

# Serious Accidents and High Potential Incidents

Mining and quarrying



Mines Inspectorate

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## Summary of reported incidents for period November 2008 – January 2009

### 1. Gravity – Fall of Person

- A member of the public sustained fatal injuries when he jumped from a 38m high wall into water in the bottom of the opencut excavation at an inactive coal mine.
- Whilst carrying a mesh sheet on a decline a worker slipped and broke his leg.

### 2. Gravity – Fall of Equipment

- A section of walkway detached and fell from the boom of an operating dragline.
- While filling an ANFO charge basket kettle the 300 kg bulka bag of ANFO fell off the locking pins of an IT and struck one of the workers on the leg causing minor bruising.
- A poly coupling fell from the surface brace 200metres down a shaft, striking the hand of one of the shaft crew as he was operating the knocker line.
- Coal fell away under a Cat D11 dozer as it trammed over a feeder beneath a coal stockpile. The dozer slipped into the cavity.
- The strata of a low bench failed causing an excavator on the bench to roll onto its side with the boom coming to rest across the headboard of a dump truck.

### 3. Gravity – Rockfall

- Approximately 50 tonnes fell from the brow of a backfill stope tipping point.
- A jumbo miner operator had just scaled a mining face. As he walked forward under supported ground to the booms to clear some material from the slides a rock fell, deflected off the boom rollover and hit him in the back of his helmet. He received a cut to his head and bruising from the impact.
- A 10m section of the rib/roof fell in a drift belt roadway.
- A 200mm diameter rock fell 30m from the bench above an underground portal onto the ramp.
- A rock about 1.5 metres in diameter rolled off a batter onto the haulroad.

- Geotechnical personnel were conducting an inspection of a highwall. They were standing 40 meters from the highwall toe when unexpectedly a dozer on the strip above pushed material over the highwall.
- A worker was inspecting a stockpile when rocks rolled down, hitting and knocking him to the ground. His legs were lacerated and required stitches.
- A 17 metre pre-strip highwall slumped impacting the rear of a P&H 4100 shovel located about 15 metres from the toe.
- Material clinging to the highwall in front of the presplit line dislodged and contacted the side of a dozer.
- A pre-split line slabbed off a highwall and fell against a dozer which was cleaning the highwall bench below.
- A 60 metre floor heave caused 200 metres of low wall to slip.
- A knob of material, estimated at 4,000m<sup>3</sup>, left on the highwall during dragline operations fell into the pit.

### 4. Mechanical

- A worker restarted a stacker conveyor after cleaning out a build up of material from an unguarded tail drum. He then noticed there was still some debris around the drum so he used a stick to clean it. The stick got caught in the tail drum and the worker's arm was dragged into it becoming wedged between the tail drum and the belt, which stalled. Another worker in the area stopped the conveyor. His arm was grazed and bruised.
- The boom of a dragline was being lowered by four cranes when a winch failure on one of the cranes caused the boom to fall 30 metres. This resulted in major structural damage to the dragline's boom and the transit lift crane. One worker received cuts and bruises.
- A worker was standing at the top of an air operated sliding access ladder on a dragline. The ladder was stuck in the lowered position, so he tried to free it by kicking the lower part of the ladder. As the ladder came free his left foot was

momentarily trapped, resulting in multiples fractures to the small bones in his foot.

