Investigation information release

Date: March 2025

Haul truck collides with excavator

Incident date: 20 February 2025

Event: Haul truck collides with excavator

Location: Mt Arthur North (coal mine), Muswellbrook, NSW

The mine

Mt Arthur North is an open cut coal mine 5 kilometres south of Muswellbrook in the Hunter Valley. It is operated by Mt Arthur Coal Pty Ltd.

The incident

A Caterpillar 789 haul truck used in mining operations at the mine was due to attend the workshop for scheduled maintenance. There was a build-up of material that had become hung up in the truck's tray. A practice had developed at the mine where excavators were used to scrape the material out of the truck tray before a service. This was to mitigate the risk of the material falling from the tray of the truck while it was in the workshop. This practice was known as 'backscratching'.

A contractor was operating a ZX470/490H Hitachi 49 tonne excavator as part of a project to reduce a topsoil stockpile. The supervisor of the overburden operation arranged with a representative of the contractor for the haul truck to attend the excavator's location for a 'backscratch'.

The haul truck went to the excavator's location on 20 February 2025 at 3:35pm. The truck operator thought he had established communications with the excavator operator but he was communicating with another of the contractor's representatives.

The excavator was on an angle across a relatively narrow bench, which was 1.9 metres high. The haul truck reversed towards the excavator without positive communications established between the operators.

The excavator operator tried to move the excavator out of the truck's path but was unable to do so because of the large size of the truck and the position of the excavator on the bench.

The rear of the truck and its tailgate collided with the side of the excavator's cabin. This caused the front left side pillar of the excavator to be pushed inward towards the operator and the cabin roof forced upward. Extensive damage was occasioned to the excavator's cabin and the operator was unable to exit the cabin using the normal means of egress.

An emergency was called and an operation was commenced to free the excavator operator. The excavator operator was eventually freed from the cabin uninjured.

Figure 1 - Collision between truck and excavator

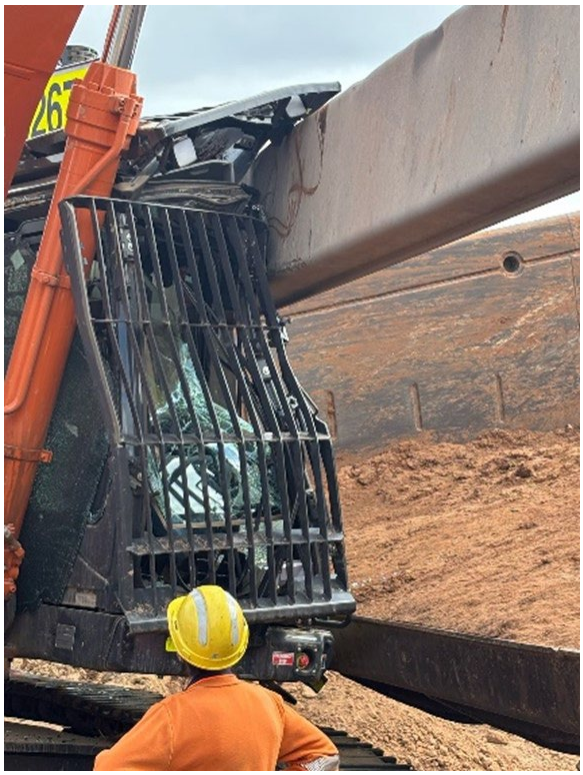

Figure 2 - Position of truck and excavator

The investigation

The Resources Regulator commenced an investigation to determine the cause and circumstances of the incident. The investigation will examine the effectiveness of controls to eliminate or minimise risks to health and safety arising from mobile plant interactions including the:

- planning and coordination of mobile plant activity
- communication leading up to the incident
- instruction, training, experience and supervision of the workers
- adequacy of risk assessments, work instructions and procedures
- effectiveness of the mine operator's mobile plant commissioning processes
- alternative methods of scraping material out of truck beds that eliminates or further minimises the risk of collision between vehicles.

The mine operator and other parties are assisting with the investigation. A report will be published when the investigation is concluded.

Safety observations

Mobile plant interaction is a well-known risk in mining operations.

Mine operators and contractors are reminded of their duty to identify hazards and manage risks to health and safety in accordance with the provisions of the *Work Health and Safety Act 2011* and *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and associated Regulations.

In particular, mine operators and contractors must:

- provide workers with appropriate instruction and supervision so as to ensure effective positive communications (using clear methods of identification) are maintained by operators
- review the adequacy of surface transport management plans, including establishing rules for safe mobile equipment interaction when backscratching operations occur
- ensure when excavators are working in close proximity to haul trucks hard barriers are in-place, such as a sufficient bench height above the running surface, or an adequate separation windrow is maintained if operating at a level where interaction can physically occur
- ensure that backscratching only occurs in locations that are specifically designed for that purpose
- consider, and where reasonably practicable, incorporate the use of available technology to control mobile plant interactions such as proximity detection and collision avoidance systems
- ensure the risk controls for mobile plant interaction are being adequately monitored and verified by safety management system review and auditing mechanisms.

Workers are reminded of their duty to take care for their own health and safety and that of their co-workers. They must also comply, as far as they are reasonably able, with the mine's work instructions, policy and procedures to ensure worker safety and compliance with the *Work Health and Safety Act 2011* and related legislation.

In particular, mobile plant operators must follow the mine operator's procedures in relation to establishing positive communications with other operators to minimise the risk of a collision occurring.

Further information

Please refer to the following guidance materials:

- Mining Design Guideline 15 - Mobile and transportable plant for use on mines and petroleum sites
- Safety alert SA20-09 October 2020 - Operating mobile plant - incidents and near misses

About this information release

The Regulator has issued this information to draw attention to the occurrence of a serious incident in the mining industry. Further information may be published as it becomes available.

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