



Resources Safety & Health  
Queensland



January 2024

# MMQ Quarterly Report

High Potential Incidents and Serious Accident Summary  
Queensland Mineral Mines and Quarries Inspectorate  
*October – December 2023 quarter (FY24Q2)*



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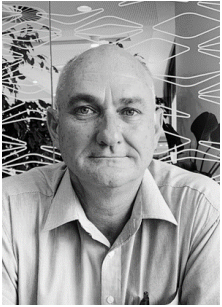
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*Unless otherwise stated, all data displayed is the financial quarter FY24Q1/2*





## From the Chief



**Hermann Fasching,  
Chief Inspector of Explosives  
Chief Inspector Mineral Mines and Quarries**

The significant rainfall in North Queensland and its devastating effects over the Christmas and New Year period is a timely reminder for sites to review their emergency response plans. The significant rainfall experienced has and will continue to affect operations across the mining sector, from flooded pits to slip hazards at camps.

Late last year, the Minister for Resources and Critical Minerals' Safety Reset was held with the theme of See, Stop, Report. Reminding all workers at sites across the resources sector that if they come across something that is unsafe, or even if they are just unsure about it they can stop, ask questions and report the hazard. Workers have the right, by law to:

- stop work if they have reason to believe they are being exposed to a serious risk to their safety or health,
- remove themselves to a position of safety, and
- refuse to undertake a task that may place them in immediate personal danger.

Workers cannot be disadvantaged for exercising these rights under the Mining and Quarrying Safety and Health Act 1999.



## News and updates from RSHQ



**Trevor Brown**

**Deputy Chief Inspector Mineral Mines and Quarries**

I hope everyone enjoyed their Christmas and New Year period and are now focused on a safe and productive 2024.

Unfortunately, we continued to see serious accidents and high potential incidents occurring during this period. While reporting has improved, I have noted industry often uses minimising language when reporting an incident i.e. the person reporting the incident down-plays the severity or potential consequences of the incident. On further questioning, viewing photographs or a site visit the full extent is then realised.

This type of reporting language can delay accurate information to enable timely advice to industry, and release of secured scenes. With the ongoing introduction of the online incident reporting system, inaccurate reporting can also mean that previously entered data must be re-entered or modified by the site. There also continues to be some discussion around what is a high potential incident and what needs to be reported.

