

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for January 2012

#### Fall of Person (1)

- A worker fractured his right fibula when he slipped while inspecting a levee bank.

#### Fall of Equipment/Material (9)

- During maintenance on a Komatsu 475 dozer an 18t Franna crane was lifting the dozer's track frame when the recoil assembly slid out of the frame and fell onto a worker's foot fracturing two of his toes.
- While a jumbo drill rig was scaling a development face approximately 200m of 50mm diameter PVC pipe fell out of a diamond drill hole which intersected the face. The pipes landed in several lengths along the drive and in front of the jumbo.
- A 7mm wire line on a Drill Torque exploration drill rig broke at the mast top sheave as it was pulling up the core barrel. The broken wire line fell striking the driller and offsider.
- A 1.5m long by 200mm diameter steel pipe bend fell to the floor of a sump due to failure of the corroded victaulic fittings.
- Spillage that had built up on a pipe in a process plant fell 8m and struck a worker on the head.

#### Fall of Ground (10)

- A miner was putting up mesh in a development heading when rock fell onto the mesh pushing his arms against the timber jacks of the ABM25 bolter miner. He suffered contusions to both forearms and fractured his right thumb.
- A rock fell through an opening between damaged roof mesh and struck two workers who were hanging poly pipe.
- A slab of fibrecrete and rock weighing approximately 150kg fell from the back of an underground substation.
- About 15t of rock fell from the shoulder and back of a drive. A supervisor was struck by fly rock from the fall which caused bruising to his shoulder and neck.
- An access ramp above the endwall of an open pit slumped 20m and the pit floor heaved when approximately 700,000 m<sup>3</sup> of the endwall slipped about 50m into the pit.
- Two Legra pumps installed near the crest of a highwall fell into the pit when they were undercut by a failure of approximately 11000m<sup>3</sup> of ground in the highwall.

#### Mechanical (17)

- A tyre fitter was inflating a tyre on a Komatsu WA 900 loader when he heard a noise coming from the tyre. He moved to the tyre to investigate when it ruptured. The tyre split in the tread area where it was in contact with the ground. He was peppered with rocks blown out of the hardstand. He lost some of his teeth, sustained a deep laceration in his left arm and many impact marks on his skin.
- A trainee tyre fitter failed to deflate a tyre on a Komatsu 830E dump truck before removing the wheel nuts and cleats.
- The wheel assembly of a Cat 789 dump truck was fitted to a Komatsu 830E dump truck.
- The operator of a dragline heard a loud clunking noise while in swing mode causing him to lose control of the dragline which swung hard to the right. He hit the MG set button to isolate the machine and movement.
- An uncontrolled movement of the drag motion on a Bucyrus 1370 UDD dragline occurred while the dragline was dumping material at boom point. The Boom Protection System activated after the fault and set all motion brakes.
- An exploration driller was unable to loosen the joint between two lengths of steel borehole casing using chain tongs so he used the drill motor rotation to assist. The pin end of the upper length of casing came free and hit him in the chest. He fell against the rotation control, pushing it into reverse. The casing rotated and the tongs hit him several times before his offsider was able to stop the drill. The driller required stitches in a cut to his right ear.
- Two workers were recharging a sand blasting hopper when the handpiece activated. A burst of material and air struck and cracked the visor on the helmet of one of the workers causing eye and facial injuries.
- An Airtrack drill rig operator partially severed the tip of his left hand index finger when he caught his hand between the drill steel and the boom of the drill rig.
- A worker opened both sets of double vent doors to allow him to drive a loader and trailer through and then stopped to close them. He was closing the left hand door of one of the sets of doors when the air velocity pushed him through the right hand door opening. He was still holding onto the door handle when the right hand door slammed closed fracturing his left wrist.
- After a Cat 924H loader became bogged a lifting chain attached to a Hitachi 870H excavator was used to try and pull the loader out. The chain

broke and recoiled through the excavator cabin windscreen.

### Vehicle – Collision (28)

- A Komatsu 785 dump truck re-entered the dig floor and parked at one end of the circuit while a Cat D10 dozer was pushing at the other end. As the dozer reversed to do another push it made contact with the access stairs of the truck.
- As a Komatsu 830E dump truck reversed to tip on a dump on nightshift the dozer driver asked the operator to move further along the tip head. As the truck moved forward a second Komatsu 830E arrived to tip. The operator of the second truck thought that the first truck was leaving. When the first truck started to reverse into position its tailgate struck the offside front of the second truck.
- While a cable tractor was positioning a dragline trailing cable the front of the left shoe of the dragline made contact with the side of the tractor when the dragline swung around to set up the shoe parallel with the dig face. The tractor operator suffered minor injuries while the cable tractor was damaged.
- A Le Tourneau 1850 loader reversed into a light vehicle on a ROM pad. The loader operator didn't know that the light vehicle had come into the area.
- As an R2900 loader reversed out of an underground workshop bay it collided with the front of a light vehicle which had stopped near the loader because its planned exit was blocked by another vehicle.
- The bucket of a P&H 4100 shovel hit the headboard of the Cat 797 dump truck it was loading when the shovel failed to stop slewing due to a component failure.
- A light vehicle drove through an intersection without noticing that a Cat 776D dump truck, which was travelling at about 60kph, was approaching from the left. The truck operator slowed down to avoid a collision.
- A Cat D11 dozer reversed into a water cart which had parked, without communicating with the dozer operator, close to where the dozer was pushing on a tip head.

### Vehicle – Loss of Control (37)

- A Bucyrus MT4400 rear dump truck was travelling unloaded down a ramp with its right hand side wheels along the centre on the dry line. The operator veered to the left when he noticed another dump truck leaving the dig floor. The truck lost traction, slid 35m and came to rest facing the bund.
- A loaded Cat 777F dump truck was pulling away from the dig face when the front RHS suspension cylinder failed catastrophically above axle stub.
- The trailer of a Cat articulated truck rolled onto its side while turning a corner in wet weather and poor road conditions.
- A loaded Volvo A30D articulated haul truck was negotiating a left hand downhill bend when the trailer tipped over onto its right hand side.

- The operator of a Cat 793F rear dump truck deviated 150m from the haul path in a pre-strip circuit and contacted a bund. The truck came to rest 6m down a bank on the other side of the bund.
- A Cat 785B dump truck was following a water truck which was watering down a ramp. The dump truck lost traction and made contact with the centre bund turning 180 degrees before stopping.
- A Nissan Navara ute was travelling along a mine access road when its RHS rear wheel came off. It had been recently fitted with 4 new tyres during scheduled servicing.
- The drive shaft on prime-mover of coal haulage road train snapped causing the trailers to jack-knife and rollover.
- A Toyota 4WD commuter bus stopped against a safety berm after it slid 20m on a muddy section of road. A passenger received minor injuries.
- A Kenworth 650 AB Triple axle roadtrain lost a set of dual wheels from its middle axle.
- The LHS wheels of a Cat 776D longtruck contacted the bund while negotiating a sweeping bend when the wheels moved off the compacted road surface onto a wet slippery section of road.
- A fitter turned the ignition key of a Toyota troop carrier to start the engine while standing outside with the open door. The vehicle which was in first gear jumped 4m forward striking a service truck.
- A Volvo L35 loader rolled onto its side as the operator was dragging a long length of poly pipe which was attached to the raised bucket of the loader around a corner on an access track.

### Explosion (22)

- An inexperienced electrician repowered and restarted a fan without permission from the ERZ Controller after power tripped off at the section transformer of an underground coal mine.
- Due to methane concentrations in excess of 2.5%, all mineworkers were withdrawn from an underground coal mine.
- A chock carrier was taken underground with only 2 of 14 bolts fitted to an explosion protected screen rendering the enclosure non-flameproof.
- During drilling operations at an open cut coal mine, the drillers had to lower the mast to carry out hot work repairs. During grinding, sparks fell into a gap in the floor and ignited seam gas. The fire self extinguished.
- An arc flash occurred and power tripped to a continuous miner after the machine walked off packing timber which had been placed under it for maintenance. The rear of the machine cantilevered up pinning the power cable, which was looped over the tail of the miner, against the roof.
- A shuttle car power cable was damaged and an arc flash occurred when the cable caught on a rib bolt as the shuttle car was returning to the continuous miner.
- An Eimco loader was cleaning up in an ERZ area of an underground coal mine when the raised bucket contacted an 11kV cable, crushing it to the roof and causing an arc flash.

- A diesel fire pump would not start when checked during routine maintenance. An electrician was fault finding at the solenoid while another electrician attempted to start the pump when the Cat 175-4390 battery box exploded, blowing the lid off the battery.
- A shot firer was preparing to refire a misfire when a blast guard observed a worker enter the blast exclusion zone via an access road that was not on the blast plan.
- The bucket elevator at an ammonium nitrate reload facility failed causing the belt to smoke and catch fire. A 1km exclusion zone was set up around the site.
- A blasthole downline was lost when the stemming loader drove over the hole collar causing it to collapse.

### Fire (48)

- A Cat D10R dozer blade arm hose burst spraying oil onto the exhaust system and causing a fire.
- Oil ignited when the turbo feed hose blew on a Cat D11T dozer. The auto fire suppression activated and extinguished the fire.
- A small fire started when the tilt ram hose on a Cat D11T dozer burst spraying oil onto the fire blanket of the turbo in the engine bay.
- A fire started in the engine bay of a Cat AD55B dump truck while travelling up a decline when a rag, which was left next to the turbo after servicing, ignited. The fire was put out with the on board fire suppression system.
- While travelling down a decline an operator of a Cat AD55B dump truck noticed flames coming from the exhaust area. He activated the fire suppression system, stopped the truck, and extinguished the remaining flames with a hand held fire extinguisher.
- A fitter found flames coming from the hydraulic tank of a Cat 789B dump truck after the driver had parked the truck because of steering problems. The fitter activated the fire suppression to extinguish the flames.
- A Liebherr T282C rear dump truck was travelling down a ramp when the DC-DC convertor panel failed causing a fire inside the cabinet.
- A suspected oil leak onto the turbo started a fire in the engine compartment of a Cat 24H grader.
- A Cat 992 loader was conducting ramp repairs in the pit when the operator noticed smoke and flames coming from the right hand side exhaust. The fire suppression system was activated and emergency procedures initiated.
- Hydraulic oil sprayed over the hot exhaust of an O&K 120E excavator and ignited after the 50mm diameter main control hose burst on the boom. The fire was put out with two hand held extinguishers.
- A fire started in the battery compartment of a Komatsu PC800 excavator when a flexible steel braided grease line used for filling the autolube system contacted a battery terminal. The fire was put out with a handheld fire extinguisher.

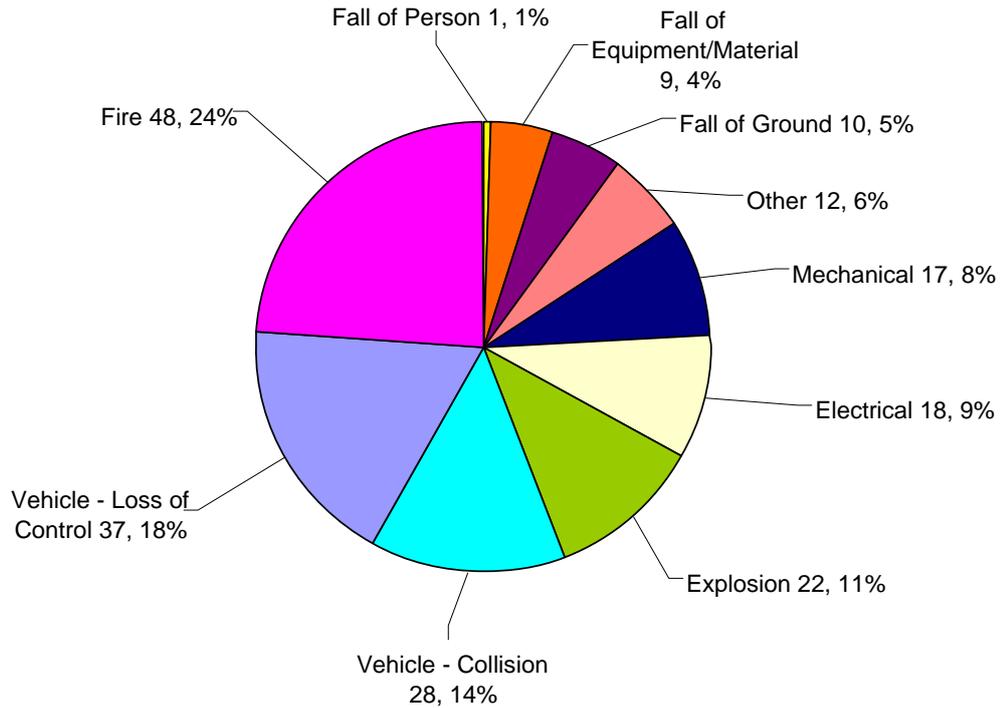
- While an Ingersoll Rand TH75 drill rig was casing a methane drainage hole a fire started near the cooler pack of the onboard air compressor.
- A fire started on a Reich 750 overburden drill rig when oil sprayed from a hydraulic oil leak onto the exhaust. A hand held extinguisher was used to put the fire out.
- An electrical fault in the rear light of a Normet explosives charge car caused a fire in the wiring.

### Electrical (18)

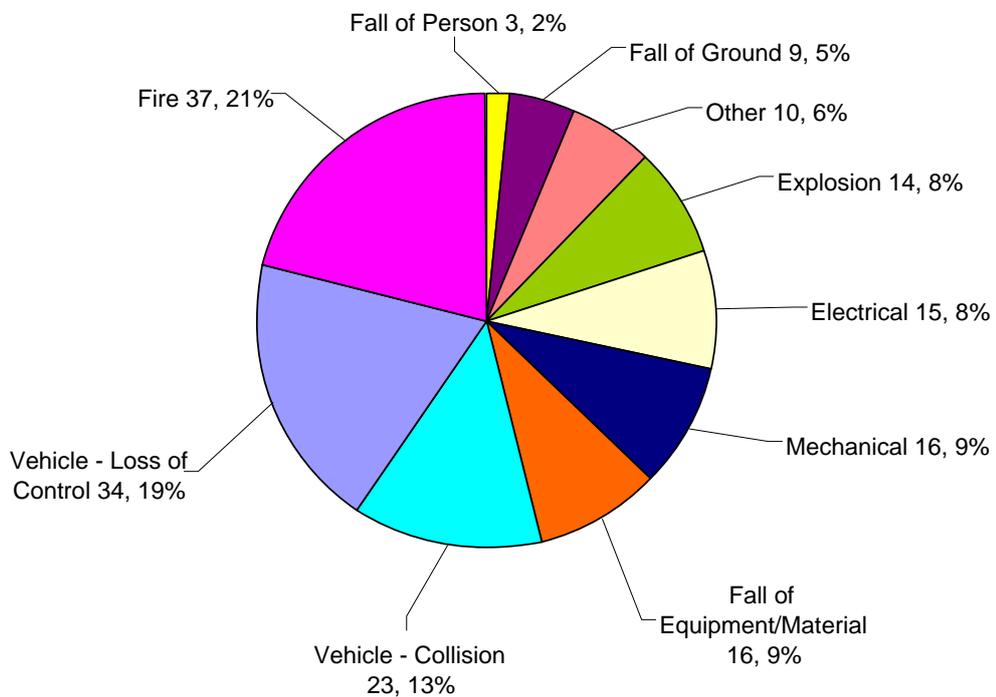
- While resetting a trip on a lighting plant a worker received an electric shock. The covers over the electrical enclosures were missing allowing them to fill with rain water.
- A high voltage fuse ruptured during the clearing of an electrical fault causing damage to the auxiliary transformer high voltage switching panel. The panel contained the fault but was damaged by the explosive forces associated with the arcing fault.
- During clean up activities a Cat 428D backhoe damaged a 6.6kV drill cable.
- A worker received an electric shock while operating a bolter on a Sandvik MB670 bolter – continuous miner.
- Due to hot and humid conditions a boilermaker removed his gloves to reposition equipment and to cool down. He noticed that the work lead had fallen off. When he picked up the clamp he received an electric shock.
- An electrician received an electric shock when he took hold of the bottom of a plastic switchboard door which he was about to open.
- A worker received an electric shock while testing a submersible pump. The main switched tripped on earth leakage.

### Other (12)

- A worker in a surface workshop was bitten on the leg by a brown snake.
- A mine catering employee was bitten by a brown snake on the shin while placing a bag of rubbish in a bin at the rear of the kitchen.
- A worker at a process plant stepped into a sump drain containing sulphuric acid when the fibre reinforced plastic grid mesh covering the drain collapsed. He sustained serious acid burns to his foot and lower leg.
- A diesel fitter was admitted to hospital suffering possible heat stress after working most of his shift in 38°C ambient temperature on a dozer at an unsheltered hardstand.
- Workers were withdrawn from an underground coal mine due to inflow of water from the surface during a heavy storm which limited them to only one egress from the mine.
- A level 4 blast fume event at a coal mine generated fume that breached the fume management zone, left the lease and drifted down a public road.
- Cyanide from a dosing pump dripped onto two workers as they removed grating to access a blockage in a mill feed chute in a gold processing plant.



**Figure 1: January 2012 Incidents (total 202) by Category**



**Figure 2: Twelve Month Rolling Average (176 incidents/month) by Category**

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for February 2012

#### Fall of Person (2)

- An operator fell about two metres to the ground when he stood on a rubber wheel flap attached to the engine compartment of an Atlas Copco 6020 underground truck. The operator was flown to hospital with a suspected fractured hip and coccyx.
- An aluminium ladder was being used to access the walkway on a mobile crusher. The top rung was hooked over the crusher's ladder hooks. As the crusher operator climbed the ladder the top rung broke and the ladder fell against the crusher. The operator fell about two metres to the ground breaking his left forearm.

#### Fall of Equipment/Material (10)

- The tray of a Volvo A40E articulated truck tipped over as the operator reversed the truck to tip onto a stockpile.
- The position 5&6 tyres of a Cat 793F dump truck breached the dump rill while reversing to tip.
- A Cat AD40 articulated dump truck rolled over while tipping when the edge of the road gave way.
- A solvent extraction plant operator sustained bruising when approximately one tonne of copper plates overbalanced and fell off the weigh station and partially onto the operator.
- A Franna crane tipped onto its side while unloading PVC pipes from a truck.

#### Fall of Ground (4)

- Approximately 30,000 tonnes fell from a highwall into a bunded area.
- While hooking up a development face firing a miner was struck by a small rock which fell from the shoulder of the face.
- A dozer was cleaning up along the toe of the highwall when it was struck by a rock which fell from the highwall. The rock ricocheted off the access stairs into the side window of the cab which broke.

#### Mechanical (30)

- The position 4 tyre on a loaded Cat 797 dump truck burst while travelling up a ramp shattering the windscreen.
- While removing the stick from an Hitachi 5500 excavator the stick swung and contacted the cab and front tyres of the 130tonne hydraulic crane which was supporting it.
- High pressure oil from a burst hose struck a worker on a longwall while he was using a hydraulic

- tensioner. He sustained a 10mm laceration to his rib cage and was treated for possible oil injection .
- A 2.3 tonne lifting chain broke while removing a blade arm from a D7 dozer.
- The signal from a remote control being used to operate a MB650 Sandvik continuous miner was received by the same model continuous miner operating nearby.
- An operator assisting with a SAG mill reline used a hydraulic hammer to punch 50mm x 400mm bolts into the liners from the outside while other worker were inside the mill.
- A PC300 excavator, fitted with a rockbreaker, was breaking rock when the windscreen shattered and splinters of glass entered the operator's eyes.
- Catastrophic failure of the blades of a 250kW ventilation fan resulted in metal parts being projected through the steel wall of the protection cone into a work area.
- While installing electric cables in a process plant from the basket of a Genie cherry picker the basket moved unexpectedly to the side and struck a column.
- A boilermaker was struck in the neck by a metal shard while using a hammer to break off a loader bucket head block he had been gouging. Surgery was required to remove the piece of metal.
- An operator opened a hinged guard to shovel away some spillage at the tail end of an operating conveyor. He broke the tip of a finger when the shovel handle struck the conveyor frame after the shovel caught between the conveyor and the drum.

#### Vehicle – Collision (25)

- A ventilation officer entered a sub-level from a decline to take some measurements. When he returned to the decline he found his path blocked by a Cat 2900 tele-remote loader which was set up and armed to start operating.
- The bucket of an excavator which was being used to dewater a trench struck a worker who was helping to prepare conduit for installation in the trench. He sustained bruising to his back.
- The top of the cab of a Cat D10 dozer contacted the walkway of a Marion 8050 dragline while the dozer was conducting clean-up operations within the house swing area.
- A dragline cable handling tractor which was repositioning the power cable was struck and caught up on the slewing dragline house. The tractor was rolled onto its roof and dragged sideways before the dragline operator was alerted

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

by the nearby dozer operator. The tractor operator sustained cuts and bruises.

- As a Cat 793 dump truck started to overtake a Cat 16H grader. The grader turned across the path of the truck. Both vehicles had to brake hard and stop to avoid a collision.
- An Eimco loader operator's vision was obscured by the bucket load of stowage material he was carrying as he exited the portal. He collided with the rear of another loader that had overheated and stopped on the surface just beyond the portal.
- The counterweight on a 4100 XPB rope shovel, which was loading on both sides, came into contact with the tray of a Cat 793 dump truck after the dump truck parked too close to the shovel. The shovel was loading a truck on the other side.
- Two light vehicles collide on a blind corner of a light vehicle access road.

