

Incident periodical

Recent High Potential Incidents
Learnings and Recommendations
Reporting + Communications

Queensland Coal Mines Inspectorate

October 2023

Coal Inspectorate



Resources Safety & Health
Queensland

1. Incident – Damage to plant using concrete boom delivery systems

During August 2023 there were two high potential incidents (HPIs) reported that involved the failure of components on concrete boom delivery systems that resulted in the ejection of concrete material and damage to mobile plant.

On both occasions windows were struck and either shattered or breached. No personal injuries were sustained.

1. Incident – Damage to plant using concrete boom delivery systems



Light vehicle struck by concrete shattering passenger side window.



Ruptured hose on concrete boom pump and breached drill rig cabin windscreen.



Points to consider and discuss

- Does your mine have a robust process for introduction of plant to site?
- Does this include all components of the plant including attachments and consumable components?
- Does this system include plant operated by short and long term contractors?
- Are records kept of maintenance and inspection history; especially of wearing components (i.e. pipes concrete is being pumped through)?
- Has site considered the impact rating of glass in various pieces of mobile plant?
- Do Coal Mine Workers (CMWs) consider park up position of mobile plant when conducting tasks that have the potential to impact nearby work areas?
- CMWs always need to have a plan A and B. Understand the line of fire and stay out of it. In case things go wrong always have in advance a safe path of retreat.
- Consideration should be given to referencing other industry codes of practice for guidance; e.g. Worksafe Queensland Concrete Pumping Code of Practice 2019.

2. Incident – Microsleep

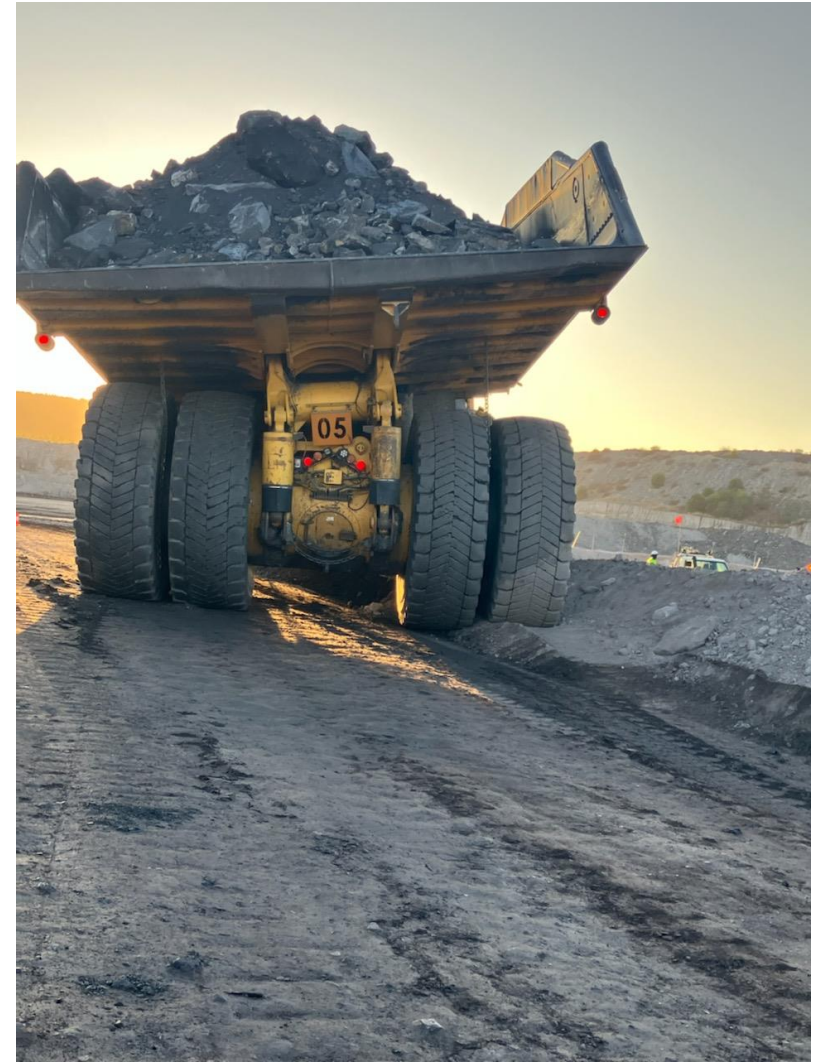
A rear dump truck (RDT) operator has had a microsleep and the loaded RDT has come into contact and mounted the centre bund, waking the operator who stopped the truck. No injury was sustained.