- A crane was lifting a drill rig carousel onto a semi trailer when the drill string locator plate fell hitting a worker on the shoulder.
- When a driller's offsider cut the retaining strap from a load of drill pipe the load moved and one of the 180kg pipes fell striking the worker on the foot.
- A small sliver of steel entered a worker's neck while he was using a hammer to remove a wear plate.
- A worker was observing a large rock caught in a jaw crusher when the rock broke and a fragment flew out of the top of the jaw impacting his hard hat.
- Whilst changing a grease nipple on a strut of a Terex dump truck, the nipple propelled from its housing and struck the worker on the lip, resulting in stitches.
- A drill bit and stabilizer were lying on the floor of a surface drill rig. The operator was attempting to separate them by using a pair of stillsons which were being held in place by the bucket of a backhoe. The stillsons came loose and struck the operator. He required 17 stitches in his head.
- A worker was struck by hydraulic oil when the hose on a longwall chock failed.
- An air track roof bolting machine was being used to install roof support. The offsider was having difficulty pushing a bolt to the back of the hole. He climbed up closer to the rig, placing his hand on the drill rig mast. He then told the rig operator he was getting down. The rig operator misheard and brought the drill mast down and crushed his hand at a pinch point.
- A starter box fell off the wall and onto the operator while he was attempting to plug in a power cable.
- An apprentice received minor lacerations when the Abbey workshop crane toppled over whilst lowering a Cat 793 hub to the ground. The hub hit the ground and fell onto the apprentice's leg.
- When a feed dump cylinder was raised after being fitted to the boom of a Jumbo during a service the cylinder snapped near the knuckle, resulting in the boom rotating and falling forward to the ground.
- A Manitou with a jib fitted to it was being used to support a Cat 785 dump truck wheel spindle assembly while it was being separated from the strut. When the spindle assembly came free the forklift was unable to support it and it dropped to the ground raising the rear of the forklift.
- A Franna crane was supporting the bottom of a skip while it was being installed in the rope guides of a shaft when the winder suddenly moved up, lifting the front wheels of the crane off the ground.
- After a conveyor had been electrically isolated for maintenance the belt slowly moved a short distance while two workers were standing on the belt when the gravity take-up weight lowered to the ground.
- A drill mast fell from an underground drill rig after the split pin and retaining nut fell from the mast retaining bolt.
- A production drill hole from the level above broke through close to diamond drillers who were unaware that the breakthrough was going to occur.

### 5. Mechanical – Vehicle Collision

- A smelter crane was carrying a matte pot across the smelter aisle when the pot hit the cab structure of a Kress hauler truck. Some molten metal splashed out of the matte pot, causing a small tyre fire.
- The operator of an excavator misjudged the placement of the load in the back of the dump truck, contacting the rear of the load. This resulted in the truck moving and the truck's operator hitting his head on the window.
- Two light vehicles collided on a blind corner when the driver of one of the vehicles braked and slid into the other vehicle.
- A light vehicle and a dump truck had to take evasive action to avoid collision at intersection.
- A water truck collided with the disengaged trailer of a B double truck when the water truck operator had a microsleep.
- While being refuelled a Cat 789 dump truck operator drove his truck forward and struck the service truck which was parked in front of him.
- An excavator was slewed while being re-fuelled resulting in the counterweight striking the fuel truck.
- A Cat 16 H grader was grading the centre of a haul road when an overtaking Cat 785 dump truck struck the grader's ripper arm and tyres.
- A Juganaut utility vehicle collided with a Driftrunner light vehicle which was broken down at the top of a drift.
- A Cat D10 dozer reversed into the front driver's side of a Cat 789 dump truck.

- A 980 Cat loader reversed into Toro 50D dump truck on the ROM pad.

## 6. Mechanical – Vehicle Loss of Control

- The driver of a Volvo truck pulled up to adjust his brakes. While under the truck it rolled over his legs dislocating an ankle.
- During operator change over an excavator which was parked on a 12 percent grade with bucket down and park brake applied moved forward approximately 4 metres.
- A delivery truck rolled 30 metres after the driver got out of the vehicle at the mines entrance gate to request access to the site.
- A light vehicle rolled away from where it was parked and collided with another parked vehicle.
- A light vehicle overturned on a haul road after it lost traction on the wet slippery road surface and slid onto the clay/gravel shoulder.
- Whilst travelling up a ramp and round a bend, the lead trailer of a loaded B-double truck overturned, taking the prime mover with it. The driver received cuts and abrasions.
- Whilst driving behind a water cart, a troop carrier hit a dry section of road and rolled over.
- The driver of a light vehicle travelling on a black soil road in wet conditions lost control and rolled the vehicle while rounding a sharp bend.
- A service truck rolled onto its side while negotiating a bend.
- A Cat 777 rear dump rolled onto its side after skidding on a damp surface. The driver required five stitches to his head.
- A Cat 785 dump truck lost traction on a recently spot watered haul road. It slid approximately 20 metres before impacting the safety bund.
- While a dozer was travelling up a track between benches the track collapsed and the dozer rolled onto its roof.
- A dozer rolled onto its side whilst working on a bench near a dig face.
- While traversing a stockpile a Cat D11 dozer became unstable and rolled onto its side.
- A scraper tipped onto its side while trimming a 1:2 dam batter.
- A scraper rolled onto its side while moving between benches on a 1:3 batter.

