

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for April 2011

#### Fall of Person (1)

- The operator of a Komatsu 630E dump truck was knocked unconscious when he fell while climbing down the access stairs. He sustained a fractured vertebra in his neck.

#### Fall of Equipment/Material (19)

- A worker damaged two vertebrae in his lower back when he was struck by mud which fell from the underside of an Hitachi EX3600 excavator which he was helping to clean.
- While assembling a new Cat 797 dump truck a boilermaker tack welded a rock deflector into position while it was being supported by a crane. When the crane released the deflector it fell striking and fracturing the boilermaker's left foot.
- In a process plant a 600mm long section of channel iron dropped through a handrail and fell ten metres onto the driveway below.
- A dozer was pushing coal on a product stockpile to clear a bridged feeder. While reversing the coal bridge slumped and the dozer slid into the slumping coal above the feeder.
- A Cat D11 dozer was cleaning spoil off the top of a coal bench when the fractured coal gave way. The dozer slid down the face of the bench and rolled over, landing back on its tracks. The operator was knocked unconscious and suffered head and pelvic injuries.
- As a Cat 793 dump truck reversed to dump its load the pos 5 & 6 wheels impacted the safety bund. The material slumped from under the wheels causing the rear of the truck to subside into the dump.
- After discharging its load on a dump a Cat 651 scraper went over the edge of the four meter dump access ramp which was about four meters high in that location and rolled onto its roof.
- A surface drill rig rolled onto its side while being trammed down a steep ramp with the boom elevated and drill mast raised.
- In a process plant a kibble loaded with 5t of grinding media fell 8m to the ground after the crane rope came off the pulley on the overhead crane attachment.
- While a DR253 drill rig was drilling a hole, a guide plate fell eight metres from the rod carousel striking the operator's cabin before landing on the drill deck.
- During conveyor maintenance in a process plant a troughing idler was dislodged while being replaced and fell 30m to the ground.

- A rock rolled down the face of a dump, bounced over the rill at the toe and struck a Hitachi EH4500 dump truck which was dumping its load.

#### Fall of Ground (12)

- A rock fell from the top of a development mining face while one miner was charging the backholes from a charge basket and a second miner was on the ground uncovering the lifters. The miner on the ground was struck by the rock which deflected off the side of the basket. She sustained a head injury and severe arm injury which resulted in her right arm being amputated below the elbow.
- A worker was knocked over on a longwall when coal spalled from the face and hit him in the back.
- Rock from a high wall failure struck a maintenance vehicle which was parked 10m from the toe while the fitter was working on a an excavator parked nearby.

#### Mechanical (17)

- A primary crusher feeder exciter, weighing approximately 3t, detached from its mounting and fell 2.5 m onto the walkway below.
- A fitter was investigating why a dozer would not shut down. He was removing the hose from the shutdown cylinder when his arm came in contact with the radiator fan blade. He required stitches to a cut on his arm.
- A longwall shearer operator was struck on the foot by a lump of coal flicked up by the shearer drum while he was cutting into the tailgate.
- A worker's shirt sleeve became entangled in a drill steel when he tried to reseat it into the spinning chuck of a bolting rig on a continuous miner. Two of his fingers were dislocated.
- While using a slide sledge hammer to fit bushes into a dozer push arm bore the fitter holding the adaptor tool got the tip of a finger crushed between the adaptor tool and hammer. The fingertip had to be amputated.
- On an underground LM 75 diamond drill rig the offsider was hit and knocked off the drill platform by the rod he was about to add to the drill string. It swung round and struck him when it became trapped between the traveller and the frame of the rig.
- While extending a 150mm diameter compressed air line a worker started to remove a gate valve while the line was charged. The valve blew off the end of the manifold narrowly missing the worker.
- An exploration driller's offsider caught his gloved hand in the drop chain of a Schramm drill rig while running casing down a borehole.

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

- After maintenance the main gate belt had been stopped and started a few times prior to the mobile boot end unexpectedly moving about 2m outbye.
- When a drag rope on a BE1350 dragline broke strands of wire up to 1m in length were found lying in the house.

