

October 2023

MMQ Quarterly Report

High Potential Incidents and Serious Accident Summary
Queensland Mineral Mines and Quarries Inspectorate
July – September 2023 quarter (FY24Q1)



Resources Safety & Health
Queensland



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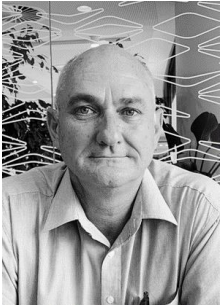
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Unless otherwise stated, all data displayed is the financial quarter FY24Q1





From the Chief



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

In August, RSHQ published the summary report into the death of Adam Malone in 2018. It is important that we share information about incidents and investigations to raise awareness of risks and provide information about the events leading up to an incident and recommendations of what can be done reduce the likelihood of similar events. RSHQ will continue to publish incident findings through summary investigation reports.

This October is The Minister for Resources Safety Reset. This year's theme is "If its not safe or you're unsure, stop" encouraging workers from all areas of the resources sector to see hazards, stop work and report without fear.

Many sites have held their resets and will continue through the month of October and early November with the aim of having every worker on every site stop for safety. This is the second Safety Reset to encompass the whole of the resources sector and I encourage every site and every worker to participate in stopping for safety.

I also want to stress the importance of respirable dust management across Queensland mine sites. RSHQ has been made aware of deficiencies in sampling practices. Failing to conform to the sample collection requirements of [Guideline \(QGL02\) "Management of respirable dust in Queensland Mineral Mines and Quarries"](#) or Australian Standard AS2985 puts workers at risk. Further information on the requirements has been communicated to industry via a Letter from the Chief Inspector which has also been included in the Health Topics section of this report.

News and updates from RSHQ



Trevor Brown, Deputy Chief Inspector Mineral Mines and Quarries

The Queensland police campaign “**The Fatal 5**” is very clear on this messaging about what causes traffic fatalities:

