

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for December 2011

#### Fall of Person (4)

- At a refuelling location on nightshift a serviceman climbed up the access ladder of a parked Cat 785 dump truck. While standing on the top rung he lost his balance and fell to the ground. The serviceman injured his wrists, right leg and elbow.
- An operator fell and possibly fractured his left forearm while cleaning the front lights of a Cat R2900 loader.

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

- An 8.7t conveyor gravity take-up counterweight fell to the ground due to failure of the hanger bolts.
- While pushing dirt a Cat D11 dozer operator backed up and slid over the edge of a 3m bench.
- A Cat D10T dozer was reversing along a bench when it slid off the bench and rolled over on its side.
- A lifting eye-bolt failed under load while fitters were lifting a slew gear box from a hydraulic shovel.
- During inspection of supports, a small piece of shotcrete was found to have fallen from the top of the rib line at the start of the arch.
- The operator of a Cat D10 dozer which was pushing up material to build a safety berm along a highwall dislodged some rocks which rolled over the edge and landed close to a serviceman working on a pit pump below.
- At a coal preparation plant, a vacuum filter underpan dislodged due to corrosion and hinged down to the floor.
- A B-double side tipper trailer rolled over while trying to tip wet sand from the rear articulated trailer.
- A small power screen feed conveyor, being fed by a loader, toppled over.
- While lifting a demountable building an articulated Franna crane toppled onto its side.
- An anchor bolt from the drill mast fell 7m onto the roof of the operator's cabin while the operator was drilling a hole.
- A light fitting reflector shroud dislodged and fell 10m to the floor.
- Workers removed the wings from a raisebore reamer while the reamer was still under the 4m diameter open hole.
- While a Cat 2900 loader was cleaning up an underground development heading above an open bench stope part of the floor 3m back from the face fell into the stope. The left front wheel of the loader dropped into the hole in the floor.

- The tray of an International body truck separated from the chassis and rolled off to the side while it was trying to tip material on unlevel surface created by previously tipped material.
- An Isuzu tip truck, with only one outrigger set, tipped over on its side while the operator was removing a load from the tray of the truck using truck's vehicle loading crane.

#### Fall of Ground (8)

- A 150m x 15m section of a tertiary clay low wall collapsed onto the pit floor.
- A 100kg lump of coal fell close to where a worker was changing picks on a longwall shearer.
- Coal mine workers were withdrawn from a development panel when it was realised that the rockbolts that had been installed in the panel were of an inferior steel quality.
- A jumbo was about to travel through old workings that had just been mined into when rocks fell from the back.
- A miner was struck by a rock that fell from the face while he was changing a drill bit on a jumbo drill rod. He sustained a fractured ribs and shoulder.

#### Mechanical (21)

- The cooling fan of a CHPP feeder breaker 150 kW electric motor disintegrated causing metal fragments to eject through the plastic cowling.
- While manually rotating the deck bush of a Reich 700 drill, the deck bush came free and struck the operator's finger resulting in the loss of his finger tip.
- A timber jack hydraulic cylinder lifted slowly towards the roof without any operator input.
- A chock at a longwall tailgate lowered without any operator input.
- Work was being carried out on a conveyor when a supervisor noticed it was not isolated.
- As a timber jack on a continuous miner was being lowered by remote control it contacted the end of a drill steel, the other end of which a miner had resting on the top of his boot. As the jack continued to lower it penetrated and went through the miner's foot.
- While removing the park brake assembly from a Komatsu 830E dump truck the park brake cap ejected when an Enerpac pump was connected to the park brake caliper and pressurised to over-ride the brake spring.

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

- The mobile boot end of a main gate conveyor unexpectedly moved 4m.
- A worker was struck with high pressure oil from a leak in a longwall chock. He was taken to hospital suffering a suspected fluid injection injury.
- A counterweight on an isolated conveyor was moved using an independent power source causing unexpected movement of the conveyor belt where another crew was working.
- A surface winder was inching a shaft conveyance into the chairing position on a shaft plat when the winder unexpectedly dropped the conveyance 4m. Subsequently a dead gecko was found in one of the relays of the control system.
- A 2t winch was pulled from its concrete base and moved forward 9m towards the pit edge while lifting a 185mm diameter HV armoured cable up a high pit wall.
- The main section of the boom on a Hitachi 450H excavator cracked and split open while loading a rear dump truck. The excavator arm and loaded bucket dropped onto the tray of the truck.

