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Windrow management and demarcation

This safety bulletin provides safety advice for the NSW mining industry on managing the risks of with plant working near windrows.

Issue

The Resources Regulator has seen an increase in notifiable incidents related to equipment breaching windrows. Windrow breaches place operators at serious risk. These incidents have occurred at multiple sites, all while performing different tasks.

Circumstances

Windrows are established on haul roads, dumps and in proximity to highwalls where there is the potential for a piece of mobile equipment to drive off an edge. The mine operator has requirements under work health and safety legislation to manage and controls risks associated with roads and other vehicle operating areas. Assessing the risks will help the mine operator take the correct action to eliminate the risk or, where this is not reasonably practicable, minimise the risks. As part of this process consideration must be given to the roads or other vehicle operating areas principal hazard management plan requirements in schedule 2 of the Work Health and Safety (Mines and Petroleum Rites) Regulation 2014.

Photograph 1: A haul truck was rear dumping when the operator reversed over windrow. Photo courtesy of the mine.



Photograph 2: During rear dumping the windrow has packed down, reducing its effectiveness. Photo courtesy of the mine.



Photograph 3: The drill rig has trammed over windrow, showing the rig's position after it was pulled back from the edge. Photo courtesy of the mine.



Investigation

Because of these incidents and subsequent inspections routinely conducted by Resources Regulator inspectors, it has been identified that controls have been ineffective in managing the hazard. The regulator has identified concerns about the management of the risks associated with:

- the construction standard of windrows
- the maintenance of windrows

- reliance on windrows as a barrier
- not aligning to the windrow when windrow dumping
- the effect on visibility due to the time the work is being carried out and weather conditions
- training of operators in relation to construction requirements of windrows and the standards required
- the quality of inspection of windrows.

Recommendations

Mine and petroleum site operators should:

1. Design and construct windrows adequately to be a control for the hazard at the operation, paying specific attention to set-back distances, heights and material used.
2. Regularly inspect and maintain windrows through open cut examiner inspections and operator inspections.
3. Acknowledge that windrows should be used as a line of demarcation rather than an interception for vehicles.
4. Highwall demarcation should be established on drilling benches including adequate use of lighting, flashing beacons or reflective signs as deemed appropriate to ensure operator awareness.
5. Roadway demarcation should be established at intersections without hindering visibility or reducing the effectiveness of the mine's vehicle interaction plan.
6. Vehicles operating around windrows should operate in such a way to ensure the windrows have maximum efficiency including the angle at which equipment operates in relation to the windrow.
7. Work should be planned to ensure there is an opportunity for the operator to have maximum visibility of demarcated areas.

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

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Disclaimer

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

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