



## Significant Incident Report No. 240

**Subject:** Haul truck collides with grader on active dump

**Date:** 13 April 2016

### Summary of incident

In July 2015, a grader was working in good conditions, near the entrance of an active waste dump, grading into oncoming traffic. As a haul truck drove up the pit ramp and turned off onto the dump's haul road, the truck's driver failed to see the operating grader.

In an effort to avoid a collision, the grader operator moved out of the anticipated path of the oncoming haul truck and stopped. However, the haul truck continued along the haul road, colliding with the left side of the grader.

The haul truck driver did not see the grader until after the collision. Fortunately, no one was injured.



### Direct causes

- The driver of the haul truck did not see the grader.

### Contributory causes

- The gradient of the pit ramp, the sharp corner at the dump entrance, the windrow height and a blind spot created by the cab's pillar and doorframe limited the haul truck driver's visibility.
- There was no communication between personnel:
  - the grader operator did not use the two-way radio to inform haul truck drivers of the grading activity at the entrance to the dump's haul road
  - the proposed grading work was not discussed at the pre-start meeting.
- The grader was operating opposite to traffic flow, near the dump entrance, without physical controls in place (e.g. warning signs, temporary hazard controls).
- Workers and supervisors failed to recognise and manage the risks associated with mobile plant interaction (e.g. no risk assessment).

- Due to noise in the cab (i.e. radio and two-way radio), the haul truck driver did not hear the vehicle proximity alarm, which sounded for 9 seconds before the collision.
- The condition of the dump area was such that it required constant grading, increasing the interaction with haul trucks.

## **Actions required**

Mine operators are reminded of the importance of developing safe systems of work that identify hazards and ensure effective risk controls are implemented for working on dump areas.

### **Traffic management**

- Design road, intersections and dump areas to reduce the risk of mobile plant interaction.
- Design windrows for optimum visibility (e.g. at dump entrances).
- Separate haul truck and grading operations where practicable.
- Implement systems to help identify the location of mobile plant operating around haul trucks (e.g. warning signage, elevated flag indicators with high-visibility strips, revolving light, working with hazard lights on).

### **Safe systems of work**

- Maintain effective positive communication between mobile plant operators.
- Managers and supervisors conduct adequate workplace inspections before and during work activities to identify hazards and risks (e.g. grading against the flow of traffic) and implement appropriate control measures.
- Develop effective controls and procedures to manage human error.
- Maintain and regularly test vehicle proximity systems.
- Monitor the effectiveness of, and compliance with, safe systems of work.
- Regularly inspect, audit and review the traffic management plan.

### **Training**

- Personnel should understand the hazards and risks involved with mobile plant interaction.
- Train and assess mobile equipment operators as competent in safe systems of work before undertaking tasks.

## **Further information**

- Department of Mines and Petroleum, Guidance about traffic management, [www.dmp.wa.gov.au/Safety/Guidance-about-traffic-6268.aspx](http://www.dmp.wa.gov.au/Safety/Guidance-about-traffic-6268.aspx)
- Department of Mines and Petroleum, Mines safety alerts, [www.dmp.wa.gov.au/Safety/Mines-safety-alerts-13194.aspx](http://www.dmp.wa.gov.au/Safety/Mines-safety-alerts-13194.aspx)  
Significant Incident Report No. 238 *Mobile plant interaction results in crush injuries*  
Significant Incident Report No. 214 *Haul truck collides with light vehicle in designated controlled area*  
Significant Incident Report No. 152 *Haul truck and light vehicle collision*

This Significant Incident Report was approved for release by the State Mining Engineer on 13 April 2016