

Serious injury

Incident date: 22 October 2018

Event: Grader operator suffers serious head injuries

Location: Mt Arthur Coal Mine, Muswellbrook NSW

Overview

A worker suffered serious head injuries when the grader she was operating made contact with a pressurised dewatering pipeline, causing glass and debris to forcibly enter the operator's cabin. The worker was transported to hospital for treatment. The NSW Resources Regulator has commenced an investigation into the incident.

Photograph 1: The grader and waterpipe.



The mine

Mt Arthur Coal Pty Ltd, owned by BHP Billiton PLC, operates Mt Arthur Coal Mine 5 km southwest of Muswellbrook, NSW. The large open cut mine uses a strip mining method to remove overburden and coal by shovel and excavators. Haul trucks transport the overburden and coal to onsite processing and transport facilities. The mine operates 24 hours a day, seven days a week. The mine produces coal for domestic and international energy sector customers.

The incident

At or about 5 pm on 22 October 2018, a worker, 49, suffered serious head fractures and lacerations when the grader she was operating made contact with a pressurised dewatering pipeline (poly pipe). The worker was improving an access ramp onto a bench of the pit area where drilling was being undertaken. Dewatering of the pit area was being undertaken using a diesel-powered pump that was connected to a 355 mm pipeline. The pipeline was adjacent to the access ramp. Water was pumped from the pit at a rate of 100 litres per second, creating pressures of between 1250 and 1500 kPa along the pipeline. The pump was operating while the grading works were being undertaken.

Photograph 2: The grader and the punctured pipeline.



Photograph 3: Broken glass in operator's cabin



The right side of the grader blade punctured the pipe. Water ejected at high pressure, causing dirt and rock material to hit the right-hand side of the grader cabin. The laminated glass in the grader door shattered. Rock, dirt and glass were forced into the cabin of the grader and hit the worker. The worker suffered multiple facial fractures and deep lacerations to her face, which required surgery.

The investigation

Resources Regulator inspectors and investigators responded and commenced an investigation to determine the cause and circumstances of the incident. The mine operator is cooperating with the investigation. An investigation report will be prepared for the Secretary of the Department of Planning and Environment.

Safety observations

Mine and petroleum site operators are reminded of their duty to identify hazards and manage risks to health and safety associated with the operation of mobile plant 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 Regulations.

Mine operators must have effective safety management systems in place and identify risks associated with the operation of mobile plant. In managing these risks, mine operators must have regard to the possibility of interactions occurring in areas where mobile plant operates near mine infrastructure. Consideration must be given to identifying and demarcating infrastructure and isolating potential energy sources. Appropriate separation distances between the mobile plant and infrastructure must be maintained.

Mine operators must ensure that workers are adequately trained and competent in the safe use of mobile plant and that effective supervision and clear instructions are provided to workers.

Further information

Please refer to the following guidance materials:

- [MDG-15 Guideline for mobile and transportable plant for use at mines other than underground coal mines](#)

About this information release

The Resources Regulator has issued this information to draw attention to the occurrence of a serious injury in the mining industry. Investigations are ongoing and further information may be published as it becomes available.

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Department of Planning and Environment or the user's independent adviser. All photographs were taken by the Resources Regulator.

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Investigation Information release

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