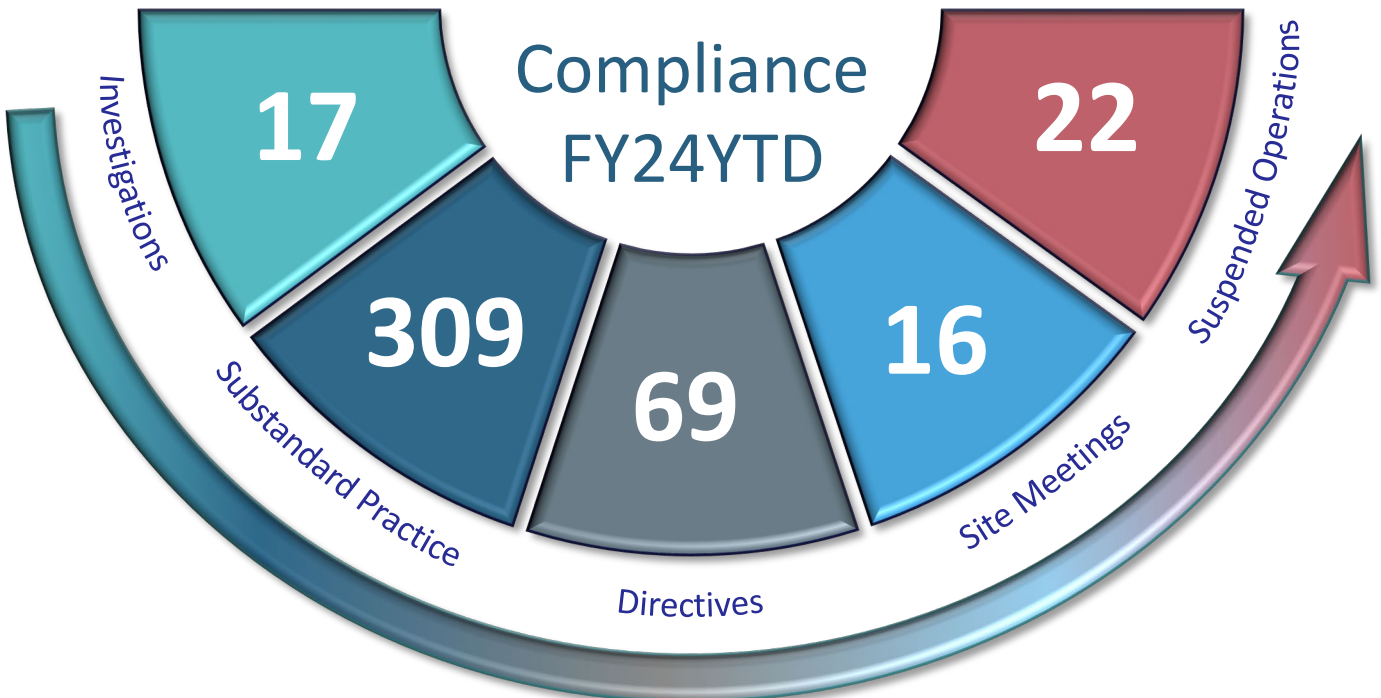
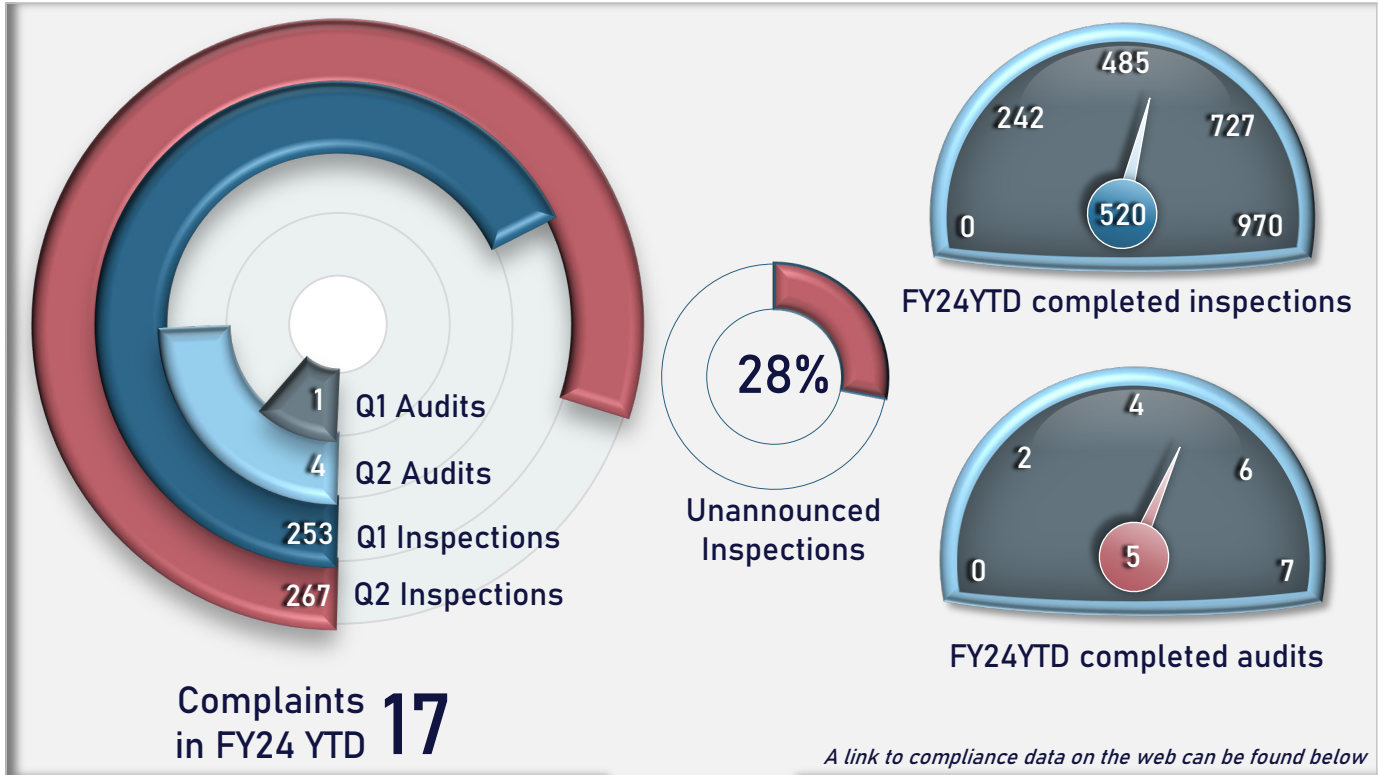
Mining Quarrying Safety and Health Act states:

***S. 18. Meaning of high potential incident***

***A high potential incident at a mine is an event, or a series of events, that causes or has the potential to cause a significant adverse effect on the safety or health of a person.***

A high potential incident must be reported to the inspectorate. The understanding of this requirement should form part of all workers (including supervisors and managers) training.

