

Serious Accidents and High Potential Incidents

Mining and quarrying



Mines Inspectorate

Released: 5 September 2008

Summary of reported incidents for period 1 May – 30 June 2008

1. Gravity – Fall of Person

- An employee of a blasting contractor was assisting with charging activities on a shot when he fell over the edge of the bench and landed on the quarry floor nine metres below. He sustained a gash to his head and cuts on his arms and legs.
- When the operator of a Cat 769 water cart climbed out of the cab and grasped the handrail it broke and the operator fell to the ground.
- A two metre temporary stairway erected to access a dragline roof collapsed beneath two workers when it was being lifted to put sleepers under the bottom tread.

2. Gravity – Fall of Equipment

- As a manganese crusher mantle was being lifted by crane to turn it over, the lifting lug broke off and the mantle fell onto the left foot of the employee supervising the lift. He was taken to hospital and subsequently had his toes amputated.
- A fitter on a dragline was unhooking the dump sheave from a crane when it fell over, landing on and fracturing his right foot.
- During assembly of a drill rig part of the mast became detached falling off and narrowly missing an operator.
- A piece of grid floor mesh approximately 300mm x 150mm fell five metres into a flotation cell below where workers were hosing.
- A portable lockout box fell five metres from the floor above and landed beside the mill reline crew.
- A worker was jacking up an MG set component in a dragline house when a 20 kg guard located on top of the MG set fell 1.8m onto his head resulting in a cut requiring seven stitches. The worker had removed his helmet to provide a better view of the component being raised.
- Backfilled material in a previously mined stope slumped when a loader drove over the area. The loader's front wheels and bucket went into the hole.
- A dozer drove into a coal stockpile and dropped into a cavity above the load out chute. The dozer was partly buried by coal.

- A dozer operator was cleaning up coal when the surface cracked away and the dozer slipped sideways off the bench.
- A dozer was clearing and stripping alongside a creek diversion when the bank gave way and the dozer slid into the creek.
- A dozer went over an overburden dump and slid into a waterhole.
- An operator was reversing an excavator to commence loading a dump truck when the right hand corner of the bench collapsed causing the excavator to topple over. The extended boom of the excavator hit the rear of the dump truck.

3. Gravity – Rockfall

- While an excavator was digging ore from a shot, part of the wall slipped down. Rocks struck the excavator bucket rams and windscreen.
- A rockfall of approximately two cubic meters was discovered on a decline. Two rock bolts had not been properly grouted.
- A surveyor was hit by a small rock on the helmet and hands while checking an underground development face.

4. Mechanical

- A worker, walking behind an Eimco loader which he thought was going to continue moving forward, had his right foot crushed by the engine compartment overhang when the loader reversed and dropped into a depression in the road. He subsequently had to have his foot amputated.
- An operator was removing liner bolts from a mill using a hydraulic hammer when it recoiled. His wrist was broken when his arm was struck between the hammer housing and a steel column.
- An operator pinched his hand between a bolt and drill rig slide as he was installing a bolt. He degloved his finger tips and possibly broke a finger.
- While cutting off a cable tray with a portable grinder the cutting wheel jammed causing the grinder to rebound and the wheel to contact the worker's forearm resulting in a deep cut.

- An operator strained his hand after his glove wrapped around the rotating drill steel during drilling operations with a Cram roof bolting rig.
- An operator sustained bruising after being struck by a compressed air line which ruptured during a sand blasting activity.
- At an exploration drill site a loaded core barrel struck a driller's offsider on the back as it was being lowered onto the rod truck when the retriever overshot and released the barrel from the wire line.
- At an exploration drill site a driller assistant's hand was trapped beneath a drill rod he was helping to transfer from a truck to the rod slew. He suffered fractures to the little and ring fingers of the left hand.
- An operator got his hand caught while trying to clean a conveyor roller.
- A drill rig with its mast in the raised position rolled onto its side while it was being repositioned on an uneven slope.
- While lifting a pump out of a 400 metre deep borehole a section of the drill rod support pipe broke after the assembly had been raised 150m. The pump, power cable and support pipe fell to the bottom of the hole. The drum, which the power cable had been wound onto, was pulled rapidly towards the collar of the hole.
- A cable reeler was letting out a 35mm diameter electric cable down a 48 metre vent raise when the cable reeler failed to hold the load and a further 20 metres came off the reel.
- While attempting to lift spare rigging off the deck of a coal prep plant the chains of a 50t crane caught on the webforge flooring, breaking the clips and lifting the floor panel and rigger 300mm into the air.
- A 25 tonne Franna crane toppled onto its side while unloading a semi-trailer.
- A fitter was preparing to change a hydraulic ram when he was sprayed by hydraulic oil under the residual pressure still in the hydraulic system after isolation.
- As the boom on a Kanga mini loader was lowered oil sprayed towards the operator from a hole in a worn hydraulic hose.
- The intermediate shaft on a screen deck exciter failed with the shaft ejected four metres onto the neighbouring screen.
- The drill string of a surface diamond drill rig unexpectedly broke through into an underground decline.

