NSW GOVERNMENT

NSW Resources Regulator

SAFETY ALERT

DATE: February 2020

Roof fall buries a continuous miner – miners take evasive action to prevent injury

This safety alert provides safety advice for the NSW mining industry.

Issue

An intersection being formed in an underground coal mine collapsed burying a continuous miner and required two workers to take evasive action to prevent injury.

Circumstances

The incident occurred at 2.30am on 13 February 2020.

The continuous miner was operating in a mains development panel. The mine operates in a low stress environment (depth of cover in the area was approximately 120m) and has a green level of support of 4 x 1.8m bolts per 1.2m of advance. Due to some minor guttering the panel had been working at orange level (TARP level 1) of support of 4 x 1.8m bolts per 0.6m of advance.

The continuous miner had completed an overdrive to 125m chainage and had pulled back and commenced forming the left-hand breakaway at 101m for the 110m centre cut throughs. The continuous miner had taken an initial wedge cut out to form the outbye side of the intersection. This cut had been completed and spot bolted.

As the continuous miner commenced a second wedge cut to form the inbye corner of the intersection the roof was observed as starting to fall. The fall began on the left-hand side and continued across to the right-hand rib. The miner driver and offsider ran to the back of the shuttle car to avoid injury. The shuttle car operator was on the shuttle car during the fall.

The fall was to a height of around 2.5m above roof level. The fallen material covered the continuous miner and also landed on the back of the shuttle car.

Investigation

There was some minor guttering in the preceding three to four pillars of development but this had reduced in the area of the intersection. The guttering had been adequately secured but no consideration had been given to whether this was an indicator of a change to the geological environment.

There were no other signs of geological structures or weighting of the intersection prior to the fall.

After the fall it was observed that there were signs of a small thrust fault in the sides of the cavity. These signs did not appear in the lower sections of the immediate roof strata.

There was no strata monitoring in the intersection. Due to a change of sequence with the cut through to be driven from A heading rather than B heading the roof had not been driven above the normal roof level from 100m to the 105m mark for the intersection formation. The roof was only raised from 105m to 115m marks. The deputy stated that he intended to install the tell-tale after formation of the intersection so that it would not be damaged during the formation of the intersection due to the roof not being raised as normal.

The Regulator has carried out a site assessment to obtain information about the incident.

Recommendations

Mine operators should ensure that any abnormal changes in the strata behaviour are considered as potential indicators of geological change and respond appropriately.

Mine operators should consider all the effects of a change of sequence.

Mine operators should ensure the strata monitoring plan includes the timing for installation of strata monitoring devices, the location of the devices in all high-risk areas, including intersections, and the frequency of reading those devices during widening and breakaway activities.

NOTE: Please ensure all relevant people in your organisation receive a copy of this safety alert and are informed of its content and recommendations. This safety alert should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's common area, such as your notice board where appropriate.

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