

Serious injury

Incident date: 5 July 2018

Event: Serious injuries at an underground coal mine

Location: Springvale Mine, Lidsdale NSW

Overview

A flying object hit a worker and inflicted a serious injury while he was attempting to free a jammed conveyor chain of a continuous miner in the underground workings of the mine on 5 July 2018. The NSW Resources Regulator has commenced an investigation to determine the cause and circumstances of the incident.

Photo 1: Continuous miner in underground heading showing conveyor. Picture by Resources Regulator investigators.



The mine

Springvale Coal Pty Limited is the mine operator of Springvale Mine Underground Operation, an operation of Centennial Coal.

The mine is at the Castlereagh Highway, Lidsdale in the Western Coalfields about 14 km north-north-west of Lithgow, NSW.

Springvale Mine is an underground coal mine that extracts about 4 million tonnes of thermal coal using longwall extraction. The mined coal is taken to the surface crushing plant and then overland conveyors take it to domestic consumer at Mount Piper or to Centennial's Springvale Coal Services for processing for the export market. Export coal is transported by rail to Port Kembla.

The incident

At 4.50 pm on Thursday 5 July 2018, a flying object struck a worker when it was ejected from the rear conveyor of a continuous miner. The object struck the continuous miner driver, aged 46, in the face, rendered him momentarily unconscious and knocked him over with his head hitting the mine floor. The worker was transported by ambulance to Orange Hospital for treatment.

The worker received more than 50 stitches for a facial wound and one stitch to a small laceration near the corner of his left eye. He was released from hospital on Friday 6 July 2018.

The worker was part of the development team that was breaking away to the left in B-heading of the 426 development panel to mine the seven cut-through to form the gate roads. The worker had pulled the continuous miner back to trim the intersection when the centre conveyor chain jammed.

The worker was standing on the operator platform on the continuous miner and had angled the conveyor in line with his position so he could see down the conveyor chain. The worker reversed the conveyor to free the chain. An object was ejected from the centre conveyor chain of the continuous miner, hitting the worker.

The seven cut-through breakaway was moved 30 metres inbye (closer to the mining face) of the planned position due to adverse strata conditions. The change in breakaway position resulted in the continuous miner cutting through steel rib mesh and steel rib bolts.

The investigation

Resources Regulator inspectors and investigators responded and began an investigation to determine the cause and circumstances of the incident.

The mine operator is cooperating with the investigation.

Preliminary enquiries indicate that the object that hit the worker may have been the plate from a rib bolt.

An investigation report will be prepared for the Secretary of the Department of Planning and Environment.

Photo 2: Continuous miner showing cutter heads and entangled rib mesh and bolts. Picture by Resources Regulator investigators.



Safety observations

Mine operators of an underground mine are reminded of their duty to identify hazards and manage risks to health and safety associated with mining operations 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 plant. Under provisions of the *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014*, the operator of a mine must prepare and implement a mechanical engineering control plan that sets out the control measures for the risk of injury to workers caused by the operation of plant.

When developing such control measures, the risks associated with face machines must be considered. The control measures must have safe work systems for dealing with plant including isolation and control of all mechanical energy sources.

A risk assessment must be conducted whenever a change to the mining sequence, such as pillar size and breakaway distances, is considered. Continuous miners and the steel picks on the cutter heads are not designed to mine through steel strata supports, such as steel rib bolts and rib mesh. Using the continuous miner to cut steel increases the risk of mesh and other materials getting caught around and

entangling the cutter heads and spark generation with potential frictional ignition of flammable materials on the continuous miner and methane gas if it is present in the workings.

Supervisors and workers must recognise hazards and foreseeable risks associated with unblocking conveyors of continuous miners and other plant. Appropriate control measures must be in place before any work is undertaken. There must be sufficient safeguards to prevent a worker being at risk and in the line of fire of objects or component that may be ejected from the cutter head or conveyor chain either while it is operating or under repair.

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.

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- learn more about our work on major investigations and emergency response
- view our publications on other major investigations
- find your local mine safety office, where you can contact our team of inspectors.

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (July 2018). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the NSW Department of Planning and Environment or the user's independent advisor.