### Vehicle – Loss of Control (28)

- While approaching an excavator a Cat 789 dump truck braked and slid sideways for ten metres.
- A Cat 637 scraper slid sideways and rolled onto its side as it was cutting and trimming a batter.
- A Cat 797 slid into a bund while rounding a bend on a recently watered section of road.
- The rear wheel detached from the hub of a light vehicle. All five wheel nuts and locators were found near the vehicle.
- A light vehicle drifted to the side of the road and hit the windrow before tipping over onto its side. The driver had dropped his radio handpiece and took his eyes off the road while retrieving it.
- A worker lost control of his light vehicle while push-starting it down a decline. The vehicle ran into the side wall and rolled onto its side.
- A Normet agitator slid about 50 metres down a decline that had recently been watered by a water truck that was also leaking hydraulic oil onto the road surface. The agitator struck the wall a couple of times before stopping.
- The driver of a light vehicle parked on a slope and left the vehicle. It rolled away and collided with a conveyor.

### Explosion (19)

- The blast door at an underground coal mine portal was found tied open.
- An employee took a wrong turn on a bench and drove passed a blast entry sign and through a gate onto a shot.
- An MMU reversed over a loaded blast hole and impacted the downline.
- An MMU drove over two shot control lines.
- During stemming operations the stemming loader drove over a downline.
- While charging a shot some of the bulk explosive product was dumped on the ground after overgassing caused an exothermic reaction.
- Boosters fell from a shot firer's vehicle onto a haul road while travelling to a shot from the magazine.

- A production drill uphole broke through into the floor of a drive close to where stope charging was taking place.
- The conductors were exposed when a continuous miner jammed its power cable against a rib bolt.
- An open arc occurred when the conductors in a shuttle car cable were exposed following the jamming of the cable in the overspooling device.

### Fire (34)

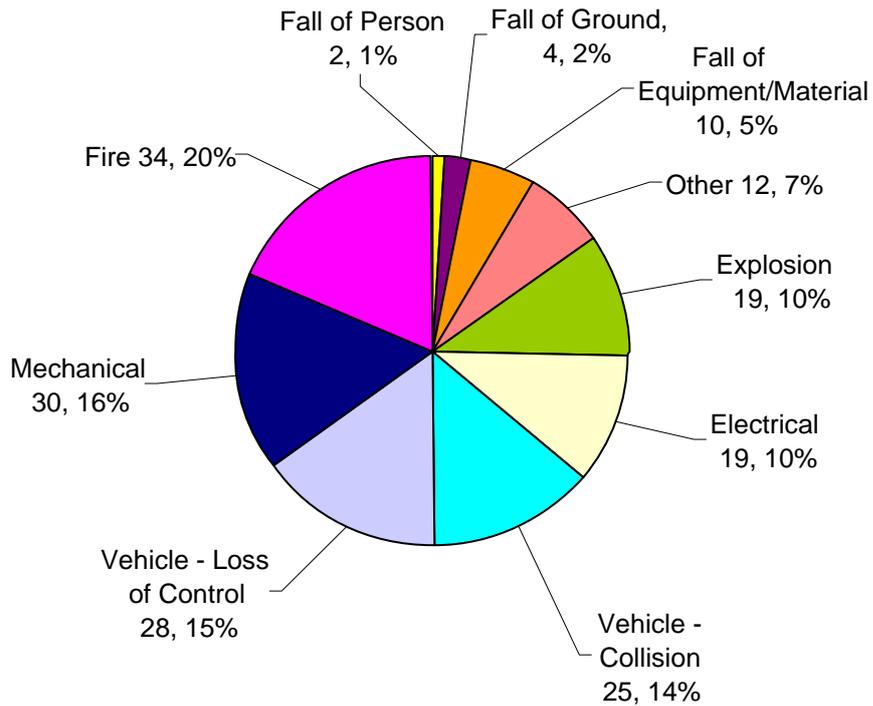
- A worn fuel line resulted in a fire in the engine compartment of a Cat D10 dozer.
- Fuel from a Cat D10 dozer return fuel line, which had worn through as a result of rubbing against an adjacent hose, leaked onto the exhaust manifold and caught alight.
- Oil sprayed from a burst high pressure hydraulic hose on a Cat RH340D excavator ignited when it contacted the turbo.
- Oil sprayed from a burst steering hose on Cat 793B dump truck ignited when it contacted the turbo.
- A fire started in the engine bay of a Cat D11 dozer after the rocker arm bolts broke and the valve went through the tappet cover allowing oil to flow onto the shielded turbo.
- Coolant leaked from a loose line connector on a Cat 785 dump truck onto the turbo and ignited.
- The collapse of a conveyor tail end drum bearing caused the grease to catch alight.
- Failure of a pedestal bearing on a P&H 9020 dragline resulted in the bearing grease igniting.
- A portable diesel generator overheated, tripped and then caught alight.
- Acetylene leaking from a flash-back arrestor was ignited by grinding sparks.

### Electrical (19)

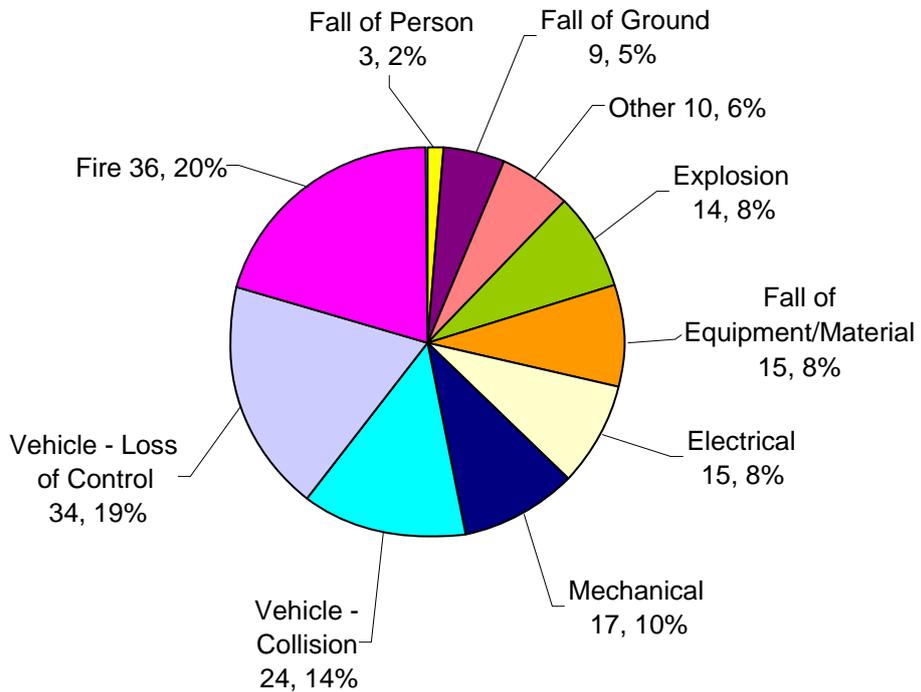
- Severe equipment damage occurred when an arcing fault developed in the bus bars of a switchboard.
- A worker received an electric shock when turning on a light switch.
- A worker, wearing wet gloves, received an electric shock while welding. The electrode holder of the caddy welder was also in poor condition.
- A worker was holding the leads and hoses for a boilermaker when he touched the earth clamp and received an electric shock.
- A loader contacted a live 11kV cable while digging a pit when the operator kept digging past the indicator tape.

### Other (12)

- A dump truck driver who was parked near where a spontaneous combustion event was occurring was overcome by the gases being emitted.
- Fume from a level 5 blast fume event breached the exclusion zone.
- While cutting into the tailgate of a longwall a volume of water flooded down the face and pooled at the main gate.



**Figure 1: February 2012 Incidents (total 183) by Category**



**Figure 2: Twelve Month Rolling Average (176 incidents/month) by Category**

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for March 2012

#### Fall of Person (3)

- A fitter fell about 1.6 metres to the ground from a conveyor on a Terex Finlay C-1540 mobile cone crusher which he was setting up. He fractured his femur.
- Two operators climbed onto the feed conveyor of a mobile cone crusher to look for steel after the metal detector tripped the conveyor. With the crusher still running they climbed up the hand rails onto the crusher rock box and then onto the conveyor.

#### Fall of Equipment/Material (13)

- The access ladder on a Cat D10 dozer fell from the raised to the lowered position after a hinge pin fell out. As the ladder fell the limit switch plate hit the operator on his right shin. His shin was cut and bruised.
- When a Cat 972 loader operator had filled his bucket with wash plant mud from a bin he put it in the crowd position. The rear of the loader lifted off the ground. He lowered the bucket and the rear of the loader dropped to the ground, jarring his neck.
- The winch rope failed on a Sandvik DE810 exploration drill rig which allowed the drill string to drop back down the hole. The haul plug hit the rod spinner, pulled out of the rod and fell onto the deck.
- During shaft sinking a one metre length of chain with two lock hooks attached fell from the cage above the brace to the sinking stage 40 metres below.
- While pulling inner tube, after completing a core run on an exploration drill rig, water began to surge out of the 150 metre deep borehole. The blowout preventer was shut and the wire line stripper was being installed when a gas kick occurred. The wire line stripper shot into the air followed by the overshot and inner tube which went through the top of the tower about 30 metres and landed in front of the rod trailer.
- While installing a wing on a surge bin one end knocked the guard rail at the end of the bin. The guard fell three metres to the ground within a metre of a worker.
- While live testing a Hitachi 1800 shovel a fitter raised the bucket, which was loaded with overburden. As the bucket reached full extension a rock rolled out of the bucket and landed on the roof of the cab.
- While laying the mast down on a Drilltek DK45 drill the mast dropped the last metre when the pivot cap bolts failed.

- While testing the hoist brakes on a P&H 4100 shovel the brakes failed and the bucket fell two meters to the ground.
- While lowering a charge basket on a Charmec charge vehicle the basket tilted forward onto the floor when the crowd cylinder eye attached to the basket failed.

#### Fall of Ground (7)

- Approximately 15 tonnes of rock fell from the back of an intersection on a main decline.
- A large piece of a highwall wedge failure struck the back end of an excavator.
- Approximately 100,000 bcm of overburden slumped at the top of a highwall. The failure extended into a power easement.

#### Mechanical (29)

- A light vehicle was travelling at low speed when all the spokes on the alloy wheel rim of the front right wheel broke and the wheel rolled away.
- A worker was knocked to the ground while helping to replace a 250 metre underground conveyor belt when he was struck on the shoulder and head by a chain which snapped while under load. The chain was one of two securing a snatch block which was part of the rigging assembly for the 10 tonne winch rope which was pulling on the conveyor belt.
- While reversing a dump truck out of a workshop a wheel chock was squeezed out and ejected from under one of the tyres and under a light vehicle parked nearby.
- A fitter was using a hydraulic torque wrench to loosen the bolts on a Komatsu 930E dump truck wheel motor when an "O" ring on the wrench failed releasing hydraulic oil under pressure.
- A worker's foot was crushed by a an Eimco mounted bolting rig platform when the platform shifted off its cradle.
- Two workers incorrectly isolated process water piping while removing a flow meter. Process water released under pressure when the flange stubs were removed.
- While advancing an adjacent longwall shield a worker had his foot pinched between the relay bar of the shield he was standing on and the base of the lift cylinder.
- A worker was installing a cross beam as part of the installation of a 66kV light pole. He was working from the basket of a vehicle mounted elevated work platform when the basket moved and pinned the worker between the basket and the cross beam. He sustained chest and internal injuries.

**Vehicle – Collision (25)**

- A Cat 992 loader reversed into a Cat 785 dump truck at the ROM pad. The loader operator was unaware of the dump truck at the pad.
- A Toyota Hilux utility crossed in front of a Cat 777F dump truck heavy vehicle on a mine haul road. The truck braked and pulled up 30 metres from the utility.
- A Reich 750 drill operator was tramping back to set up for the oncoming shift when the drill contacted his light vehicle parked in close proximity to the drill.
- While a Komatsu 465 dump truck was tipping at the ROM bin a second truck came onto the pad and swung around in front of the truck and reversed striking the cab of the first truck causing extensive damage. The operator of the first truck evacuated the cab when he realised what was about to happen.
- A Cat 785 haul truck drove through a give way sign and half way into an intersection before stopping causing a Cat 777 haul truck coming into the intersection from the right to take evasive action.
- A Cat D11N dump dozer reversed into a Cat 777D dump truck that was preparing to tip its load causing damage to the dump truck's cat walk.
- A Minegem tele-remote underground loader was remotely started by the operator while two persons were setting up the loader. A radio call alert to the operator resulted in the loader being shutdown.

**Vehicle – Loss of Control (37)**

- The service brakes failed on a forklift while travelling in reverse down a ramp. A haul truck was passing the ramp at the same time and was forced to brake suddenly to avoid the forklift. The forklift operator stopped the forklift in time by engaging it into drive gear.
- While reversing a loaded CAT 789C dump truck towards the bund to dump the load the off-side rear wheels of started to sink slowly. The operator stopped the truck and called the dozer operator who noticed that the tyres had gone through the bund.
- A Cat 793C dump truck slid for 10 metres on a wet patch from road watering when the operator applied the service brakes while hauling coal.
- A Cat 793C Dump truck ran into a berm with Pos 1, 3 & 4 tyres coming to rest on top of the berm where the drop to the next bench beyond the berm was 25 metres.
- The operator of a Cat 793C dump truck experienced a micro-sleep causing the truck to cross the haul circuit and contact a bund wall after drifting for a distance of 100 metres
- The operator of a Kenworth T400 heavy rigid service truck while travelling along a recently watered haul road slid uncontrolled and rolled onto its side.
- A Toyota Coaster 12 seater mini bus travelling along a wet road lost traction and slid onto the bund on the right hand side of the road.

- While repositioning an All Light mobile lighting plant with a Toyota troop carrier the plant detached from the tow hitch and rolled back down the ramp onto a bund resting on its side. Safety chains were not attached to the towing vehicle.
- While relocating 25t 4 WD Franna mobile crane the operator lost control resulting in the crane rolling over. The operator was treated for injuries at the scene and transported to the hospital.
- A dump truck was parked on a ramp, with the retarder on waiting in a queue when it rolled back stopping within 3 metres of the truck behind.
- A John Deere Gator utility vehicle parked on top of rise waiting to drive inside a building rolled down when the brakes failed crashing into the rear of another parked Gator.
- A Cat 777 coal hauler slid through a 360° turn as it drove round a corner that had just been watered.
- As a loaded Cat 40 tonne articulated dump truck was driving up a ramp the operator over corrected his steering and the trailer rolled onto its side.
- A concrete agitator skidded about 50 metres down a wet underground ramp before coming to a stop when it hit the side wall.

**Explosion (11)**

- Conductors on the power cable of a shuttle car were exposed when the shuttle car slid on the floor and squashed the cable between the outrigger and the rib.
- When a continuous miner intersected a gas drainage well it encountered remnant borehole casing.
- A flash and smoke were observed coming from the cable reel of a shuttle car as it travelled to the breaker/feeder.
- Open arcing and exposed conductors were observed when a shuttle car cable pulled in half when the car was driving away from its anchor point and the cable caught on its shoe.
- An MMU reversed over a downline and a loaded hole.

**Fire (22)**

- A fire started in the engine bay of an Atlas Copco MT 6020 dump truck while it was dumping a load of ore on the surface. A hydraulic pump hose came loose and sprayed oil over the engine. The operator activated the AFFF system to extinguish the fire.
- A fire started on a Terex RH340 excavator when a high pressure oil line in the engine house ruptured. The fire was put out with a hand held extinguisher.
- While lowering the mast on a Drilltech D90 overburden drill oil leaked onto the exhaust and ignited. A hand held extinguisher was used to put the fire out.
- While gouging in a workshop slag fell onto the arc welder leads starting a fire.
- A fire started on the turbo of a Cat D11 dozer when a hydraulic line ruptured spraying oil onto the turbo. The operator activated the on-board fire suppression to put the fire out.

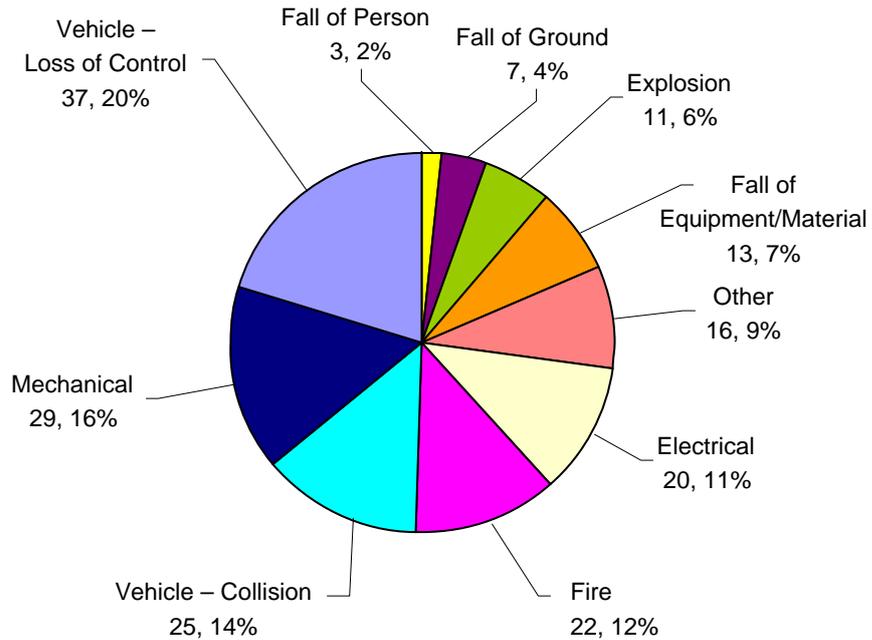
- A small fire started in the rear drive unit of a Hitachi 4000 dump truck.

### **Electrical (20)**

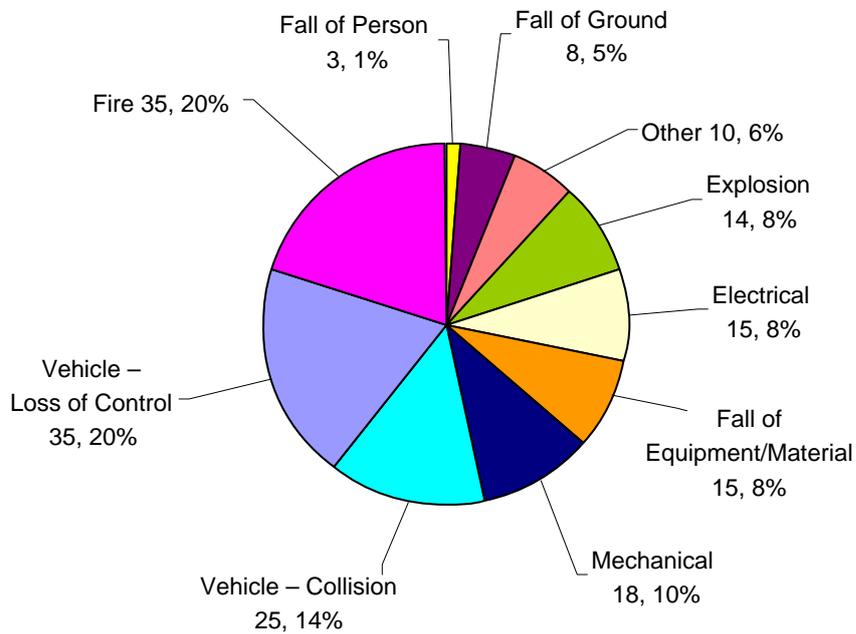
- An Hitachi ZX350T excavator contacted overhead 33kV powerlines while tramming to a service truck.
- An electrician received an electric shock when he cut an energized 110V cable.
- A worker received an electric shock when he touched a welding trailer.
- A worker was unplugging a back to back connection on a trailing cable when it arced out and he received an electric shock.
- An electrician was testing shovel cables with a 10KVa Megger unit when he received an electric shock.
- A worker received an electric shock when he unplugged a grinder from an extension lead.
- While reversing, a Cat D11 dozer ran over an electric shovel trailing cable.
- A boilermaker, who was relocating a 240V fluorescent light fitting on a dragline, received an electric shock when he grasped the lead of the fitting and touched an exposed conductor.

### **Other (16)**

- A dragline was evacuated when an elevated sulphur dioxide level was detected.
- Thirteen coal mine workers were taken to hospital for review after being exposed to elevated levels of sulphur dioxide associated with a spontaneous combustion event.
- A coal mine face was evacuated when a seam to surface dewatering hole was unexpectedly intersected during continuous mining operations. A release of water and seam gas entered the face from the borehole.
- Following an overburden shot level 2 fumes breached the exclusion zone.
- A shotfirer's vehicle was left parked in a mine car park with its explosives carry boxes unlocked.
- A loaded quarry shot that was being slept overnight was initially left unguarded.



**Figure 1: March 2012 Incidents (total 183) by Category**



**Figure 2: Twelve Month Rolling Average (178 incidents/month) by Category**

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for April 2012

#### Fall of Person (3)

- An operator fell down the access stairs of a Cat 789 dump truck.
- A worker was climbing down a portable ladder when it slipped to the side and he fell about 1.5 metres to the ground, landing on his side and striking his head on a rock.
- On nightshift a fitter fell through a hole in the deck of a Drilltec DK70 drill which is accessible with the mast in the lowered position. He fell about 1.6 metres to the ground and sustained bruising to his chest from striking the edge of the deck.