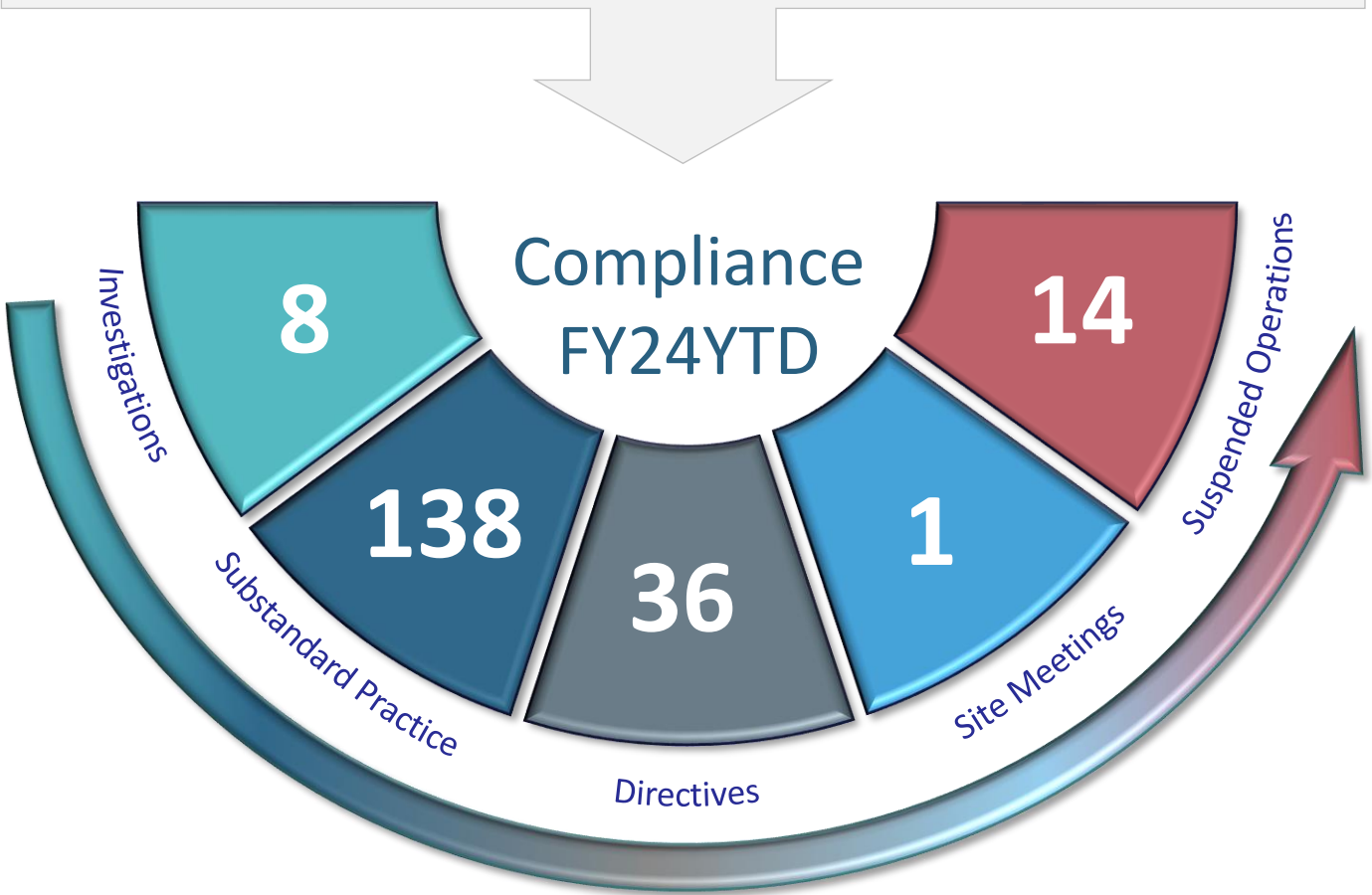
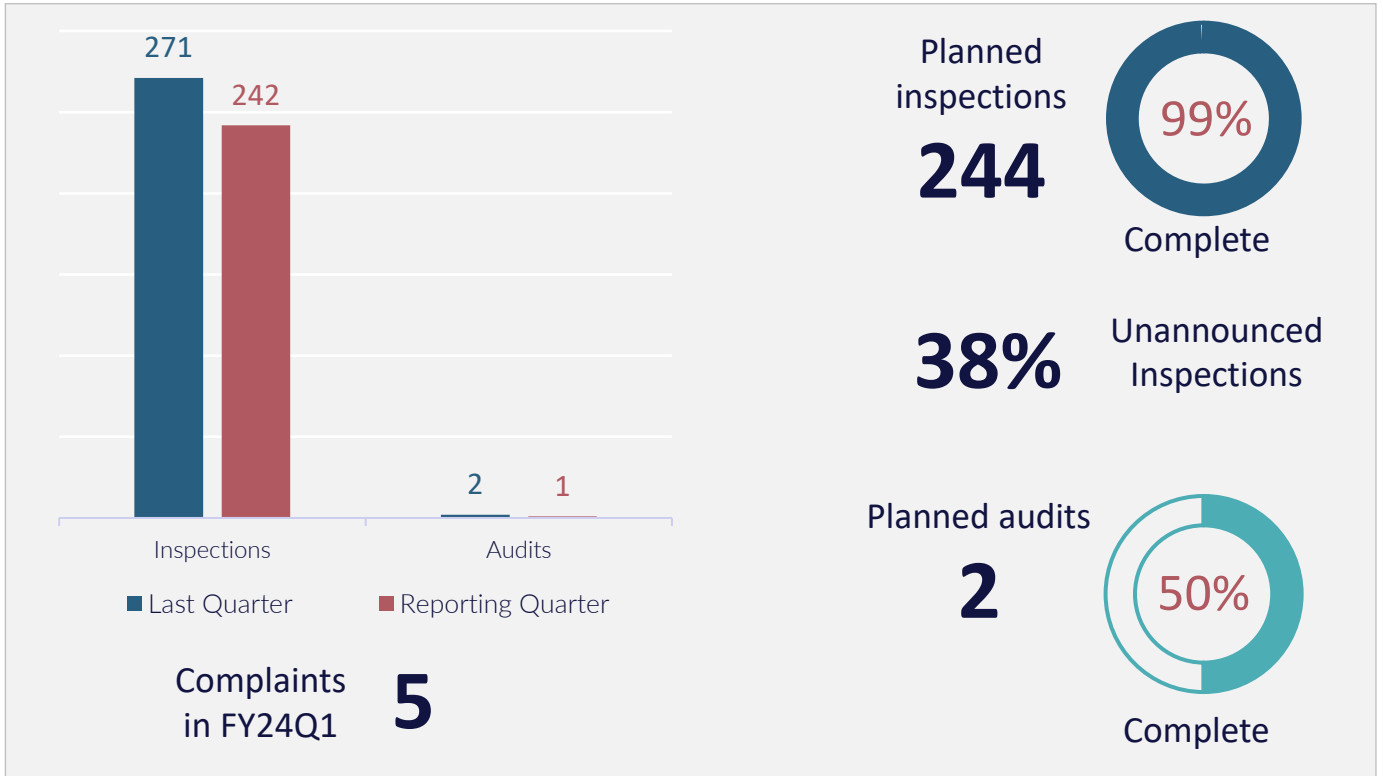
-  Speeding
-  Not wearing a seatbelt
-  Driving tired
-  Distracted driving
-  Drink or drug driving

