

## COMPLIANCE PRIORITIES OUTCOMES

### Interaction with mobile equipment – underground coal (development areas)

#### Issue

In February 2021, a worker at an underground coal mine suffered severe injuries when he was crushed between the boom of a continuous miner and the coal rib. An information release about the incident was published on our website in March 2021. At the time of writing, a formal investigation, led by the NSW Resources Regulator is ongoing.

As a result of this incident and others, we conducted a compliance priority inspection program focusing on the interaction between mobile equipment and workers in development areas of underground coal mines.

#### What we did

Inspections were undertaken at 15 underground coal mines and the following information was assessed:

- relevant components of the safety management system
- training provided and undertaken by all mine workers
- proximity detection on continuous miners
- alternatives controls to proximity detection implemented
- identification of safe standing and no-go zones
- mine workers' understanding and knowledge of hazard identification, safe standing and no-go zones.

#### What we found

- All mines assessed have varying levels of systems identifying safe standing and no-go zones between pedestrians and mobile equipment in development areas.
- Training has been completed for all assessed mine workers and most mine operators have scheduled retraining processes in place.

- All mine workers interviewed were aware of safe standing and no-go zones and could identify that information on requirements was available at underground locations.
- Some mine operators are investigating the use of proximity detection systems for continuous miners, however, no mine operators have immediate plans to install these systems
- Several mine operators utilise a red/green traffic light system, on the boom of the continuous miners, indicating when operators can enter or exit the zone between the miner platform and the boom of the miner.
- Some mine operators rely on access onto the miner after the power has been turned off the miner.

## Outcome

Based on the assessments which have been conducted, mine operators remain reliant on administrative controls (lower level control measures) such as positive communication and training, rather than engineering assisted controls. As a result, mine operators are reminded of their legislative responsibility to minimise the risk to as low as reasonably practicable, in accordance with the hierarchy of controls.

## Next steps

We will continue to assess the interaction of equipment and pedestrians in underground coal mines through planned inspections and targeted interventions. This is primarily due to the significant number of fatalities and serious injuries, that involved the interaction of mineworkers and mobile equipment. Technologies, such as proximity detection systems, are proven on longwall equipment to provide a safer environment for workers. Therefore, mine operators are encouraged to apply similar efforts, where reasonably practicable, for development areas and other areas of a mining operation.

## Recommendations

Mine operators should:

- as an interim measure, consider the use of visual signals to indicate the status of the continuous miner which could include red/green traffic light systems
- continue to identify and train mine workers in hazard identification, positive communication and no standing procedures
- actively assess the practicability of proximity detection systems on continuous miners

- consider, after consultation, fitting software/hardware in the overhaul of the continuous miner process, that assists in retrofitting proximity detection equipment as it becomes available
- consult with OEM's of mining equipment, including continuous miners, mobile equipment and cap lamps regarding proximity detection system developments and availability.

DATE PUBLISHED	REFERENCE	TITLE
June 2021	SA21-05	<a href="#">Potential crush point on personnel transport vehicle</a>
Mar 2021	IIR21-03	<a href="#">Worker suffers serious injuries when pinned by boom of a continuous miner</a>
Mar 2009	SA09-05	<a href="#">Mine worker crushed against rib by remote-controlled continuous miner</a>
Nov 2008	SB08-08	<a href="#">Mineworkers injured in machinery crush zones</a>

© State of New South Wales through Regional NSW 2021. You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose, provided that you attribute Regional NSW as the owner. However, you must obtain permission if you wish to charge others for access to the publication (other than at cost); include the publication in advertising or a product for sale; modify the publication; or republish the publication on a website. You may freely link to the publication on a departmental website.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (September 2021) and may not be accurate, current or complete. The State of New South Wales (including Regional NSW), the author and the publisher take no responsibility, and will accept no liability, for the accuracy, currency, reliability or correctness of any information included in the document (including material provided by third parties). Readers should make their own inquiries and rely on their own advice when making decisions related to material contained in this publication.

DOC21/573320