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

- A conveyor pulley dropped to the ground after the shaft failed between the bearing housing and the suspension point.
- A worker broke a bone in his foot when he dropped an equipment stand on his foot.
- An articulated dump truck was tipping pugmill material on a stockpile when the body of the truck fell off the chassis.
- A 2.6 tonne Cat D10 dozer ripper frame was being lifted using two doubled up three tonne fibre slings rigged through the ram securing holes rather than through the OEM specified pins. As the frame was being lifted it rotated and the steel edges of the holes cut through the slings and the frame dropped to the ground.
- A Franna crane was transporting a jaw liner which was suspended by two slings when one of the slings failed causing the load to swing and hit the front of the crane.
- A dozer operator suffered spinal injuries when the dozer fell into a cavity on shot ground.
- An Hitachi 3600 excavator was digging on a bench when the edge of the bench collapsed causing the excavator to slide about five metres.
- A B-Triple Mack truck was tipping its trailers which were loaded with magnetite into a pit at a process plant. When the third trailer body was raised it fell against the process plant structure before sliding backwards into the pit.
- While raising the body of a trailer to dump magnetite on a process plant stockpile the trailer rolled over onto its side.
- A Cat 992 loader toppled forward onto its bucket while tipping into the ROM hopper. The bucket ended up resting on the stop log.
- While side tipping coal the trailer tipped onto its side when the load initially hung up and then shifted rapidly to the side.

#### Fall of Ground (8)

- A Cat D10 dozer was cleaning up an excavator floor when a section of sandy material fell from the highwall and landed against the cab of the dozer, popping out the side window.
- A rock fell off a charged face severing detonating chord and nonel detonator tails.
- A large section of endwall failed and landed on 93 loaded blast holes and a water pump.
- Rock fell from a dig face and hit a Cat D10 dozer which was cleaning up, damaging the walkway and handrails.

#### Mechanical (19)

- Two electricians were near a longwall pump sled when the pump went over relief and released pressure to atmosphere through the exhaust hose which whipped and struck one of the electricians on the side of the face.
- The tail conveyor of a continuous miner dropped unexpectedly approximately 150mm while cutting due to a faulty tail lift ram.
- While walking a dragline the right hand rear shoe return rope failed, causing the inner piston to retract into tube and shoot grease out the back of machine for 25 meters.
- As a boilermaker started an exhaust fan the fan assembly failed. The securing nut and three blades were ejected from the fan.
- A boilermaker was using air arc gouging to remove a dozer blade wear plate skin when the top edge sprung out and hit him in the head.
- The cable attached to a survey tool became stuck while being raised in a raise boring shaft. The cable snapped when the winch driver applied tension to it in an attempt to get the survey tool to release. A worker suffered minor injuries when he was struck by the cable on his hand and foot.
- The operator of a long haul trailer attached to a Cat 776B dump truck found both position 1&2 tyres flat, the wheel studs missing and the pos 1 tyre detached from the hub.
- While raising the platform on an ABM25 continuous miner a drill steel initially became snagged on some chequer plate and then sprung free striking a worker on the side of the face. He sustained a contusion to his ear and jaw.
- While putting the longwall conveyor belt into the turnbuckles connecting the two mobile carriages broke resulting in six of the mobile carriages separating from the main carriage and running back to the stop blocks.

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

- The position 5 tyre on a Cat 789C dump truck burst kicking up rocks off the ground. The rocks struck a dozer working 60 metres away shattering the right side door window.

### Vehicle – Collision (30)

- A Komatsu 830E dump truck was reversing to dump at the dump edge when it struck a Cat WD900 wheel dozer which had started reversing to set up for next tip head push. The collision dislodged the truck's fire suppression bottle and activated it.
- A Toyota Land Cruiser crossed 2 meters in front of a Cat 789 dump truck that was dumping a load without establishing positive communication.
- A slewing excavator clipped the hand rails of a dump truck causing minor damage.
- A Cat 785 dump truck and a Cat grader reversed into each other on a dump. The grader contacted the position 6 tyre of the dump truck.
- A Hitachi 5500 excavator was slewing its bucket after loading a truck when a Cat D11R dozer backed in without proper communication. The bucket struck the dozer hand rail causing minor damage.
- An Ecologist narrowly avoided being struck by a back-hoe when he was walking behind it during test pit sampling.
- A flat bed light truck was reversing to park in the park up area when it struck a generator set located in the area.
- A Cat 16H Grader collided with a dump truck that was dumping its load when the grader drove in front of the truck.
- A dump truck attempted to reverse under a front-end loader arm while another truck was being loaded. Collision between the two trucks was narrowly avoided when the loader operator asked the reversing truck to stop.
- A Cat 980G Front-end Loader reversed into a CAT 773E dump truck which had pulled in behind him
- A wheel dozer was preparing a pad for the drill rig when it reversed into gas well pipework causing gas to emit from the well.

### Vehicle – Loss of Control (29)

- A parked 25t Franna mobile crane moved one metre in reverse. The maxi brake had not been engaged.
- A Cat 773 service truck while descending a ramp started to slide on a recently watered section of the road travelling 70 metres and spinning around 360 degrees before coming to rest.
- The operator of a Volvo FM12 service truck was descending a ramp when the brakes failed. The operator bailed out before it crashed into the bund at the bottom of the ramp.
- The driver of a Toyota Hilux utility on the mine access road experienced a micro-sleep resulting in the vehicle driving off the road and down an embankment.
- A Komatsu 785-7 dump truck operator had a micro-sleep on the 3rd night shift of the roster and

crashed into a safety berm causing minor damage to the truck. A short time before the incident, the operator had reported feeling fatigued and was going to take a fatigue break.

- The operator of a Cat 777 water truck descending a recently watered ramp tried to shift course to pass Hitachi 5500 excavator walking on the left. The truck lost control at a wet patch sliding seven metres and spinning 90 degrees.
- A loaded Cat 793C dump truck was travelling up a ramp when the operator had a micro-sleep and mounted the front right wheel on to the centre dividing berm. The truck stopped when the rear wheel made contact with the berm.
- The brakes on a shuttle car failed to engage when the operator parked it and turned the power off rolling a short distance.
- A light vehicle operator failed to negotiate a corner and tipped the vehicle over onto its roof.
- Two rear dump trucks were driving to park because truck operations were suspended due to imminent heavy rain after some light rain. Both trucks lost control in separate incidents, one turning 90 degrees and the other sliding 30 metres.
- The driver of a light vehicle lost control striking a safety berm and rolling onto its side.
- When the operator of an explosives truck exited the cabin to pick up a hose that had fallen off the truck it rolled back ten metres and struck a side wall.
- A Cat 785 dump truck was being moved from one service bay to another when the brakes failed to work causing it to roll forward 6.5 meters. The truck stopped when it wedged on a wheel motor stored in the service bay.
- A Komatsu 830E dump truck operator experienced a micro-sleep while travelling to the tip head, the truck striking the ripper frame of a Cat 16H grader that was sweeping the haul road.
- The steering arm of a light vehicle failed while travelling down an incline causing the vehicle to strike the wall.

### Explosion (21)

- A light vehicle operator breached a blast exclusion zone and drove over a lead in line to a shot.
- During routine inspection of an intrinsically safe battery powered laser, it was found that the batteries were not approved for the laser, making the laser non explosion protected.
- During routine mechanical servicing of a Sandvik ED10 loader, a mechanical tradesperson found that the cable gland on the alternator was broken. The damage had not been previously reported.
- During a routine inspection of a continuous miner, a bolt was found to be missing from the main electrical enclosure. The bolt was later found under materials that had been loaded onto the miner indicating that it may not have been refitted after a maintenance task in the enclosure.
- The cable supplying the pump motor on a shuttle car had been in contact with a drive shaft resulting in the hose and cable rubbing through and exposing the conductors of the cable

- The tube bundle system of an underground mine detected high levels of methane in the goaf. In accordance with the mine's TARPS workers were withdrawn from the mine until the atmospheric conditions in the goaf were understood.
- At an open cut mine, methane was found to be emanating from a crack in the pit floor.

### Fire (33)

- The engine on a Komatsu PC 4000 excavator shut down unexpectedly. Upon investigation by the operator a small fire was detected in the engine bay and extinguished with the manual activation of the fire suppression system.
- While operating a Dresser 630 dump truck a fire was detected in the engine bay. The operator left the vehicle without activating the fire suppression system resulting in complete destruction of the truck.
- A fire started on a Komatsu 475 dozer when a conrod was thrown out of the block. The operator activated the fire suppression system and extinguished the fire.
- A fire occurred in the electrical cabinet on a Liebherr T282 dump truck.
- A small fire on a Bucyrus 340B shovel occurred when hydraulic fluid came into contact with the turbo blankets in the engine bay. The fire was extinguished using a hand held fire extinguisher.
- A fire on a Cat IT started when a crack developed in the exhaust causing hot exhaust gases to emit directly onto a rubber seal in the engine compartment. A hand held extinguisher was used when the AFFF failed to extinguish the fire.
- A small fire caused minor damage to a Kenworth haul truck when the battery wiring harness caught fire.

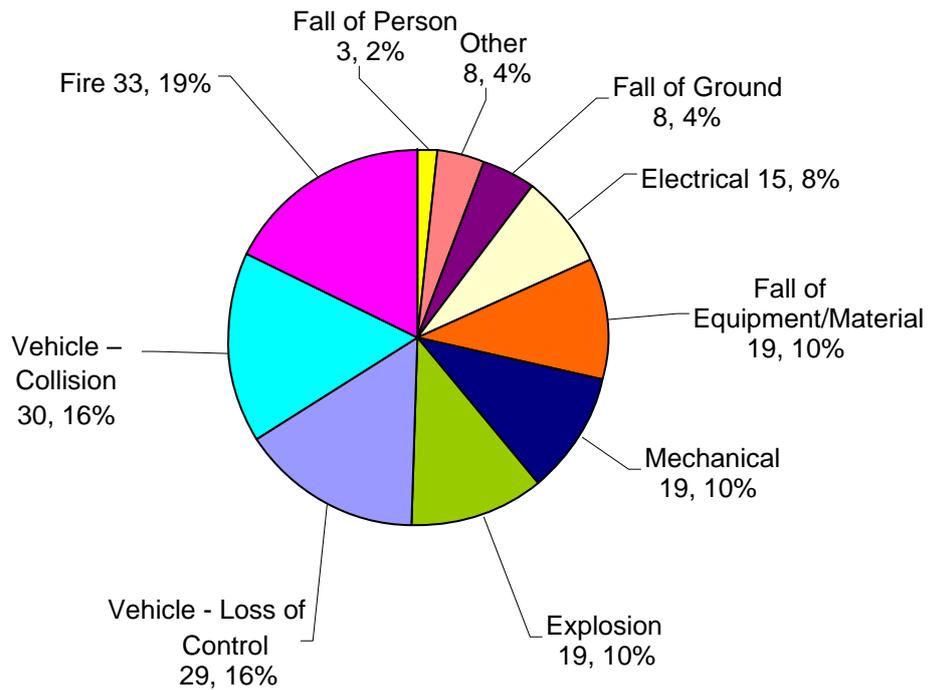
### Electrical (15)

- A worker received an electric shock while inspecting a five inch grinder prior to using it. When he held a part of the lead where the outer and inner insulation protection had been melted away during previous activities.
- A contract worker was operating a skid steer loader fitted with a mower attachment when a live electrical cable was contacted by the blades of the mower.
- While shutting down a dragline, after a flash over on a drag motor, an electrician was attempting to open the sync motor excitation circuit breaker when it also flashed over. The arc was contained within the cabinet. The electrician was wearing category 4 arc glasses at the time.
- The #1 swing motor on a dragline had failed and it was decided to take this motor out of service and operate on the remaining swing motors. Due to this motor being the 'control generator' for the swing motors, the control was reconfigured with the assistance of the OEM. During testing of the modifications the swing motor flashed over and caught fire.

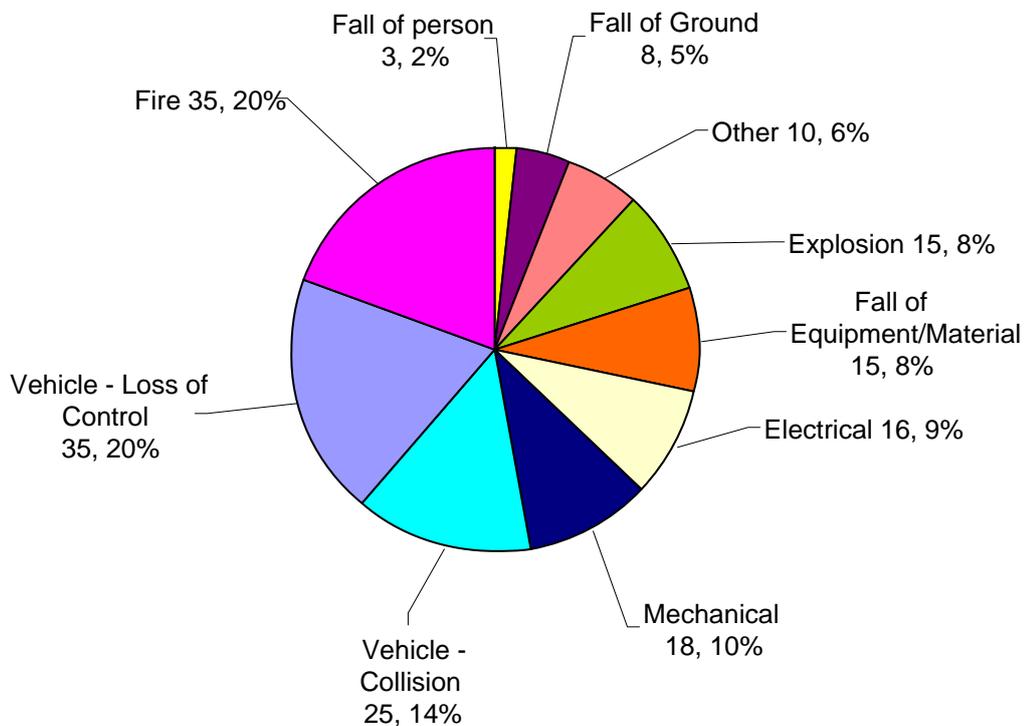
- The bucket of a CAT 345B excavator contacted the 6.6kV trailing cable causing damage to the cable. The circuit breaker did not open to clear the fault. A tradesperson completed an emergency opening of an ABS to clear the fault.
- A worker received an electric shock from a pipe threading machine. The machine had been hosed down to clean it. During the investigation, the earth wire was found to be broken.
- Three employees received electric shocks from equipment associated with a bagging line conveyor.
- One year prior to a cable arcing out, a screw had penetrated a supply cable. Over time, material was stored on top of the cabinet and as a result the cabinet moved causing the screw to contact a live conductor. The fault had not been detected during routing inspections.
- A worker received an electric shock from the conveyor motor isolator on a continuous miner. Some of the internal wiring had rubbed through, allowing the conductors to touch the operating mechanism of the isolator.

### Other (8)

- A Cat 773 dump truck operator recorded an elevated carbon monoxide level on a personal gas monitor while carting stockpile coal to the process plant at a mine that had been experiencing spontaneous combustion activity.
- An inrush occurred when a geological borehole was intercepted during development operations the borehole was known but did not correspond directly with the plan.
- A worker cut his finger on roof mesh. Subsequently it became infected and he had to be admitted to hospital as an in-patient for treatment.



**Figure 1: April 2012 Incidents (total 185) by Category**



**Figure 2: Twelve Month Rolling Average (180 incidents/month) by Category**

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for May 2012

#### Fall of Person (5)

- A passenger sitting in the rear of a Toyota Hilux dual cab started to get out after the vehicle had initially stopped, but then fell from the vehicle as the driver reversed. He sustained a bruised shoulder.
- A worker was stopped when he was observed installing mesh floor panels in a conveyor walkway without using any fall restraint or arrest equipment. He was working around the openings which were about 25 metres above the ground.
- When an operator stepped back while hosing in a process plant the heel of his foot broke through a rusted section of walkway floor mesh.
- Following a blast in an open cut, which is located above an underground stoping area, a void was found in the shot ground.

#### Fall of Equipment/Material (13)

- A 12 kg length of channel section steel fell about six metres onto a process plant walkway.
- A twin 55kW ventilation fan fell from the back of an underground access when the supporting eyebolts sheared.
- A silencer fell off a 55kW underground fan.
- While lifting a Cat D11 dozer transmission into place the load swung, one end dropped and the attached extension bracket squashed the steel cap of the fitter's boot. He sustained cuts to his toes.
- A forklift was unloading a crate from one side of a truck. The tynes extended beyond the crate being lifted and under an adjacent crate. When the forks were lifted the adjacent crate fell off the truck.
- While unloading an all terrain vehicle from the back of a flatbed Hino truck one of the ramps dislodged and fell to the ground. The vehicle was left with the front wheels on the truck, one rear wheel on a ramp and the other on the ground.
- As a 250 tonne crane was unloading a generator from the back of a truck at a mine village one of the outriggers broke through the road surface and sunk into the ground causing the crane to tilt to the side.
- The position 3&4 wheels of a Cat 785 dump truck dropped into a sink hole while being loaded. The excavator operator placed the bucket into the body of the truck to prevent the truck rolling over.
- At a shaft sinking operation a fitter removed a redundant dual pilot check valve from the kibble bridle charring hydraulic circuit. The bridle, which weighs 600kg, slid 17 metres down the kibble rope onto the kibble which was sitting on the shaft collar doors.

- A fifty tonne hydraulic winch was being used to construct a modular ladderway in an underground raise when two strands of the six strand winch rope failed.

#### Fall of Ground (10)

- A bench collapsed under a Cat RH 340 excavator while it was loading a dump truck. The excavator tilted forward and was restrained by resting the bucket in the dump truck body.
- While mining through a faulted area the roof fell onto the continuous miner.
- About 200kg of rock fell from a development face and struck a miner who was scaling from a charge car basket. He sustained cuts to his lower back.
- While meshing and bolting a longwall face a rock slab measuring 1600mm x 200mm x 300mm and weighing about 250kg fell from the roof, slid along the ranging arm and struck the operator across the chest and legs. He was knocked to the ground and sustained bruising and a cut to his chest.
- A large slab of stone fell from the roof over the spill plates and onto a longwall chock cutting a 125V lighting cable.
- The tip head of a coal rejects dump failed beneath a Cat 777F dump truck which had stopped three metres short of the bund resulting in the truck sliding down the face of the dump.

#### Mechanical (25)

- A worker was struck on the side of his face by a crowbar he was using to unblock an operating jaw crusher. He fractured his lower jaw and broke some teeth.
- A Cat 992 loader operator was checking the coolant level sight glass after noticing the thermostat indicator light had come on when the radiator cap failed discharging hot coolant over him. He sustained superficial scald burns to his abdomen, parts of his neck and side of his face.
- A fitter was using a five inch grinder to remove a nut from a liner when the blade came into contact with the steel framework, kicked back and lacerated his left hand index finger above the knuckle. He required surgery to repair a severed tendon.
- A fitter was using a Hi-torque tensioning tool to tighten grouser plates on a dozer when the seal in the swivel joint of the tool failed spraying the fitter with hydraulic oil.
- A fitter lost the tip of his middle finger while levering a hose mounting block of a Terex RH170 excavator to replace an O-ring. The lever slipped

- While a worker was being raised on an IT basket to hang electrical cable his middle finger was trapped between the basket and a service poly-pipe causing a significant injury to his finger.
- While a serviceman was greasing a Cat 631 scraper using a pressure grease gun from the service truck the grease line failed causing the grease to penetrate his glove and inject into the base of his index finger.
- A worker had mistakenly fitted a 50mm compressed airline into the inlet of a 1000 litre water tank pod thinking that he was filling water. The tank ruptured when it pressurised blowing the top metal section off the pod.
- An exploration driller was trying to clear material from inside a drill rod when the rod unexpectedly disconnected from the drill head striking the offsider on the shoulder.
- A Minsup coupling separated when an airline was charged. A Safety clip had not been attached to the coupling.
- A worker was extending poly-pipe air line by connecting to an existing 4 inch valve when the valve separated from the line striking the worker on his forehead.
- Two fitters were unbolting a bull gear from the end of a hoist drum on a P&H 9020 dragline using a portable Enerpac hydraulic ram and flogging spanner. When pressure was applied the ram slipped and crushed a fitter's hand between the ram and the bearing pedestal.
- While a worker was using a hammer and chisel to work on the foot shaft on a Continuous Miner a broken splinter from the chisel embedded in his upper leg. The splinter had to be surgically removed.

### Vehicle – Collision (27)

- An electrician parked his light vehicle beside a dragline shoe and then went on board the dragline to fix a fault that had stopped it. Having repaired the fault the electrician asked the operator to test swing the dragline. The light vehicle was struck by the shoe and pushed sideways.
- The right hand shoe of a dragline struck the tray of a light vehicle that was parked under the the dragline.
- The bucket of a Hitachi EX3600 excavator struck the blade of a Cat D11 dozer that had entered the excavator's swing zone.
- A Cat 785C dump truck reversed into a Cat D10T track dozer causing damage to the ladder of the dozer.
- A dump truck collided with a loader while reversing on a ROM pad. The truck operator was unaware that the loader was behind him.
- Two workers walked out from behind a sea container and into the path of a dump truck.
- While cleaning up a dig face a Cat 854K wheel dozer came into contact with the pos 1 tyre and rim on a MT 4400 dump truck.

- A light vehicle pulled out in front of a Komatsu 830E dump truck after being given permission to enter the haul circuit.