### Vehicle – Collision (27)

- An excavator was being escorted by a light vehicle to its work location. The driver of the light vehicle rounded a curve and stopped near the edge of the road to answer a phone call. As the excavator rounded the corner it ran into the escort vehicle.
- A loader cleaning up on a shot struck a stationary MMU with its bucket.
- As a Cat 793C was exiting a service bay after being refuelled, it contacted a vertical support beam.
- As a service truck backed away from an excavator it made contact with a parked light vehicle that had entered the work area. The light vehicle driver had not made positive radio contact nor parked in the designated parking area.
- A CAT 793C rear dump truck failed to give way to a light vehicle at a major intersection. Visibility from both vehicles at the intersection was poor. The light vehicle was able to slow and yield to the truck to avoid collision.
- An Atlas Copco articulated truck was travelling down an open pit ramp leading to the underground mine portal when it collided on a blind corner with a light vehicle coming up the ramp from the mine.
- A dump truck stopped at an intersection prior to making a right hand turn. As it moved forward a light vehicle carrying explosives drove into the intersection, the driver having assumed that the dump truck operator had seen him. The light vehicle had to take evasive action to avoid a collision with the truck.

### Vehicle – Loss of Control (47)

- As the operator of a fully loaded on-highway water truck came over the crest of a hill on an exploration drill site he unsuccessfully attempted to select a

lower gear. He lost control of the truck as it gained momentum down the hill. The truck veered off the track into the scrub and rolled onto the passenger's side.

- A Komatsu 930E dump truck slid 40m on a recently watered ramp and ended up 90° to the direction of travel.
- A Cat 789D dump truck was travelling on a recently watered haul road when the truck lost traction and spun through 180° before stopping.
- A Cat 777B dump truck lost traction while travelling down an over watered ramp and skidded, started spinning, hit the safety berm and ended up facing uphill.
- The operator of a Cat 785B dump truck lost traction when he drove down a ramp in 4<sup>th</sup> gear and through a pool of water at the bottom. The truck slid off the road and straddled a safety berm.
- The operator of a Cat 777 dump truck encountered very heavy rain which limited his visibility as he approached a sweeping corner. The truck continued straight ahead and came to rest in a table drain on the opposite side of the road.
- The operator of an empty Cat AD55 dump truck lost control of his truck after negotiating a turn on a decline and slid 15m before coming to rest against the wall.
- The operator of a Normet agitator truck was travelling down a decline when the truck stalled causing loss of all braking capacity and steering. The truck then freewheeled for 20m before striking the decline wall and coming to a stop.
- A Mack service truck was travelling down a ramp to re-fuel an excavator on the pit floor when the operator lost control of the truck. He was unable to stop and collided with the excavator.
- The operator of a Komatsu 960E dump truck had a micro sleep and drove into a drain as he turned left at the top of a ramp.
- A Cat 775F dump truck which was parked outside a workshop rolled away 27m and ended up in a drain.
- While waiting to load from a chute the operator of a Cat AD45 truck stopped approximately 4m behind a parked truck and left the cab. His truck rolled forward into the tray of the parked truck, damaging the cab.
- A fully loaded water truck was going up a short steep ramp in second gear when the rear wheels started to tramp. The operator tried unsuccessfully to change down to 1st gear but the transmission ended up in neutral. The truck rolled back and stopped against the safety bund.
- A Mack road train was parked on a ROM pad with the park brake applied while the driver was loading the truck with a loader. After placing the last bucket in the back trailer the truck started to roll backwards and jack-knifed.
- A shotfirer's light vehicle rolled onto its side as it entered a magazine compound.
- A brand new Cat 789C dump truck was travelling along a haul road prior to undergoing final commissioning when the position 3 wheel assembly dislodged from the hub.

- While loading a dump truck on a bench a Liebherr 996 excavator started to slide down a ramp toward the dig face. The operator swung the bucket around and placed it on the ground in the direction of the slide and the excavator came to rest against the bucket.
- The weight of a lighting plant being towed by Toyota troop carrier down a ramp resulted in the light vehicle skidding for 60m before coming to a stop at the bottom of the ramp with the lighting plant jack knifed.
- A lighting plant was being towed to a new position when it detached and rolled uncontrolled into a parked truck.
- A shuttle car unexpectedly moved 1m after being stopped because the hand brake had not been applied.