### Vehicle – Collision (29)

- An electrical apprentice was assigned to fix the radio in a Komatsu WA1200 loader which was stopped outside a workshop. He parked his light vehicle behind the loader and left the vehicle without making positive communication with the operator. In the process of driving the loader into the service bay the loader operator reversed without realising the light vehicle was behind and ran over the bonnet of the vehicle.
- A loader collided with an unoccupied light vehicle, parked about 15m away, as it reversed and turned after dumping a load of material in a hopper.
- A Nissan patrol wagon drove onto a dump and parked next to a Toyota troop carrier and to the left rear side of a Kenworth C501 service truck which was refuelling a dozer. While the two light vehicle drivers were discussing operations the refuelling was completed and the service truck reversed. It collided with the Nissan and pushed it into the Toyota.
- A Cat 789 dump truck was being refuelled at the Go Line at the same time as a hot seat changeover. The new operator sounded the horn and began to pull away when the serviceman realised and released the fuel hose from the truck.
- A dump truck operator called up the dozer on a tip head to advise that he was going to drive behind the dozer. When the dozer stopped the truck operator assumed that it was OK to proceed. The dozer then reversed into the truck.
- A dump truck operator called up a loader operator as he approached the crushing plant to be loaded. The loader operator stopped. The truck driver assumed that it was to let him reverse into position. As he reversed the loader moved forward and collided with the truck.
- A Cat 844 rubber tyred dozer was cleaning the dump face when a Cat 793C dump truck reversed into position without telling the dozer operator. The dozer reversed into pos 3 tyre of the truck.
- While a dozer was cleaning up the dig face, a grader drove behind the dozer. The dozer backed into the grader.
- A Cat 777 dump truck contacted a stationary Cat D10T dozer whilst reversing to the tiphead.
- While an empty Cat 785 dump truck was coming down the ramp from an overburden dump, the tail of the truck contacted the offside mirror of another loaded Cat 785 dump truck going up the ramp.
- A dump truck operator stopped on the circuit when he encountered a grader which was grading in the opposite direction. Without receiving positive radio communication the dump truck operator proceeded to pass the grader on the narrow side between the grader and the edge of the haul road. During this manoeuvre the truck made contact with the grader.

- A light vehicle entered an intersection without looking and failed to give way to a Cat 777F dump truck. Both vehicles took evasive action to avoid a collision.
- Two Terex MT7300 dump trucks collided at a shovel face when the loaded truck stopped unexpectedly as it departed while the empty truck was reversing into position. The operator of the loaded truck was unable to warn the other operator because the latter had his radio switched to the workshop channel.

### Vehicle – Loss of Control (27)

- A Sterling semi trailer truck loaded with concentrate rolled over onto the driver's side while negotiating a left hand downhill corner. The truck cab was significantly damaged. The driver sustained a laceration to his forehead.
- The prime mover and first trailer of a Kenworth 508 road train rolled onto its side as it turned at an intersection.
- While driving through a corner a light vehicle operator leaned down to pick up his radio mike, steered into the centre dividing berm and rolled the vehicle.
- A Cat 793D dump truck failed to take a left hand turn on a haul road and mounted the centre bund.
- A Cat 793 dump truck skidded and spun on a recently graded and watered ramp.
- A Cat 789B dump truck skidded on to the wrong side of the haul road after hitting a recently watered patch of road.
- The operator of a John Deere tractor was slashing grass on the top of a contour bank, when the tractor slid off the top and into a drain.
- The left hand rear wheel came off a light vehicle as it was travelling at about 50kph along an access road.
- A light vehicle rolled approximately 20m after being parked on an incline.
- A Moxi articulated dump truck rolled away after being parked and lodged underneath an overhead conveyor.
- A Komatsu 630E dump truck had its wheels in a spoon drain at the workshop while an electrician and supervisor were load testing a wheel motor. During the test the truck moved forward about 2m and then subsequently rolled back into the drain.
- A shotcrete unit tramping up a decline lost power. The operator turned the unit into the wall and applied the park brake.