### Vehicle – Loss of Control (34)

- A loaded Cat 740 articulated dump truck slid on a recently watered, off camber corner and rolled onto its side as it was descending a ramp.
- While travelling up a ramp a water tank trailer separated from the light vehicle that was towing it and rolled 25 metres down the ramp before colliding with an industrial bin.
- At the end of shift a light vehicle operator lost control of his vehicle when he over accelerated while driving across the quarry floor. The vehicle skidded on gravel for 40 metres before rolling onto its side.
- An underground worker was loading a light vehicle with bolts and mesh in a cuddy when the vehicle rolled about ten metres out of the cuddy and into the travelway.
- A Cat 785 water truck slid about 30 metres on a recently watered section of road and spun through 90 degrees before making contact with an embankment.
- The driver of a light vehicle had a micro-sleep and drove up onto a bund then back onto the road.
- When the operator of a Cat 777C dump truck applied the retarder while travelling down a recently watered ramp the truck slid for about 50 metres before stopping against a bund.
- A Volvo FM400 service truck failed to slow when the operator applied the brakes to take a corner on a ramp. The driver steered the truck down the ramp pumping the brakes. The truck travelled through a road closed sign and over a small bund at the bottom of the ramp before it ran into the toe of an in pit dump and stopped.
- While following a water truck to the pit, an empty Cat 789 dump truck lost control at the corner of the ramp and slid for about 50 metres before stopping at the bottom of the ramp.
- While travelling down a ramp, the operator of a loaded Hitachi EH 4000 dump truck lost control and narrowly missed a truck moving ahead of it. The truck came to a stop at the bottom of the ramp.
- The body of a Cat 940 articulated dump truck tipped onto its side whilst travelling along a haul road.
- A front wheel of a Mack water truck came off after a king pin boss housing on the front steer axle failed.
- A wheel came off a Cat 740 articulated dump truck as it was travelling on a haul road.

### Explosion (16)

- An MMU drove over a loaded hole while loading a shot. The downline became entangled with the vehicle and was severed.
- Flyrock from a shot travelled about 1200 metres and hit an evacuated cribroom within the exclusion zone.

- Flames were seen coming from the back of an 11kV bolted coupler in an underground coal mine. Circlips were missing on the connector pins.
- A non certified power supply for a gas monitoring system was found energised in an ERZ1 area of an underground coal mine.
- During routine inspection of methane sensors, one sensor was found to be reading low. The wrong type of sensor head was connected and that the sensor would not trip power in the event of excess methane being detected.
- The flameproof encoder junction box on an Eichhoff shearer fell off the machine and was damaged which compromised the explosion protection properties of the junction box.
- The cable for a shuttle car stopped reeling in and was crushed between the breaker feeder and shuttle car. A loud bang was heard and an arc flash came from the crushed section of the cable.
- During roadworks in an underground section of a mine an Eimco made contact with a 1000 volt cable. The cable was squashed and electrical protection removed power from the damaged cable.

### Fire (35)

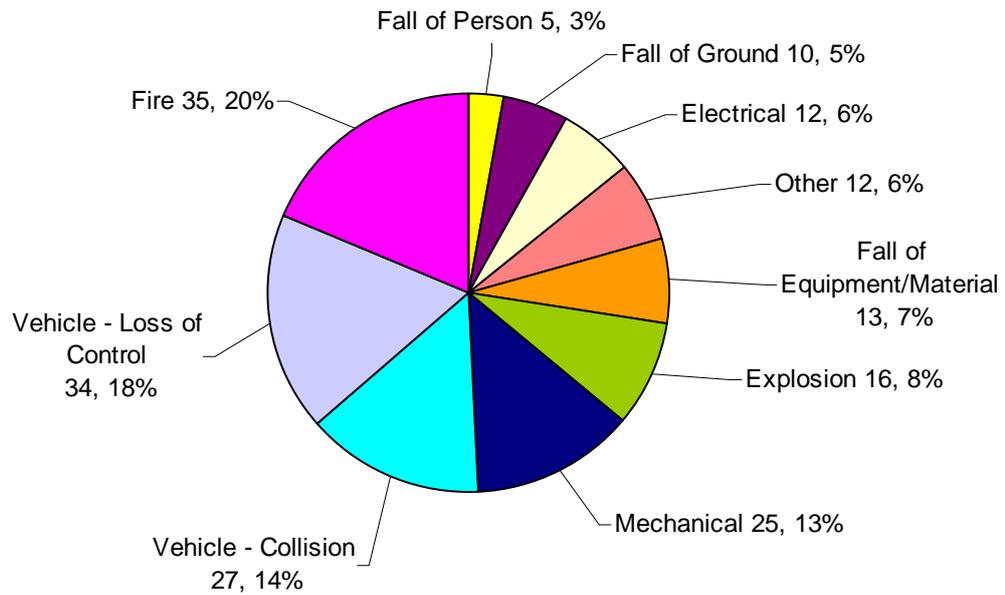
- A small fire occurred in the engine bay of a Sandvik ED40 loader after the driveshaft came adrift and broke a hydraulic line which sprayed oil over the engine bay.
- A small fire started on a blast hole drill rig when oil dripped from the mast during maintenance onto the exhaust and ignited when the drill was started up.
- While applying degreaser to a Cat 2900 loader in a workshop the degreaser came into contact with the hot turbo and ignited.
- A fire started in the engine bay of a Cat D11 dozer after a hydraulic line blew and sprayed oil over the turbo.
- A fire started on a coal conveyor when coal fines surrounding two return rollers ignited. One of the rollers was seized while the other had a collapsed bearing.
- During maintenance on an excavator welding slag fell onto an oil covered track and started a fire.
- Hot coal embers caused by spontaneous combustion were found in an underground conveyor roadway.
- A fire in between the lower side of a P&H XPC 4100 shovel track frame and the left hand track was put out by using a hand held extinguisher.
- A fire started in the engine bay of a Sandvik DP1500 drill rig when a blown hydraulic hose at the rear of the cab sprayed oil onto the turbo. The operator activated the onboard fire suppression system and extinguished the fire.
- A boilermaker had just started gouging a bucket on an excavator, which was parked for maintenance on a coal mine ramp, when he noticed a small flame about 50mm high protruding from the ground and other small flames burning briefly around it. He extinguished the flame with a handheld extinguisher.

### Electrical (12)

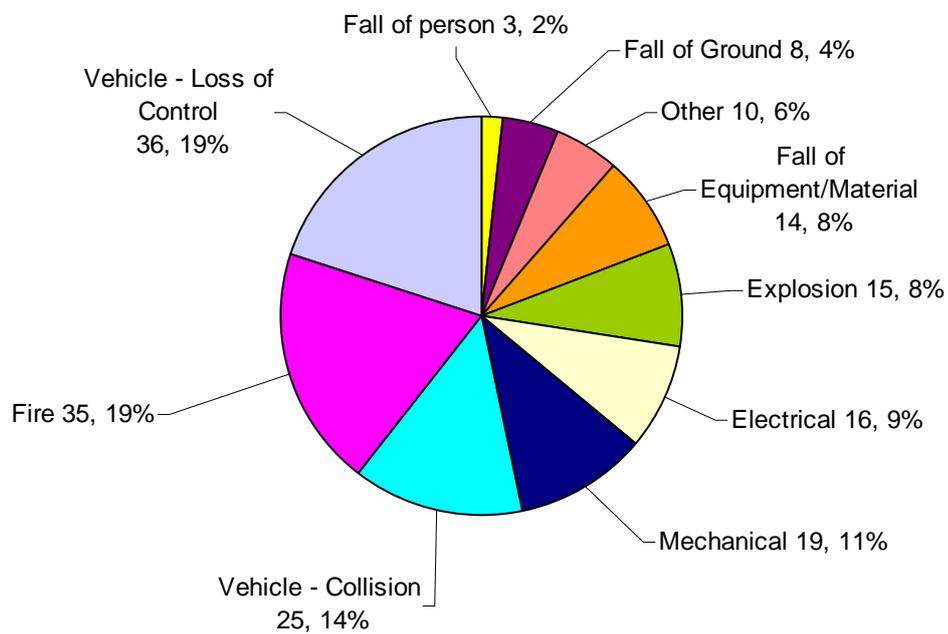
- During high voltage (22kV) switching live conductors in an adjacent cubicle were accessible due to failed interlocking associated with the earthing switch.
- During prestart checks of an ANFO plant, the operator received an electric shock while operating an on/off switch and touching a connecting plug.
- During fault finding of an earth continuity fault on a shuttle car, an operator who was leaning against the shuttle car outrigger received an electric shock.
- A worker received an electric shock while using a magnetic base drill in a wet environment. The worker was not able to let go until another worker disconnected the power supply by turning off the generator that was being used to power the drill.
- The 110Volt primary face cable was caught under a bolt pod on the longwall face. As a roof support was advanced, the pontoon caught the cable and severed it.

### Other (12)

- A shotcrete spray rig operator working in an underground heading was taken to hospital after showing heat stress and dehydration symptoms.
- Approximately ten tonnes of water was flushed down an incorrect paste fill line into a drive in a barricaded area.
- Fume from a level 4 blast fume event breached the fume management zone. Fifteen workers who were exposed to the NOx fumes were taken to hospital for observation.
- Fume from a level 3 fume event breached the fume management zone. One worker was exposed to the NOx fumes and was taken to hospital for observation.
- Following an overburden shot fume from a level 5 fume event breached the fume management zone.
- While undergoing a mines rescue exercise under full breathing apparatus a member of the squad collapsed and was found to be unconscious.
- While removing the discharge pipe from a pontoon pump to allow the pontoon to be towed to the access ramp, the pontoon capsized when the discharge pipe was disconnected. The employees who were wearing PFDs fell into the water.



**Figure 1: May 2012 Incidents (total 189) by Category**



**Figure 2: Twelve Month Rolling Average (181 incidents/month) by Category**

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

# Serious accidents and high potential incidents

Mining and quarrying

## Compilation of reports for June 2012

### Fall of Person (3)

- A Hitachi EH4500 dump truck operator slipped on the bottom step and fell to the ground while getting off the truck. She sustained a dislocated shoulder.
- A worker slipped on the wet change room floor and while trying to catch his fall gashed his wrist on a hook on a locker door. He was taken to hospital to have the wound stitched.

### Fall of Equipment/Material (18)

- As a Cat 793 dump truck reversed into the dump point the position 5 & 6 tyres pushed through the tip head bund.
- A paste fill borehole wasn't isolated at the surface paste fill plant before workers disconnected a length of pipe during maintenance on the underground paste fill pipe network.
- A 20 tonne Franna crane was lifting a pump sledge using a synthetic fibre sling in a basket hitch configuration. The sling moved, rubbing against the sledge and cut through it causing the load to fall.
- An exploration driller broke bones in his right foot when a drill rod fell on it.
- While an operator of a 16 tonne forklift was trying to line-up the fork arms to lift a 7 tonne kibble bin containing mill balls the bin tipped over spilling the load and damaging handrails and cable trays in the vicinity.
- The operator of a 55 tonne Grove mobile crane left the cab to discuss a lifting job with a rigger leaving the crane motor running and the boom extended to a height of 15 metres. When he returned to the crane he found the winch rope had un-spooled from the winch drum and lowered the hook and headache ball to the ground.
- A fitting attached to the rotary actuator for the drill-mast of an Airtrack roof-bolter failed allowing the drill-mast to rotate uncontrolled from the top of centre to the ground.
- A worker who was standing next to a conveyor transfer chute was hit in the back of the head by a rock which bounced out of the chute just as he took his hard hat off to scratch his forehead. He received stitches to the head in hospital where he was kept in overnight for observation.

### Fall of Ground (3)

- While charging a development face approximately ten tonnes of rock fell from the wall three metres back from the face.
- A major slip from the endwall of an open cut coal mine resulted in floor heave on the bench.

### Mechanical (19)

- A worker was killed when he became entangled in a conveyor gravity take-up pulley.
- An emergency pull wire on a stacker reclaimer conveyor was found cut or broken and tied back on the conveyor structure to allow the equipment to be used.
- An underground coal mine worker entered the pinch point ('no go zone') between the rib line of the roadway and an operating Eimco LHD as it was articulating and gaining traction.
- An apprentice carpenter was using a Brobo metal drop saw to cut a zincalume steel channel section when a large piece from the saw blade broke off and flew 7 metres across the workshop before striking a door and bouncing back 2 metres.
- During bolting operations in an underground coal mine the bolting rig of an ABM 650 continuous miner switched itself onto auto drill mode and began to move up to the roof. An O-ring in the control box was incorrectly installed.
- The seizure of the main bearing at the base of a stacker conveyor caused the swivel housing bolts supporting the assembly to the foundations to snap off and lift the conveyor at the base and resting against the conveyor structure above.
- While maintenance workers were separating the nose cone bearing from the torque tube joint of a Terex MT3300 dump truck, the front half of the truck and the wheel chocks moved forward 0.3 metres.
- The inner rear wheel rim on a Mack service truck cracked and separated from the outer part of the rim.
- Tyre fitters were replacing tyres on a Komatsu 830E rear dump truck fitted with Rimex TSR rims. They had removed both position 3 and 4 wheels when the inner side ring for position 4 wheel unexpectedly dislodged off its tapered seat. It moved about one metre towards the tyre fitter who was repairing the valve extension on the outer end of the position 3 rim.
- A worker who was removing a set of ventilation doors was struck on the elbow when the door that had been chocked in the open position swung closed. He sustained soft tissue injuries to his right elbow.

### Vehicle – Collision (27)

- A light vehicle collided with the rear of a road train which was decelerating as it travelled up a small hill on a dusty haul road.

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

- A Cat 789 dump truck, returning from a dump, collided with the tray of a Cat 789 dump truck which had stopped at a give way sign as it waited for a loaded truck to go through the intersection. The operator of the returning truck failed to stop in time when he realised that the other truck was still stationary.
- A Terex MT 300 dump truck failed to stop at an intersection give way sign. A Komatsu 785 dump truck coming down a ramp into the intersection had to take evasive action to avoid a collision.
- A Bucyrus MT440 dump truck travelling toward an intersection had to brake to allow a Cat 793 dump truck to move onto the correct side of the haulroad after the Cat truck had entered the road on the wrong side of the centre divider.
- A reversing articulated dump truck collided with a truck parked behind it.
- After washing down and inspecting a Cat 793 dump truck a fitter lowered the tub of the truck. As he reversed the truck off the wash pad it collided with a grader parked behind.
- After loading a Cat 777 dump truck a Komatsu WA 900 loader was repositioning to load for the next truck when it reversed into a truck that drove in behind the loader.
- While a Cat D11R dozer was cleaning the pit floor a Terex RH340 excavator which was positioned on the bench reached behind the dozer to get a bucket of material. The dozer reversed unexpectedly and the bucket hit the dozer as the excavator operator tried to move the bucket out of the way.
- The trailer on a Volvo FM12/460 semi tipper toppled over onto its side when the tailgate failed to open as the trailer was raised to tip the load.
- A worker was reversing a Hyster electric walkie forklift when he stumbled and fell backwards. The forklift rolled up onto his foot, fracturing his ankle.
- The driver of a Cat 2.5 tonne forklift stopped next to a Cat 7 tonne forklift parked in the warehouse yard to turn the head lights off on the larger forklift. He placed his forklift in neutral, did not engage the park brake and got off. The smaller forklift rolled against the larger forklift trapping the operator's left leg causing swelling and bruising.
- When the operator of an underground Toyota tray back stopped on the side of a decline and started to get out to re-hang a barricade the vehicle started to roll away. The vehicle ran up the windrow of material against the wall and rolled onto its side.
- A service truck rolled back 20 metres after being left parked on a slight gradient.
- A twenty seater Mitsubishi Coaster bus rolled back 30 metres from its parking spot after it was left in neutral without its park brake applied. It stopped just short of a crate of gas cylinders.
- The right hand front wheel and hub assembly came off a loaded agitator concrete truck as it was travelling at about 40 km/h along a mine road. The truck slid about 20 metres along the road into a table drain and stopped part way up an embankment.
- While a road truck and trailer was travelling down a ramp a wheel separated from the hub. The truck stopped but the wheel rolled over a bund wall and ended up in a gully.
- The passenger side rear wheel on an underground Toyota Landcruiser separated from the hub assembly while it was travelling up an incline.

### Vehicle – Loss of Control (32)

- After heavy rain the operator of an empty Cat 777 dump truck lost traction while driving down the access ramp into an open cut mine. When the operator tried to stop, by steering into the bank to the left of the ramp, the truck rolled onto its right side. The operator, who wasn't wearing a seatbelt, broke an ankle and sustained possible spinal injuries.
- A Cat 785 dump truck slid for about 50 metres down a recently watered ramp road before spinning and stopping at 90 degrees to the direction of travel.
- An empty Cat 769D dump truck slid on the pit floor as it approached a Cat 980G loader and collided with the loader bucket.
- While a Komatsu 930E dump truck operator was travelling up a ramp the operator had a coughing fit and the truck veered off the road and spun into the bund.
- When a Cat 793 dump truck operator had a micro sleep the truck veered onto and straddled the haulroad centre bund.
- A Cat D11 dozer rolled onto its side when it drove off the edge of a ramp while carrying out slot dozing overburden.
- An overloaded Atlas Copco 6020 articulated truck tipped on its side as it made a turn next to the surface stockpile.

### Explosion (18)

- A shuttle car in a two car panel left the feeder breaker heading back to the continuous miner. As it rounded a corner, the car crushed the other car's cable creating an arc flash.
- A shuttle car was incorrectly anchored following a services advance. When car was moved the power cable dragged across the hungry board cutting the cable and created an arc flash.
- The power cable on a continuous miner was damaged and an arc flash occurred when a shuttle car unexpectedly moved forward crushing the cable between the two machines.
- Following routine calibration checks of a NERZ/ERZ methane monitor the monitor was placed back into normal service. The oncoming shift found the sensor still in bypass mode.
- A routine gas calibration of a methane monitor on a continuous miner found that the power would not trip. The gas sensor had been replaced three days earlier without a gas trip test being performed and the trip was set to ten times the required trip point.
- An Eimco ED7 loader was sent to the surface workshop because of a damaged flameproof enclosure and tagged out of service. Subsequently the tag was removed so the loader could be used

for a job on the surface and then it was taken back underground without the enclosure being repaired.

- The operator of an explosives charge car reversed into a concrete agitator at an underground metalliferous mine damaging the explosives transport box on the back of the charge car.

### Fire (24)

- A fire started in the engine bay of a Cat 992 loader. The operator shut the loader down and activated the on-board fire suppression. Two hand-held fire extinguishers also had to be used to put the fire out.
- A fire in the wiring in an electrical cabinet at the rear of the engine bay of a Hitachi 3600 excavator was extinguished by the operator using a hand-held extinguisher
- Hydraulic oil from a failed pos 2 ride strut on a Cat 789 dump truck sprayed over the engine and turbo and ignited. The on board fire suppression was activated and extinguished the fire.
- A small fire started on the exhaust of a Cat R2900 loader while being re-fuelled in an underground re-fuelling station when diesel leaked from a crack in the fuel tank onto the exhaust.
- A leaking hydraulic hose resulted in a small fire on the turbo of a Cat D11T dozer.
- Leaking oil from a hydraulic hose onto battery terminals resulted in a fire behind the cab of a Kenworth C500 road train.
- A contractor was servicing a Cat 365 excavator when a canister of brake cleaner caught fire and ignited, burning the paper coveralls he was wearing. The contractor was not injured.
- A fire started in the engine bay of a Cat D11 dozer after a hydraulic hose blew and sprayed oil over the turbo.

### Electrical (21)

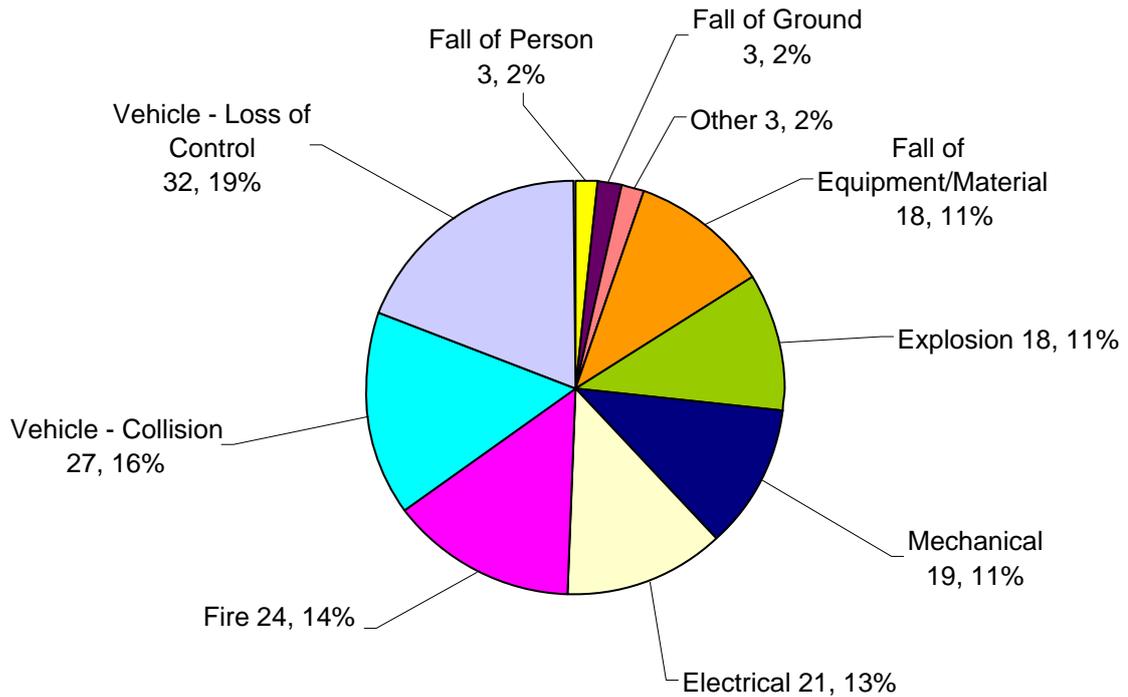
- The boom of a Liebherr 996 excavator contacted and snapped a 66kV overhead powerline while the excavator was travelling from the workshop to a mining area. The excavator operator was not aware of the incident until other workers who saw the arc flash notified him.
- An exploration driller received an electric shock from a damaged methane monitor charger plug while plugging it into the power board.
- A process plant operator received an electric shock from a damp 110V solenoid while unblocking a distributor gate-valve.
- A short circuit developed in an electrical starter panel causing an arc flash. It was not contained by the panel enclosure and was seen by the plant operator who was standing nearby.
- Two workers were adjusting electrical equipment during maintenance on a dragline after isolating the power. One worker received an electric shock when the spanner he was using touched one of the electrical components which contained stored electrical energy.
- After a grinder was repaired and returned to service the lead pulled out of the grinder causing

arc between the live wires and the steel floor. The RCD was not operational and the lead clamp in the grinder was not tightened.