# Regulator activity



Displayed data taken 22/01/2024

<https://www.rshq.qld.gov.au/about-us/resources/publications/compliance-data>





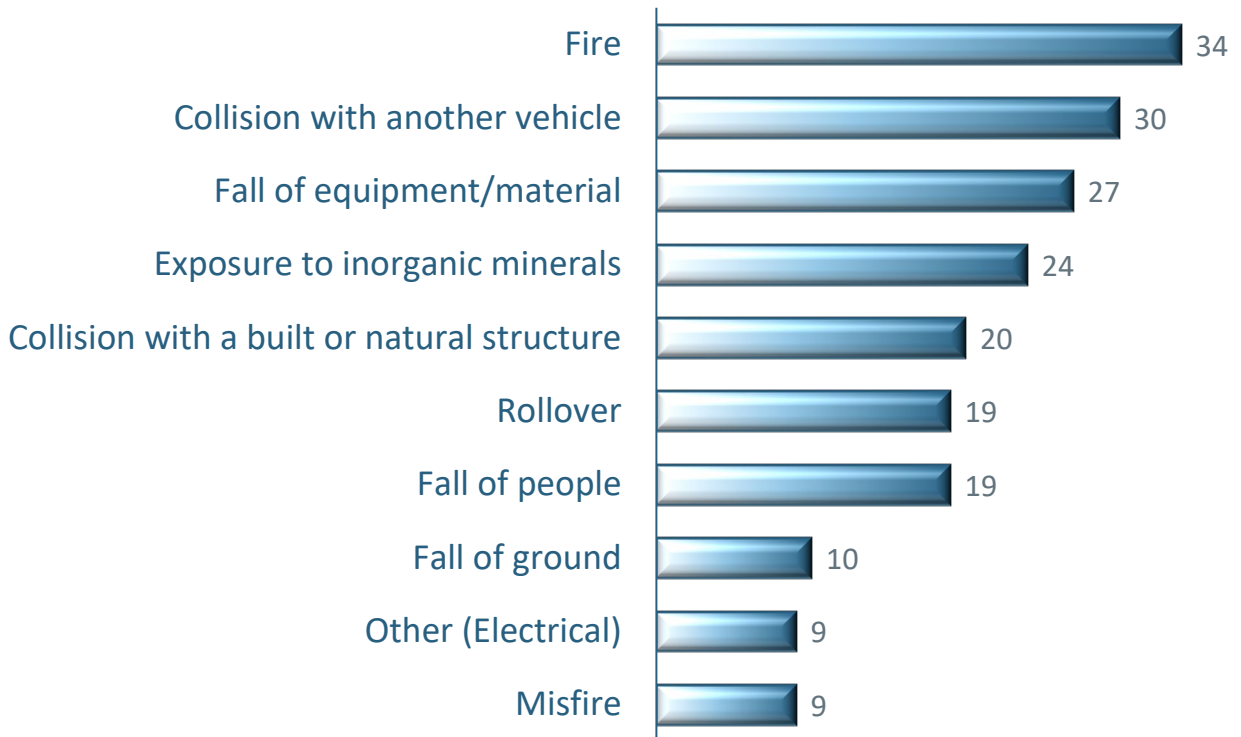
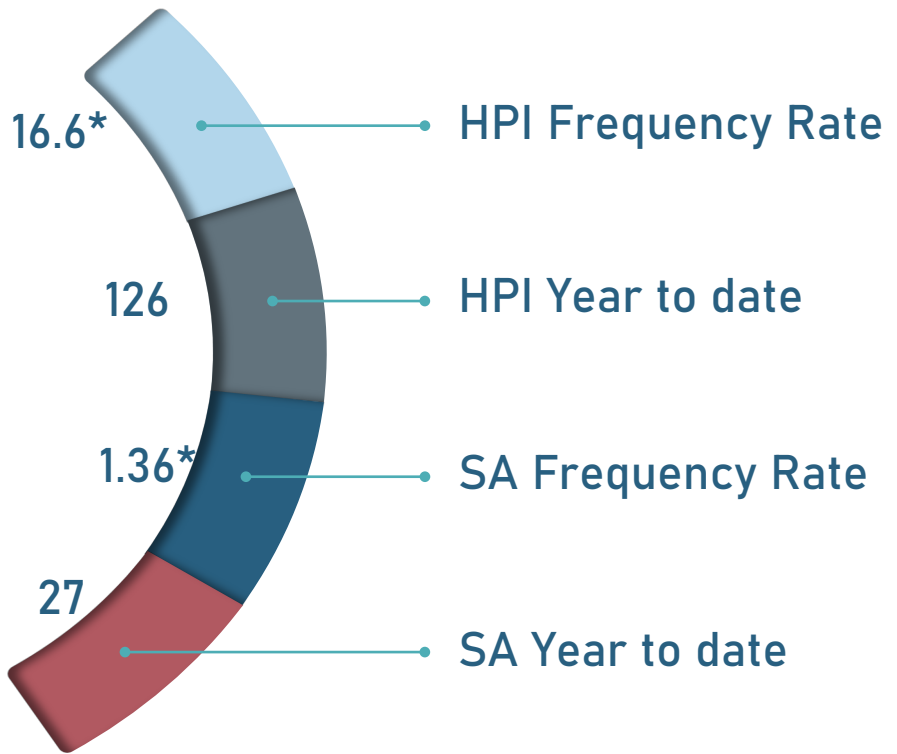
# The numbers