In the first eight months of 2023, there were 25 HPIs reported to the coal inspectorate that resulted in either a collision or unplanned movement of heavy mobile equipment that included the term microsleep in the incident report. 80% of CMWs involved in these were operating rear dump trucks.

* Note there are likely more fatigue related incidents, including microsleeps that did not result in an HPI.

* HPIs reported resulting from operator fatigue that did not include the term microsleep are not in the 25.

2. Incident – Microsleep



Points to consider and discuss

- Does your site have system in place for minimising the potential for fatigue from design of rosters and shift cycles?
- Do CMWs at your mine understand the operational and personal factors that contribute to personal fatigue?
- Do supervisors understand the signs and symptoms of personal fatigue?
- Have sites considered why dump trucks are implicated in the majority of fatigue related HPIs reported and how this number and potential for harm can be reduced?
- Has your site investigated the use of fatigue monitoring systems and their role to reduce harm when other operational measures or personal actions have been unsuccessful to prevent fatigue?
- Does your mine encourage fatigued CMWs to report their condition and is there a process to manage this?
- Does your Safety and Health Management System (SHMS) consider the impacts of fatigue from travel to and from site?
- Do CMWs understand their obligations to present to work in a fit and rested state to perform their functions safely?

3. Incident – Collision of Mobile Equipment (Autonomous and Manual operation)

A loss of comms occurred on an autonomous circuit. The excavator operator grounded the bucket and exited the cab. While moving back to re-enter the cab, comms was restored and a rear dump that had been spotted into position started reversing toward the excavator. The CMW was unable to move the boom out of the way in time resulting in damage to the stick cylinder. There were no injuries to the CMW.

3. Incident – Collision of Mobile Equipment (Autonomous and Manual operation)



Points to consider and discuss

- Do you have autonomous mining and haulage equipment at your site?
- What are the start-up procedures after a comms outage?
- Is there an alarming function prior to start up?
- Is positive comms required with operators on circuit before start up?
- What are the rules and systems about leaving HME on an autonomous circuit during comms outage?
- Have sites considered additional safety functions for excavators and diggers used in autonomous circuits to recognise when a digger operator is not seated?

4. Incident – Tyre Fire from hot ground

A dump truck carting clean waste material has come into contact with heated material at a tip head.

The heated material had been previously dumped by another truck and caused POS 3 tyre to catch on fire.

An exclusion zone established was established and the tyre monitored. The situation was managed without further incident.

4. Incident – Tyre Fire from hot ground



Points to consider and discuss

- Does your site have a system in place for preventing and treating spontaneous combustion events?
- Is there a procedure for loading and hauling hot material?
- Does your site have a system for monitoring temperature of running surfaces when loading coal in reactive ground or active spon com?
- How is spillage identified and managed?
- Do CMWs know what to do if a tyre fire is suspected?
- Is there a procedure in place to manage and monitor the tyre fire (e.g. treatment, exclusion zones, time)?
- Is this understood by CMWs who are likely to be impacted?

5. Incident – Cut by grinder

A boilermaker was fabricating a metal support frame for a Legra pump. A grinder was being used to make a series of cuts into a steel beam. After completing a number of cuts without incident, the boiler maker repositioned himself to make the final cut in a kneeling position.

The boilermaker proceeded to cut the vertical section in a downward motion. The end section of the steel beam was unsupported. The final vertical cut has allowed the end section of steel to drop, pinching the cutting disc. This has caused the grinder to kickback, contacting the boilermaker on his inner right thigh.

5. Incident – Cut by grinder



Photo showing layout of beam and cut point. End section unsupported.



