



Mines Safety Significant Incident Report No. 160

Maintenance personnel crushed by excavator counterweight

Incident

During the cleaning out of a run-of-mine (ROM) crusher bin at an Eastern Goldfields mine, two maintenance personnel were crushed between the bin and an excavator counterweight. They sustained serious injuries, including multiple fractures.

The excavator was being used to clean rocks from the crusher bin to allow maintenance work to be carried out. This involved the excavator bucket reaching into the bin, removing loose rock and placing it beside the bin. The incident occurred when the slewing action of the excavator created a pinch point between the counterweight and bin's concrete sidewall when tipping a bucket of rock beside the bin.

Immediate causes and contributory factors

Before initially approaching the ROM crusher bin, the maintenance personnel had notified the excavator operator, who subsequently shut down the machine. After viewing the crusher mantle from the front of the bin, the maintenance personnel had started to leave the area.

Upon seeing the pair departing, the excavator operator recommenced cleaning out the bin. He was unaware that they had returned to the area until he was lifting the third bucket of rock from the bin and noticed one of them lying on the ground.

Comments and preventative actions

- Safe systems of work must be in place to prevent hazardous interactions between personnel and operating earthmoving equipment. This is particularly important when working in confined areas with the potential to create pinch points.
- To limit the interaction, work areas must have defined boundaries or barriers that are determined by the machine operator's field of vision.
- Machines must have effective means of communication to allow the operator to be contacted.
- Should personnel wish to enter an area where equipment is operating, they must first notify the operator who must shut down the machine before authorising their entry.
- Equipment should not be restarted until the work area is vacated and the operator notified that all personnel are clear.
- Relevant personnel are to be trained in the procedures and risk control measures in place.
- It is the operator's responsibility to operate the equipment safely and only commence work when it has been confirmed that all other personnel and equipment have left the work area.

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