Mobile equipment collisions

Mines safety bulletin no. 162 | 21 June 2017 | Version 1

Incidents

This year to date (01/01/17 - 27/05/17) open cut coal mines have reported an alarming number (48) of mobile equipment collisions and near misses to the inspectorate. Mobile equipment interaction is a principal hazard in open cut coal mines, and the potential for fatalities has certainly been evident in most of these collisions and near misses.

The following mobile equipment types have been involved in collisions and near misses reported so far this year:

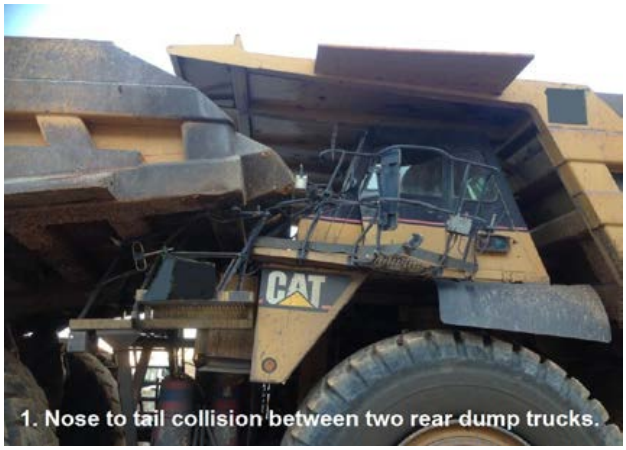
Coal Hauler v Coal Hauler (1)	Light Vehicle v Light Vehicle (1)
Coal Hauler v Service Truck (2)	Medium Vehicle v Light Vehicle (1)
Dozer v Light Vehicle (1)	Rear Dump Truck v Light Vehicle (3)
Dozer v Rear Dump Truck (3)	Rear Dump Truck v Front End Loader (1)
Dozer v Grader (3)	Rear Dump Truck v Rear Dump Truck (6)
Dragline v Dozer (2)	Rear Dump Truck v Grader (5)
Dragline v Cable Tractor (1)	Rear Dump Truck v Service Truck (2)
Drill v Light Vehicle (1)	Rear Dump Truck v Water Kart (1)
Drill v Service Truck (1)	Service Truck v Light Vehicle (1)
Excavator v Dozer (1)	Shovel v Dozer (3)
Excavator v Rear Dump Truck (5)	Shovel v Rear Dump Truck (1)
Front End Loader v Rear Dump Truck (1)	Shovel v Rubber Tyred Dozer (1)

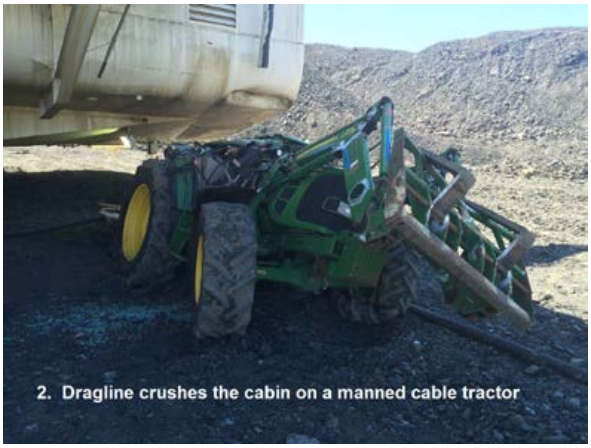
Causes

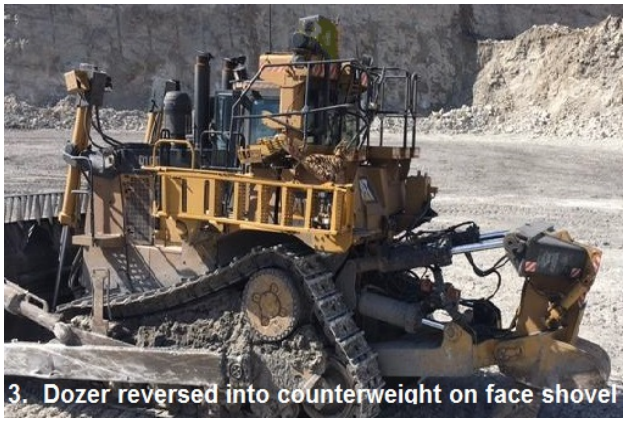
The hazard here involving mobile equipment is collision with another vehicle. Causes identified through investigations into these collisions and near misses include: road design and construction; no separation of light vehicles from heavy equipment; procedural breaches; driver / operator concentration lapses; fatigue; poor visibility; intersection design; wet roads as a result of overwatering or rain; inexperienced operators; speed; and dust.

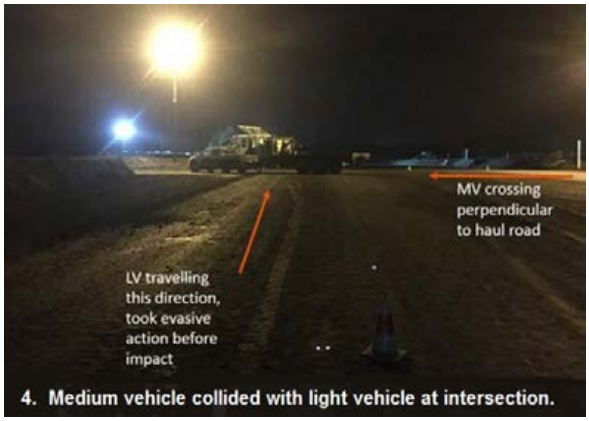
Comments

The photos below document just some examples of collisions that have occurred within the open cut coal industry.









Recommendations

Mines review their Principal Hazard Management Plan and associated standard operating procedures for Mobile Equipment Interaction to ensure they are effective in managing the risk. Within this process mines should also ensure that they have identified all the potential collision situations involving mobile equipment interaction at their mine. When applying controls consider 'Hierarchy of Controls':

- **Elimination:** e.g. reduce the number vehicles allowed into the active mining areas; lookouts so light vehicles don't have to access truck / shovel circuits
- **Substitution:** e.g. design roads for segregation of light and medium vehicles from heavy equipment
- **Engineering:** e.g. mine road design and construction; proximity detection systems; centre bunding on mine roads; collision avoidance systems; identification lights on equipment; mobile equipment monitoring systems
- **Administration:** e.g. training; procedures for using mobile equipment; fitness for work procedures; safety inspections
- **PPE:** not applicable

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Issued by the Queensland Department of Natural Resources and Mines

Placement: Place this announcement on noticeboards and ensure relevant people in your organisation receive a copy.

See more safety alerts, bulletins at www.dnrm.qld.gov.au/mining/safety-and-health/alerts-bulletinssearch-tool/alerts-bulletins-search and the hazard database at https://www.business.qld.gov.au/industries/mining-energy-water/resources/safety-health/mining/hazards/hazards