FY24Q1/2

Industry worked  
13.42 Million Hours\*\*



0 Deaths



Data taken 22/01/2024

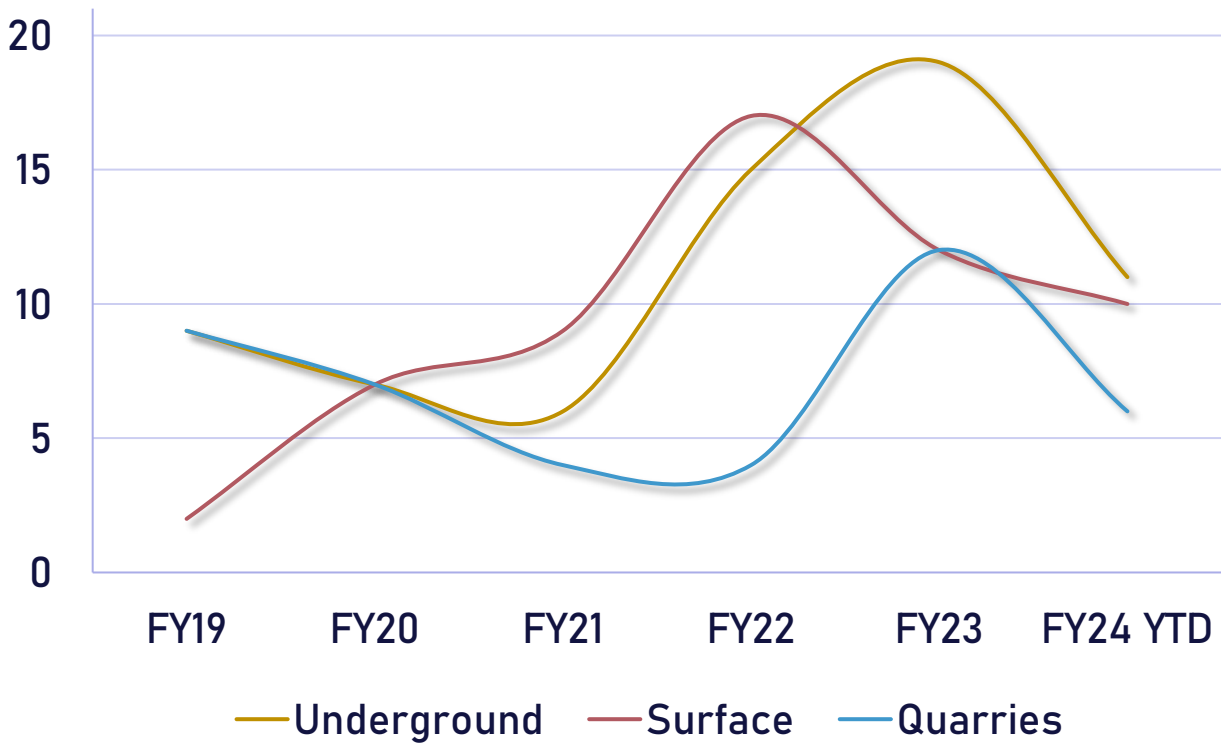
\* For every million hours worked

\*\*Worked hours are reported from industry and may increase as sites submit their data to RSHQ.

