

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for May 2011

#### Fall of Person (4)

- An operator was observed working adjacent to the edge of a stope without using fall arrest equipment.
- An operator was trying to relocate a mobile conveyor discharge tripper above a lime storage bin in a process plant. He fell through the opening in the floor and landed on the lime 3m below.

#### Fall of Equipment/Material (18)

- A five cubic metre rock tipped from a dump truck, rolled down the face of the dump and landed on the ramp below.
- A Cat 980 Loader reversed off a stockpile ramp and rolled onto its side.
- A Cat 793 dump truck reversed through the bund at the tip edge of a dump and slid 5m down the face ending sitting upright on its tray and rear wheels.
- One of the stands supporting a Komatsu 630E dump truck slipped out from underneath the truck.
- A B-double tip over axle trailer fell onto its side while discharging its load at a train load out stockpile.
- A drill rod detached from the drill head on a Fraste drill rig and fell down the hole.
- In the process of removing the counter-weight tail section of a Kawazaki bucket wheel reclaimer, the tail which was being supported by a 140t crane, dropped 300mm when one of the stay pins was removed from the mast.
- A link of a corroded chain on a process plant 2t gantry hoist broke while the hoist was starting to raise a kibble loaded with grinding balls.
- While charging uphole production holes, rocks started falling in the stope. After the IT operator reversed out of the drive the stope rilled closing off the brow of the stope.
- A survey to determine the shape and size of an orepass was being carried out when a loader operator on an upper level tipped a bucket of ore down the pass.
- A 300t mud rush occurred from an underground truck loading chute.

#### Fall of Ground (11)

- A section of a coal bench slipped about 0.75m towards the pit floor causing the wheels of a Cat 785 dump truck to sink into the coal and an O&K 170 excavator to shift slightly.
- During nightshift a large rock fell from half way up the highwall and landed close to a dozer working within the 15m exclusion zone.

- A dozer was reversing from a push close to and parallel to a bench when a rock fell from the face about 2m above the dozer cabin and struck the dozer.
- While a Cat D8 dozer was cleaning up a ramp the adjacent bench wall failed. Rocks hit the dozer cabin breaking the glass in the windows.
- A wedge failure measuring 10m wide x 5m deep x 5m high occurred in the face below a catch bench.
- Approximately 30 tonnes of rock fell onto the boom of a jumbo while carrying out ground support rehabilitation.

#### Mechanical (12)

- A structural failure in one of the lift arms of a Sandvik ED7 load haul dump unit resulted in the bucket falling to the ground.
- While servicing an Eimco EJC130 load haul dump unit the articulation bar was incorrectly secured onto the boom locking lugs. Later when the hydraulic ram was activated to lower the boom the retaining chain and collar from the locking pin snapped and flew across the workshop striking a fitter standing 3m away. The fitter sustained a shoulder injury.
- When the shearer on a longwall stopped several shields continued to advance.
- When a hydraulic hose on the boom of a Hitachi EX3600 excavator failed high pressure oil jetted from the hose and contacted the operator's cab fracturing one of the window panels.
- A 54mm diameter winder rope was nearly unwound off the service winch back onto the winder drum after a rope cut when the tail end of the rope slipped out of the clamp securing it to the service winch. The unrestrained tail swung around and struck a worker standing next to the winch. He sustained bruising to his head and shoulders.
- When an operator put down a high pressure water hose after cleaning under a crusher, the on/off valve on the hose triggered and the hose swung around blasting the operator in the eye. He was taken to hospital for treatment for a damaged retina.
- The cutting blade on a 125mm angle grinder broke while cutting a 5mm thick steel plate and injured a worker. He sustained a laceration to his foot.
- While running casing on a Schramm 450 truck mounted drill rig the driller's offside fingers pinched his finger in the sheave wheel.

( ) The number in brackets next to each category heading is the total number of accidents and incidents reported for that category.