On review of high potential incident and serious accident reports the same causal factors are also a reoccurring theme within the Queensland mining industry. Of significant concern is distracted driving and failure to wear seatbelts. As you meet for your safety resets, I would strongly encourage everyone to talk about vehicle interactions including single vehicle (both heavy and light) incidents and what controls are required to ensure the safety of mine workers.

These topics are particularly relevant as we move into the festive season when many of us will also be travelling on the roads with our families and friends. I would like to see all our mine workers go home safe so they can spend quality time with their families and friends over the festive season.



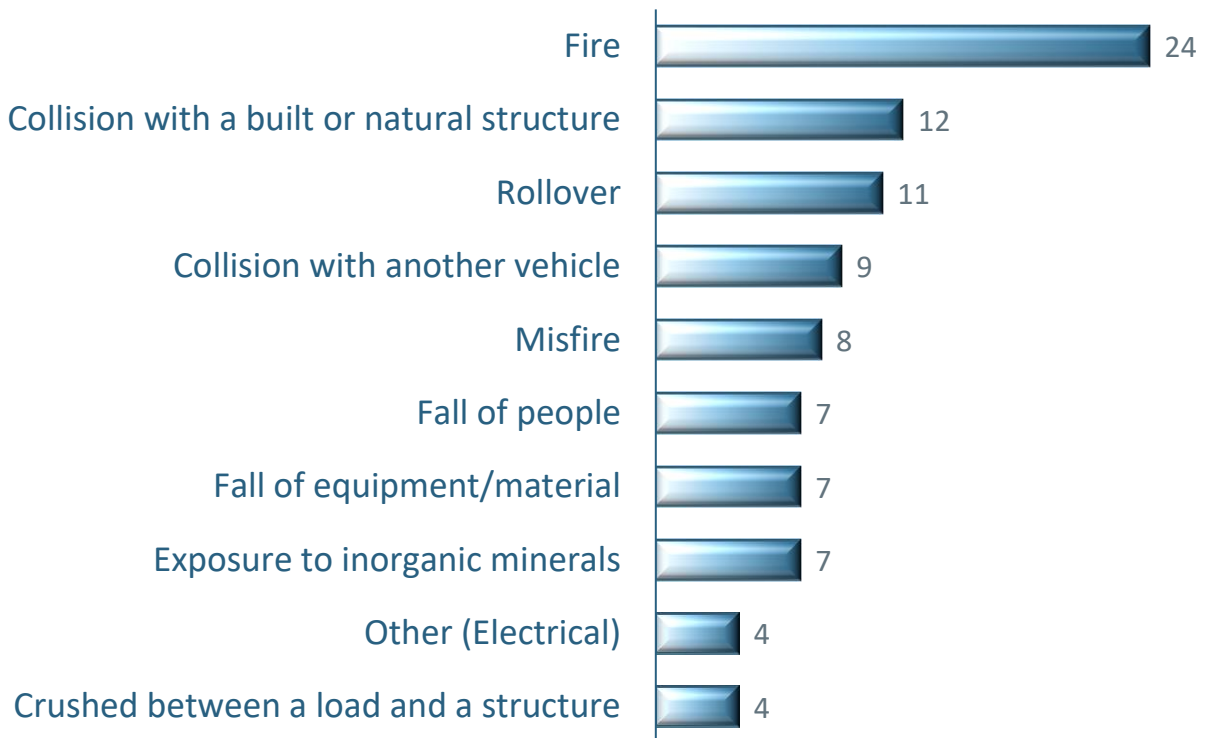
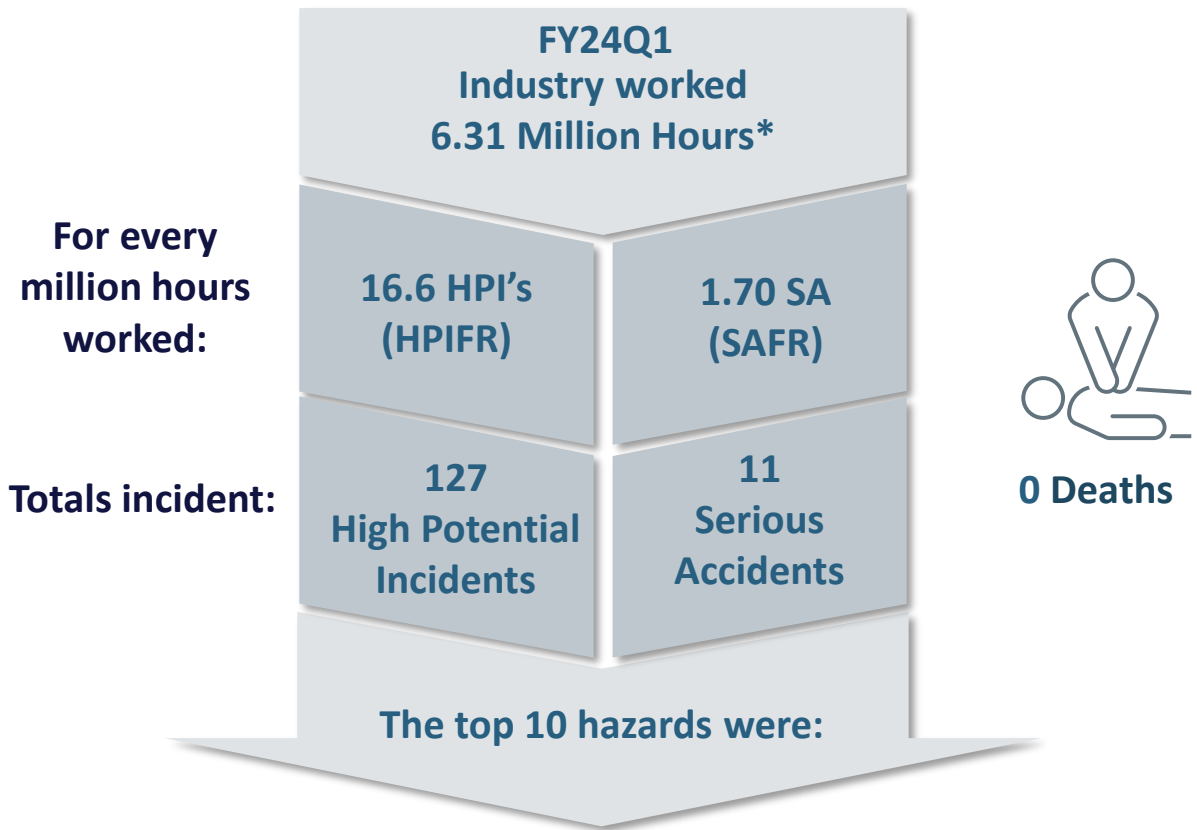
Regulator activity



