Safety bulletin

NSW RESOURCES REGULATOR

DATE: APRIL 2018

Positive communication failures result in collisions

This safety bulletin provides safety advice for the NSW mining industry.

Issue

The NSW Resources Regulator has noted from several incidents that breakdowns in positive communications have resulted in a collision between items of plant. In each circumstance, an operator proceeded into shared areas without making positive communication with another operator.

Incident 1: A collision occurred this month when a loaded haul truck attempted to pass a stationary grader. The haul truck operator approached the grader believing he had received instruction to proceed. No instruction by the grader operator to this effect nor verification from the haul truck operator was recorded on the radio communication recordings. No injuries were received but heavy damage was caused to each machine, including a burst tyre.

Figure 1 – A haul truck collided with a grader while trying to pass (SInNot-2018/00553). Photo courtesy of the mine.

Incident 2: A collision occurred this month between a slow-moving haul truck that was passing a stationary grader between the right-hand side of both machines. Seeing the collision about to occur, the grader operator tried to make radio contact with the truck driver, who was on a different channel. No injuries were reported.

Figure 2 – A haul truck contacted a grader while passing (SInNot-2018/00528). Photo courtesy of the mine.

Incident 3: An excavator reversed into a dozer in March, resulting in damage to the dozer's lift cylinder. The dozer operator drove behind the excavator. When he realised the excavator was moving towards him, he attempted to make contact by radio. The radio was busy at the time, which prevented the dozer operator from making contact. The camera and proximity system fitted to the excavator were not working at the time.

Figure 3 – Excavator reverses into dozer (SInNot-2018/00355). Photo courtesy of the mine.

Incident 4: Two trucks operating in the same dump collided while under direction by a dozer at a site in February 2016. One of the trucks began reversing when instructed to dump and struck the second truck, which had entered the dump area. The operator of the second truck attempted to make radio contact to alert the reversing truck but was unable to prevent the collision.

Figure 4 – Two trucks collide (SInNot-2016/00218). Photo courtesy of the mine.

Investigation

Contributing factors identified by the regulator after reviewing the incidents include:

- → a lack of positive communication between operators is repeatedly a factor in collisions
- → several instances where operators have not identified the need for positive communications
- → a high volume of radio traffic prevented communication to avoid a collision
- → operators using different radio channels within the same operating area
- → one incident could have been prevented but the engineering controls (camera and proximity detection system) were not in an operational state.

While no injuries have been sustained in any of these incidents the potential for serious or fatal injuries was present in each case.

Recommendations

It is recommended that all mines should:

1. identify and assess all areas where mobile plant interaction occurs
2. develop, review and update procedures that manage the interaction of all mobile plant operating on site, including requirements for proximity detection and positive communication
3. train workers in the contents and application of site positive communication procedures
4. have systems in place for supervisors to monitor compliance with site positive communication procedures
5. ensure supervisors are trained to monitor radio communications and to remain aware of radio interactions that do not follow the positive communication protocols of the site
6. schedule refresher training for positive communication within the mine's safety management system
7. review available proximity detection and collision avoidance technologies
8. ensure that where collision avoidance systems are fitted and not in use, a risk assessment and documented reasons why they pose a greater risk than when in use is completed.

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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