- While part of a convoy transporting three monorail sections to a longwall, an Eimco 936 lost steering when its front wheels lifted off the ground as it rounded a bend. The Eimco swung to the side and the cab was severely damaged when it struck the wall.

## 7. Explosion

- Flyrock landed close to a blast guard standing just outside the 200 metre exclusion zone.
- Flyrock exceeded a 600 metre exclusion zone.
- An operator was hooking up the bell wire from a charged development heading to a BlastPED to check for line resistance when the face has fired.
- An excavator dug up an unexploded detonator, booster and product.
- An excavator dug within 10 metres of a loaded shot.
- An excavator dug to within 2 metres of a loaded shot.
- During a rainy night a drill operator drove his light vehicle onto a shot that was partially loaded.
- Two operators were hit by the airblast from an orepass hang-up firing which occurred on a level above. The shock wave travelled through a finger in the orepass.

## 8. Thermal Fire

- While tramming a Toro LH 621 loader a fire started in the engine bay. The AFFF system was activated but was ineffective. The operator then attempted to use the hand held extinguisher but the handle was damaged. He was finally able to extinguish the fire using a nearby water hose.
- While travelling up a decline a small fire occurred in the engine bay of a Toro 50D truck. The fire suppression was activated and extinguished the fire.
- Whilst driving up a decline the rear tyres of an agitator truck caught fire. Hand held fire extinguishers were used to extinguish the fire.
- A fire broke out in the engine compartment of an Elphinstone 2900 loader after an engine failure.
- A radiator hose blew, spraying coolant onto the turbo which ignited.
- A fire occurred on a Cat785 dump truck after a burst hydraulic hose sprayed hydraulic oil on to the engine.

## 9. Electrical

- An excavator, being transported on a float, hit overhead power lines and pulled them down.
  - Whilst trenching to lay pipes, a backhoe dug up a live armoured cable.
  - An electrician was tying an out of service tag to a circuit breaker when he brushed adjacent terminals and received an electric shock.
  - An employee received a minor electric shock when he placed his hand on the work bench on which a boilermaker was welding.
  - Two workers, wearing damp gloves, received electric shocks while using a 240 Volt rattle gun to change out a blown dredge hose.
  - A person received an electric shock whilst changing an electrode. The machine was fitted with a VRD which was in bypass mode.
  - During routine maintenance checks, electrical personnel found access doors open, exposing electrical switchgear.
  - A fitter received an electric shock when he contacted the exposed conductors of a damaged extension lead.
- A mud rush occurred while wet ore was being discharged from a chute onto a conveyor.
  - An incorrect defeat program installed in a PLC allowed a conveyor to continue running despite being locked out.

## 10. Other

- A worker suffered a heart attack and died as he was driving onto an exploration site.
- Two workers were "knocked" to the ground after a lightning event occurred in the vicinity.
- High winds blew off the roof from a semi-mobile crib hut during a storm. Several blast crew personnel were inside, with one worker receiving minor lacerations on his back.
- A crib hut was blown over in a storm and moved 20 metres.
- During a storm, the wind picked up a wheelie bin frame and propelled it across the workshop. The frame hit a worker breaking his leg.
- A crib hut overturned in a storm injuring the leg of a worker inside.
- While a dragline tub was being gouged the spotter was found slumped over as a result of suspected fume inhalation.
- Four workers were exposed to pyrite fumes after a pyrite explosion occurred during a firing in a development heading.
- E. Coli bacteria was detected in potable water and an ice machine.