Displayed data taken 9/10/2023



The numbers



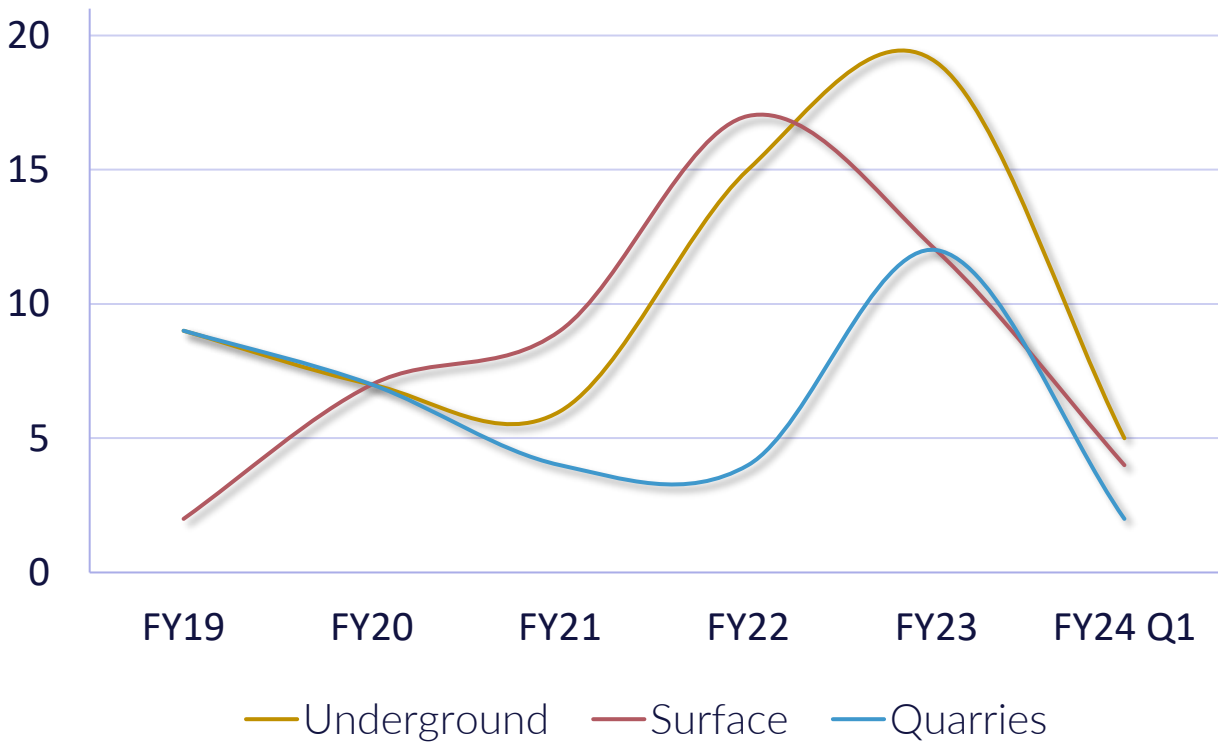
Data taken 9/10/2023

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

