

Serious Accidents and High Potential Incidents

Mining and quarrying



Mines Inspectorate

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Summary of reported incidents for period 1 July – 31 October 2008

1. Gravity – Fall of Person

- As a worker climbed down the ladder of a bulk fuel tank he lost his balance and fell, shattering his elbow.
- A Cat 785 dump truck operator fell from outside his cab to the ground fracturing his right wrist and ankle.
- A production driller was pulling rods on a hole adjacent to a one metre diameter back filled raisebored hole when the material in the hole slumped. A loader operator had drawn material from the raise.

2. Gravity – Fall of Equipment

- A drill fitter was working on a drill rig work table when the chain feed from the mast fell and struck him around the head and arm knocking him unconscious.
- When the thread on the drill head sub of an exploration drill rig broke the attached 140kg rod fell six metres striking the driller's offside a glancing blow on his shoulder and leg.
- Whilst demobilising a crane, the lifting chain broke away from the counterweight and hit the dogman on the leg causing a fracture.
- A Cat D11T dozer reversed over the edge of a 15 metre high bench coming to rest in a vertical position on a bed of loose coal heaped against the wall.
- When a Cat 789 dump truck backed up to a safety bund to dump the load the bund gave way, and the truck toppled backwards over the edge of the dump. Shortly before, a loader had been drawing material from the dump.
- A Cat 797 dump truck reversed through a wet safety rill at a dump.
- A Cat 793 dump truck reversed over a poorly constructed tip head bund.
- A dragline slipped into the pit when the pad it was sitting on gave way.

- An Elphinstone 1700 loader was tipping ore into an orepass when it breached the mullock stop log, fell into the pass and became wedged near the top of the pass.
- An excavator over-balanced and fell onto its side when the operator picked up a large rock and slewed the bucket around 90° to the tracks. The operator sustained bruising to his ribs.
- A 50 tonne excavator was moving an oversize rock when it tipped onto its side on the edge of a bench when it slewed the bucket around 90° to the tracks with the boom over the edge of the bench.
- While turning a corner on a decline a work basket dislodged from a forklift and fell to the ground.
- The roof of a vehicle underpass beneath a coal product conveyor collapsed due to an accumulation of coal fines.
- An overhead crane and a six tonne come-a-long were being used to lower an engine into a Cat D11R dozer when the come-a-long failed causing the rear of the engine to drop one metre.
- Whilst a section of a crane boom was being carried by a 12 tonne Franna crane, two webbing slings broke, causing the load to fall.
- A box containing a pump fell from a storage rack.
- A small section of angle iron sitting loosely in the web of an I-beam fell 20 metres to the ground as the beam was being lifted.

3. Gravity – Rockfall

- A trainer was struck and seriously injured when two large slabs of rock fell from the back while he was demonstrating to two trainees how to drill a hole into the back with a rising feed drill.

- Two geologists and a field technician entered a draw point to map and sample the face. A scat fell from the face and hit the upper left arm of one of the geologists.
- A rock bounced ten metres out of an open access to the bottom of a 393 metre raisebored shaft after material was dislodged from the collar of the shaft on the surface.
- A two tonne rockfall was found in an underground travelway.
- A continuous miner had advanced four metres when it was pulled back to trim the corner. As the miner began to trim the corner a block of coal, 3m x 1.5m x 0.8m, slipped and sat against the cutter head. As this was being cleaned up a second block of similar size fell.
- After blasting a longwall belt chamber a 7mx3.5mx2m section of the adjacent supported roof collapsed.
- After water had been run into a pass, to assist in clearing a hang-up, explosives were placed in the pass beneath the hang-up. When the explosives were fired the hang-up dropped and a mud rush occurred.
- Shortly after surveyors had left a bench approximately 70,000 tonnes fell from the pit wall and onto the bench.
- Some rocks fell from a highwall and landed outside a bunded area at the toe with one small rock striking the windscreen of a light vehicle which was about ten metres from the bund.
- A rock fell from a bench face on to a drill rig that was being serviced.
- A rock fell from a high wall hitting the ground before striking a parked light vehicle seventeen metres from the toe.
- A rock fell from a wall onto and over a windrow in a narrowed down section of ramp as a truck was about to travel past.
- Approximately 100 tonnes of rock fell from a highwall above presplit blast holes.
- When a dozer pushed a small amount of material over a high wall a lump of mud bounced across the pit floor and struck a driller who was working outside the exclusion zone.

