



Significant Incident Report No. 194

Subject: Crush injuries sustained from working with a suspended load - fatal accident

Date: 16 January 2014

Summary of incident

A worker was fatally injured, and another seriously injured, in an accident at a heavy equipment maintenance workshop. Two workers were completing the installation of the operator's cab for a surface miner after a rebuild. The cab weighed about 2.5 tonnes and was suspended from an overhead crane.

The pins that connected the four lifting arms to the cab had been fitted by the day shift workers. The day shift had then lowered the cab onto the machine and left it in the resting position against the bump stops. There was slack in the chains connecting the cab to the overhead crane. When the job was handed to the night shift workers, one pin had to be shimmed and the retaining bolts fitted to all four pins.

The accident happened about one hour into the night shift after the cab had been lifted from its resting position on the bump stops. Both workers were positioned in the cab's path as it fell in an arc.

Direct causes

- The two fitters were working in the vicinity of a load suspended from an overhead crane with rigging, and were along the descent path the load would follow if the rigging failed (i.e. they were in the "line of fire").
- The rigging arrangement between the cab and overhead crane failed.

Contributory causes

- There was no detailed safe work procedure (SWP) for the cab installation. The maintenance manual provided for the surface miner by the original equipment manufacturer (OEM) did not:
 - detail the weight of the cab
 - specify how to attach the lifting points to the cab
 - give a safe working load (SWL) or working load limit (WLL) for the lifting points.
- It appears the rigging practices were inadequate.

Actions required

Managers and supervisors are reminded of the importance of conducting detailed risk assessments for work associated with or near suspended loads. There are constant reminders in workplaces not to walk or work under a suspended load. However, where suspended loads are connected to other mechanical linkages, there is the potential for the load to not only drop straight down, but to swing and strike people who are not directly beneath it. Therefore:

- All stored energy hazards associated with suspended loads need to be identified and adequate control measures implemented.
- Areas that could be in the line of fire should be clearly identified during the risk assessment and dealt with using the hierarchy of control.
- When working with suspended loads, thoroughly check every component of the rigging system to ensure it is fit for purpose.
- If workers cannot see how to do the job safely, they should stop the job and advise their supervisor. Work should only continue once all hazards have been identified, controls put in place, and the job signed off by the appropriate competent person.
- At shift handover, provide the incoming shift with sufficient information for them to continue the job in a safe manner, including a review and acknowledgment of any job hazard analysis (JHA) or SWP.
- A competent supervisor should review and sign off on JHAs to ensure all job steps are adequately covered.

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 16 January 2014