**Vehicle – Collision (25)**

- A Volvo FM400 service truck reversed into an unoccupied light vehicle in a workshop area.
- A Komatsu WA900 loader reversed into a grader, as it drove behind. The loader operator had not acknowledged the grader operator's 'positive communication' radio call before the grader proceeded.
- A Cat 789B dump truck reversed after dumping at the stockpile and collided with a Cat 16M Grader working in the stock pile area.
- A grader was entering the park up area at the end of shift when two trucks attempted to pass the grader without establishing 'positive communications'.
- After initial radio communication with a Cat D10 dozer operator, a Terex MT3700 dump truck reversed to the dumping position. The truck driver then decided to re-position his truck. As he did this the dozer also reversed and was behind the truck as it came back, resulting in a collision.
- A bus travelling along a haulroad towards an intersection had to stop unexpectedly when a Cat 793 entered the intersection. The two vehicles ended up 20m apart.
- The bucket of a Hitachi EX5500 excavator contacted a Cat D10 dozer after it moved in to clean-up where a truck had just been loaded. The dozer operator mistook the OK given by the excavator operator to the OCE to enter the area as permission for the dozer to proceed.
- While loading a Komatsu 630 dump truck, the bucket of the Cat 992 loader came into contact with the head-board of the truck.
- A collision occurred between two light vehicles at an intersection when the driver of one of the vehicles was distracted.
- While driving a light vehicle on an exploration site access track at about 30kph the driver cut a corner and collided with a stump hidden in the grass. The passenger struck his head on the windscreen.

**Vehicle – Loss of Control (23)**

- While travelling down a drift an operator lost control of his light vehicle when it skidded on a wet section of pavement. The vehicle slid into the wall of the drift and rolled over. The operator sustained a strain injury to his left foot.
- After rain the operator of a Terex MT3300 dump truck was driving down a ramp when he lost control of the truck and skidded on the wrong side of the road for about 30m. He finally regained control and drove through an intersection. Two other trucks approaching the intersection stopped before the intersection to avoid a collision.
- A truck slid for approximately 40 metres on the wet section of the road and finished up across the road.
- A Cat 793 dump truck was coming down a ramp as rain started to fall. The truck slid at 45 degrees for 6m before stopping.
- A scraper slid on a recently watered section of haulroad as it rounded a corner. The operator lowered the bowl to steady the machine as it was

sliding towards the side of the road. The scraper rolled onto its side when the bowl contacted the ground.

- While driving through a bend in a road a light vehicle driver drove into an embankment and rolled onto its side.
- The operator of a Cat 785 dump truck was updating his load sheet as he pulled away from a digger and ran into the windrow.
- The operator of an underground Volvo 40t truck sustained a head injury requiring seven stitches and 3 cracked ribs when his truck rolled back about 15m and struck the wall of a decline.
- A Mitsubishi Canter supply truck lost braking going down a decline and hit the sidewall before making contact with a light vehicle coming up the decline.
- A Cat 793 dump truck operator had a micro sleep as he entered a dump and veered into the onside bund where the truck came to rest.
- The driver of a loaded Komatsu 630E dump truck fell asleep as he drove along the haulroad. He woke up and was able to brake heavily before colliding with the rippers on the rear of a Cat 16H grader which was trimming the haulroad.
- A dozer was reversing on a train loadout stockpile when it slid down the side of the stockpile and came to rest against an elevated conveyor support leg.

**Explosion (10)**

- Flyrock struck a dragline house which was located 40m outside the equipment exclusion zone.
- An electrician started an auxiliary fan without permission of the ERZ controller in charge of the area.
- Three mesh block ventilation seals in an underground coal mine were found to have not been constructed to the design standard.
- A shuttle car cable caught on a cable hangar on the corner of a roadway and then became trapped under the car. When the operator stopped the cab squashed the cable against the ground causing an arc flash.
- A methane drainage hose parted under pressure allowing methane to vent into the intake air of a development panel. Power to the section tripped when a 2% methane reading was recorded.