- The activities of a dozer working on a bench disturbed the safety bund causing a large rock to roll down, breaching bunds on two lower benches before impacting an excavator.
- Approximately 8000bcm of material slumped from an end wall onto a ramp.
- Highwall material slumped 20-30m onto a bench.
- A stockpile slumped onto a Cat D11 dozer during pushing operations.
- While rock was discharging from a conveyor onto a stockpile the plant operator removed a piece of timber from the stockpile. He was struck on the hand and arm by a rock and sustained lacerations.

4. Mechanical

- A worker sustained fatal injuries when he was struck by a retractable wing he was removing from an Extec C12 Mobile Crusher.
- An employee was struck in the face by the crowbar he was using to unblock rocks caught in the jaws of an energised crusher.
- The operator of a Hy-Torque multiplier wrench sustained a high pressure oil injection injury to his hand when the pressurised swivel head failed.
- A driller's offsider lost tip of right hand index finger while working with a breakout tool on a UDR1000 exploration rig.
- A timberman was moving an air line, when a butterfly valve on the bottom of the dropper unexpectedly opened, causing the air line to whip around and strike the timberman in the face. The worker was treated at the hospital for lacerations.
- A drill crew member was struck on the chest and face by the end of the Kelly rod 'rathole' drain hose when compressed air was accidentally released through a Kelly rod.
- A mechanic severed his left thumb at the first knuckle while placing a heavy duty lifting chain onto a chain rack.
- A fitter was working on a pump when he was hit on the head by chains hanging from a

crane hook which swayed after the crane stopped.

- A drill jumbo offsider went to change a drill bit while the operator was still feeding the rod forward. He pinched his hand between the front centraliser and the bit sustaining lacerations and a fractured knuckle.
- A fitter who was under a Cat 777D dump truck preparing to inspect the A frame bearing had to get out from under the truck when his colleague in the driver's cab reversed the truck, pushing the rear chock back one metre then moved the truck forward and drove over the front chock.
- As a shuttle car moved off it started to slide towards a worker standing adjacent to the coal rib. The driver stopped the car before contact was made.
- A worker was trapped between a drill rig platform and the coal rib, when the platform was moved.
- After the power tripped to a continuous miner, the drill rig operator leaned across to reset the rig and accidentally hit the control levers. As he did so the power was restored. The drill pot retracted and pinned the operator.
- While carrying out vent bag work from the basket of a Cat IT28 the operator in the basket was caught between the basket and the back.
- While lifting a work basket, the operator put the hoist lever into the neutral position. The movement of the basket failed to stop and continued upwards for 0.2m.
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- A rock was projected by the rock ejector between position 5&6 tyres into the operator's cabin of a dump truck as he moved forward after dumping his load at the tip head.
- A drag rope was being cut with an oxy-acetylene torch. When the rope had been cut through, the tension was released and the rope brushed across the operator's chest.
- A winch rope was attached to a conveyor belt to pull it into position. The rope broke when the securing chain on the winch rope deflection sheave block failed and the winch rope impacted the conveyor structure. The

unrestrained belt ran back down the structure and heaped at the bottom of the ramp.

- During a conveyor belt change-out, the belt splicing team took up some slack near the head pulley. This resulted in the belt inadvertently moving 3m at the tail end where a separate crew were working on a different task. This crew had to pull themselves up on support bracing to avoid the belt.
- A mobile transformer was being towed up an incline by a loader when a 12 tonne bow shackle pulled apart. The transformer rolled down the ramp for 120 metres before crashing into a conveyor.
- A transformer rolled down a slight slope and jammed high voltage cables into the cable basket of a loader while two employees were working between the transformer and the basket.
- A rota-coupling on inter-chock hoses between longwall shields ruptured causing the hose coupling to whip and spray high pressure emulsion.
- The bolts on the wheel split rim assembly of a Cat DP19NT forklift were incorrectly installed facing outwards instead of inwards.