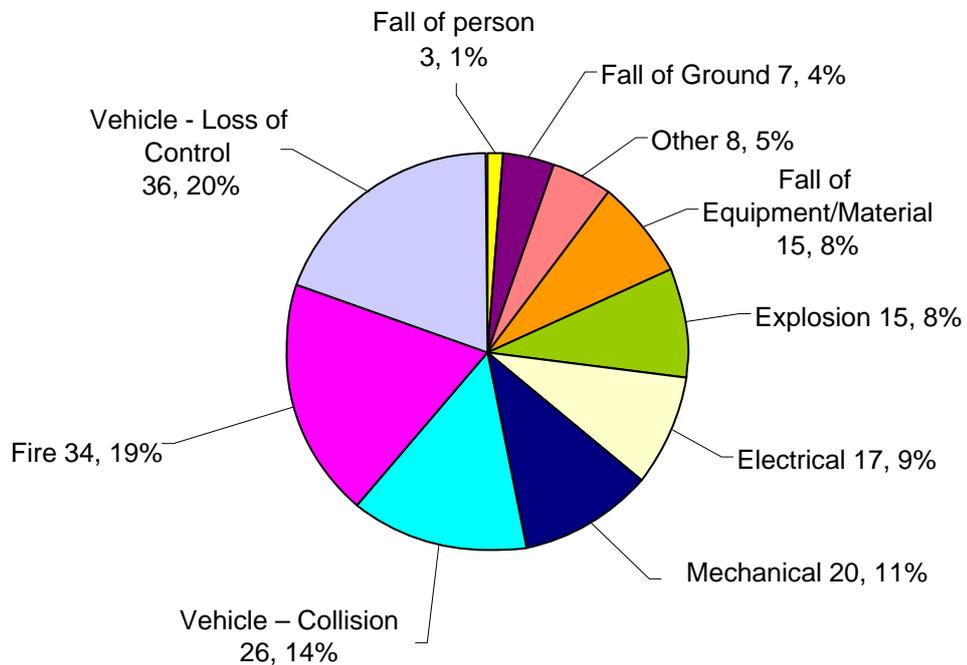
- A circuit breaker at an underground metalliferous mine failed causing control wiring to melt together. Power was lost to sections of the mine.
- A boilermaker was loading equipment into the basket of a JLG elevating work platform when he received an electric shock. The basket had become energised due a fault in the battery charger which energised the frame and body of the machine.
- A contractor used a sub-contractor to Test and Tag electrical equipment. The sub-contractor did not possess the relevant competencies, had not been approved to work at the mine and had not completed the mine's safety induction.

### Other (3)

- While boring a development face, the drill rods broke through into an old drive which was not identified on the development plan.
- A fauna collector was bitten on the finger by the snake he was trying to capture. He was admitted to hospital and given anti-venom.
- Stemming ejection during a quarry blast resulted in an overpressure level of 129dB(L).



**Figure 1: June 2012 Incidents (total 168) by Category**



**Figure 2: Twelve Month Rolling Average (181 incidents/month) by Category**

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

# Serious accidents and high potential incidents

Mining and quarrying

## Compilation of reports for July 2012

### Fall of Person (5)

- A fitter fell to the ground while climbing down the ladder from the engine bay of a Liebherr T282 dump truck. He injured his back and hip.
- While dismantling scaffolding a barricade and signage were removed from a walkway where flooring was being replaced.
- A worker fell 2 metres to the ground from the top of an Elphinstone 2900 underground loader while removing a tele-remote transmission box. He suffered minor scratches and bruising.

### Fall of Equipment/Material (17)

- A conveyor idler which had been placed on a modified section of conveyor walkway rolled off the walkway where a section of kick rail was missing. It fell 30 metres to the ground brushing the leg of a worker on stairs 20 metres below and missed a worker on the ground who moved out of the way when he heard the idler falling.
- While maintenance workers were refitting a stick/bucket linkage pin on a Hitachi 2500 excavator, one worker lost control of a pipe clamp he was removing causing it to slide down along the boom and fall 5 metres striking another worker on the shoulder.
- A 20 tonne workshop overhead gantry crane was lifting a wheel motor of a front end loader when the lifting chain snapped resulting in the hook attached to the chain to strike a bystander on his helmet.
- At an exploration drilling site a driller's assistant was guiding a 7.6 metre long drill rod using a rod handling tool attached to a winch of an Ingersoll Rand T4 drill to off-load it on to the drill stand. The lower end of the drill rod moved laterally outwards from the bottom clamps of the tool causing the drill rod to dislodge from the tool's pilot bar. The drill rod fell and lodged against the drill rod carousel.
- At a shaft sinking site a large rock contacted the kibble chains while tipping rocks on to a chute causing another 40 kg rock to fall over the side of the chute and land outside the tipping exclusion zone.
- Two boxes, each containing 500kg of equipment, slipped off the back tray of an Isuzu 20 tonne truck and fell to the ground when the truck was entering the service ramps.
- While a Terex 20 tonne mobile crane was lifting a rail segment on to a dragline tub, one of the lifting lugs failed causing the rail segment to fall a distance of 900mm onto the tub.

- While erecting scaffolding, a transom supporting the planks failed under the weight of the scaffolder causing the transom and planks to fall to the ground. The scaffolder was wearing fall arrest equipment at the time of the incident.
- At a coal preparation plant a light fitting fell 5 metres to the floor when a steel wire suspending the fitting broke.
- A helicopter was stringing high voltage overhead power-line cables when a shear pin of the attachment suspending the cable failed disengaging the cable and causing the cable and the 30kg stabilising weight to fall to the ground. The cable whipped towards the workers on the ground striking one worker on the legs and the stabilising weight fell close to another worker.
- The operator of a skid steer loader was using a rake attachment connected to the quick hitch when the attachment detached and fell on the operator's cabin smashing the windscreen and preventing the operator from exiting the cabin. A crane had to be used to lift the attachment and rescue the operator.
- A Tadano 70 tonne mobile crane was lifting a tank when one of the crane outriggers sank into the ground. The crane boom was damaged when the crane lurched sideways and struck the boom.

### Fall of Ground (6)

- About 3 tonnes of rock fell onto a Simba production drill rig from the back when one of the stingers was retracted.
- Some localised guttering in the roof was noticed adjacent to a sump which was being mined by a continuous miner. As the continuous miner withdrew some roof failed in the sump and into the roadway.
- Two operators had a sheet of roof mesh resting on the temporary roof support of a Sandvik Continuous Miner/Bolter ABM20 when a slab of roof fell onto the mesh. One operator was knocked backwards while the other was hit by the mesh and slab. He sustained bruising to his neck shoulder and upper back and fractured a finger which was caught under the slab.
- A bedding plain failure in a pit wall resulted in approximately 300 tonnes falling onto the catch berm.
- A Liebherr 995 excavator was loading a Komatsu 730E dump truck when the outside of the bench slumped. The excavator operator placed the bucket in the back of the truck to support the excavator.

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

**Mechanical (14)**

- At an underground coal mine, hydraulic fluid emitting at high pressure came into contact with a worker's hand when he was trying to manually bleed the relief valve on a continuous miner to release a jammed tensioner.
- A crushing plant gear box at a coal preparation plant sheared away from its mounting position against the crusher body resulting in the gear box flipping through 180 degrees before power trip.
- A 500 litre pressurised accumulator tank rated at 1000kpa for controlling water hammer in a dust suppression spray system exploded, separating the top half of the tank and propelling it 30 metres through the pump station roof. A pressure limiting switch had failed to operate pressurising the tank to 200kpa above its rating.
- A Telestacker conveyor failed to hold in position after the radial arm wheel brakes had been applied. The jack legs were operated to arrest its movement.
- During maintenance work to replace a conveyor belt, the clamps securing the belt failed to hold the cut belt resulting in the belt slowly running down the drift.
- An underground diamond driller's offside was struck on the chin by an air mover while trying to reposition it. The coupling connecting the air mover to the compressed air valve was not secured with safety clips and became loose during repositioning. He escaped serious injury because the valve was only cracked open allowing him to restrain the air mover and reducing the force of the impact.
- An operator was inserting a hose into a drain pipe to clear a blockage in a pump circuit when a power failure caused the pneumatically operated drain valve to close while his hand was inside the valve chamber. Another operator managed to free his hand by reversing the air supply to the valve. He was treated at a hospital for cuts.
- A Cat 793 dump truck had 12 broken bolts on the adaptor ring of the position 3 tyre. The remaining bolts were found to have only 20 percent of the required torque.
- A blast furnace operator was using a pelican pick to clear a jammed pneumatically operated chute diverter which was failing to change over. When it changed over, the diverter plate struck the operator on his forearm causing soft tissue injury and swelling. The air supply to the diverter had not been isolated.

**Vehicle – Collision (27)**

- A Liebherr 984 excavator lost power as the bucket was being positioned for a Cat 789 dump truck to reverse under. The ducktail of the tray collided with the bucket jarring the dump truck operator's neck.
- While loading holes on a shot a Dyno MMU truck reversed into a stationary dewatering pump truck pushing it 0.5 metres.
- A Nissan Navara dual cab collided with a Cat 631E Scraper at a four way intersection.

- A Cat D10 dozer, which was pushing at the tip head, reversed into a Cat 785D dump truck. The truck had turned behind the dozer to tip while the dozer was stationary.
- Two Cat 789C dump trucks were travelling up a ramp towards an intersection in the early morning. While the leading truck was stopped at the top of the ramp the operator of the following truck had a micro sleep and collided with the tray of the stationary truck. The cab and access steps were damaged and the operator sustained lacerations.
- The counterweight of a face shovel collided with the side of a Komatsu 830E dump truck as the shovel moved forward and slewed.
- The rear of a dragline house collided with a service truck when the truck entered the swing zone of the dragline without the dragline operator's knowledge. The truck was pushed approximately 6 metres by the impact which also sheared the gauges off two oxygen bottles which were stored on the back of the truck. The passenger in the truck sustained neck and side pains and was admitted to hospital for observation. He was released the following morning.
- A Komatsu 830E dump truck collided with a parked Cat 773 water truck when it pulled away from the go line and made a hard right turn.
- On night shift a service truck drove onto the wrong side of a wide haul road and passed an on-coming haul truck after the operator entered the haul road became disoriented.

**Vehicle – Loss of Control (38)**

- A Toyota Landcruiser ute, driving on a straight section of recently watered haul road, spun through 180 degrees before rolling at low speed.
- A semi trailer drove through an intersection when it lost its brakes due to the airline for the trailer detaching from the prime mover.
- An empty Cat 789 dump truck slid approximately 50 meters on a recently watered haul road before stopping against the haul road bund.
- A Volvo articulated dump truck was travelling down a spot watered ramp when the operator had difficulties with the steering. He applied the brakes and the truck skidded approx 17 meters.
- A Mack road tipper fell over while discharging its load at a stockpile area.
- The body of a Volvo articulated dump truck fell onto its side while tipping a load onto a stockpile.
- A loaded Cat 793 dump truck was travelling up a ramp when the operator had a micro sleep and the truck veered into a bund.
- The front left passenger side tyre on a Toyota Landcruiser fell off while the vehicle was travelling at 70 km/hr on a light vehicle road. The driver managed to bring vehicle to a stop.
- A light vehicle driver lost control of his vehicle when it hit a pothole. It veered into a bund and rolled onto its side.
- A Toyota Landcruiser ute rolled onto its side after the driver lost control of the vehicle on a wet section of road.

- The tub of a Cat 740 articulated dump truck rolled over while reversing to tip on a dump when the truck drove up onto a bund protecting a light tower.
- The trailer attached to a Kenworth prime mover tipped over onto its side while it was tipping ammonium nitrate at an explosives reload facility spilling the load on to the ground.
- A loaded concrete agitator truck was driving down a ramp when the brakes overheated and effective braking was lost. The operator steered the truck into a bund to stop it.
- A Driftrunner collided with a set of airlock doors when the brakes failed to stop the vehicle as it approached the doors.
- A Mack service truck was travelling down a ramp when the driver noticed that the service brake was spongy. He applied the park brake to slow the vehicle.

### Explosion (6)

- Water accumulated in a smelter under an anode casting wheel due to a blocked drain.
- A continuous miner trailing cable, looped down behind the machine at the anchor point, was crushed by a shuttle car creating an arc flash.
- During a routine daily inspection of a shuttle car by an electrician, a flameproof plug was found missing a retaining bolt.
- Following a longwall services retraction, an energised non explosion protection junction box was found within the explosion risk zone (ERZ) of an underground mine.

### Fire (35)

- The wiring harness in a Cat 631E scraper caught fire.
- The exhaust lagging on an underground Cat 930H loader caught fire after fuel sprayed onto it from leaking injector pipe. The AFFF system activated automatically and extinguished the fire.
- The battery cables shorted near the battery box on a Cat D10N dozer causing ignition of oil nearby. The fire was put out with a hand held extinguisher.
- Grease within the bearing of a Warman slurry pump ignited.
- When a hydraulic oil pipe broke on the blade lift ram of a Cat D11 dozer oil sprayed over the exhaust stack and ignited.
- An air compressor failure on a Cat 16H grader resulted in oil spraying onto the exhaust and catching fire. The onboard fire suppression system extinguished the fire.
- Attempts to extinguish a fire in the turbo area of a Cat 972 loader with three hand held fire extinguishers failed. Another loader dumped a bucket of water on the fire which put it out.
- A driller was heating drill rods to release the threads on an overburden drill rig when he noticed a small methane gas flame from between the deck bush and the drill rod.
- The steering hose on a Cat 789 dump truck burst while it was dumping its load and sprayed oil onto the turbo which ignited.

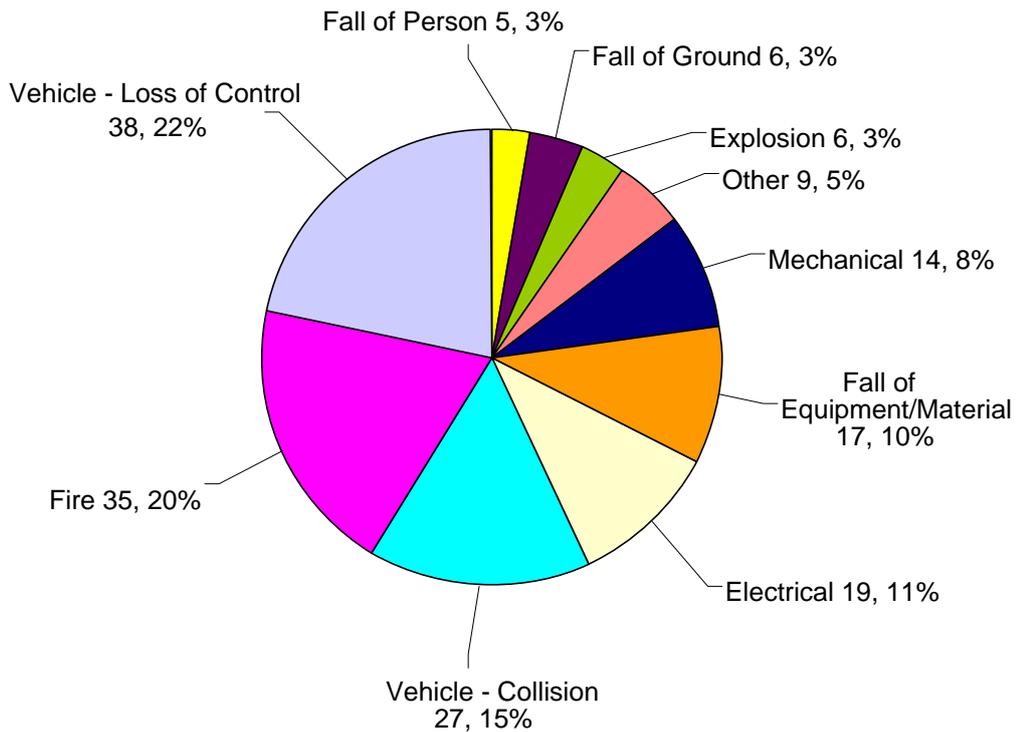
- While an excavator was travelling on a ramp a fire started in the battery box when one of the batteries moved within its cradle causing the positive terminal to touch the cradle and short.

### Electrical (19)

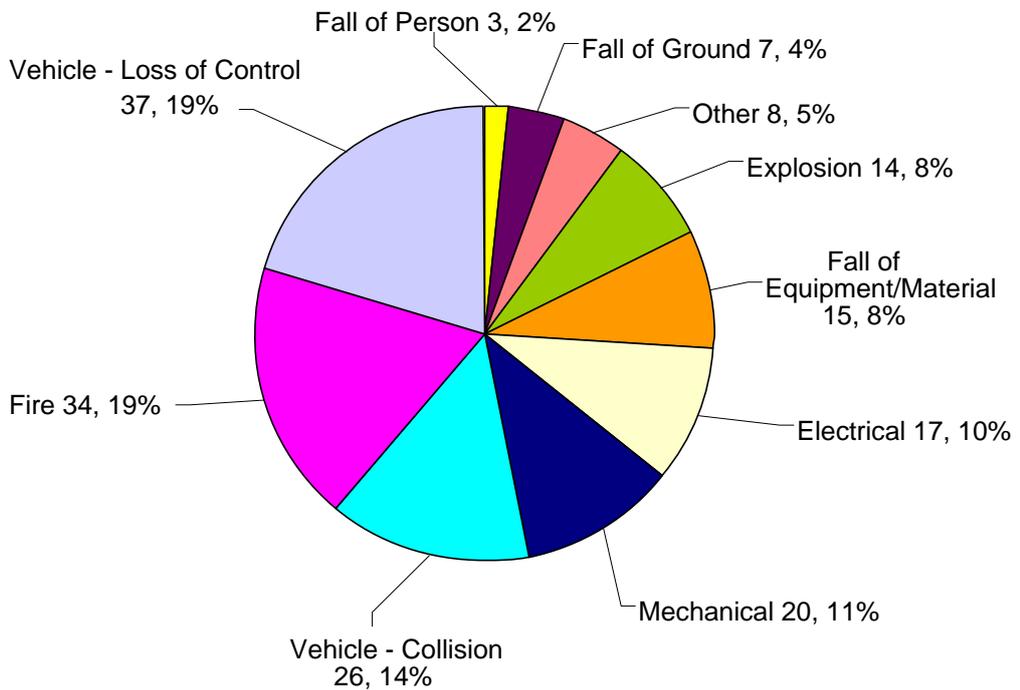
- A fitter received an electric shock while welding a bracket when he touched the bracket and the steel bench it was sitting on.
- Two workers received electric shocks from a magnetic base drill.
- A loaded Liebherr T282 electric drive dump truck was travelling down a ramp under retardation. A failure of the high voltage electrical components during the retardation caused the electrical enclosure doors to be displaced from the cabinet.
- A worker received an electric shock from a Ramset DynaDrill 543 hammer drill. His offsider also received an electric shock when he then tried to use the drill which had a damaged grommet where the power cable connected to the drill.
- A Cat D10 dozer backed over a dragline cable tripping the power to the dragline.
- A 22kV dragline cable was damaged between the ripper of a Cat D10 dozer and the push pad of the cable boat while the cable boat was being pushed back by the dozer.
- A worker who was going to refuel a lighting plant received an electric shock when he turned all the lights off on the lighting plant at a three phase circuit.
- An 8 tonne excavator dug up a cable which had not been identified on the excavation permit.
- The tray of a Cat 793D dump truck contacted a shovel cable strung between two cable towers while it was dumping road repair materials.
- The operator of a Cat 793F dump truck emptied a load of road repair material and moved forward with the tray still raised. The tray caught a power cable strung between two cable towers and pulled one of the towers over.

### Other (9)

- After an overburden shot was fired in an opencut coal mine a level 4 fume event occurred. The fume cloud was rated as level 2 when it breached the fume management zone.
- A development firing broke into an unidentified and ungrouted 150mm diameter drill hole that had been drilled from the surface.
- A Citect control system for a conveyor failed to stop the conveyor drive motor.
- A fitter was removing a fan belt on a Cat 793 dump truck when a brake coolant hose burst and he was showered with hot coolant. He sustained a burn to his hand.
- A worker was standing on a mobile screen that was not isolated.
- A borehole in a longwall panel recorded 400ppm carbon monoxide and 200ppm hydrogen from a heating in the goaf. All workers were withdrawn from the mine.



**Figure 1: July 2012 Incidents (total 176) by Category**



**Figure 2: Twelve Month Rolling Average (182 incidents/month) by Category**

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for August 2012

#### Fall of Person (9)

- While preparing to service a fan, a worker fell 1.8m to the ground. A safety harness was being worn but not attached.
- A driller's offsider was assembling a platform and hand rails to allow maintenance activities to be completed. The platform moved away from its mounts due to no locking pin being in place causing the worker to fall to the ground.
- A worker fell from the top of a Cat D11R dozer while climbing an access ladder.
- An employee was working beside the collar of a mine shaft without the use of fall protection.

