

Persons and mobile plant falling over edges

Mines safety alert no. 354 | 04 July 2018 | Version 1

What happened?

In June 2018 on a surface coal mine, a D11 Dozer travelled over the crest of a highwall while ripping after dark, falling approximately 16 metres onto a lower bench (see Fig.1 below). The dozer also rolled 360 degrees before coming to rest, and the dozer operator was seriously injured.

Approximately twelve months prior to this, an identical incident occurred at another surface coal mine. This time during daylight, a D11 Dozer travelled over the crest of a highwall while ripping, coming to rest about 10 metres below (see Fig.2). In both cases only good fortune prevented a fatality.

How did it happen?

Some common causal factors in these events are:

- * ineffective protection on the crest of the pit wall preventing equipment from falling over the edge
- * method of operation being used at the time by the operator contributed to the event occurring
- * mine's procedure or work method statement didn't cover all facets of the operation, and methods to be used
- * operator distraction and / or fatigue
- * work area inspections by open cut examiners, supervisors and coal mine workers had not identified the potential hazard.

Comments

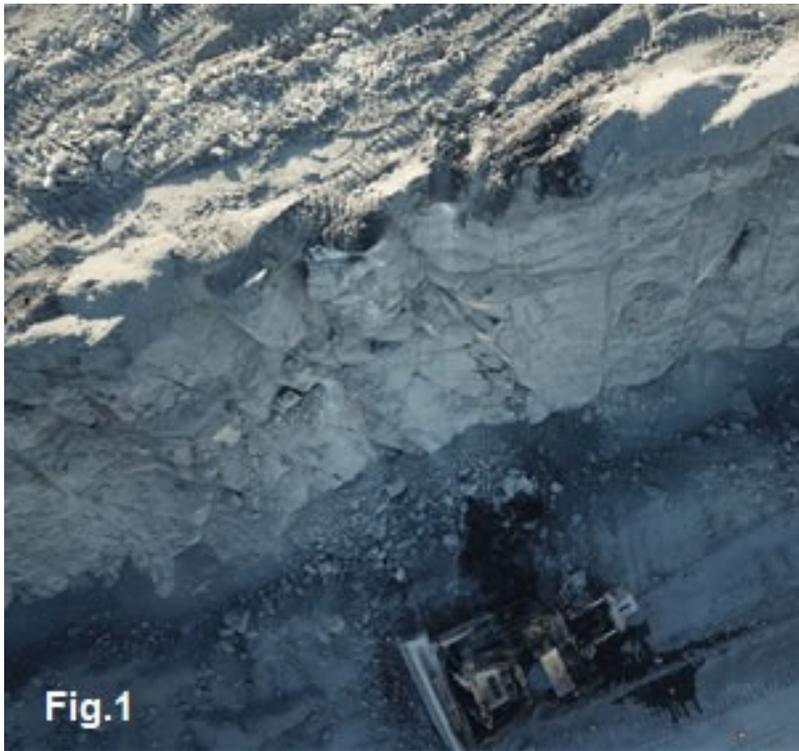
The Queensland Coal Mining Safety and Health Regulation 2017, sect.118(a), requires a mine's safety and health management system (SHMS) to provide for installing safety berms or implementing other appropriate control measures to prevent persons and mobile plant from falling over edges with a vertical drop of 1 metre or more. Mines must have such effective controls in place as going over a pit wall can easily lead to a fatality.

Recommendations

Mines review their SHMS ensuring, and as a minimum include within this review the following:

1. effective safety berms or other appropriate control measures are in place to prevent persons and mobile plant from falling over edges with a vertical drop of 1 m or more
2. review of work methods used when working near an edge with a vertical drop of 1 m or more
3. evaluating level or risk when using different mining equipment types near edges with a vertical drop of 1 m or more (e.g. an excavator v dozer for removing material adjacent to an edge)
4. risk for activities near edges with a vertical drop of 1 m or more is at an acceptable level
5. inspections (coal mine workers, OCE's, supervisors etc.) check that work areas comply with the mine SHMS's requirements
6. considering recommendations made in previous alerts - Safety alert 97 Restricting access to hazardous areas

- How important are safety rills/berms, and Safety alert 210 Dozer falls from bench.



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Issued by the Queensland Department of Natural Resources, Mines and Energy

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