**Fire (35)**

- Diesel leaking from a cracked steel fuel line on the engine of a Cat D9T dozer caused a fire when the diesel vaporised and ignited. A hand held extinguisher was used to put the fire out.
- When a hydraulic hose on the boom of a Bucyrus RH340 hydraulic shovel failed, oil sprayed back over the machine and caught fire when it contacted the hot turbo and exhaust. The onboard fire suppression system was manually activated and extinguished the fire.
- A fire started on a Coldwell drill after oil from a leaking gasket on the oil feed line pooled on the heat shield and ignited. A hand held extinguisher was used to put the fire out.

- The oil feed line to the turbo of an O&K RH170 excavator ruptured causing a fire which was extinguished by the onboard fire suppression system.
- A fire started in the engine bay of a UDR1200 truck mounted drill rig as the truck was being driven from the exploration area. Use of a handheld fire extinguisher failed to put the fire out. The vehicle was extensively damaged and the surrounding grass caught fire.
- A short in the cables of the propel motors on a BE 1370 dragline resulted in a fire which filled the power control room with smoke initiating a manual shutdown of the dragline and auto activation of the fire suppression system.
- The activation of the onboard fire suppression system on a Cat 16H grader was insufficient to extinguish a fire in the grader's engine bay. The ERT was called to put the fire out.
- A fire started in the engine bay of an explosives MMU truck when oil leaked onto the turbocharger as the truck was travelling along a road. The operator stopped the truck and put the fire out with a hand held extinguisher.
- The onboard fire suppression system was used to extinguish a fire which started in the engine bay of a Normet concrete agitator.
- One of two 50kW electric powered air compressors housed in a shed caught fire and was destroyed. A water truck had to be used to extinguish the fire after two hand held fire extinguishers were ineffective due to limited access within the shed to get at the fire.
- A boilermaker was gouging a crack in the revolving frame of a P&H 4100XPB shovel when molten metal fell onto the track frame and ignited some grease. The spotter used a hand held extinguisher to put the fire out.

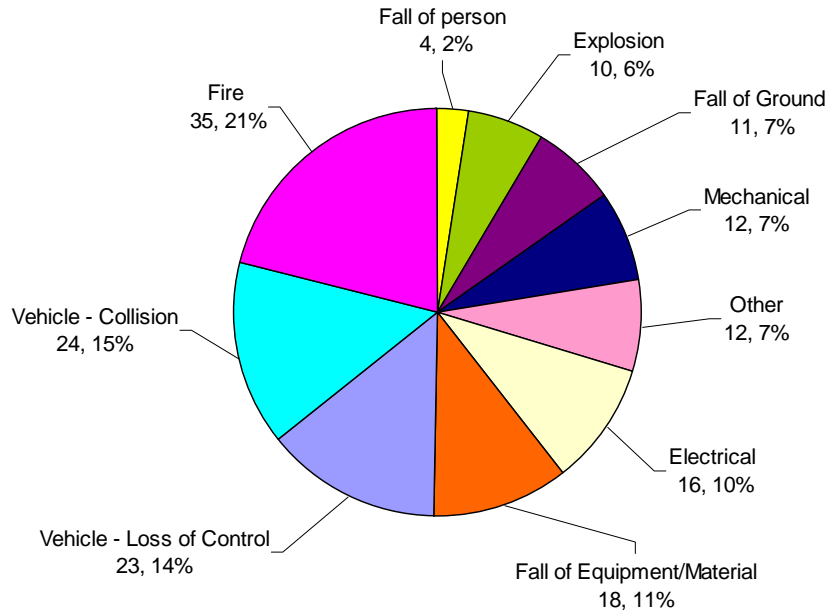
### Electrical (16)

- A dozer hit a power pole over while working on a ramp. The powerlines remained intact.
- A Komatsu WA500 loader reversed into a powerpole while loading from a stockpile causing the power lines to swing and arc which tripped the power.
- An electrician was fault finding on a circuit breaker for a conveyor. While accessing the PLC limit switches he received a 55V electric shock.
- A worker received an electric shock while using a damaged umbilical controller to operate a 100t press. Moisture had entered the controller which enabled tracking to occur between the live parts and the pushbutton.
- After a Komatsu electric drive truck was put into reverse, the electrics tripped on a fault. The fault was reset by the operator. When reverse was again selected, the operator received an electric shock from a metallic part of the steering wheel.
- A Cat 773B left the stockpile area with its tray raised after tipping its load. The operator pressed the button to lower the tray. The truck travelled 700m before driving under high voltage power lines with the tray in a partially elevated position.