#### Fall of Equipment/Material (8)

- The cabin on an Atlas MT6020 truck was tilted to allow the air conditioner to be serviced when the door came off its hinges and squashed two fingers of the maintainer.
- The tailgate of a rear dump truck was being replaced. The tailgate was being lifted with nylon slings when a burr on the tailgate cut through one sling. The second sling broke due to the sudden and excessive load on it.

#### Fall of Ground (13)

- During the night cracks were detected in the low wall at a coal mine. The area was barricaded off. The low wall slumped during the following day shift.
- While tramming past an ore pass, the operator of a loader discovered that approximately 50 tonne of ground had fallen.
- As the longwall advanced a slab fell from the face striking the shearer driver and fracturing his leg.

#### Mechanical (25)

- Following a maintenance task, a set of vice grips was found to have been left on the low water shutdown circuit of a drift runner.
- During the retraction of a chain tensioner at a longwall tailgate, a 10mm diameter hydraulic hose failed. The jet of hydraulic fluid narrowly missed two workers.
- A lead concentrate storage tank was being descaled using a high pressure water blasting system. The operator lost control of the high pressure hose and cleaning head which whipped out of the tank and fell to the ground.
- While testing chain tension using an Enerpac a hose fitting failed spraying oil into the fitter's eyes.
- An apprentice fitter de-gloved the tip of his little finger while he was assembling dozer tracks.

- After a 'Dog' trailer was unhitched from a truck, the trailer started to roll away. The maxi braking system failed to hold the trailer.
- During the removal of a final drive assembly on a Komatsu 375 dozer, the lifting frame failed catastrophically whilst taking up the weight.
- During the fitment of a flipper pin on a longwall roof support the pin ejected, struck the front and rear windows of an IT loader parked 18 metres away.
- A worker was attempting to unblock a jaw crusher with a wedge when the wedge pulled out from his hand. He retreated to the crusher cabin fearing that the wedge would be ejected. As he entered the cabin the wedge ejected and smashed through the window narrowly missing the worker.

#### Vehicle – Collision (27)

- A supervisor sustained fatal injuries when he was struck by a Cat 988H loader while in the ROM area.
- A light vehicle was parked in front of an overburden drill to allow operators to change out. As the drill was being trammed to a new location it drove over the light vehicle. The onboard camera was not operational.
- A Cat 992 loader collided with another stationary Cat 992 loader at a ROM stockpile while loading bins.
- During nightshift a Cat D11 dozer reversed into a parked D11 dozer punching a 20x10cm hole into the upper section of the blade.
- At shift change an overburden drill backed over a Toyota Hilux that was parked nearby.
- A Cat 777 rear dump truck was parked waiting for a Cat 16M grader to turn following completion of a grading run. Instead, the grader reversed into the rear dump truck.
- An operator was experiencing a fault on the drive train of a dump truck. A fitter was called and parked his light vehicle in front of the dump truck. The fitter took control of the truck and moved forward colliding with the light vehicle.

#### Vehicle – Loss of Control (43)

- A Drifrunner had been parked for five minutes with the engine switched off and park brake applied. As the operator opened the door, the vehicle started to move. The park brake was again reapplied with no effect. The vehicle rolled approximately 15 metres.

- As a Komatsu 630E dump truck entered a heavily watered intersection the operator lost control and mounted the left hand bund and then the right hand bund.
- The steering accumulator on a Cat 797F rear dump truck became dislodged from its mounting due to a failed hold down strap. Steering fluid was lost and the dump truck lost steering.
- While reversing, the operator of a water truck misjudged the distance to the edge and rolled off the wall of a tailings dam.
- The operator of a Komatsu 730E rear dump truck fell asleep while travelling to the tip head and crossed the road.
- While stationary and jibbing out the boom to reposition its load, the rear wheels of the Franna crane lifted approximately 700mm off the ground.
- The operator of a scraper drove into a 2 metre deep hole that had been dug for maintenance work. The scraper rolled onto its side.
- A Manitou rolled onto its side while attempting to lower a 4.6 tonne load.
- The operator of a Cat 793 rear dump truck lost control when he applied the retarder on a wet section of road. He failed to see the dry line of the recently watered road.

### Explosion (18)

- A gas drainage operator went to an underground gas drainage riser. When he got out of his vehicle, the personal gas detector alarmed and read 6.45% CO<sub>2</sub> and 1.56% CH<sub>4</sub>. He exited the area and reported to his supervisor.
- The methane sensor on an underground coal LHD was found to have been mechanically bypassed.
- The methane monitor on a PJB man transport was found to be locked in the bypass position.
- A worker was using a grinder near a battery charging area. The sparks given off by the grinder ignited gas causing the battery to explode.
- During the start up of a diesel welding plant the battery exploded. The starter motor appears to have remained engaged and back fed into the battery.

### Fire (47)

- After a water truck had been refuelled and the bowser shut off, a fire started on the water truck. The AFFF system activated.
- A faulty starter motor on a Cat D11 dozer caused the wiring to heat up and ignite.
- The tappet cover on a Cat D10T dozer cracked which enabled oil to leak onto the exhaust and start a fire.
- A fire started in the engine bay of a light vehicle due to an electrical fault.
- A spontaneous combustion event was detected in a small coal stockpile adjacent to a rail load out facility.
- A fire occurred in the front axle housing on a Letourneau L1850 loader resulting in damage to electrical wiring and hoses.

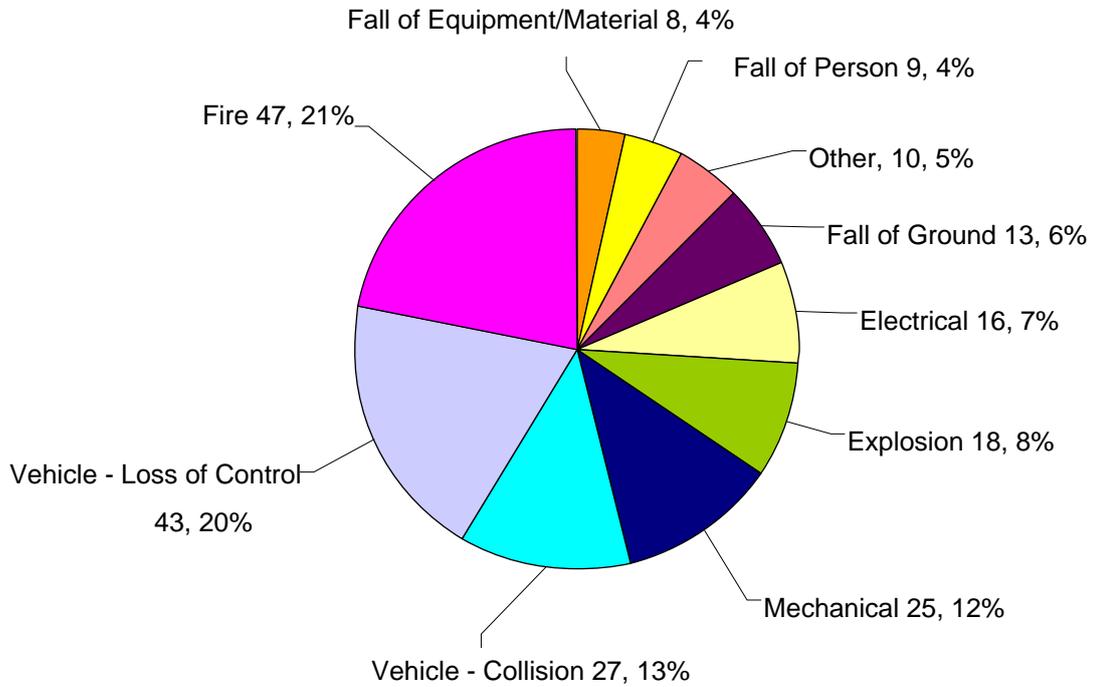
- The drive end bearing on a crusher motor failed causing the grease to ignite.
- While starting a dozer, smoke was observed coming from under the floor. The onboard fire suppression was activated but failed to extinguish the fire that followed.
- A hydraulic hose on a drill mast burst allowing oil to come into contact with the drill motor resulting in a small fire.
- As a Komatsu 960E dump truck was descending a ramp, the truck lost electric retardation. The service brake was used to bring the truck to a stop. Investigations revealed that a contactor had melted and damaged another contactor.
- A wheel assembly on a road train caught fire due to a brake dragging.
- A fire occurred on a Lincoln Air Vantage mobile welding unit from the positive battery lead chaffing on the radiator cowl.
- An excavator caught fire when oil sprayed onto the turbo from a hose that had just been replaced.

### Electrical (16)

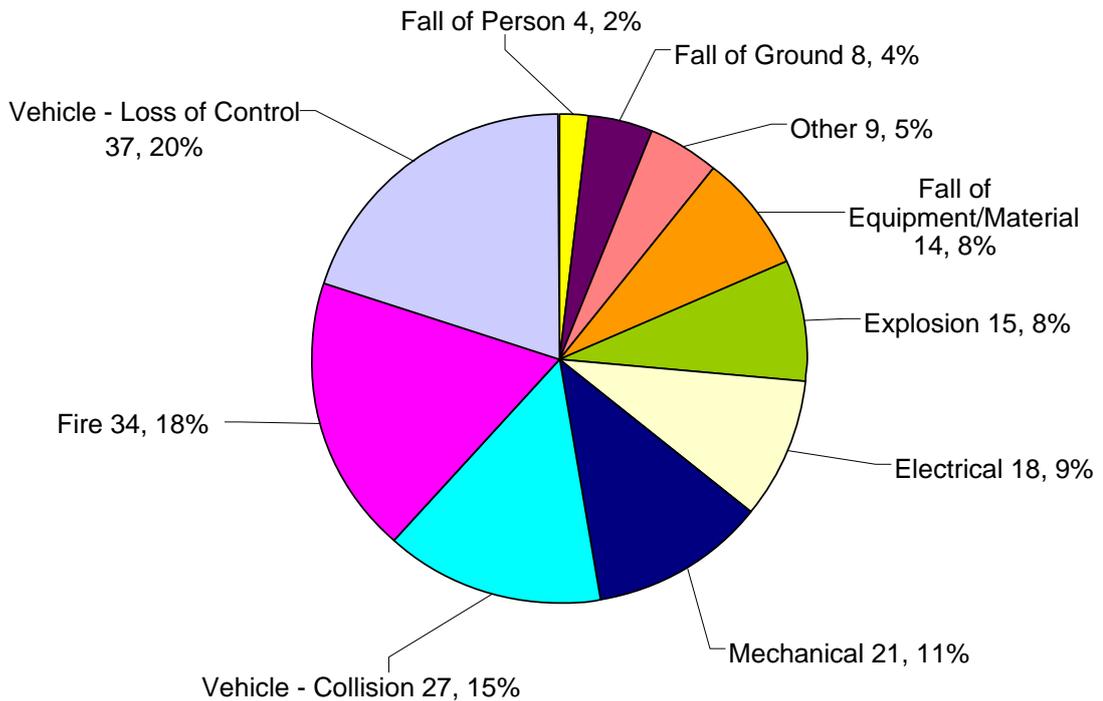
- A worker in a process plant received an electric shock while using a grinder when water overflowed from a launder above him and saturated both him and the grinder.
- While inspecting grease build-up in the slew ring area of a P&H 4100 electric shovel a maintenance worker inadvertently lifted an unsecured manhole cover. The cover came into contact with the 11kV slip rings on the shovel which tripped the power at the substation.
- After five quick restarts of a pump, the door of the electrical enclosure blew open due to the circuit breaker failing.
- The boom of a 20 tonne excavator came into contact with an overhead 11kV powerline snapping the underslung earth wire.
- Power was lost to a dragline as a result of an earth leakage and earth continuity trip. The installation was inspected and it was found that the 300A CMA plug had fractured and separated.

### Other (10)

- A mine worker had a drill rod resting on the top of his foot while realigning the drill head. As the rig moved, it caught the drill rod forcing it through his boot and through the webbing between his toes.
- As a road train drove under a load out bin, the doors opened spilling coal onto the chassis of the prime mover. It appears that the operator of the truck may have inadvertently pressed the button that allowed the chute to open momentarily.
- While clearing slag from a pouring ladle using a shovel the worker tilted the shovel allowing molten metal to fall from the shovel, flow down the trousers and enter his right boot. The worker received full thickness burns to his foot.



**Figure 1: August 2012 Incidents (total 215) by Category**



**Figure 2: Twelve Month Rolling Average (186 incidents/month) by Category**

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for September 2012

#### Fall of Person (6)

- On nightshift the operator of a Cat 992 loader was walking on the deck of the loader when he fell into the transmission bay. The covers had been left open during an inspection for an oil leak earlier in the shift. The operator sustained a fractured leg.
- A worker fell partway through a hole in a conveyor walkway after a section of gridmesh he was standing on dislodged and fell 3.5m to the floor below. He managed to grab hold of the conveyor structure to stop him falling to the floor.
- A workshop supervisor was spotting a Cat 16M grader into the workshop when the grader's walkway deployed. It struck the supervisor and knocked him to the floor. He sustained a broken leg.

#### Fall of Equipment/Material (17)

- A Cat 769C rear dump truck tipped on its side when its rear wheels went through the bund it was dumping over.
- While changing a 28mm diameter hoist rope on a 60 tonne gantry crane the cable sock used to connect the old and new ropes slipped off and both ropes fell to the ground. One rope fell close to a fitter grazing his shin.
- A 14000 litre water tank fell off the chassis of a Kenworth 501C truck.
- An O&K 170 excavator fell onto its nose with the tracks standing vertical when the bench it was tramming across subsided.
- An 1120mm diameter vent duct 90 degree elbow weighing approximately 80kg fell 120m from the shaft collar onto the canopy of the first deck of a shaft sinking stage.
- While undertaking a SAG mill reline activity the grapple slew assembly of the reline machine failed and dropped about 1.5m onto some worn liners.
- While tramming on a 1:5 gradient bench, an Atlas Copco 720 blasthole drill rig rolled onto its side when the drill was turned with the mast extended.

#### Fall of Ground (12)

- A Cat R2900 LHD loader was operating at a drawpoint when a section of the wall and roof collapsed onto the bucket of the loader. The impact pushed the loader against the adjacent wall of the drawpoint and rocks struck the cab breaking the side window and windscreen.
- After drilling out a development face, a jumbo drill rig operator was using a pelican pick to expose the lifter tubes when a 500kg rockfall occurred. Rocks

struck him causing contusions to his head and abrasions on his back.

- A Cat 336 excavator was positioned at the toe of a 10 metre high wall raking down overhanging clay material when a large lump of clay fell from the wall onto the excavator cracking the windscreen.
- After mining a trench of coal along the low wall a 100 metre long by 30 metre high section of the wall collapsed slowly into the trench.

#### Mechanical (18)

- A driller de-tipped his thumb when it was caught between the opening gripper jaws and the temporary roof support plate while trying to withdraw a flexisteel from an airtrack temporary roof support.
- A fitter sustained bruising to his upper thighs when he was stuck by a high pressure hose while changing out a longwall pump module.
- A shipping container was being winched onto a tilt tray truck, when the winch chain broke striking the winch operator in the head. He sustained a laceration to his nose and cheek.
- An exploration driller's offsider sustained a fractured lower leg when he was struck by the handle of a set of stilsons while the driller was trying to break the thread of the joint between the drive sub and reamed casing. The offsider was sitting on the drill platform with both legs below the drill deck so he could access the stilsons.
- A tyre fitter was jacking up a Kress coal hauler on the rear axle when the jack dislodged causing the second jack to be ejected as it took the load.
- A 50 tonne dozer was towing a longwall bootend around a corner when the tow chain failed. The chain struck and cracked the windscreen of the dozer.
- A worker in a CHPP laboratory suffered a partial amputation of his right ring finger when it was drawn into a roll crusher.

#### Vehicle – Collision (21)

- While moving cables a cable tractor collided with a parked dragline.
- A Cat 16H grader drove over a Toyota Hilux ute. He had just relocated the light vehicle so he could grade the area.
- A Komatsu WA1200 loader reversed into a parked Cat 793C rear dump truck.

- A Nissan Patrol collided with 6 tonne Isuzu dual cab truck at an intersection on a bend in an access road.
- A light vehicle travelling on the wrong side of the road approaching a corner collided with a light vehicle coming in the other direction.

### Vehicle – Loss of Control (32)

- While a Cat 789C rear dump truck operator was travelling down a ramp behind another rear dump truck the retarder failed to slow down the truck. When the service brake also failed he turned the wheels into the bund. The truck travelled over the bund and struck the tray of the truck in front.
- A Toyota Landcruiser ute fitted with a small mid-mounted vehicle loading crane rolled onto its side while doing a U-turn.
- The trailer on a 40 tonne Volvo articulated water truck rolled over when the truck slid down the edge of an earthen dam wall which was under construction.
- A light vehicle veered off the road when the driver reached down to pick-up a folder. The driver over corrected causing it to rollover and end up back on its wheels.
- In the early hours of the morning Komatsu 930E rear dump truck operator had a microsleep while driving up a ramp and drove into the berm.
- As a light vehicle came over a crest on a wet section of road it veered across the road and hit the windrow rolling onto the driver's side.
- After a Bucyrus MT4400 rear dump truck crested the top of a ramp it slid approximately 85 metres down a recently watered road before the operator could steer the truck into the bund.
- The operator of an Eimco ED7 loader had to apply the emergency brake to stop the loader after the brake peddle separated from the brake treadle valve.
- The steering ball-joint of a loaded Cat 771D rear dump truck failed causing the truck to pull off the road and contact the bund wall.

### Explosion (18)

- A production uphole being drilled from a lower level broke into a development above close to where production holes were being charged.
- While digging an interburden shot a Hitachi 3600 excavator uncovered a misfired hole containing 220 kg of ANFO, an uninitiated downline booster and detonator.
- A shuttle car's power cable was severed when the shuttle car struck the wall while reversing.
- A drift runner was found to have a bypassed methane monitoring system after it had been driven into the underground workings.
- The main enclosure on a continuous miner was found with a flameproof gap in excess of 0.6mm.
- An arc flash occurred when the power cable of a multi bolter rig was pinched between the back of the reeler enclosure and a QDS stone duster.

- A shuttle car ran over its own cable pulling it apart and exposing the conductors when the cable failed to reel in correctly.

### Fire (47)

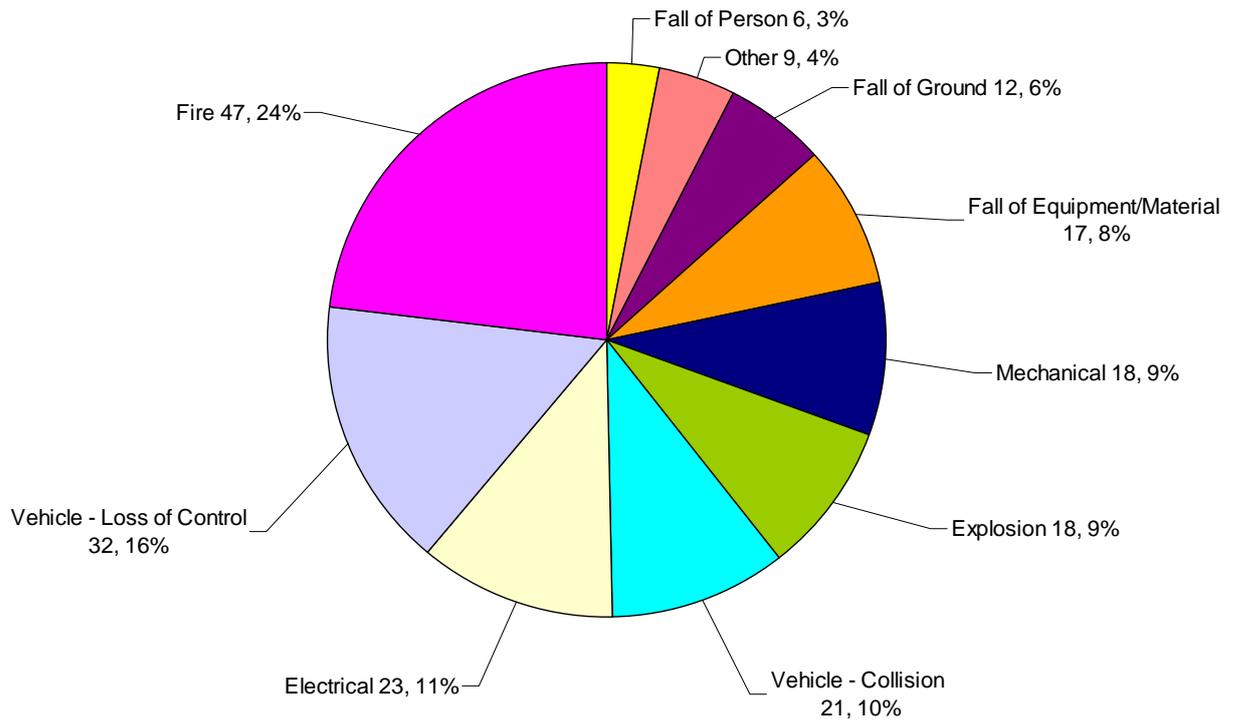
- A fitter was cleaning the mast pinning limit switch on a surface drill rig with contact cleaner when an electric arc ignited the cleaner vapours. The fitter sustained burns to his right hand.
- Oil leaking from a rocker cover on a Cat D11T dozer contacted the turbo and ignited.
- Lubricant vapours ignited when a worker was oxy cutting steelwork on jammed mobile screen. He sustained minor burns to his face.
- A fire started on a generator when sound proofing material dislodged from the outer case and rested on the exhaust.
- A small fire started on a Cat 789 rear dump truck while tipping when a hydraulic seal failed and the hydraulic fluid contacted the exhaust.
- Following a pre-split blast in an open cut coal mine above old underground workings four of the blast holes were found with methane gas flares burning at their collars.