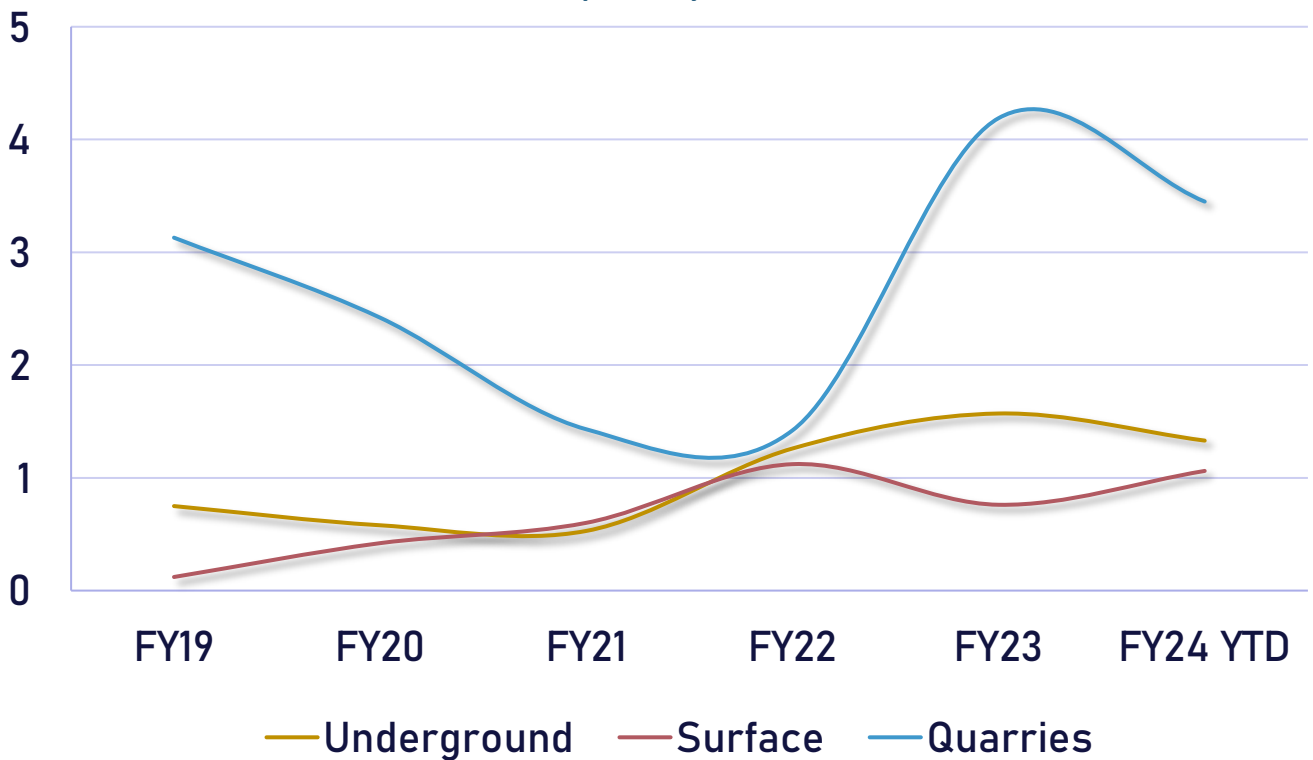


 Trends\*

Serious Accidents FY 2019 to FY 2024 YTD



Serious Accident Frequency Rate FY 2019 to FY 2024 YTD



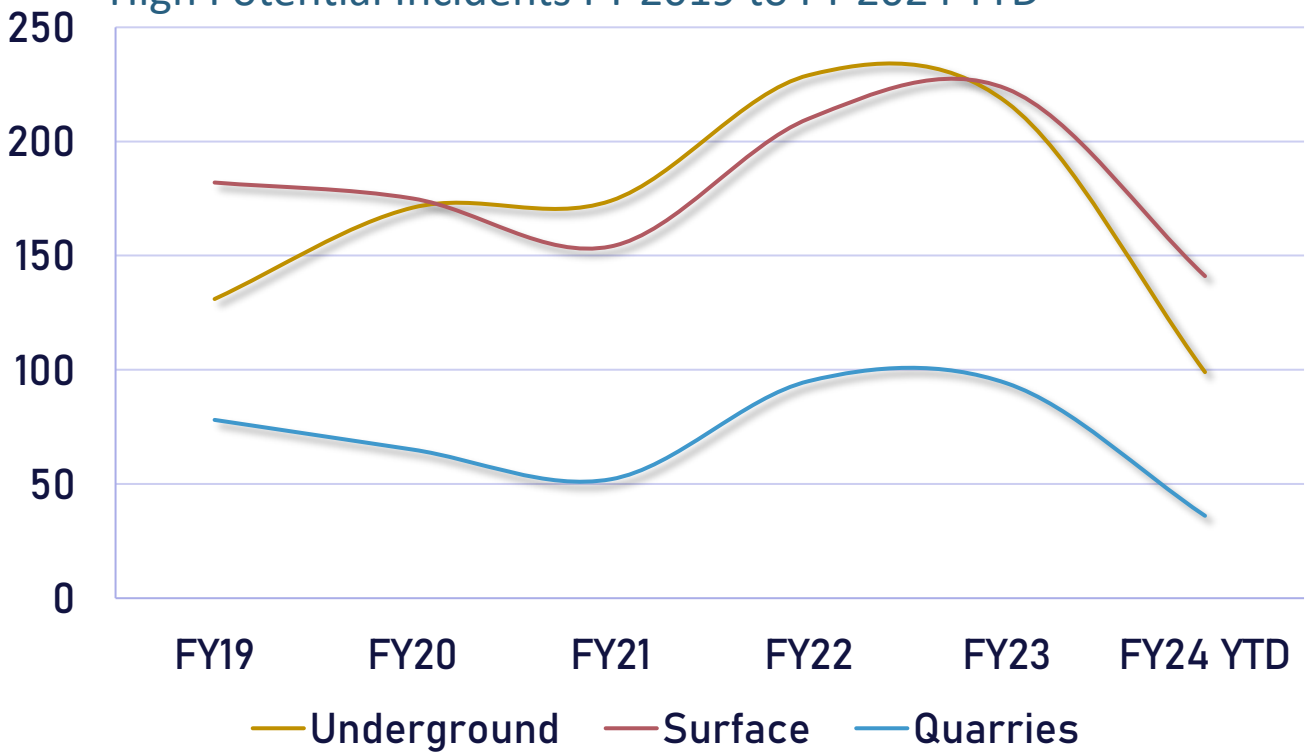
Data taken 22/01/2024

\* Due to the nature of data collection these figures may vary slightly

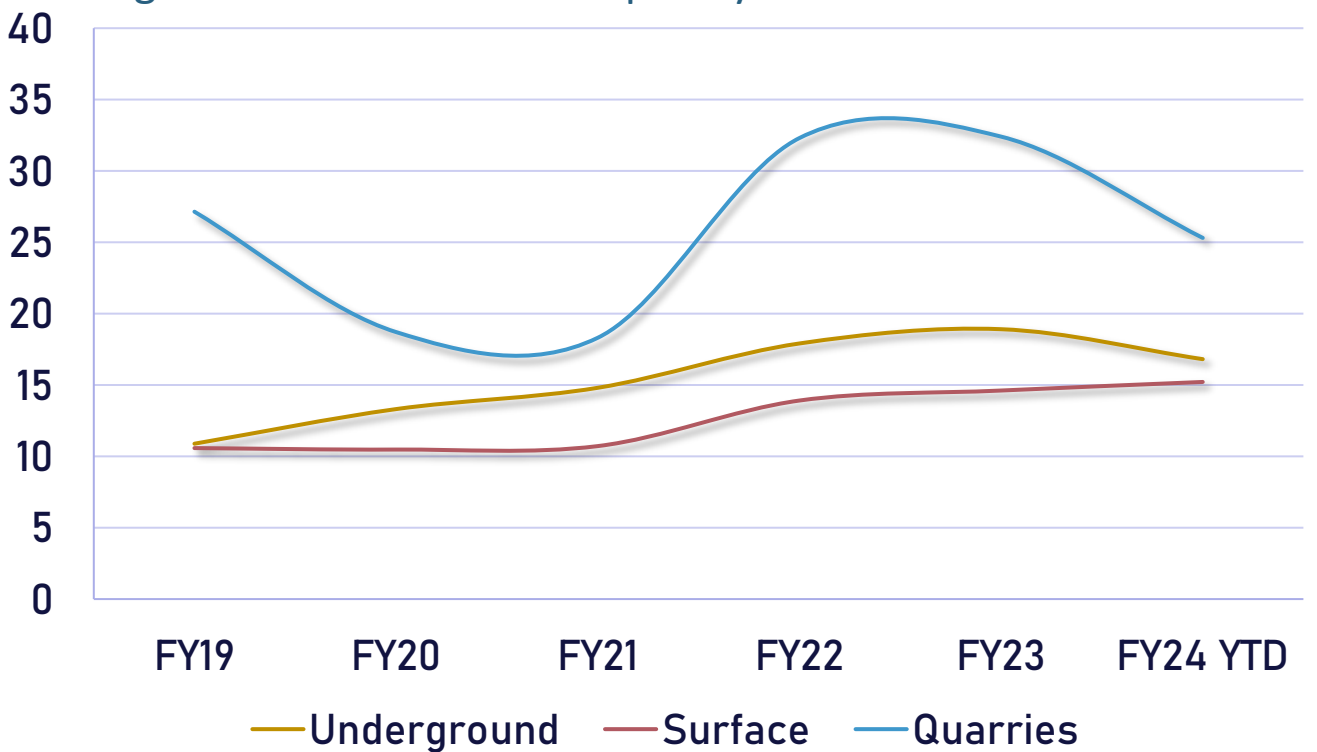


## Trends\*

### High Potential Incidents FY 2019 to FY 2024 YTD



### High Potential Incident Frequency Rate FY 2019 to FY 2024 YTD



Data taken 22/01/2024

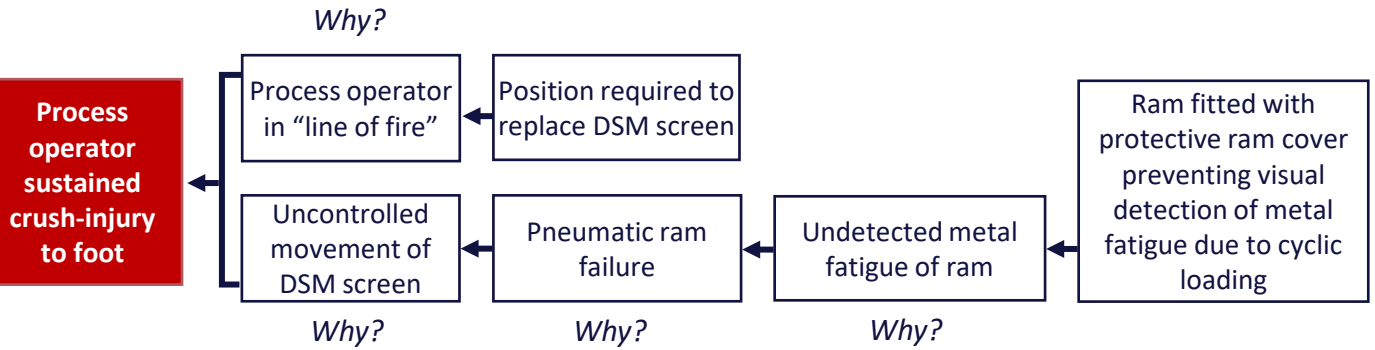
\* Due to the nature of data collection these figures may vary slightly





### DSM Screen maintenance activity

A process operator had his foot crushed while changing a screen panel on a DSM screen. Preliminary information suggests that one of the pneumatic rams that brings the screen deck into position for maintenance failed, causing an uncontrolled movement of the screen.



### Contributing Factors

- Corrosive environment.
- Pneumatic ram not maintained regularly.
- No visual inspection of pneumatic ram assembly prior to the task commencing due to protective ram cover.
- Reliance on pneumatic ram alone to support the weight of the screen assembly in its maintenance position.
- Worker positioned in the “line of fire” to gain access to the worn screen when ram failure occurred.

