

SAFETY ALERT

Water tanker rollover at haul road intersection

INCIDENT

A water tanker failed to negotiate a left hand turn at a 90 degree T-intersection of two haul roads and rolled over to its right through 270 degrees coming to rest on the passenger's side.

CIRCUMSTANCES

The incident occurred at 5.30 pm in clear, dry weather and the haul road was in good condition.

The water tanker driver had six months experience in this task and had completed generic induction and water tanker training. He had completed ten hours of work on his first day shift after a seven day rostered break.

The water tanker comprised a prime mover and a single trailer fitted with a 20,000 litre water tank. It is estimated that the water tank contained 15,000 litres of water at the time of the incident.

The water tanker came to rest on the wrong side of the haul road with the prime mover in the centre of the road and the rear of the trailer in the table drain at the side of the road.



INVESTIGATION

No documented pre start inspection of the water tanker was conducted on the day of the incident.

The water tanker driver was not wearing a seat belt and was extremely fortunate to have suffered only minor injuries in the incident.

An independent third party audit of the water tanker failed to identify any mechanical failure that could have contributed to the incident.

The investigation could not determine the actual speed of the water tanker before the incident, but given all of the prevailing circumstances it did conclude that the water tanker was travelling too fast to safely negotiate the intersection and that this was the primary contributing factor to the incident.

No baffles were installed in the water tank and a lateral surge of water when the water tanker was attempting to negotiate the intersection may have contributed to the rollover.

RECOMMENDATIONS

- Mines should ensure that pre start inspections specific to the type of mobile plant, and that identify mobile plant safety critical systems, are rigorously carried out by competent operators.
- Mines should provide training to ensure operators understand that seatbelts must be worn at all times, and should conduct regular workplace inspections and task observations to ensure compliance by operators.
- Mines should review their safe work procedures for transporting loads to; ensure that loads are stable, prevent overloading, and assess the requirement for baffles in tanks used for transporting bulk liquids.
- Mines should ensure that haul roads are designed by competent people in accordance with anticipated traffic movements and traffic loading. Safe speed limits should be determined for all haul road situations. Speed limit signs should be clearly visible at all haul road intersections and at other strategic positions where vehicles may converge. Mines should periodically review their haul road design to ensure that it remains appropriate to a changing mine environment.
- Mines should provide training to ensure operators understand the speed limits that apply on haul roads, and should conduct regular workplace inspections and task observations to ensure compliance by operators.

REFERENCES

The following documents provide guidance material which should be considered in the development of mine safety management systems and transport management plans.

- Haul Road Inspection Handbook PH99-1-4
- Design of Surface Mine Haulage Roads – A Manual

The documents are available for free download at:

www.dpi.nsw.gov.au/minerals/safety/resources/mechanical/topical-issues

NOTE: Please ensure all relevant people in your organisation receive a copy of this Safety Alert, and are informed of its content and recommendations. This Safety Alert 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.

Signed

A handwritten signature in black ink that reads "William Barraclough". The signature is written in a cursive style with a large, stylized 'W' and 'B'.

**BILL BARRACLOUGH
ACTING DIRECTOR
MINE SAFETY OPERATIONS BRANCH
INDUSTRY & INVESTMENT NSW**

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