### Electrical (23)

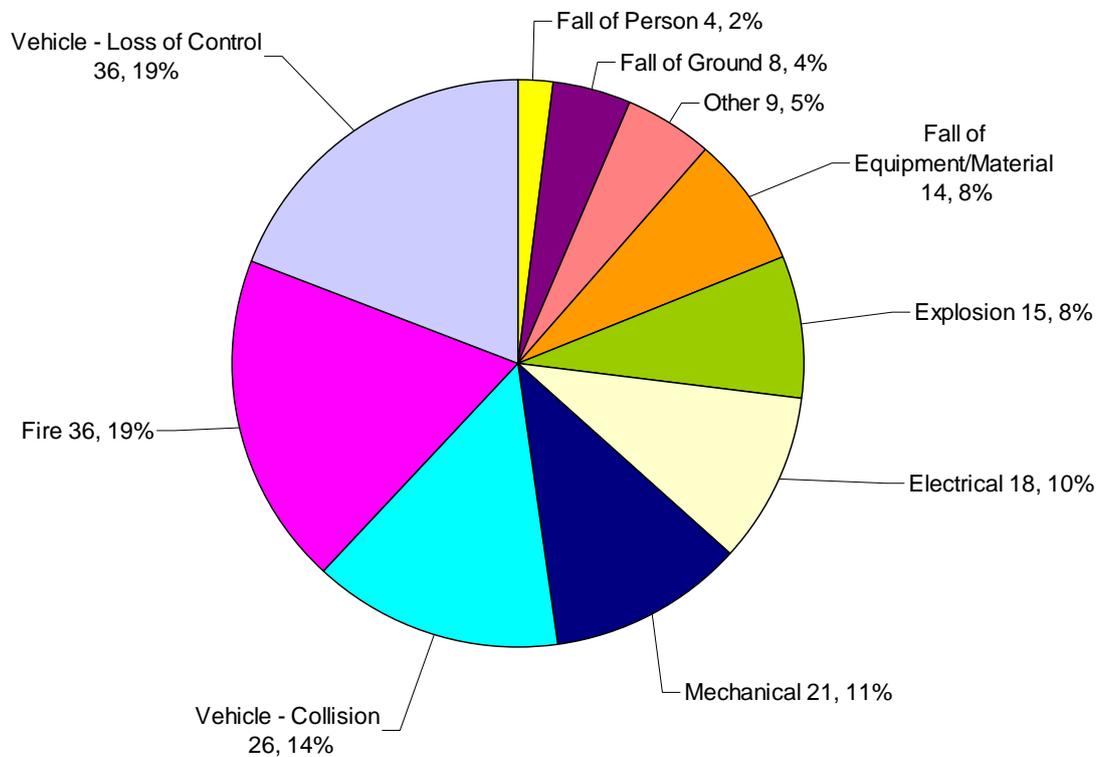
- A Cat D10T dozer contacted a dragline exposing the cable conductors while cleaning up spillage which covered the cable.
- A fitter received an electric shock while replacing drive belts on a sump pump when he checked the operation of a metal clad power outlet.
- A worker received an induction induced electric shock.
- A semi-trailer was transporting a portable office building when a communications aerial fitted to the building contacted an overhead powerline.
- A Hitachi 80 tonne excavator dug up a buried 415V cable exposing the conductors.
- A worker received an electric shock while removing an 110V pressure sensor plug from a crusher which had been hosed down for maintenance.
- A grader cut the power cable to a light tower and pulled the cable from the switchboard while trimming a road.

### Other (9)

- The deadman control on a train loadout control system was found taped up.
- Two operators in an open cut coal mine crib hut were affected by fumes from a nearby spontaneous combustion event.
- All workers were withdrawn from an underground coal mine when there was a fault in the gas management system.
- A water flush valve in wet-fill surface pipework was isolated and locked out in the open position instead of the closed position during maintenance.



**Figure 1: September 2012 Incidents (total 203) by Category**



**Figure 2: Twelve Month Rolling Average (187 incidents/month) by Category**

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for October 2012

#### Fall of person (0)

#### Fall of Equipment/Material (17)

- A 250kg actuator operating a knife gate valve in a process plant fell three metres to the walkway below when the welded structural supports for the actuator failed.
- During sag mill relining a travelling trolley on a monorail slid off the rail when the end-stop fastening bolts failed. The trolley with the attached air winch and liner removal tool fell to the ground striking a worker's arm.
- During a tyre change on a Juggernaut loader a forklift lifted the wheel into an upright position. The wheel overbalanced and the fitter who was helping with the tyre change tried to stop it falling. The tyre fell onto his left leg fracturing his ankle.
- While hanging a twin 55kW fan from the back of a decline a link in one of the supporting chains broke and the fan fell to the floor.
- A jib crane was preparing to lift a load when the winch rope hasp failed and the lifting chain fell eight metres to the ground.
- A Volvo EH60 excavator was climbing onto a pad when one of the tracks dropped into a hole and the excavator rolled onto its side.
- While lifting one of the two rams on the left hand side of a Cat 40 tonne excavator the top pin slid out. The second unrestrained ram fell and struck the fitter on the helmet, pushing him to the ground. He sustained a laceration above the eye.

- A Cat 307D excavator toppled onto its side when the edge of the bench it was working from fell away. The excavator bucket ended up resting in the tray of the dump truck it was loading.

#### Fall of ground (7)

- Approximately 25 tonnes of rock fell in a wedge failure from the shoulder and sidewall of a meshed and bolted section of drive on the corner of an intersection next to where a Manitou forklift was parked.
- An access ramp was temporarily closed after a low wall failure resulted in floor heave in the ramp.
- About 20 tonnes of rock fell from a development face when there was a wedge failure while the face was being bored.
- A 1.5 magnitude seismic event occurred near underground workings approximately 165 metres below the surface. It was also felt and heard on the surface.

#### Mechanical (20)

- During dragline maintenance the propel brakes were being checked while some workers were in an EWP repairing the handrails at the boom midpoint. The dragline moved during the brake check and the boom moved away from the workers in the EWP.
- A shard of steel entered a worker's lower right leg while he was hammering a bucket tooth on a Cat 992 loader using a copper headed mallet. The head of the

mallet comprised a steel barrel with a copper insert at both ends.

- A light vehicle was towing a shovel cable when the cable puller chain broke. The chain puller struck the spotter on the right knee causing swelling and bruising.
- During shaft sinking activities the collar doors closed on a kibble rope.
- Following repairs to a P&H 4100 shovel dipper the dipper door would not close correctly. The dipper was placed on a stand and the boom of a 25 tonne Franna crane was used to open the door so that blocks could be positioned to keep the door open while the build-up was removed. A worker was inside the boom directing the crane driver and to position the blocks which were also attached to the crane. While opening the door with the crane boom the dipper shifted one metre on the stand.
- A conveyor operator was clearing built-up material from a jammed return roller using a hammer while the conveyor was still running. When he miss-hit the roller and slipped, his arm was pulled in between the roller and the conveyor structure. He sustained an abrasion to his wrist.

## Vehicle – Collision (22)

- A Cat Tiger dozer reversed into a Cat 789 dump truck while the truck was parked and waiting to tip.
- As a Komatsu 830E dump truck was parking in a 'V' drain on the Go line at the end of shift it collided with a similar truck which was already parked.
- A light vehicle was travelling along a light vehicle access road when another light vehicle entered the road from the left at a bunded entrance and turned right. The first vehicle braked and skidded for 20 metres before colliding with the rear section of the driver's side of the turning vehicle.
- A drill jumbo was parked behind a light vehicle at a decline access waiting for traffic on the decline to pass by. The light

vehicle operator initially started to reverse onto the decline but then stopped when another vehicle came up the decline. The jumbo operator thought the light vehicle had gone and so reversed and collided with the driver's side door of the stationary vehicle.

- A Volvo L110F loader was towing three 5m lengths of 150mm diameter steel borehole casing pipes which were attached to the side of the bucket. While manoeuvring around a tree on the track, one of the pipes dug into the ground, pivoted up and struck the lights and windscreen of the loader.
- The counterweight of a Caterpillar 992C loader collided with the access stairs on a mobile crusher while the loader operator was back-blading his work area.

## Vehicle – Loss of control (27)

- A Ford service truck which was parked on a 10% slope rolled forward 6 metres before striking an area guard around a surge bin.
- A Komatsu 830E dump truck lost traction while travelling down an access ramp after a storm and spun around, coming to a stop facing up the ramp.
- While travelling along a haul road the driver of a Landcruiser ute lost control of his vehicle and slid along the road before rolling over and landing upright on its wheels facing in the opposite direction. The driver suffered minor bruising.
- A drift runner vehicle veered into the rib when a hydraulic steering hose failed.
- A Volvo L220 loader tipped onto its side against a safety berm when it travelled over uneven ground while reversing from a stockpile with the bucket in a raised position.
- When the position 4 wheel drive on a Komatsu 825A grader failed the tyre and hub assembly disengaged from the grader and rolled down a ramp into a dig face.
- A Terex MT4400 dump truck veered across the road and grazed the centre

bund when the operator had a micro-sleep.

- An empty Cat 670 scraper lost traction and rolled onto its side as it reached level ground after descending a recently watered ramp.
- The operator of an empty Cat 789 dump truck drove onto a wet section of ramp and lost control of the truck. The truck spun through 360°.

## Explosion (17)

- When the normal ventilation circuit in an underground coal mine was re-established after being reversed to allow diesel machinery access, an explosive mixture of methane was drawn from the goaf.
- Flyrock from the front row of a cast blast of a ramp bridge in an open cut coal mine struck equipment located outside the 300 metre equipment exclusion zone.
- Flyrock from a single row trim shot in a quarry was ejected beyond the 500 metre exclusion zone and struck buildings outside the quarry boundary in an adjacent commercial development.
- During production drilling in an underground metalliferous mine a hole was drilled through a section of shotcreted ground and into a misfired hole containing emulsion explosion.
- While a shuttle car was travelling to the boot-end the power cable reeler jammed due to coal and rock build-up under the reel. This caused a loop of cable to fall under the shuttle car and get caught behind the wheel unit severing the cable.
- A methane monitoring system on a Juggernaut LHD loader was connected such that the loader would not shutdown if methane was detected.
- An excavator operator was left within the 1000 metre blast exclusion zone when two shots, one in coal and the other in overburden, were fired together.

## Fire (40)

- A fitter assisting with maintenance on a Drill Tech D75K drill rig sustained burns to his hands, face and back when he was covered with flames and hot oil which expelled from the main compressor when the drill was shut down.
- A fire started in the engine bay of a Cat D10 dozer when fuel leaked onto the engine from a hole in the return fuel line which had developed from rubbing on a hose clamp. The automatic fire suppression activated and extinguished the fire.
- A small fire broke out on in the engine bay of an Atlas Copco MT6020 dump truck when leaking oil sprayed on the radiator cooling fan which pushed the oil onto the turbo. The leak was from a reticulation pipe attached to the oil cooler which was damaged when the oil cooler holding brackets failed. The onboard fire suppression was activated and extinguished the fire.
- A fire started in exhaust lagging on a Sandvik DD420-60C jumbo as it travelled up a decline. The lagging had been impregnated with oil from a seal failure on the hydraulic oil cooler.
- Oil from a burst hydraulic hose on a Getman scissor lift platform sprayed onto the exhaust and ignited. The fire was extinguished by the operator using a hand held extinguisher.
- A fire started on a Coldwell drill after the turbo failed.
- Failure of a drive end bearing on an underground crusher resulted in a grease fuelled fire. The operator hosed the bearing to put the fire out.
- While refuelling a Cat 797 dump truck the Wiggins quick fill connector failed to shut off. Fuel was forced out of the breather outlet, came into contact with the engine and ignited. The fire was extinguished by a water truck.
- A fire started in a Cat 777F water cart when the water pump hydraulic oil hose ruptured and sprayed oil onto the exhaust.



The operator noticed flames coming up behind his cabin and from the engine side of the cabin while travelling along the haul road. He shut the truck down, activated the fire suppression and exited the cab. Two other water carts assisted in extinguishing the fire.

## Electrical (17)

- When the load on a semi trailer snagged a powerline indicator the truck managed to stop before contacting the powerline.
- During the removal of an internal office wall, a worker cut a live cable in the wall with a reciprocating saw.
- An electrician received an electric shock while replacing a 110V pressure switch.
- A pump cable which rubbed through on a vent bag support cable was being repaired when the operator touched the frayed and exposed cable and received an electric shock.
- A worker received an electric shock when water came out of a hole he drilled through a concrete thickener wall, wetting both him and the drill.

## Other (9)

- There was an inrush of water from an unidentified borehole when it was intersected in the sidewall during mining in a development heading.
- While cleaning the product hopper sensor on an MMU with the hopper hatch removed, emulsion product was suddenly expelled from the hopper striking the shotfirer in the face and chest.
- The pH of the water in a mining village increased to three when the dosage equipment in the water treatment plant failed resulting in an overdose of hydrochloric acid.

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

Figure 1: October 2012 Incidents (176) by Category

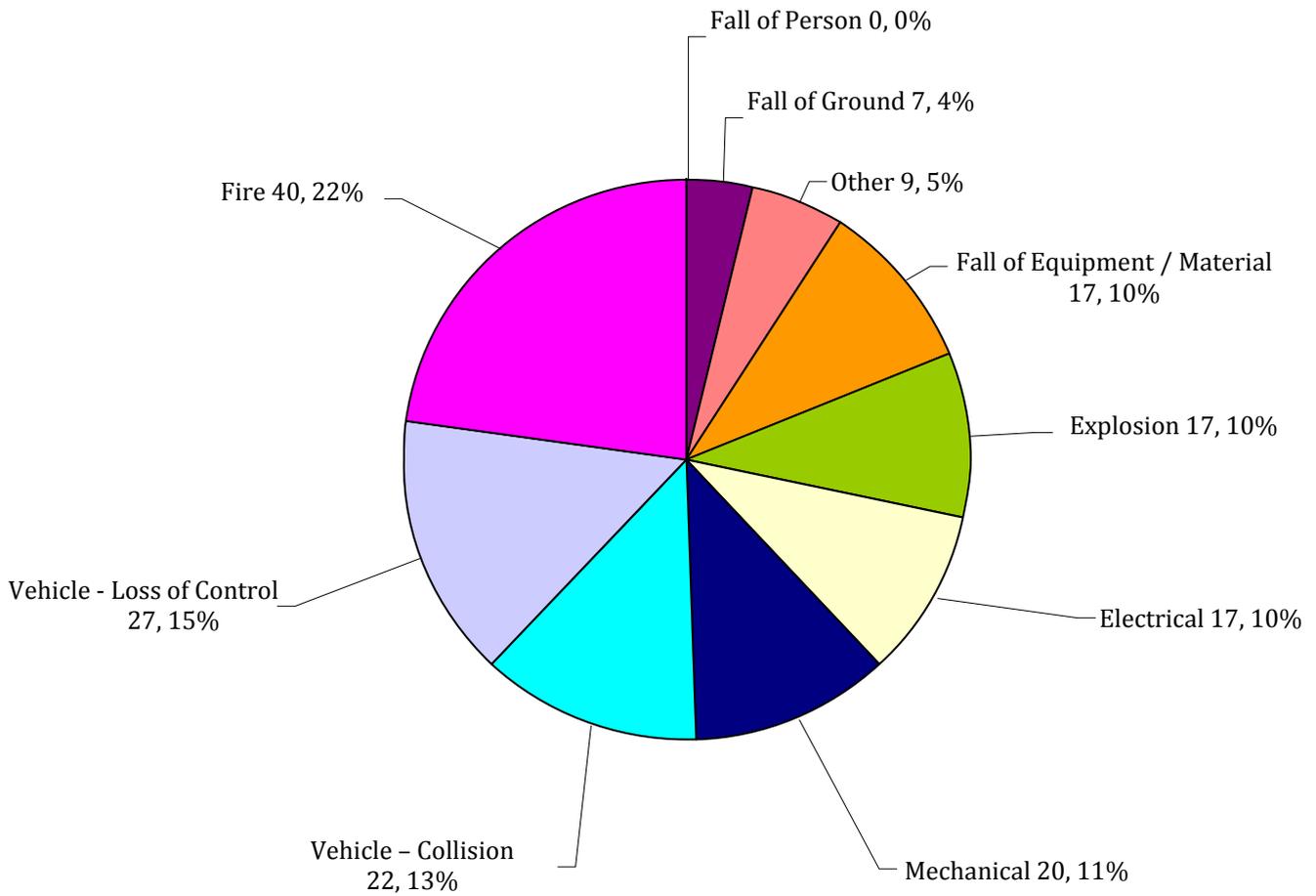
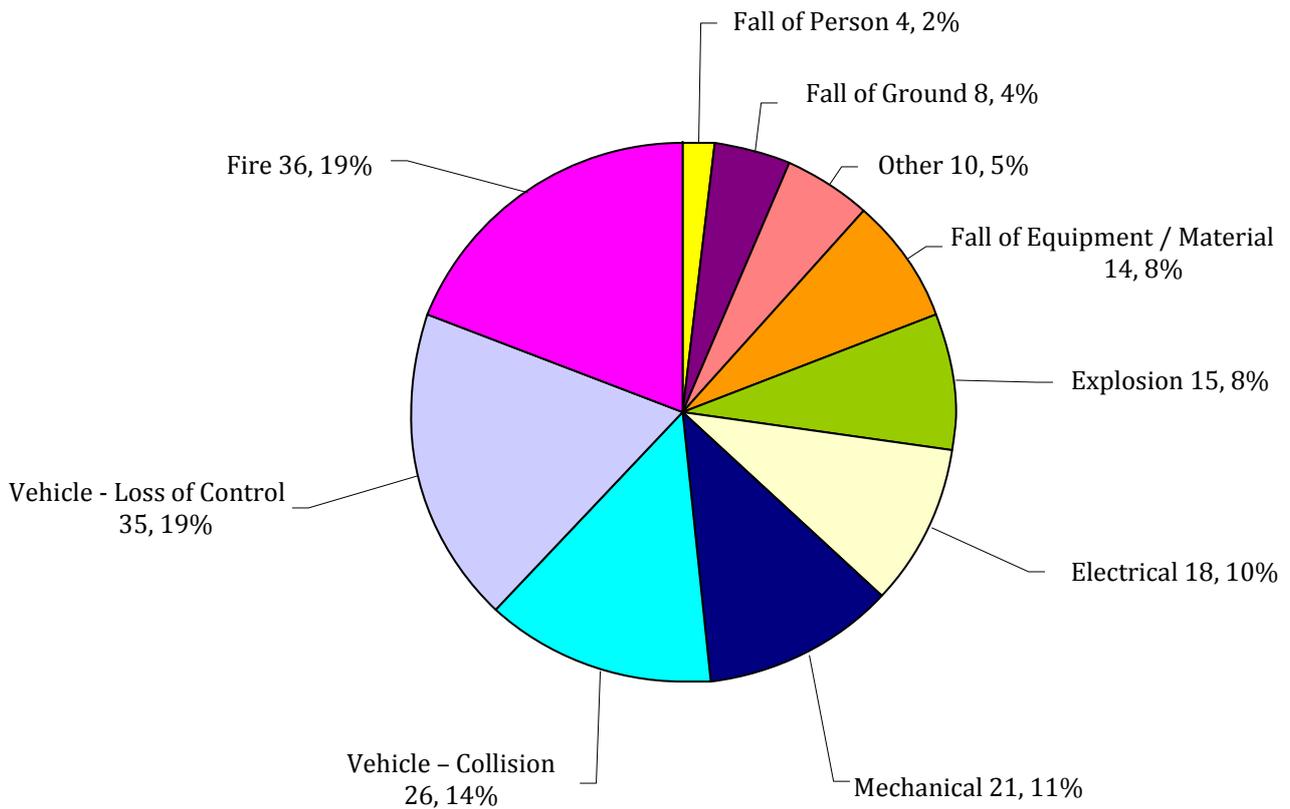


Figure 2: Twelve month rolling average (186 incidents/month) by category



# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for November 2012

#### Fall of person (2)

- The operator of a Cat Moxi dump truck stepped back over the edge of the safety rail on the truck while cleaning the windows and fell 1.7 metres to the ground.

#### Fall of Equipment/Material (14)

- While tripping drill rods into a borehole on a Drilltech C25K 22H exploration drill rig a piece of the cast iron winch line pulley at the top of the mast broke off and fell 8m striking the driller's offside on the back of his neck.
- A falling rock from a crusher feed chute struck the operator while he was under it, cutting his forehead. The operator broke his collarbone when he ran into the crusher as he rushed to move out of the way.
- A 14mm diameter x 250mm long (1.2kg) securing pin on the sheave block of an 80 tonne slewing crane fell 16 metres to the floor.
- At a shaft sinking operation, an 11kg hydraulic accumulator on the Cryderman Shaft Mucking Unit, dislodged and fell 8 metres onto the shaft bench as the unit was being raised to the chaired position in the sinking stage.
- A Cat D11T dozer reversed over the edge of a coal face and fell into a dewatering trench while it was cleaning the coal floor.
- A side discharge conveyor on a Metso ST3.8 mobile screen collapsed to the ground while being unfolded due to a weld joint failure of the conveyor's support beam.

- A Cat D10 dozer operator took a short cut across a catch bench while tramming between two pushbacks. The dozer went over a safety bund with its blade raised, slid sideways down the bund and came to rest on the edge of the catch bench 15 metres above the bench below.
- While lifting the ripper box off a Cat D11R dozer with a 10 tonne gantry crane the ripper box tilted backwards after removing the top pins of the tilt assembly and the lifting chains slipped off.