### Key takeaways

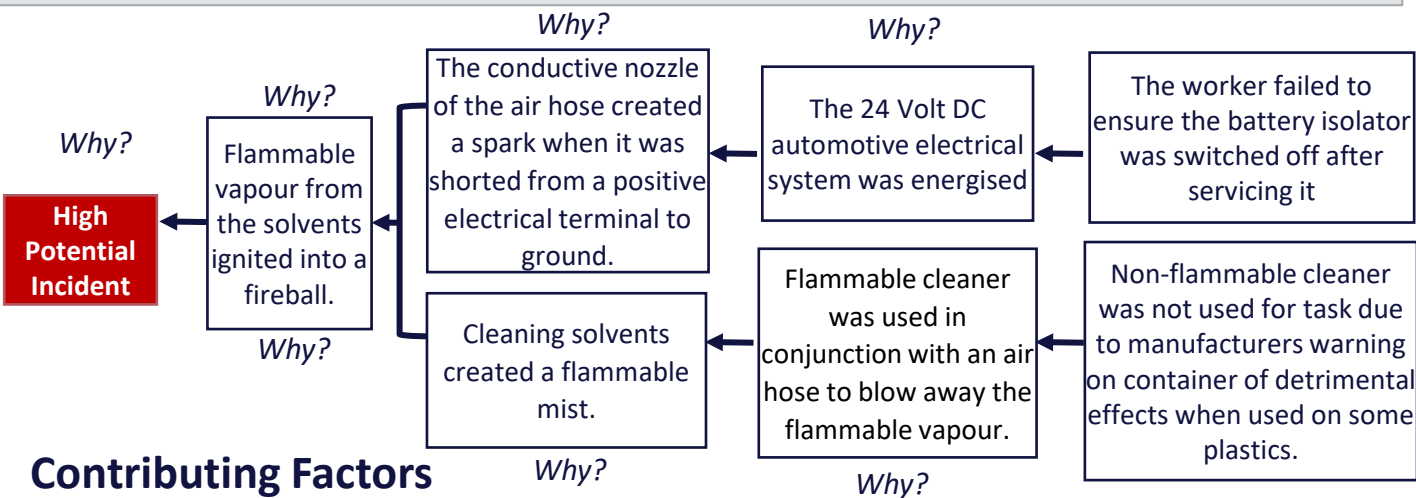
- Always inspect all components of lifting and load bearing equipment prior to use. Ensure all lifting equipment, including rams, are part of a register and regularly inspected to ensure it is fit for use in its intended environment.
- Do not rely solely on pneumatic or hydraulic systems to support loads while carrying out maintenance activities. Consider chocks, locks or pins as a more reliable form of isolation.
- Stay clear of suspended or hoisted items of plant. Identify exclusion zones in case of load lifting equipment failure.



Fig 1 Failed pneumatic ram

## Ignition of flammable cleaning solvents during vehicle service

A service was being performed on an underground dump truck. The electrical system was isolated at the battery isolator. During the service it was reported to the auto electrician that the main battery isolator was "sticky" to operate. The isolation point was changed to the starter motor so work could be completed on the battery isolator. The worker proceeded to repair this defect using spray cans of brake cleaner and CO contact cleaner, both of which have flammable vapours. The worker then failed to ensure the battery isolator was in the off position when proceeding with the service to clean electrical terminals inside the battery compartment using flammable cleaner. The worker was aware the vapours were flammable and was using an air hose to blow away the vapours, when the metal nozzle of the air hose shorted from a live 24 Volt positive circuit breaker terminal to the negative vehicle body creating a spark and igniting the flammable vapour. The worker received burns to their face.



### Contributing Factors

#### Safety and Health Management System.

The mine risk management process was followed at the start of the job, but the hazards and controls were not reassessed when a change in the original job task occurred. (Change Management).

#### Isolation of Plant.

The energy source was not isolated when performing this task. The energy source could have been isolated while performing this task, eliminating any spark potential from this energy.



### Key takeaways

- Working on energised plant must not occur when work could be performed with the plant de-energised and isolated.
- The hazard identification process must review the hazards and controls before any changes to the work environment or tasks occur while the job is being conducted.
- As a mitigating control, consideration should be given to using insulated tools around exposed live automotive electrical systems.
- Risks involving cleaning live electrical switch terminals using flammable solvents also need to be controlled.

## Unplanned Movement – Wheel detached from light vehicle

While travelling on the decline, the operator of a light vehicle (LV) felt vibration in the rear. The operator stopped and reversed slowly off decline into a cuddy. During this manoeuvre, the passenger side rear wheel detached.

Wheels detached from LVs in four reported incidents for QLD metalliferous mines during the year 2023.