- A Freightliner truck operator was tipping a load when the body fell to the side after the bolts holding the hoist pulled through the chassis.
- While constructing a new storage shed the shed frame toppled over after temporary bracing was removed prior to installing permanent bracing.
- Whilst shotcreting underground, a piece of layflat hose ruptured, swung uncontrollably and momentarily pinned a worker against the wall.
- A rock thrown up by a blown tyre on a dump truck struck and penetrated the windscreen of a water truck 80 meters away.

5. Mechanical – Vehicle Collision

- A light vehicle overtook a rear dump truck whilst travelling up a ramp without establishing positive communication.
- A grader was going up a single lane ramp followed by a light vehicle. When the grader gave way to an unloaded truck coming down the ramp the light vehicle, without calling up, came out from behind the grader to overtake forcing the truck into an emergency stop.
- A Cat D11R Dozer struck a stockpile conveyor support trestle when dust obscured the operator's vision. The conveyor fell over and landed on the stockpile behind the dozer.
- A Cat 966 Loader was cleaning up coal spillage around a coal prep plant when it reversed into a trestle column supporting a pipe bridge and walkway.
- After an excavator had loaded a dump truck it revolved 360 degrees resulting in the bucket striking the truck cab.
- While loading a truck, a loader reversed into a light vehicle which had parked in the stockpile area for a hot seat change.
- While ascending a ramp a loaded truck veered across into the right side of the road and came into contact with the tray of truck coming down the ramp.
- A dozer operator started ripping the floor shortly after a hot seat change. The dozer contacted the troop carrier parked nearby while the operator was watching the rippers.
- A grader collided with a parked service truck when the grader operator bent down to pick up radio receiver.

- A Cat 797B rear dump contacted a P&H 4100 shovel breaking the top rail of the access stairs and penetrating the house.
- A water truck operator pushed a roller backwards for approximately 1.8 metres to park his water truck. The fitter who had been working on the roller was nearby.
- A Mack truck collided with the tray of a flat bed truck parked in a laydown area when the driver's vision was affected by the sun shining in his eyes. The passenger, who was not wearing a seatbelt, struck his head against the windscreen and his knees against the dashboard.
- A light vehicle was following a grader along an access road. The grader stopped at a 'stop' sign, proceeded onto the haul road and then stopped a short distance past the sign. The light vehicle moved up to the 'stop' sign and then saw the grader reversing towards his vehicle. The grader hit the light vehicle, pushing it back four metres and turning it through 90 degrees. It only stopped when a passing haul truck driver alerted the operator.
- The operator of a Toro loader, whose visibility was restricted by a full bucket of ore, was tramping on a mucking level when it collided with a light vehicle which was trying to reverse out of the loader's path.
- A dozer was cleaning up around a digger, and whilst reversing contacted a grader which was passing close behind.
- A Cat 785C dump truck contacted an Hitachi EX2500 excavator after the truck started reversing into position without positively confirming via two-way radio that the excavator operator was ready.

6. Mechanical – Vehicle Loss of Control

- A Toyota Land Cruiser was driving over a wet section of haul road when the driver lost control and the vehicle rolled onto its side.
- A light vehicle rolled on its side coming down a ramp which had recently been watered.
- A light vehicle rolled onto its roof after the driver lost control of the vehicle while moving from a wet to dry section of road.
- The driver of a Cat 797 dump truck lost control of his truck while travelling down a recently watered ramp and crashed into the berm.
- A Cat 637 scraper rolled on its side during top soil stripping removal when it started slipping on a wet

section and the operator applied the retarder as the scraper moved back onto dry ground.

