

July 2022 Incident periodical

Recent High Potential Incidents**
Learnings and Recommendations
Communications and Safety Notices
Queensland Coal Mines Inspectorate

**Selection of the 127 HPis
reported during the period

Coal Inspectorate



Resources Safety & Health
Queensland

1. Incident – tyre fire

- A rear dump truck was totally destroyed by fire
- The truck was being escorted to a hot tyre bay when a CMW noticed flames coming from Pos 4 wheel and called the emergency
- The operator safely exited the truck
- Investigations identified likely tyre damage (cuts & tread separation) due to poor road conditions, potentially exacerbated by wet weather
- Prior to the incident two other trucks had been stood down for suspected hot tyres
- Travel speed and distance to a hot tyre bay were not considered when relocating the truck
- Internal tyre temp & pressure sensors did not indicate the likelihood of an external tyre tread fire



Recommendations

- Review mine road design and operating standards. Including location of “hot tyre” bays.
- Confirm vehicle tyre selection is appropriate
- Review “hot tyre” response procedures including defect identification, use of thermal imaging, proximity to “hot tyre” areas and relocation requirements
- Review emergency response capability for dealing with “hot tyres”

Site Senior
Executive



- Make sure road standards and conditions meet or exceed the site standards
- Understand and communicate to CMWs current site procedures for dealing with “hot tyres” including emergency response procedures

Supervisors



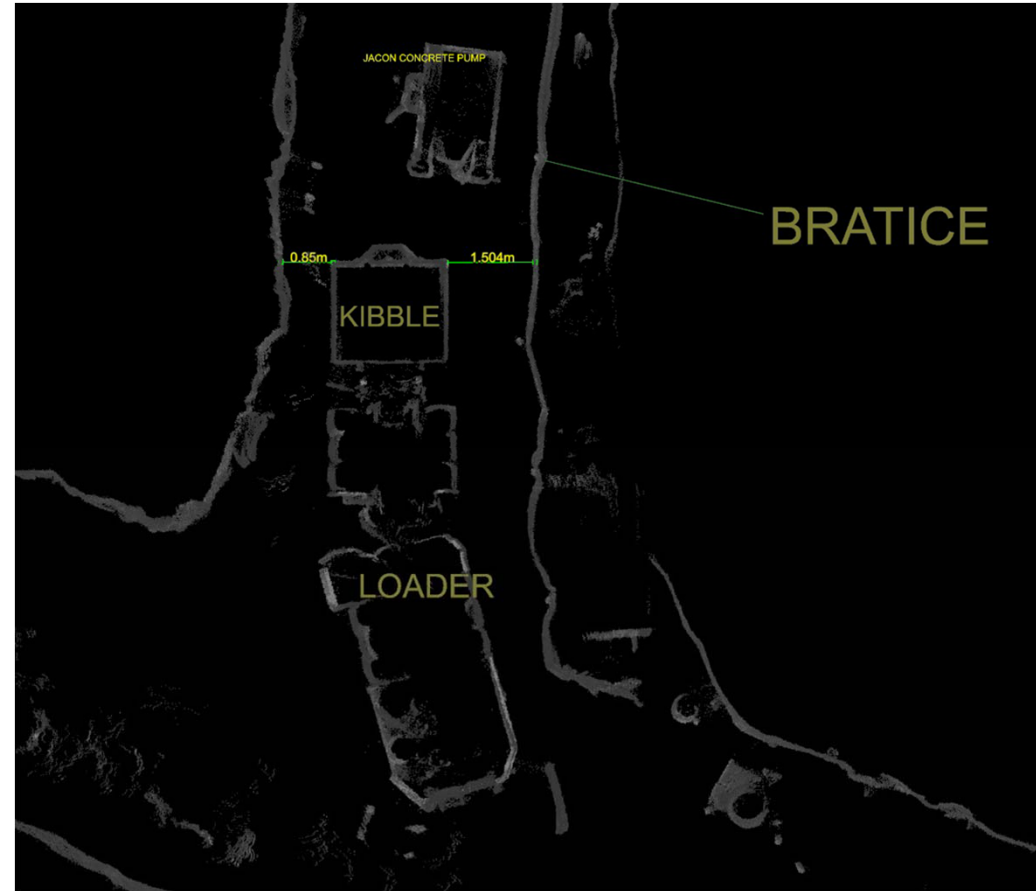
- Understand and comply with site roadway operating standards
- Understand and follow site procedures for dealing with “hot tyres”, including emergency response requirements

Coal Mine
Workers



2. Incident – CMW crush injury

- A CMW suffered serious crush injuries to their right leg and hip when pinned between a Load Haul Dump (LHD)/ concrete kibble and a Jacon concrete pump.
- CMWs were constructing a Longwall goaf seal. A load of concrete had been delivered by the LHD/kibble and pumping of the load had been completed.
- The LHD/kibble backed out from pump and on re-entry the LHD/kibble operator heard the injured person shout out.
- The injured CMW was found trapped between the kibble and the Jacon concrete pump.