#### Fall of ground (6)

- About seven hours after a bench blast below a ramp, the wall and part of the ramp failed and toppled onto the shot material.
- An underground coal mine shotfirer was struck by a rock which fell from the roof while he was conducting a post blast inspection. The rock struck his shoulder then fell onto the muckpile where it slid down against his foot. He sustained a broken toe and a soft tissue injury to his shoulder.
- Some rocks fell into a portal box cut from the highwall above.
- About two tonnes of rock fell from the shoulder of a drive a cut back from where it was being supported.

#### Mechanical (22)

- During maintenance on an Alimak industrial lift in a smelter stack a boilermaker fractured the big toe on his foot when his boot was trapped between

the guide rollers and structural steelwork as the lift was lowered.

- A fitter was removing the steering locking pin on an Atlas Copco MT articulated dump truck when his hand was trapped between the valve block and the pin as the truck was articulated to ease the load from the pin. He suffered soft tissue damage.
- Two boilermakers were replacing liner plates on a tray of a Cat 797 dump truck using a power pack and a fabricated strong back to press the plates into position. When force was applied to the strong back the welds connecting it to the truck body failed. The strong back struck one of the boilermakers, bruising his ribs.
- The guards on a conveyor gravity take-up pulley system were removed for maintenance and left lying on the walkway when the conveyor was put back into operation.
- The house on a P&H 4100 shovel rotated freely about 5 metres during an overhaul. The bucket had been removed and the swing brakes disconnected.
- At a coal handling and preparation plant a Hazemag APK 1010 impact crusher spring bar retainer package weighing 6 kg ejected 28 metres when an internal cascade failure caused the blow bar package to dislodge.
- A damaged control valve on a high pressure grease hose assembly caused grease under pressure to strike a fitter in the face and safety glasses. Some grease entered his left eye socket.

### Vehicle – Collision (15)

- A fitter reversed a Cat DK300 excavator over an unoccupied light vehicle parked in a maintenance area.
- The driver of a light vehicle momentarily lost consciousness while driving on a haul road and veered into the path of a loaded Hitachi EH4000 DT dump truck. The position 6 tyre of the dump truck ran over the front right hand side of the light

vehicle's bonnet. The driver exited the light vehicle unharmed.

- A Cat 793 dump truck veered across a straight section of haul road and collided with the safety bund on the opposite side of the road.
- A Cat wheel dozer collided with a Cat 16M grader when the dozer was reversing after cleaning up a truck loading area. The grader operator drove in behind the dozer without making positive contact with the dozer operator.
- As a Cat 793 dump truck slowed and indicated to turn right into a park up area a light vehicle started to overtake. When the light vehicle driver realised that the truck was about to turn he braked and swerved back behind the truck.
- A Komatsu WA380 loader drove into an unoccupied light vehicle.
- Towards the end of nightshift a dump truck turned onto and proceeded along a haul road on the wrong side of the road. Another dump truck approached from the opposite direction and when the two trucks were about 50 metres apart both operators took evasive action to avoid a collision.
- A maintenance fitter was underneath a Komatsu 730E dump truck without a personal lock or isolation in place while the truck engine was running and about to move off the go-line.

### Vehicle – Loss of control (31)

- A loaded Cat AD55 articulated dump truck rolled onto its side while turning a corner at the bottom of a surface ROM pad ramp.
- A light vehicle with two occupants rolled onto its roof after it veered off the road into the scrub. The driver sustained a lacerated kidney and a sacral bone fracture.
- A Cat 793 dump truck slid for 20 metres down a section of ramp that had just been watered.
- An empty Cat 777 rolled over while travelling down a ramp.

- A loaded Cat 777 rolled onto its side when the operator lost control of the truck and it veered across the recently watered haul road.
- A Komatsu HD 605 service truck slid on a recently watered ramp and rolled onto its side.
- A Cat D11 dozer rolled onto its side when it rode up onto a large rock while reversing.
- A light vehicle rolled onto its roof when the driver who was adjusting his radio swerved to avoid a kangaroo. The driver was taken to hospital with suspected concussion.
- A light vehicle ran into the door of a cribroom when it rolled backwards 25 metres from where it had been parked in a workshop.
- The steering wheel on a Cat 777 water cart came off while travelling along a haul road.
- The rear right hand wheel on an underground light vehicle came off after the wheel studs snapped as the vehicle was turning a corner.
- The rear right hand wheel on a Cat R2900G loader detached from the wheel hub as the loader was tramming down a decline. The wheel had been re-fitted after a rim replacement in a previous shift but had not been re-torqued.

## Explosion (10)

- An evacuation of an underground coal mine was triggered when an explosive mixture of gas was detected in the goaf area behind a heading seal.
- While reversing a shuttle car into a heading the conductors in the shuttle car's power cable were exposed when it came into contact with the cable reeler top cover hinge.
- A Power Tram that was going to be used to tram a road header was started up in an ERZ1 area.
- A battery exploded on a loader while the operator was using a metal blow pipe to

clean the battery box and terminals with compressed air.

## Fire (39)

- While slashing grass a Terex PT100 skid-steer loader fitted with a slasher unit was destroyed when the grass behind the loader caught fire.
- A boilermaker who was repairing cracks in the boom cavity of a Hitachi EX3600 excavator suffered burns to his face, legs and hands when an arc from his MIG welder ruptured and ignited the contents of an aerosol can of crack testing compound.
- The operator of a Cat D10 dozer activated the fire suppression system when he noticed flames coming out of the engine bay.
- A small fire started on a Reichdrill 750 overburden drill when fuel dripped from a hole in the fuel line onto the engine. The fuel line had been rubbing against a retaining bracket.
- Oil from a burst hydraulic hose sprayed onto the turbo and ignited in the engine bay of a Cat AD55B underground articulated dump truck while it was tramming up a decline. The operator had to use two portable extinguishers as well as the on board fire suppression system to extinguish the fire.
- A fire started in the engine bay of a Cat 922C loader when a fuel line to an injector failed and sprayed fuel onto the exhaust. The operator activated the on-board fire suppression to extinguish the fire.
- While charging a development face the charge crew smelt smoke and then noticed flames coming from a solenoid valve under the boom of their Normet charge car. A portable fire extinguisher was used to put the fire out.
- While refuelling a Reedrill SK50 drill rig a small fire started when the overflow cap blew off the tank and fuel sprayed over the engine and exhaust. The operator

activated the on-board fire suppression system to extinguish the fire.

## Electrical (23)

- Bearing failure in a high voltage cable handling system of a bucket wheel reclaimer resulted in the cables being unsupported and crushed.
- During relocation of a P&H 4100 rope shovel, the trailing cable was ruptured when the bucket was lowered causing an arc.
- A fitter received an electric shock when he touched the basket of an Elevating work Platform (EWP). The EWP had been energised by a grinder on the floor of the basket. The grinder and the basket were wet from rain.
- A commissioning engineer received an electric shock from a 240V plug. The lead had two plugs fitted with the other plug on the lead connected to an Uninterruptible Power System (UPS).
- A fitter received an electric shock when he plugged an extension lead into a power outlet. The work area had been hosed down to remove dust from the work area immediately prior to the incident.
- A worker received an electric shock from the metal case of a caddy welder. The supply lead had internal damage at the gland entry.
- A Cat D10 dozer reversed over the dragline cable while cleaning the area.
- A dozer dug up and severed the cable to a lighting tower while cleaning up a ROM pad.
- While relocating a P&H 4100 shovel, the trailing cable was damaged when a rock that had been caught between the bucket teeth fell on the cable.

## Other (5)

- A snake spotter/catcher received a bite from a juvenile eastern brown snake during tree clearing activities.
- A dozer operator who was working on a ROM pad was affected by fumes from a nearby spontaneous combustion event.

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

Figure 1: November 2012 Incidents (167) by Category

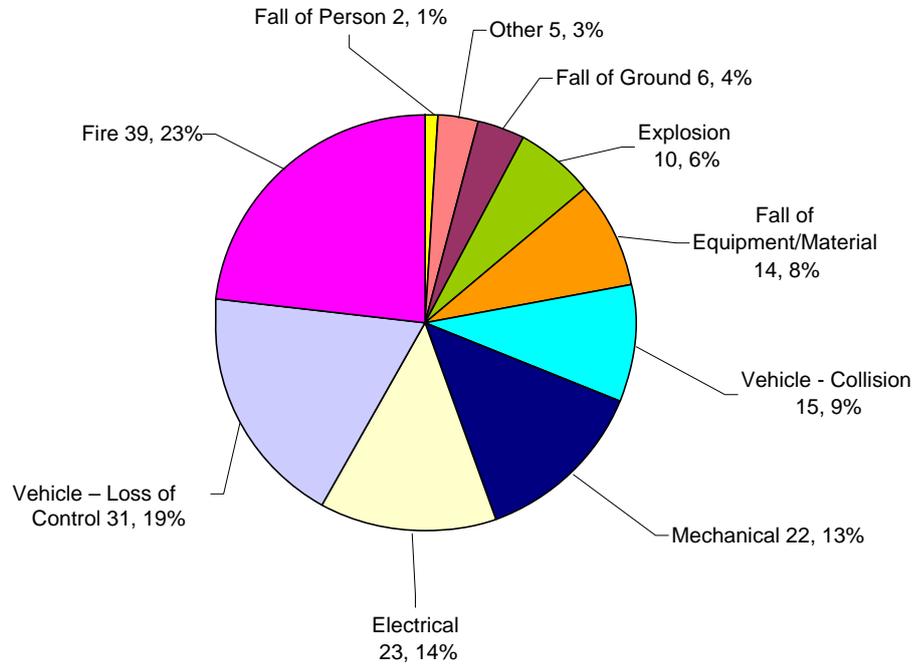
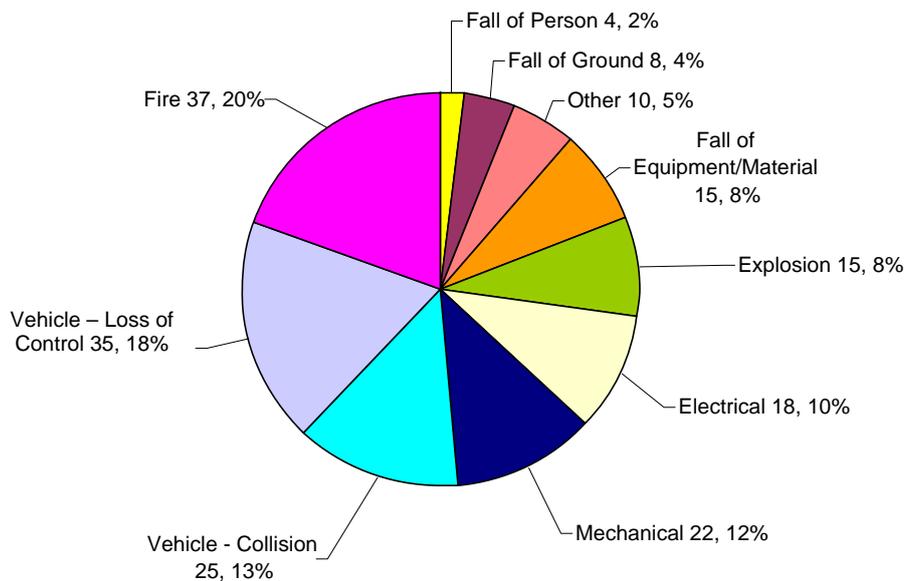


Figure 2: Twelve month rolling average (187 incidents/month) by category



# Serious accidents and high potential incidents

## Mining and quarrying

### Compilation of reports for December 2012

#### Fall of person (2)

- A worker slipped on a piece of coal and fell on his back against a chock pontoon while walking along the longwall. He bruised a kidney and was admitted to hospital for observation.
- An overhead gantry crane in a dragline house contacted and bent one of the legs of a scaffold on which a worker was standing.

#### Fall of Equipment/Material (14)

- During shaft sinking the shaft collar doors were accidentally closed on some 6m long kerb ring hanging rods which were slung below the kibble. When the collar doors were opened the rods fell down the shaft.
- A conveyor gravity take-up bend pulley fell 4 metres onto the counterweight assembly.
- A loader mucking at the bottom of an open ore pass was struck by rocks tipped into the same pass from a level 50 metres above. The rocks broke the loader's windscreen and entered the cab.
- Two operators were charging a large rock at a choked stope drawpoint when the material in the drawpoint moved due to the stope being bogged on the lift below. About 100 tonnes rilled from the drawpoint burying the rock and the explosives.
- A Cat D10 dozer was reversing while cleaning up on top of a coal bench when the LH track dropped 4 metres off the edge of the bench and ended up on its side.

#### Fall of ground (7)

- Approximately 15 tonnes of rock fell in a wedge failure from the back of a drive where a disused brattice vent frame had been bored and fired and then remnants knocked down with a loader.
- Approximately 12 tonnes of rock fell in a sliding failure on a bedding plane from the side of a drive below the installed rock bolts.
- An O&K RH 340 excavator was digging the lower batter of a 30 metre high wall when a 150 metre long section of the high wall failed, burying the bucket and dipper arm of the excavator.
- A development heading intersection collapsed outbye of a face where a continuous miner crew was working.

#### Mechanical (13)

- A section of conveyor structure collapsed when an excessive amount of material was being carried on the conveyor after clearing a blockage.
- While drilling an exploration bore hole the bit became bogged. The driller pumped high pressure air down the hole to flush the bit. This lifted water out of the hole followed by a release of air which dislodged the blooie pipe which struck the offsider knocking him into the mud pit.
- The position 2 tyre on an Atlas Copco MT5020 truck ruptured while the truck was parked in a workshop.
- A boilermaker was using an angle grinder to cut a handrail when it jammed and

kicked back striking his gloved left hand sustaining a deep laceration to his hand.

- A worker standing on the relay bar as an Armored Face Conveyor (AFC) was pushed over, suffered a crush injury to his left foot when the tip of his foot was caught between the inner relay bar and the sloping D of the clevis.

## Vehicle – Collision (21)

- An Eimco loader about to enter a portal collided with a drift runner exiting the portal when the loader operator lost visibility as the loader came over a crest on the approach to the portal.
- When a Komatsu 830E dump truck slowed down, due to sun shining in the operator's eyes, a Komatsu 930E that was following collided with the rear of the 830E.
- A Cat 797F dump truck collided with the rear of a stationary Cat 795F dump truck waiting in a queue to be loaded.
- A Komatsu 375A dozer reversed into an unoccupied parked light vehicle while cleaning up on the pit floor.
- A light vehicle drove behind a Cat 773 water cart as it was about to reverse to park on the go line. Two workers signalled the water cart to stop.
- A Cat AD55 dump truck reversed into a passing bay on the main decline to allow an approaching water truck to pass. A light vehicle also pulled into the passing bay in front of the dump truck. The dump truck operator didn't see the light vehicle and collided with it when he drove out of the passing bay.
- A Cat D10T dozer reversed into a Cat 785B dump truck on a waste dump rupturing the fuel tank on the truck.

## Vehicle – Loss of control (36)

- A Komatsu 930E dump truck skidded down a wet ramp and spun through 180° when the operator applied the service brake to stop the truck.

- The driver of a Toyota Landcruiser ute rolled his vehicle onto its side while travelling on an access road.
- The brakes on a 20 tonne Franna crane failed to work while it was travelling down a ramp. The operator turned the crane off the ramp onto a dump road to slow down and stop it.
- A light vehicle rolled back about 50 metres from its parked position and came to rest against a bund.
- While driving up a ramp the operator of a Komatsu 830E dump truck had a micro sleep and drove into the windrow.
- The operator of a Cat 793C dump truck had a micro sleep while driving along a divided haul road and ended up straddling the centre bund.
- As a Cat 793 dump truck operator lent over to retrieve his dislodged mobile phone the truck veered across the haul road and mounted the bund. The truck travelled for about 45 metres along the bund before returning to the correct side of the haul road.
- A tele-remote loader drove through an ore pass stop log and jammed in the top of the ore pass.

## Explosion (18)

- A vacuum truck was cleaning up reagent waste from a reagent sump pump pit when an explosion occurred in the collection tank on the truck.
- A 500mm diameter steel plate forming the end of a hollow hull on a pontoon blew off when a boilermaker was preparing to weld a crack in the hull. The plate struck the boilermaker. He sustained bruising to his thigh and a fracture to his right hand.
- Three workers were within the exclusion zone during an open pit blast.
- A Cat D11 dozer breached a blast preparation exclusion area while it was working on an adjacent drill preparation area.
- While a loader was carrying out roadwork in an underground coal mine the operator lifted the bucket as the loader drove up a steep section of road. When the road

levelled out the raised bucket pinched a DCB cable against the roof causing an arc flash.

- A large stone slab damaged a flameproof head light and gland on a continuous miner after being picked up by the cutting head. When the operator attempted to push the mounting plate back into position the 12V lighting cable sparked against the frame.
- Electrical conductors were exposed when a shuttle car reversed and squashed its trailing cable against the rib.

## Fire (40)

- Prior to welding, a maintenance worker applied a contact cleaner to cracks in a length of hollow steel box section he had been grinding. The vapours of the contact cleaner ignited when the welding arc was struck. The worker sustained superficial burns to his nose, cheeks and upper lip.
- A controlled fire burn on a mine advanced toward the camp when the wind changed. The camp had to be evacuated.
- A small fire started behind the cab of a Normet Charmec explosives vehicle when the air conditioner condenser fan had shorted out. The vehicle was in an underground magazine at the time. The operator used a hand held extinguisher to put the fire out.
- A fire in an underground coal mine conveyor drive head gearbox was put out with a hand held extinguisher by a loader operator who had stopped to investigate after seeing smoke.
- A fire in the engine compartment of a Toyota Landcruiser ute that was travelling down an underground decline was extinguished using the on board fire suppression system.
- While cutting plate steel, a boilermaker noticed a small flame around the oxy hose fitting. The flame melted the outer layer of the acetylene hose and ruptured burning the boilermaker's arm.
- The operator of a Hino rigid water truck parked and shutdown the engine when he saw flames coming from behind the cab. He failed to put the fire out with a hand

held extinguisher. Another water truck was used to extinguish the fire.

- Rags left in the engine bay of an Atlas Copco MT 6020 underground dump truck after maintenance ignited when the truck was returned to service. The fire was extinguished using the AFFF system.
- A power pole caught fire when an 11kV powerline insulator failed and the line came in contact with the timber pole.
- A fire started in the engine bay of a Cat D11 dozer after a fuel line cracked.
- A small fire started on a Hitachi EX8000 shovel when a hydraulic hose leading to a cooling fan failed at the fitting. Oil sprayed from the hose and into the cooling fan which then forced the oil onto the engine cowling where it ignited.

## Electrical (26)

- Electrical equipment doors were blown open when a fault occurred in a circuit breaker. Two up stream breakers tripped. The opening of a 1000V breaker resulted in arcing on the line side of the breaker.
- While working on an underground distribution box an electrician received a minor burn to his right wrist when an arc flash occurred due to contact between the ends of the incoming circuit breaker cables.
- A rubber tyred dozer struck and exposed the conductors of a shovel power cable while pushing up a bund.
- A jumbo miner's offsider received an electric shock when he reset a circuit breaker which was covered in dirt and moisture.
- An incorrect motor was isolated during conveyor motor repairs.
- A worker received an electric shock while using an electric drill in a wet area.
- An arc flash on the insulator terminal occurred in a winder harmonic filter cabinet when a capacitor overheated. The overpressure from the arc flash blew the cabinet doors open.



## Other (11)

- A drill jumbo offsider was admitted to hospital due to heat stress.
- A worker was removing a hose attached to a smelter furnace water jacket. When the hose detached, hot water gushing out of the jacket struck him causing burns to his hands and legs.
- A loss of incoming power to an underground coal mine stopped the main ventilation fans triggering mine evacuation.
- Sporadically igniting small gas fires were found on a coal mine pit floor.
- Following an overburden blast a level 4 fume event occurred. The fume cloud was at level 2 when it breached the 2km fume management zone.

(Reports from previous months are available at: <http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm>)

Figure 1: December 2012 Incidents (188) by Category

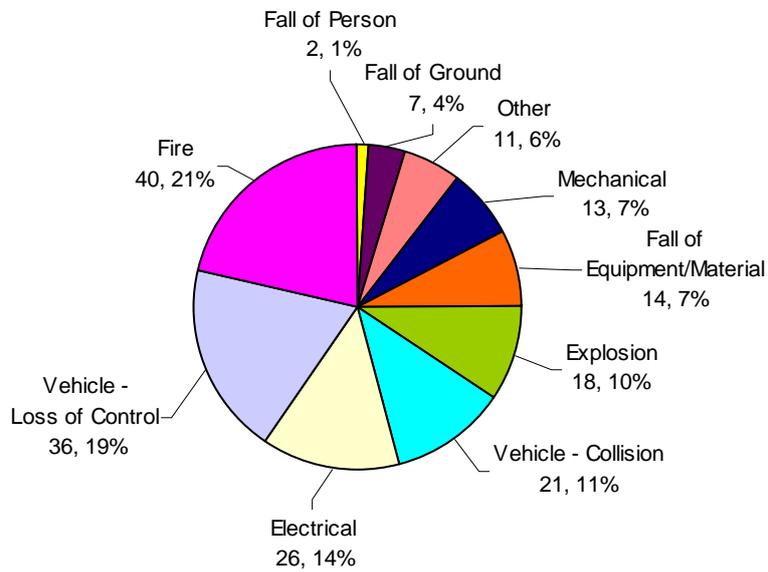


Figure 2: Twelve month rolling average (187 incidents/month) by category