5. Mechanical – Vehicle Collision

- A Cat 789 dump truck and a light vehicle collided at a mine ramp intersection. The rear wheels of the dump truck ran over and crushed the front section and the passenger side of the light vehicle. The light vehicle driver sustained non life threatening injuries but was trapped in the vehicle. Cutting equipment was used to free him.
- A light vehicle collided with a trailer of a combination road hauler as it attempted to turn onto a haul road.
- As a light vehicle entered an intersection the driver initially failed to see a Cat 785C dump truck approaching from his left. Both vehicles slowed and braked, avoiding a collision. The light vehicle came to a stop within five metres of the truck.
- Two Cat 776D bottom dump trucks nearly collided when one turned onto the wrong side of a haul road at an intersection and into the

path of the oncoming truck. Both drivers took evasive action to avoid contact.

- A loaded Cat 785C dump truck rounded a corner and collided with Cat D11 dozer.
- The driver of a Cat 793 dump truck believed he had positioned his truck too close to the load face. He reversed the truck and it contacted the handrails of the truck waiting thirty metres behind.
- Two 50 tonne Komatsu dump trucks were parked one behind the other waiting to be loaded by an excavator. The rear truck operator turned round to retrieve something, took his foot off the brake and rolled into the front truck. The tray of the front truck smashed the rear truck's windscreen and bent the handrails.
- As a truck passed under a conveyor it came into contact with the conveyor structure.

6. Mechanical – Vehicle Loss of Control

- A Cat 797 dump truck slid on an over watered corner at the bottom of the ramp and went into an uncontrolled slide.
- A trainee Cat 785 dump truck driver, under supervision, was following a water truck down a ramp when he lost control of the truck as it slid on the wet clay surface into a 180° turn.
- A Moxi truck lost traction and control while driving along a haul road and partially breached the centre bund wall.
- A service truck rolled over on a curved section of road that had just been watered.
- A Volvo rigid water truck lost traction while travelling down a grade. The operator applied the brakes causing the truck to slide into a bund where it overturned on its side.
- A Cat 785 dump truck was coming up a ramp with a load when the driver fell asleep and the truck veered off the road into the toe of the low wall.
- The driver of a Cat 789 dump truck had a micro sleep. The truck veer left and clipped a road delineation tyre.
- A Cat 785 dump truck driver heard a noise behind his seat. He turned to look for the

source and pulled on the steering wheel resulting in the truck driving off the road.

- A dozer rolled down the face of a stockpile whilst pushing forward when the right hand track lost traction.
- While walking down onto a bench a dozer slid sideways and rolled onto its side.
- A Cat 16H Grader was trimming a drain batter when it slid down to the bottom of the batter and tipped over onto its side.
- A scraper tipped on its side while constructing a dam wall.
- A Volvo R32 rigid dump truck stalled while reversing down a ramp to tip. It rolled down the ramp and into a windrow where it tipped onto its side.
- A driftrunner was going down a ramp when the methane cut out system activated cutting the engine. The emergency brake did not immediately activate so the vehicle travelled a further twenty metres before the operator brought the machine to a stop at the side of the ramp.
- A Volvo service truck moved forward four metres and came to rest against a coal stockpile when the operator engaged the PTO in high idle to commence fuelling.
- A parked light vehicle rolled away down a ramp for about 500 metres.

7. Explosion

- The real time gas monitoring system at an underground coal mine was not in position and in working order for 10 days. The Mine Manager was only made aware of the incident two weeks later.
- The trip setting of 5% was found on the general body methane sensor of a continuous miner. The setting was detected during a routine calibration.
- A non certified relay was installed into an intrinsically safe circuit of a gas monitoring system.
- A flameproof light on shuttlecar was damaged and was not discovered until routine checks were carried out.