Recommendations

- Ensure work tasks are properly planned, prepared and risk assessed prior to being undertaken.
- Make sure that tasks are properly resourced and competently supervised
- To have systems in place that ensure requirements for spotters and "no-go" zones are implemented and enforced.
- Consider higher order controls which eliminate people/machine interface such as collision avoidance or pumping concrete from the surface

Site Senior Executive



- To ensure tasks are not allocated or proceed unless they have been properly planned, prepared and risk assessed.
- To make sure CMWs understand systems and procedures including site requirements for spotters and "No-go" zones when working around machinery
- Enforce compliance with critical controls identified that would prevent injury

Supervisors



- Must follow site procedures and work instructions
- Carry out their activities and work in a way that does not expose themselves or someone else to an unacceptable level of risk

Coal Mine Workers



3. Incident – Methane drainage plant

- Failure of a surface gas drainage plant resulted in methane exceeding 2.5% being recorded in areas of an underground coal mine.
- At the time of the incident the longwall shearer was heading towards the tailgate. The methane level at the 243A detector (TG 150m monitor) was rising when the goaf drainage plant tripped. When methane levels reached 1.7% at the 243A detector the shearer haulage tripped.
- At about the same time the control room operator contacted the longwall and informed them of the situation with the goaf drainage plant and the increasing gas levels in the tailgate, instructing the crew to cease production. Methane at the 243A detector continued to rise, exceeding 2.5% and peaking at 3.08%.
- Once the methane drainage plant was restarted with all streams back on line the gas readings in the LW tailgate reduced to normal levels.
- The investigation identified multiple engineering failures in the drainage plant, inexperienced operators and inconsistencies in risk, commissioning and swp documentation.

Recommendations

- Initiate reviews of engineering designs and installations, including commissioning, operations and maintenance processes of safety critical plant aimed at identifying and eliminating operational reliability issues
- Review applicable TARPs, ensuring detailed response information is available to enable CMWs to respond to triggers
- Make sure sufficient trained and competent personnel available to operate and maintain plant required for safe operations

Site Senior Executive



- Make sure up to date TARPs and supporting documentation for installations are available and accessible
- Make sure CMWs have been trained and competent in works they are undertaking

Supervisors



- CMWs should make sure they have received sufficient training before undertaking work

Coal Mine Workers



4. Incident – Dragline contacting tractor

- CMWs were using a cable tractor to position cable
- The cable tractor moved a loop of cable and was repositioned to move another cable loop.
- The dragline operator assumed the tractor to be clear of the “no-go” zone and started to swing the dragline at slow speed.
- The dragline contacted the cable tractor reeler and cab mirror
- The cable tractor operator has then called on the 2 way twice to stop the dragline, however the dragline operator could not hear him clearly.
- The cable tractor operator exited the tractor and waved at the dragline operator to get his attention.
- At this point the dragline operator has stopped the dragline from swinging.

There have been 22 reported HPis between 2017 and 2021 involving interactions between draglines and vehicles / machinery. A further two incidents have been reported in June and July 2022



Recommendations

- Implement higher level controls, over and above positive communications, that ensure inadvertent contact between draglines and machinery, and / or personnel does not occur.
- Ensure “No Go Zones” are defined and clearly delineated.
- Ensure compliance with procedures regarding personnel and equipment entering areas where they may be struck by operating equipment are adequate and effective.

Site Senior Executive



- Should ensure compliance with procedures and processes. This includes conducting behavioural observations during dragline operations.

Supervisors



- Carry out their activities and work in a way that does not expose themselves or someone else to an unacceptable level of risk.
- Must follow site procedures and work instructions.
- If in doubt “STOP” outside of the “No Go Zone”

Coal Mine Workers



5. Incident – Bucketwheel stacker/reclaimer derailment

- A bucket wheel reclaimer/stacker derailed whilst the machine was being repositioned to begin stacking.
- The stacker boom was slewed and lowered contacting the stockpile. During this action, bogie wheels were partially derailed and the machine power tripped.
- The front bogie came off the rail and moved about 250 mm sideways when machine power was reset and the stacker boom slewed back into the park position.
- The control room operator was undertaking other production tasks at the time of the incident and did not stop the machine prior to the derailment occurring.
- Investigation identified PLC control system design defects.



Recommendations

- Ensure plant and equipment is fit for purpose.
- Initiate safety reviews of automated or semi-automated control systems with the aim of identifying and controlling foreseeable errors.
- Consider collision avoidance detection, code error checking, ground force protection systems

Site Senior Executive



- Communicate with CMWs the importance of monitoring remote operations
- Undertake periodic functional safety audits of PLC codes

Engineering



- Don't multi-task when critical tasks are being undertaken

Coal mine workers



Reporting sexual assault or harassment to RSHQ

- RSHQ has a dedicated response team for complaints and notifications of sexual assault or sexual harassment
- To contact the team call **1300 581 077** or email complaints@rshq.qld.gov.au.
- If you are in immediate danger or your health and wellbeing has been threatened, contact the police (phone 000) and seek medical advice.
- Further information is available on [RSHQ's website](#) by scanning the QR code.



What RSHQ can help with

- RSHQ's role is to ensure operators have effective controls and processes in place to:
 - reduce the risk of sexual harassment and assault in the workplace
 - receive and respond to complaints and incidents.
- RSHQ can also assist workers with referral to support services.

What RSHQ can't help with

- legal advice
- workers' compensation
- jurisdiction of other agencies (e.g. incidents occurring off-site)
- industrial relations



Communications from the Coal Mines Inspectorate

[Letter from the CICM to OCEs on the Certificate of proficiency in Mine Gases and Gas Testing](#)

[Letter from the CICM - Ventilation Officer Certificate of Competency Requirements](#)

[Letter from the CICM – Implementation of Bol Recommendations](#)

Fast facts for July 2022

- 127 HPI & serious accident reports received
- 11 Non-reportable incidents
- 10 Cases of COPD not attributable to mines

Safety Alert 415

Bolt projectile from final drive

Safety Alert 414

Hauling equipment failure during conveyor belt change out

Safety Alert 413

Underground grader unplanned movement

Safety Bulletin 204

Spontaneous combustion monitoring and response systems

Petroleum & Gas

Safety Alert 108

Finger Crush Injury

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