### Explosion (12)

- A dozer operator drove over a bund wall and into a loaded shot area. There was no barrier installed as the height of the bund was considered to be adequate to prevent entry. The dozer then walked along the edge of the shot and exited through the barrier at the other end.
- During a planned ventilation change for a longwall a ventilation control device was inadvertently opened wider than intended causing in excess of 2% methane to pass through the bleeder fan.
- During an external inspection of a Driftrunner, an electrician noted that one light was not operating due to severing of the cable inside the FRAS hose.
- A high impedance fault within a cable plug for a 3.3kV tailgate drive cable on a longwall developed into a short circuit fault. This caused the cable and molten metal to be ejected from the plug and a small fire. Workers put the flames out with a hand held extinguisher.
- A worker started welding on an explosives MPU truck that had been emptied but not decontaminated of explosive residue.

### Fire (34)

- Sparks from grinding ignited a workers shirt.
- A hydraulic line in the engine bay of a Cat 789 truck ruptured spraying oil onto the engine, starting a fire. The operator activated the on-board fire suppression system and extinguished the fire.
- The fire suppression system failed to activate on a Cat D10 dozer after a fire started. A hand held extinguisher was used to put it out.
- A potable water tanker was delivering water to a mine village when the petrol powered pump ran out of fuel. While refuelling the pump petrol spilled onto the exhaust and started a fire. Water from the tanker and hand held fire extinguishers were used to put the fire out.
- Whilst transferring ammonium nitrate prill from a bulk container to an MMU an electrical fire started in the tube conveyor motor. The operator hit the stop button and used a hand held extinguisher to put the fire out.

- A fire started in the engine bay of a Cat 769 dump truck after a failed hydraulic hose sprayed oil onto the engine. The auto fire suppression system controlled the fire.
- Fire started on a Legra dewatering pump after oil sprayed onto the turbo.
- A fire in the relay box of a Cat R2900G loader was extinguished with a hand held extinguisher.
- A hydraulic hose burst on a Cat D9 dozer spraying oil over the turbo. A hand held extinguisher was used to extinguish the resulting fire.
- The operator of an Atlas Copco MT5020 dump truck was tramping up a decline when he noticed flames coming from the engine bay. He pulled up and activated the AFFF system. The fire reignited after the system was depleted so the operator used a hand held extinguisher to put it out.
- A fire started on a Cat AD55 dump truck when a failed driveshaft hit and loosened a hydraulic hose allowing oil to spray onto the exhaust. The operator shut the truck down and activated the AFFF system.
- During routine earth leakage tests on a dragline a flash and fire occurred in an adjacent switchboard when a capacitor for a 2 kW light ignited when the circuit was re-energized.

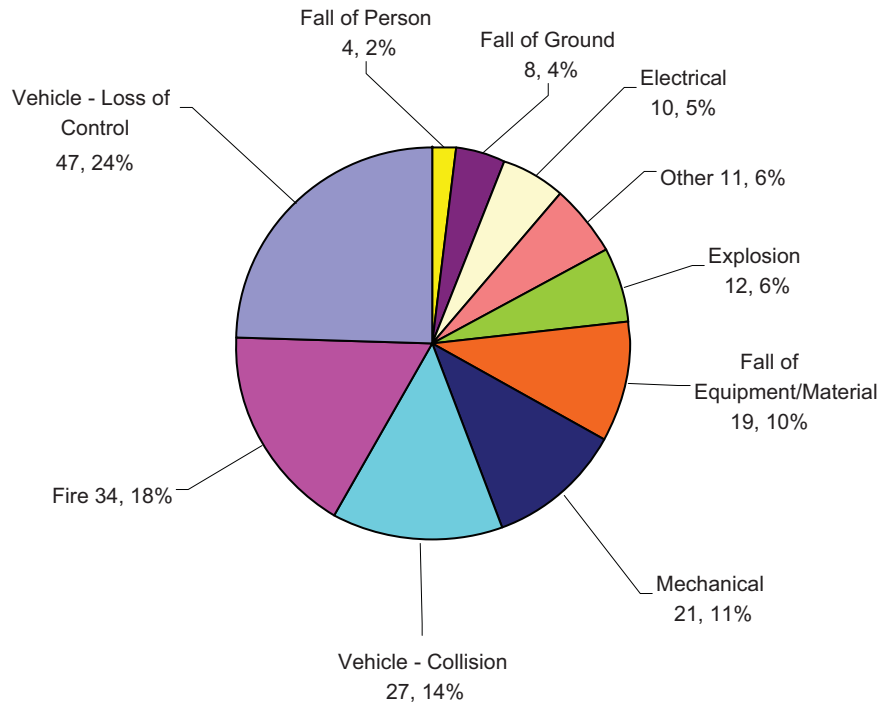
### Electrical (10)

