Department of Consumer and Employment Protection
Government of Western Australia

Resources Safety

Mines Safety
Significant Incident Report No. 141

Rockfall fatality

Incident

During late 2006 an airleg miner sustained fatal injuries in a fall of ground accident while drilling blast holes in an underground stope where sidewall stripping was in progress.

The rockfall, estimated to be in the order of 4 tonnes, originated from the shoulder area between the sidewall and backs or hangingwall of the stope alongside the face being drilled.

Causes

The fall of ground was defined by geological structures that acted as planes of weakness through the rock mass, allowing a gravity-related rockfall to occur.

No ground support was installed in the backs immediately above the airleg miner.

Precursors

It is understood that the general appearance of the backs and walls at the fatality site did not raise any concerns to those working in the area. However, it is believed the mining profile of the backs of the stope had changed from that noted in previous blasts. Such changes in the appearance of mining profiles are indicators of potential change to workplace stability in underground mines.

At least two of the critical geological structures that bounded the rockfall were evident prior to the rockfall event.

Recommendations

To prevent similar rockfalls, mine managers must ensure ground control management plans at their operations are adequate for all mining conditions and mining methods — particularly in airleg stopes where geological structure exists in the rock mass.

Where excavation profiles or ground conditions change, standard ground control practices should be re-assessed by suitably qualified personnel to determine whether additional stabilisation measures are required (e.g. spot bolting). Proper ground support standards and work instructions must be issued for all areas being mined.

Management strategies used to identify and treat changing ground conditions must be specified in the ground control management plan, along with the methods to be used to ensure that all stabilisation measures are completed in line with work instructions.

MJ Knee
State Mining Engineer

19 March 2007