### Explosion (9)

- A blast demarcation cone was moved to enable an excavator to dig within the area beneath a charged shot. On the following shift the next operator continued to dig within the demarcated area without shotfirer supervision and dug within 8m of a loaded blatshole.
- After the detonators and boosters had been laid out on a shot a grader was called onto the shot to grade an area. When the grader had finished one

detonator and booster were found pushed to the side.

- During charging activities it was noticed that a charged hole was glowing orange with visible gas emanating from the hole.
- While conducting a prestart check on a light vehicle a detonator was found unsecured on the dash.
- While inspecting an electrical enclosure on a longwall shearer a gap greater than 0.5mm in the flame path of the enclosure was identified.
- A cable on a shuttle car pulled apart after it failed to release from the shoe causing an arc flash.
- During fault finding on a shuttle car traction fault a flash was observed through the viewing window inside the main contactor enclosure. The fire self extinguished after a short time.

### Fire (33)

- A fire occurred in a process plant reagent mixing tank hopper after the reagent mixer had mistakenly put two bags of xanthate (SIBX) into a tank which was being used for mixing sodium metabisulphite (SMBS). He was clearing a blockage in the hopper grate above the tank with a steel rod when a spark from the rod against the chute ignited the gas that was created by the mixing of the two chemicals.
- A fire started in the engine bay of a Cat 793F dump truck after a turbo failed.
- A Cat 785 dump truck burst an "O" ring on the fuel line which caused a fire on the turbo. The driver used the onboard fire suppression to put the fire out.
- A fire started in the battery box of a Cat 793C dump truck after contact between the battery cover and terminals rubbed the insulation off the leads causing a short. The operator put the fire out with a hand held extinguisher.
- A fire occurred in a retarder box on a Komatsu 930E dump truck after it was parked.
- A DC retard contactor on a Komatsu 830E AC dump truck failed and generated sufficient heat to cause the external painted surface on the electrical panel to catch fire.
- While bedding in the brushes on a wheel motor on a Terex MT4400 the operator noticed flames coming from the electrical cabinet on the deck.
- A fire started on a Terex RH340 shovel when a leak in the main hydraulic line sprayed oil onto a hot surface. The fire was extinguished using hand held extinguishers.
- When the operator of a BE 8750 dragline entered the house he saw flames coming from the drag drum bearing. The bearing had failed and heated the grease. A hand held extinguisher was used to put out the fire.
- A flashover occurred in a drag generator on a Marion 8750 dragline causing a fire to start underneath the generator. The operator used a hand held extinguisher to put the fire out.
- While welding a cross member on service truck chassis spilt grease from an adjacent auto-lube system caught fire.

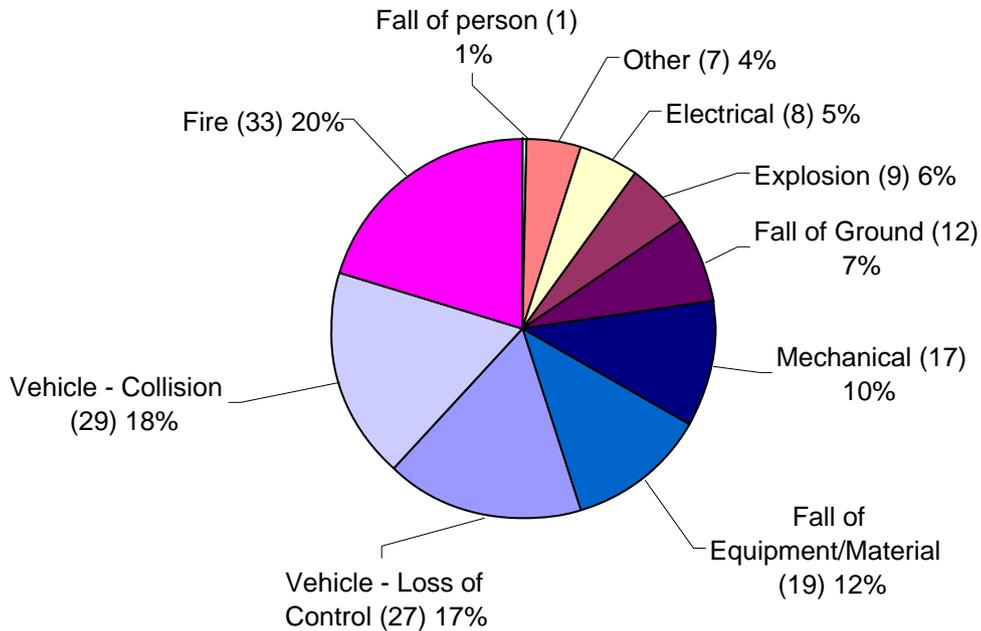
- When an injector fuel line failed in the engine bay of a production drill rig the fuel misted onto the turbo and started a fire. The auto fire suppression system initiated.
- A fire started between the seats of a light vehicle parked in an underground parking bay. It was not possible to extinguish the fire and the area was evacuated.