- A water cart was watering a ramp when it lost traction. The truck slid approx 25 metres and rotated coming to rest against the berm.
- A Cat D11 dozer slipped off a bench and rolled over.
- The driver of a dump truck had a micro sleep, drifted off the road and woke when the truck contacted a pipe beside the road.
- While reversing up a ramp to tip a load at a mobile crusher a dump truck climbed a pile of previously dumped material and rolled onto its side.
- A service truck was reversing down a ramp when the wheels contacted the berm causing it to roll onto its side.
- Whilst negotiating a section of road, that had been reduced to one lane due to maintenance, the last two trailers of a loaded five trailer coal road train rolled onto their side and down an embankment.
- A scraper turned sharply down a ramp to exit a dump area and tipped on its side.
- The emergency brake on a Komatsu 785 dump truck had to be activated to stop the truck as it was driven into the workshop.
- While tramping an underground development drill rig through the pit to the workshop the operator's vision was restricted by dirty tramping lights and the rig's booms. The rig ran up a windrow and rolled onto its side.
- A parked dump truck rolled five metres into an embankment after the driver had left the truck.
- A worker parked his vehicle on a ramp and was working alongside it when it rolled away about 40 metres and came to a stop against a berm.
- A Cat 793C operator parked his truck after noticing that the steering was loose. The tie rod end ball had pulled out of the sleeve.
- A Cat 789 dump truck reversed into the dumping position and put the rear wheels through the safety bund.

7. Explosion

- While digging shot rock an excavator struck and initiated misfired explosives. Flyrock from the resulting blast, including a 20 kg rock, smashed the windscreen of the excavator and entered the cabin. The operator received abrasions on his right hand from the broken windscreen.

- While manoeuvring an explosives mobile production unit around loaded blast holes it travelled over a stemmed blast hole and down line, narrowly missing the spool.
- While charging a blast hole with emulsion explosives a reddish/brown mist was noticed coming from the blasthole. The pit and underground mine were immediately evacuated and the shot monitored from the edge of the exclusion zone.
- Flyrock damaged equipment on the limit of an exclusion zone.
- A unit was repairing a bund above an area where a blast crew were preparing to load pre-split holes. Some material fell down the wall into the area.
- An alarm system failed to operate when a coal conveyor carbon monoxide sensor and a methane sensor failed.
- A methane detector was incorrectly positioned on an underground gas drainage drill rig and would not have tripped if there was a high methane concentration.
- A deputy found an underground loader operating in a coal mine with the methane sensor covered by a plastic bag. The sensor had been covered on the previous shift when the loader had been washed down for a service.
- A flash occurred when a continuous miner cable was hooked by a shuttle car and damaged.

8. Thermal – Fire

- A boilermaker was grinding a pipe when a spark from the grinder ignited the acetylene torch which in turn burnt through the acetylene hose causing a flame directly onto the acetylene bottle. He burnt his fingers when he tried to turn off the melted valve.
- A fire started on an underground Normet explosives charge car when a rag was left in the engine bay. A hand held extinguisher as well as the AFFF system had to be used to extinguish the fire.
- A fire occurred on a Normet vehicle when the oil pressure sensor snapped off and oil sprayed onto the exhaust. The on board fire suppression system and an extinguisher were used to put it out.
- The boom arch hose on a Leibherr 944 digger burst and sprayed oil onto the engine turbo causing a fire.
- A fire started in the engine bay of a Komatsu PC1100 excavator after a fuel line ruptured.

- A small fire started on a Cat 785 water truck when a broken fuel line sprayed fuel onto the exhaust.
- A rag left near the turbo in the engine bay of a Terex 4400 truck caught fire.
- A conveyor stopped after a tail end pulley bearing failed. Excessive heat in the bearing housing caused the conveyor belt to catch on fire. Two workers extinguished the fire using fire hoses and extinguishers.

9. Electrical

- A 30 tonne excavator dug up a buried 415V power cable while clearing a pad adjacent to a wheel wash.
- When a fitter placed the head of a high torque onto a nut of the slew ring of an excavator he noticed sparks between the head and the nut.
- While assisting a shift electrician a coal prep plant operator was asked to press the button to operate the reject bin gates. The operator noticed the frame for the truck sensor on the ground and when he picked it up to move it he received an electric shock.
- An electrician isolated a gate end box to fault find. He opened the main door and noticed that the 110Volt power was still on. He closed the door and pushed the E/C test button however this still did not trip the box back to the transformer.
- A worker received an electric shock when he picked up the power lead feeding a water blaster. The lead had a cut through the outer sheath and into one phase.
- Two persons received an electric shock whilst using an Hitachi 3/4 rattle gun to tighten bolts.
- A fitter received an electric shock from a rattle gun.
- A coal prep plant worker received an electric shock from an extension lead when cleaning the female end of the lead while it was still powered.
- An electrician isolated a conveyor belt starter at the main and auxiliary isolators, but not at supply transformer. Before testing for dead he picked up the test leads and touched the terminals on the control transformer and received an electric shock.

10. Other

- Whilst disconnecting a line on an acid pump, a worker was sprayed with 1-2 litres of concentrated sulphuric acid, resulting in mild burns down his arm.