Re-enactment photo showing point at which grinder grabbed and kicked back

5. Incident – Cut by grinder



Re-enactment photo showing direction of movement by the grinder after kickback



Photo showing condition of the disc after incident

Points to consider and discuss

- How could this injury have been prevented?
- Have you recently reviewed site procedures for cutting, grinding and welding?
- Have alternate cutting tools been considered that have additional safety mechanisms(e.g. some models grinders have magnetic braking systems that reduce the risk of disc destruction.
- Does it include information about the potential for injury based on supporting of load, angle of cut and positioning of body?
- What is your inspection regime of hand-held power tools and policy around replacement of consumables? (e.g. cutting and grinding discs)
- Are consumables readily available?

Relevant Safety Notices

Safety Alert #7
Title

Safety Alert #100
Eye penetration injury
whilst grinding

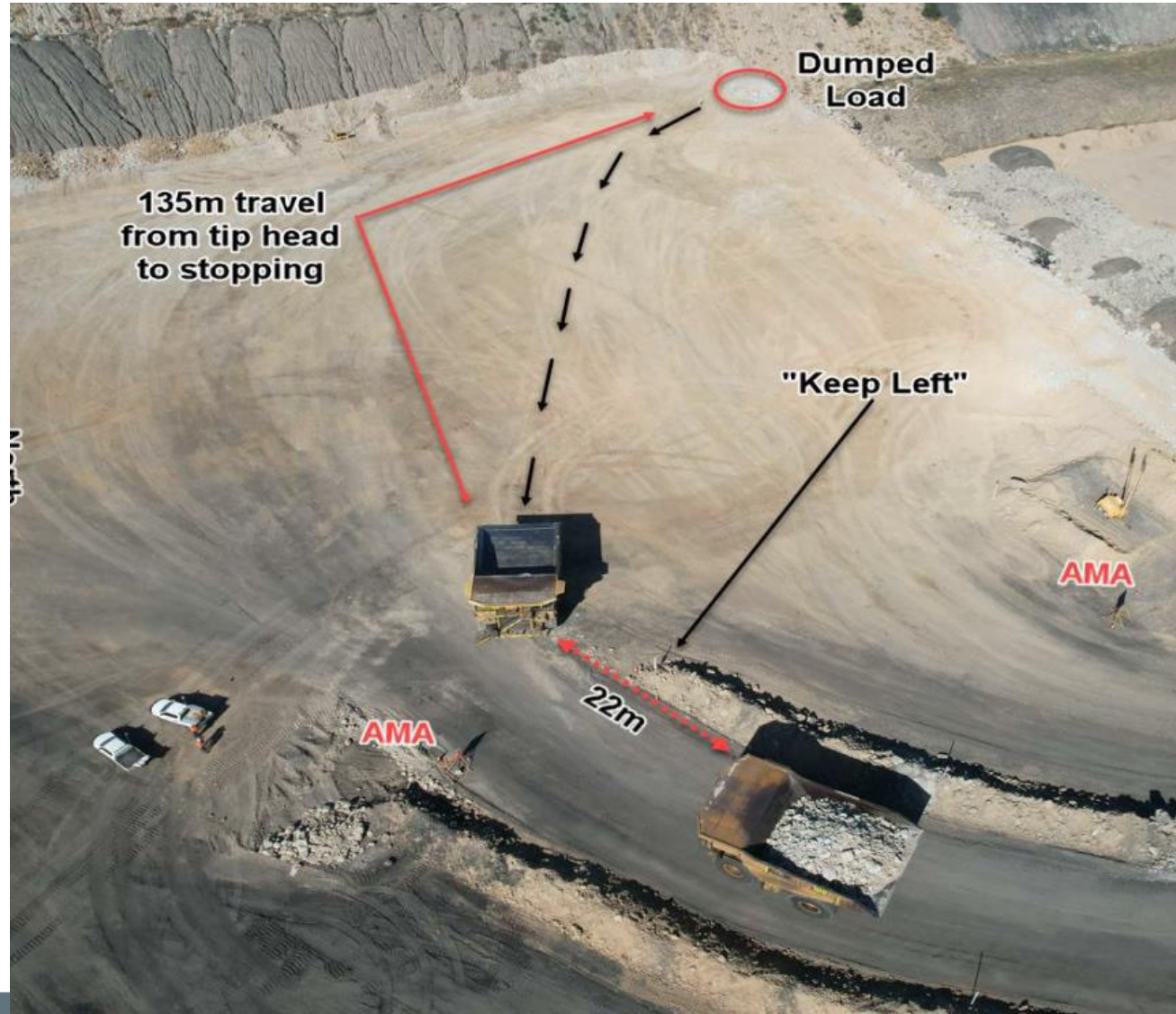
Safety Alert #126
Fixed grinder wheel failure