- A flameproof junction box was found to be operating in an ERZ1 area without a flame proof gland fitted.
- The flameproofing on a continuous miner was compromised by poor cable termination in the gland entry of the cutter motors.
- There was an arc flash when a short circuit developed in a longwall shearer MG cutter motor junction box. The box was found to have 70mm of water in the bottom of it.
- A shuttlecar cable failed to unreel when the shuttlecar drove off from the boot-end. The cable pulled apart exposing the conductors and causing an open arc.
- A worker was hooking up a ring of underground production blast holes when the explosives in two holes suddenly started burning. The mine was evacuated.
- During a quarry blast flyrock landed outside the exclusion zone and also struck fixed plant within the exclusion zone.

8. Thermal Fire

- Oil ignited in the engine compartment of a Franna crane when the turbo seal failed.
- A fire started on a Cat 785 dump truck after oil sprayed from a cracked oil line onto the turbo.
- There was a fire on an O&K RH170 shovel after a hydraulic hose failed and sprayed oil onto the top deck.
- The left hand turbo on a Cat D11R track dozer caught fire due to an oil build up from a leaking gasket.
- A fire started after oil sprayed from a burst hydraulic hose over a drill rig turbocharger.
- When a grader caught fire the operator was unable to extinguish it with the extinguishers on the grader. Proximity to overhead power lines prevented the ERT and Fire Service from approaching the grader to extinguish the fire.
- While refuelling a jumbo some fuel vented through the tank overflow and splashed onto the turbo causing a fire.
- While refuelling a Cat 740 dump truck fuel splashed onto the hot turbo causing a fire.

- A boilermaker was lancing a module retaining pin on a CAT 773B service truck, when the truck caught fire. The truck was destroyed.
- A "B" double prime mover was severely damaged by fire after the front right tyres on the first trailer burst into flames.

9. Electrical

- A boilermaker who had wet clothes and gloves from working in the rain received an electric shock when changing electrodes on a welder which was fitted with a VRD.
- A person received an electric shock off a caddy welding unit when he contacted the frame of the unit.
- An earth lead from a faulty welding machine was connected to a dump truck. When a worker was fitting a lock to the lockout he received an electric shock.
- A worker received an electric shock from a 4 inch grinder which had wet and damaged lead.
- Open arcing occurred when an electrician cut an energised lighting cable whilst removing cables. He incorrectly traced the cable in a loom and identified it as de-energised.
- A non-electrical person was instructed to access a control cubicle using a tool provided by an electrician and reach through live terminals to reset an overload
- An electrician opened a shuttlecar cable reel junction box without isolating the machine at the DCB.
- Overhead power lines were knocked down when struck by a raised dump truck body.

10. Other

- A water pump tripped out due to over heating. When an operator went down to top up the pump with coolant, the radiator cap blew off, spraying vaporised coolant into his face. He suffered facial burns.
- A worker was disconnecting a line of hypochlorite solution from a bulk bin when the solution splashed up into his face. He suffered minor chemical burns.

- A worker stepped back onto a grate covering a drain in an acid plant. The grate gave way and lower leg became immersed in steam condensate. He suffered burns to his lower leg.
- A worker was using a hose to transfer coolant from a bulk drum to a generator radiator. He sucked on the hose to get the coolant to syphon and ingested some coolant. He was taken to hospital and admitted to intensive care.
- A pump pontoon overturned whilst the operator was starting the pump motor. The operator was wearing a personal flotation device and was uninjured.
- An underground coal mine was evacuated due to an increase in carbon monoxide levels in the longwall goaf exceeding the TARP level.
- At an underground coal mine high levels of carbon monoxide were detected from a new seal mixture product being used to construct a 140kPa seal.
- A jumbo miner had bored the front row of rock bolt holes in a drive, and then started scaling the face prior to installing the bolts. Water was coming out of a corner of the face. As he scaled, a large volume of water started flowing causing the operator to evacuate the drive.