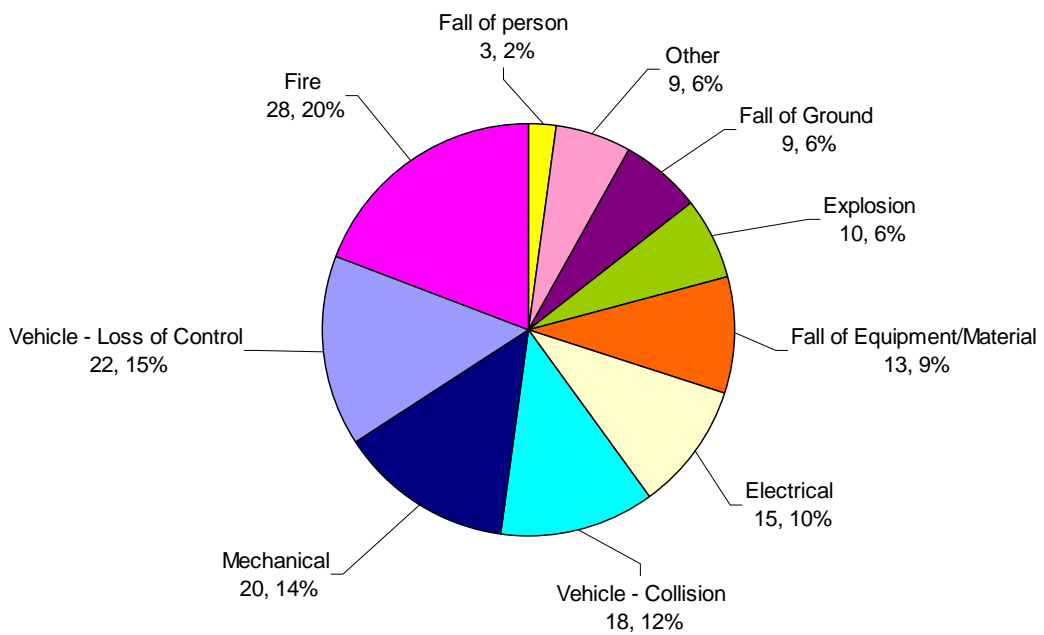
- The boom of an excavator that was been driven to the washdown area beside a workshop made contact with an overhead powerline.
- A boilermaker received an electric shock from the handpiece of an arc welder. He had wet gloves and the insulated head of the handpiece was damaged.
- During wet weather a worker who was repairing wear plates in a crusher chute received an electric shock from a Lincoln 500 welder when he struck an arc. A tarp had been erected over the job to keep the rain out.
- A driller's offsider received an electric shock while welding bore casing when he struck an arc. The equipment had been wet as a result of recent rain but was wiped dry.

### Other (12)

- Level 3 fumes from a shot breached the 1km exclusion zone.
- Level 4 fumes from a pre-strip blast breached the 1km exclusion zone.
- After a shot, two workers were found to have been in their trucks within the exclusion zone which had been extended to allow for a probable fume event.
- Level 3 fumes from a shot breached the exclusion zone and drifted across the mine's boundary. The diluted fumes drifted over an adjacent mine.
- While withdrawing a 6m drill steel from a hole during bolting operations in a coal development panel a blowout of gas occurred from the hole causing the bolter operator to feel dizzy and his offsider to feel nauseous. Subsequent analysis of the gas in the hole found it contained 16% Oxygen and 20% methane.



**Figure 1: May 2011 Incidents (total 165) by Category**



**Figure 2: Twelve Month Rolling Average (147 incidents/month) by Category**

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