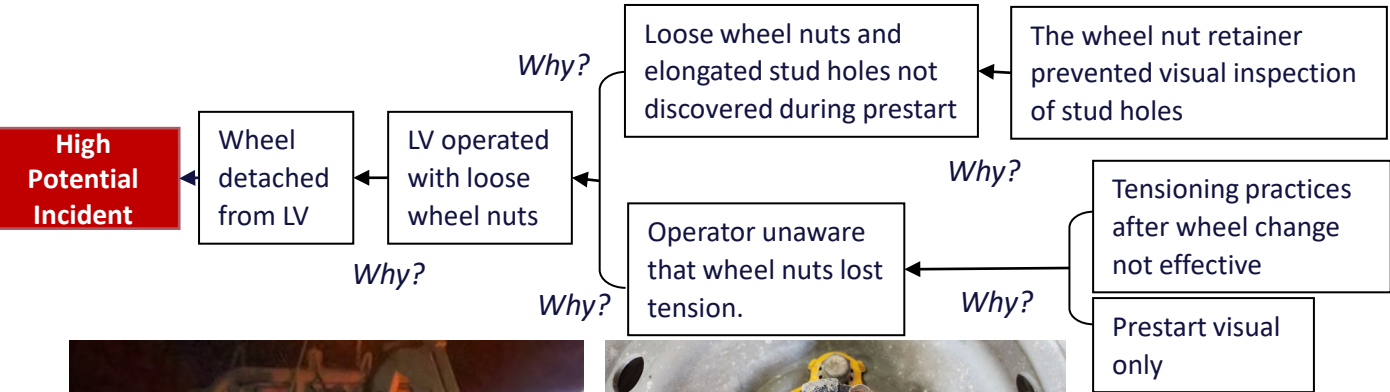


Figure 1, 2 & 3 – Photos showing LV, detached wheel and wheel nut retainer

## Contributing Factors

Commonly known contributing factors include:






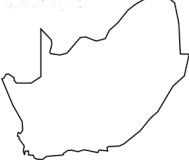
- The wheel had been changed several days prior to the failure and the wheel was found to have elongated mounting holes from a period of running loose on the hub.
- The locking-ring style wheel nut retainer did not stop the nuts from coming loose.
- Periodic tensioning of wheel nuts after the wheel change was not effective.
- Prestart check relating to wheels was visual only.

## Key takeaways

- Tapered mounting surfaces on wheel nuts and wheels must be inspected for damage during wheel change to ensure correct matching components are used.
- Hubs, studs and wheel mounting faces must be clean and free from debris before fitment.
- Sites should ensure wheels on LVs are correctly torqued, and subjected to periodic checks and re-torqued after a wheel change.
- While wheel nut retainers can provide a level of security, appropriate wheel nut tension should still be periodically checked with a tool, for example during the prestart.



 Interstate and around the world

Location	What has been happening
	<p><b>Potential fall from height Safety Alert DEC23</b> -While observing the crushing/screening operation, a worker noticed a rubber mat on the conveyor feeding the crusher. To prevent it from getting into the crusher, the operator called on the RT to a nearby worker to remove the mat from the conveyor belt before it reached the crusher. <a href="#">Further information</a></p>
	<p><b>Visually Inspect Ocenco M20.3 - Safety Alert</b> - During mandated approval audits, the National Institute for Occupational Safety and Health (NIOSH) evaluated 16 belt-worn M20.3 Ocenco units that had been in service at an active coal mine. The testing revealed that 3 of the 16 units were found to contain white sorbent dust inside the breathing bag. Miners coming into contact with sorbent material may experience respiratory distress and skin irritation. <a href="#">Further Information</a></p>
	<p><b>Worker's arm entangled at quarry site NOV23</b> An employee was injured while performing maintenance activities on a large operating rotary dryer. The employee was close to the main drive gear of the rotary dryer when their right arm became entangled. The employee's arm was partially amputated. The main drive gear was approximately 230mm wide. <a href="#">Further information.</a></p>
	<p><b>Potential heating of acetylene cylinder raises potential for underground explosion Safety Alert DEC23.</b> Hot work was being carried out underground on ore handling infrastructure during a night shift. A designated spotter noticed an orange glow coming from the bottom of an acetylene cylinder and immediately alerted the work crew. <a href="#">Further information</a></p>
	<p><b>Haul truck engine module narrowly misses workers Safety Alert DEC23.</b> Two workers were in the engine bay of a Komatsu 930E haul truck adjusting lever hoists (cumalongs) and lifting chains while installing an engine module on 15 November 2023. <a href="#">Further information</a></p>
	<p><b>Elevator plummets, killing 11 in South African platinum mine Safety Alert DEC3</b> - On the evening of 27 November an elevator suddenly dropped around 200 metres while carrying workers to the surface in a platinum mine in the northern city of Rustenburg, South Africa, killing 11 and injuring 75 — 14 of them critically. <a href="#">Further Information</a></p>



## KEY TRAINING – BOE LAW EXAM SCHEDULE FY24Q3



January	Brisbane	Monday 8	9:00AM
	Dysart	Friday 19	9:00AM
	Mackay	Wednesday 17	9:00AM
	Moranbah	Thursday 25	9:00AM
	Rockhampton	Thursday 4	9:00AM
February	Brisbane	Monday 5	9:00AM
	Dysart	Friday 16	9:00AM
	Mackay	Wednesday 21	9:00AM
	Moranbah	Thursday 22	9:00AM
	Rockhampton	Thursday 21	9:00AM
March	Brisbane	Monday 4	9:00AM
	Dysart	Friday 15	9:00AM
	Mackay	Wednesday 20	9:00AM
	Moranbah	Thursday 21	9:00AM
	Rockhampton	Thursday 7	9:00AM



# Contact & Links



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[www.rshq.qld.gov.au](http://www.rshq.qld.gov.au)