### Electrical (8)

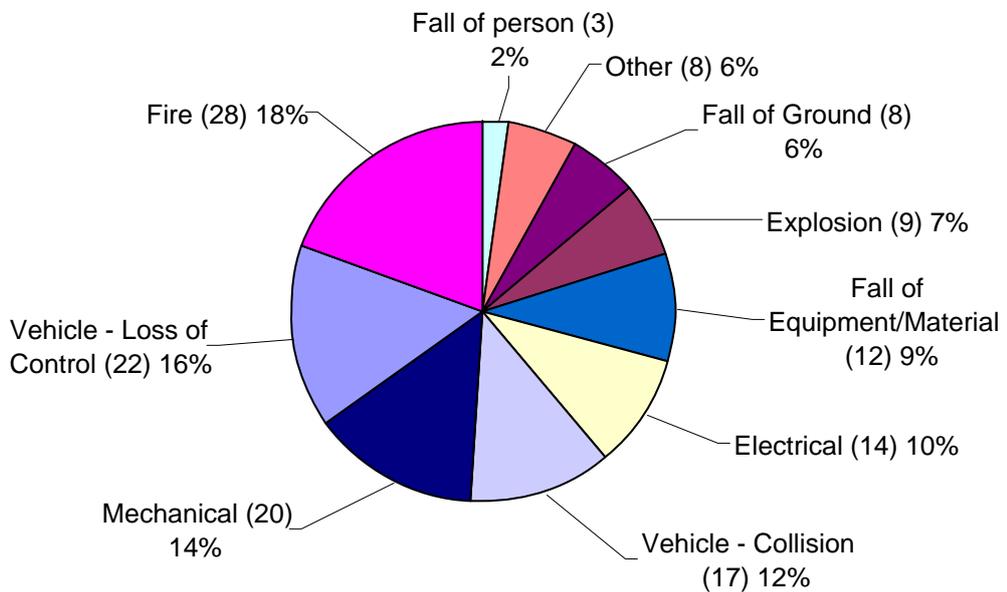
- A dozer was skimming the vegetation from the road surface when it dug up the mine's 240V PED cable tripping the system.
- An arc flash occurred while an electrician was removing a cover from a lighting and power distribution board.
- A steel fixer received an electric shock while moving some mesh into place. At the time welding was being carried out on the mesh to interlock into place. One of the two welding earthing clamps was not connected.

### Other (7)

- A fume cloud produced from a shot travelled beyond the 1km exclusion zone.
- A level 4 fume cloud was produced in an overburden blast at a coal mine. The fume cloud travelled about 8kms and passed over a nearby town.
- A steel elution vessel at a gold process plant failed at a pipe fitting allowing the high temperature contents to discharge under pressure.



**Figure 1: April 2011 Incidents (total 162) by Category**



**Figure 2: Twelve Month Rolling Average (142 incidents/month) by Category**