6. Incident – Distracted Drivers

While departing a tip head the operator of a RDT has become distracted while trying to change the 2-way radio channels in order to report a maintenance issue. This has resulted in the truck leaving the dump on the wrong side of the road. At this time another RDT was approaching the dump. Both trucks have stopped approximately 30 metres apart.

In the first 8 months of 2023, there were 31 HPIs reported to the coal inspectorate of unplanned movements, near misses or collision of mobile plant, that involved distraction of the operator. Approximately 33% of these involved the use of 2-way radio devices.

6. Incident – Distracted driver – Near Miss



Points to consider and discuss

- Has your site experienced HPIs or near misses involving distracted operators and if so, what controls were put in place to reduce similar events?
- Has the use of 2-way radios been a factor in any of these events?
- Has the type and placement of these devices been considered to minimise future events?
- Have alternative methods for positive comms been considered / explored that don't involve hand-held application?
- Have there been any other sources of operator distraction identified as contributing to HPIs at site?

7. Incident – Materials discharged at go-line impacting walkway

CMW operating a RDT was observe to partially dump a load on circuit and continue to the go line. When arriving at the go line, another CMW contacted the operator informing them of hang up in the tray.

The CMW has proceeded to reverse all the way to the back bund of a park up bay, lift their tray and release approximately half a load onto the bunding. The material has rolled out over the bund and onto the pedestrian walkway behind the park up bay.

The CMW has then rolled forward into the V-drain and continue with their shift change.

7. Incident – Materials discharged at go-line impacting walkway



Points for consideration and discussion.

- Does your site have a system for dealing with hang up in trays and are CMWs aware of the requirements?
- Do CMWs at your mine understand their obligations under section 39?

Consider and discuss how these obligations apply in this incident

- 39 (1) (c) to take any other reasonable and necessary course of action to ensure anyone is not exposed to an unacceptable level of risk.
- 39 (2) (a) to work or carry out the worker's or person's activities in a way that does not expose the worker or person or someone else to an unacceptable level of risk;
- 39 (2) (f) not to do anything wilfully or recklessly that might adversely affect the safety and health of someone else at the mine.

If you witnessed this event at your mine, how would you respond

39(1)(b) if the coal mine worker or other person has information that other persons need to know to fulfil their obligations or duties under this Act, or to protect themselves from the risk of injury or illness, to give the information to the other persons.