- An electrician received an electric shock from a 10kV insulation tester whilst testing a high voltage cable.
- A worker received an electric shock while using a grinder to cut bolts in a SAG mill discharge area when water from the mill dripped onto his arm and ran down onto the grinder.
- A loaded Liebherr T282C electric drive dump truck lost traction after the capacitors in the DC-DC converter panel failed.
- The boom on a 30t long arm excavator contacted an 11kV overhead powerline when the operator slewed the boom while reversing from a creek in the mill area where he had been removing sand.
- A worker was closing a gate at a mine while there was lightning activity in the area when he blacked out for a period of time. He was sent for a medical assessment where an irregularity in heart beat was detected. Blood tests later confirmed that the worker was possibly subjected to an electric shock from the lightning.

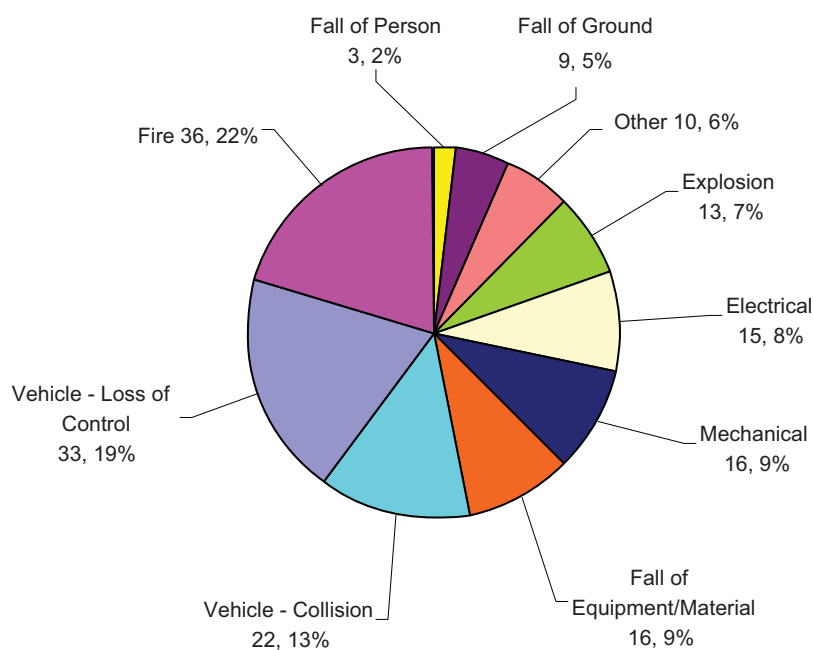
### Other (11)

- Following an overburden shot a Level 2 fume event occurred. Five workers in a crib hut were affected by the fumes and received medical treatment.
- An unexpected level 4 fume event occurred following a an overburden shot that had been slept for 20 days due to charging delays caused by wet weather.
- A gust of wind overturned a crib hut which had just been delivered to site. It was not yet occupied and was unrestrained at the time.

- An operator sustained a serious back injury when a Cat 785C dump truck hit a bump and the operator's seat collapsed.
- Workers were clearing a blocked drain hole in a sump when the blockage suddenly cleared. The operator slipped into the sump with the rush of water trapping his leg in the drainhole.
- A trainer stood on the access ladder of a loader cab while the loader was being driven by a trainee.
- An aerosol can used to inflate a blasthole decking bag ruptured in the bag while the bag was being carried on a shot. The bottom of the can blew out through the end of the bag landing 3m from the worker.



**Figure 1: December 2011 Incidents (total 193) by Category**



**Figure 2: Twelve Month Rolling Average (172 incidents/month) by Category**