delineating the stope void.
- Warning controls were able to be removed by the operator without the presence and approval of nominated persons authorised to remove the controls.
- The field-level risk assessment performed by the operator did not assign the correct level of risk for work in this location.
- The supervisor was delayed from inspecting the workplace due to the need to attend a production meeting.
- Operator visibility from loaders operating in ore drives was severely limited due to the position of the cabin and obstructions to fields of view.
- Changes to operating procedures and practices may not have been clearly understood by all relevant workers working at the mine.
- There may have been a misunderstanding about job requirements by workers involved.

## **Actions required**

Mine operators are reminded of the importance of developing safe systems of work that identify hazards and risk controls for work near open holes underground.

- Where equipment and operators, and especially manned loaders, are required to work near open holes, complete formal team-based risk assessments to determine appropriate controls for the hazards associated with the tasks. Higher order controls (i.e. elimination, engineering) are more effective than lower order administrative controls (e.g. procedures, signage) and are therefore preferred.
- Do not rely solely on lower level risk assessments (e.g. field level risk assessments, Task Hazard Analysis) performed by workers to identify and control hazards associated with high risk tasks near open holes. Quality control and management support is required to ensure such field level risk assessments are effective and correctly identify levels of risk and required actions.
- Critically examine the circumstances under which there is a need for a manned loader to be operated near an open hole, and assess whether a manned loader is fit-for-purpose for the planned task. Alternative equipment or techniques should be considered, including application of remote controlled technology to keep the operator away from the open hole.
- The appointed responsible persons should manage the hazard of open holes in mines by designing, constructing and locating physical hard barriers to prevent equipment from having access to the edge of such open holes. The barriers should be used in conjunction with lower level access control systems such as demarcation and lockable barriers controlled by supervisors or managers. Wherever possible, install hard barriers before creating an open hole.
- Clearly communicate changes to operating procedures and practices to the workforce, including supervisors, with reinforcement and monitoring from management to ensure adherence to the new standards and procedures.
- Ensure work instructions given to operators are clear, unambiguous and understood so that there is no misinterpretation of job requirements.

## **Further information**

The full Coroner's report is available at [www.coronerscourt.wa.gov.au](http://www.coronerscourt.wa.gov.au)

Visit [www.dmp.wa.gov.au/ResourcesSafety](http://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 17 June 2014