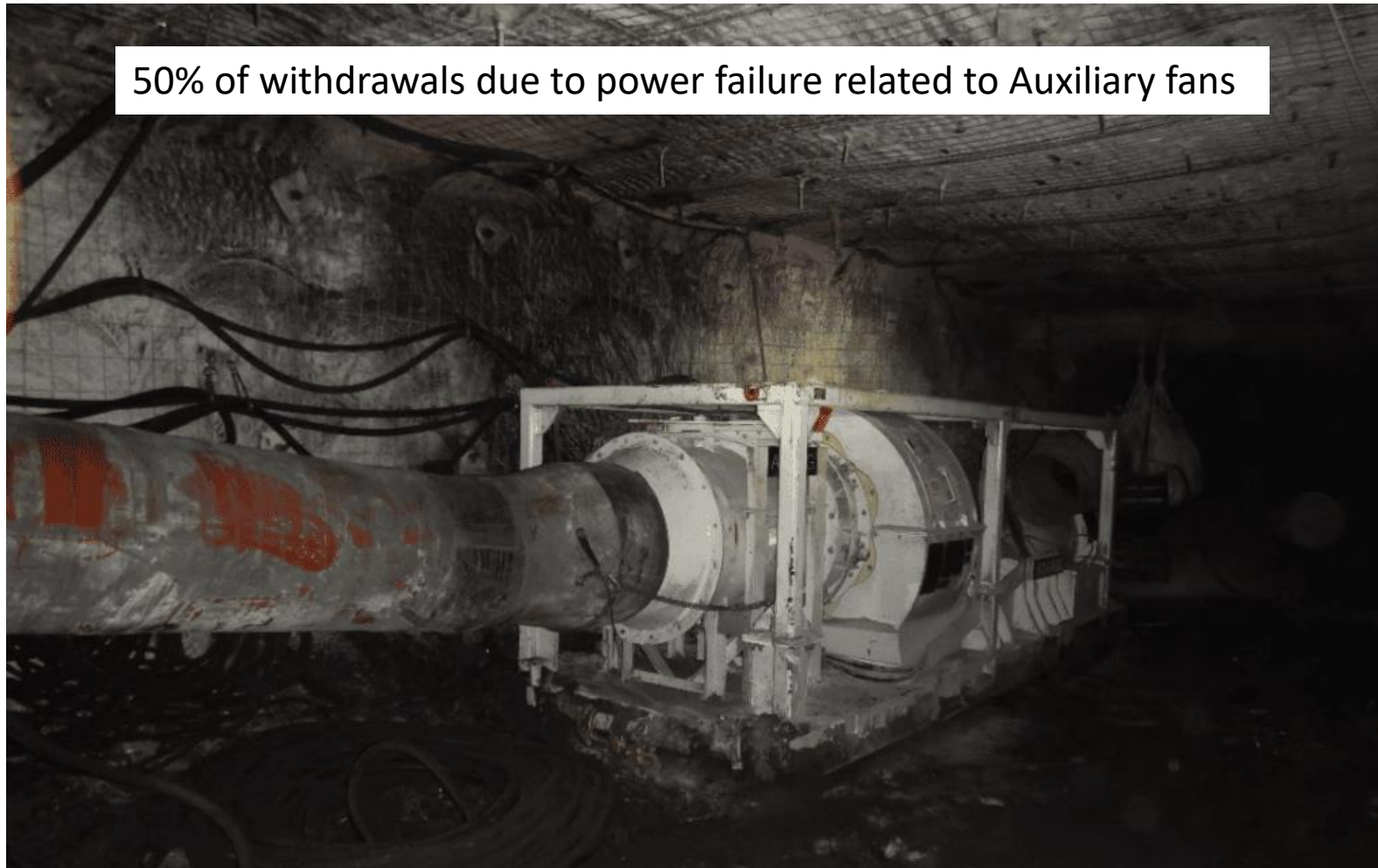
8. Unplanned withdrawal from part of an underground mine

In August there were 42 HPIs reported to an inspector that involved the unplanned withdrawal from a part of the underground mine that did not result in a gas exceedance.

38 of these were the result of power loss to working areas underground. Half of these (19) were related to auxiliary fans.

In addition, one of these withdrawals was the result of a communication outage and a further three were the result of excessive dust in a work area.

8. Unplanned withdrawal from part of an underground mine



Points for consideration and discussion.

- One observation in the Brady report was that we accept a normalisation of behaviour. With a large portion of these events there is an acceptance to reset power trips and / or aux fans multiple times over several days and weeks without investigating the root cause.
- There needs to be a point where this isn't acceptable.
- Determining root cause and resolving it allows for less interruption to the operation and more confidence in the systems in place.
- With respect to withdrawals for dust, is consideration given to CMWs working in-bye and potential exposure to dust from certain tasks conducted out-bye such as stone dusting, removal of structure and shotcreting.

Where is your point?
2,4,9 or 12 trips?

Reports to the Coal Mines Inspectorate

August 2023



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COMMUNICATIONS

[Report incidents on weekends and public holidays – 0457 107 014](#)

[MEM Forums November 2023](#)

[Information share ahead of summer](#)

[Annual obligation reminder](#)

RECENT SAFETY NOTICES

Safety Bulletin 216

Serious finger accidents at Queensland coal mines

Safety Alert 436

Rollover of excavator while ascending ramp

Safety Alert 435

Support system failure and strata fall

Safety Bulletin 215

Counterfeit items

Safety Alert 434

Rear dump truck rollover

QUICK LINKS

[RSHQ Consultation](#)

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