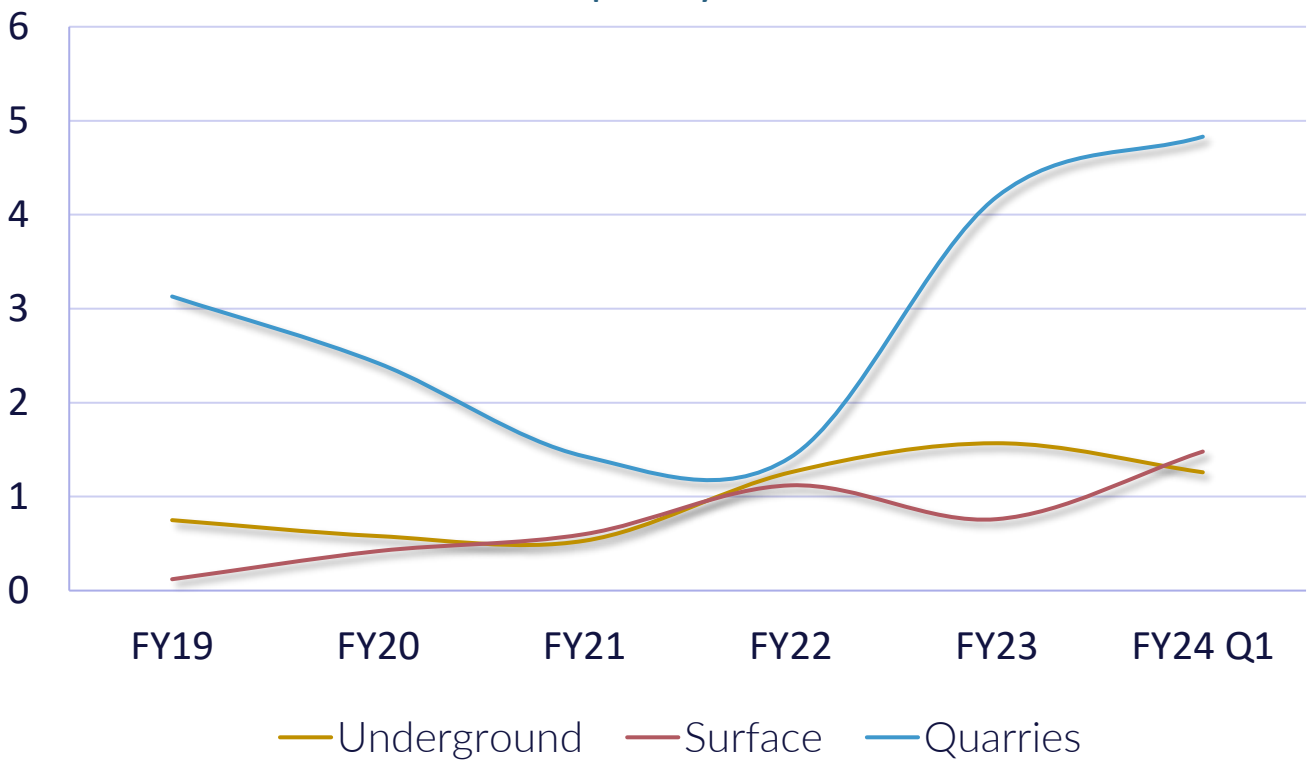


Trends

Serious Accidents FY 2019 to FY 2024 Q1

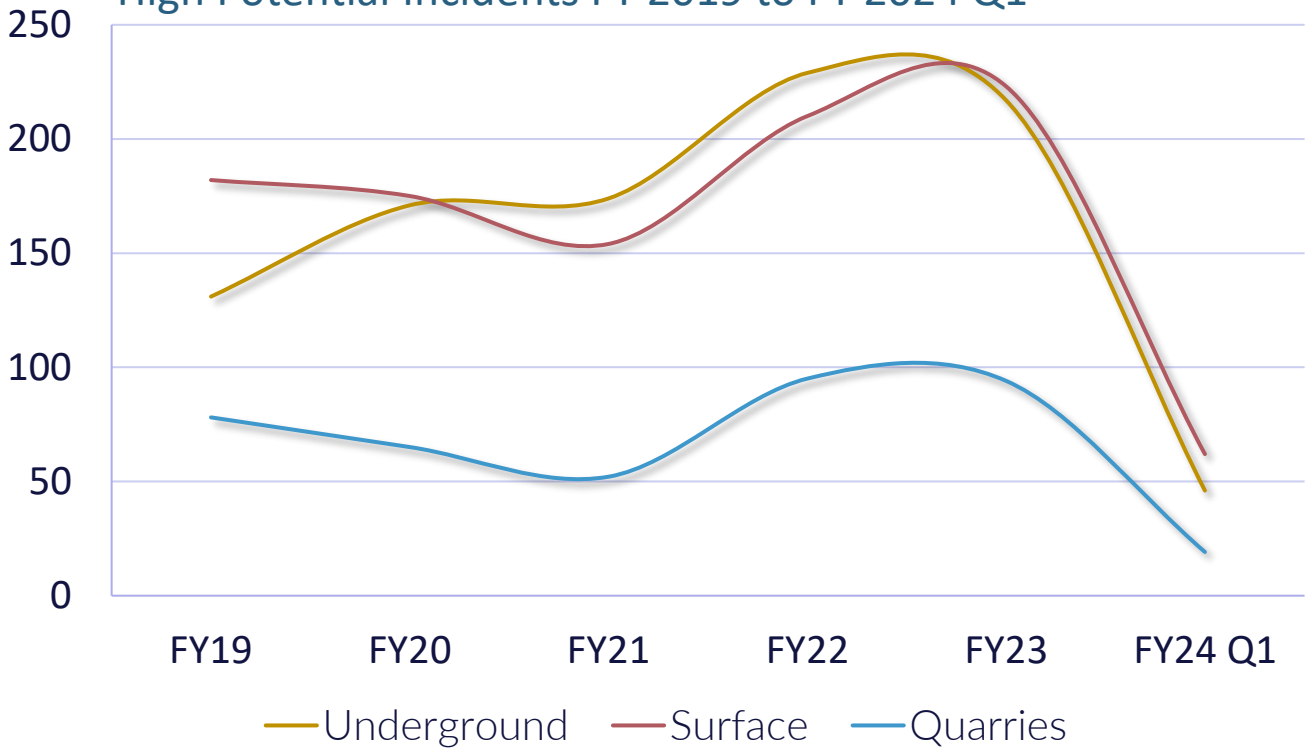


Serious Accident Frequency Rate FY 2019 to FY 2024 Q1

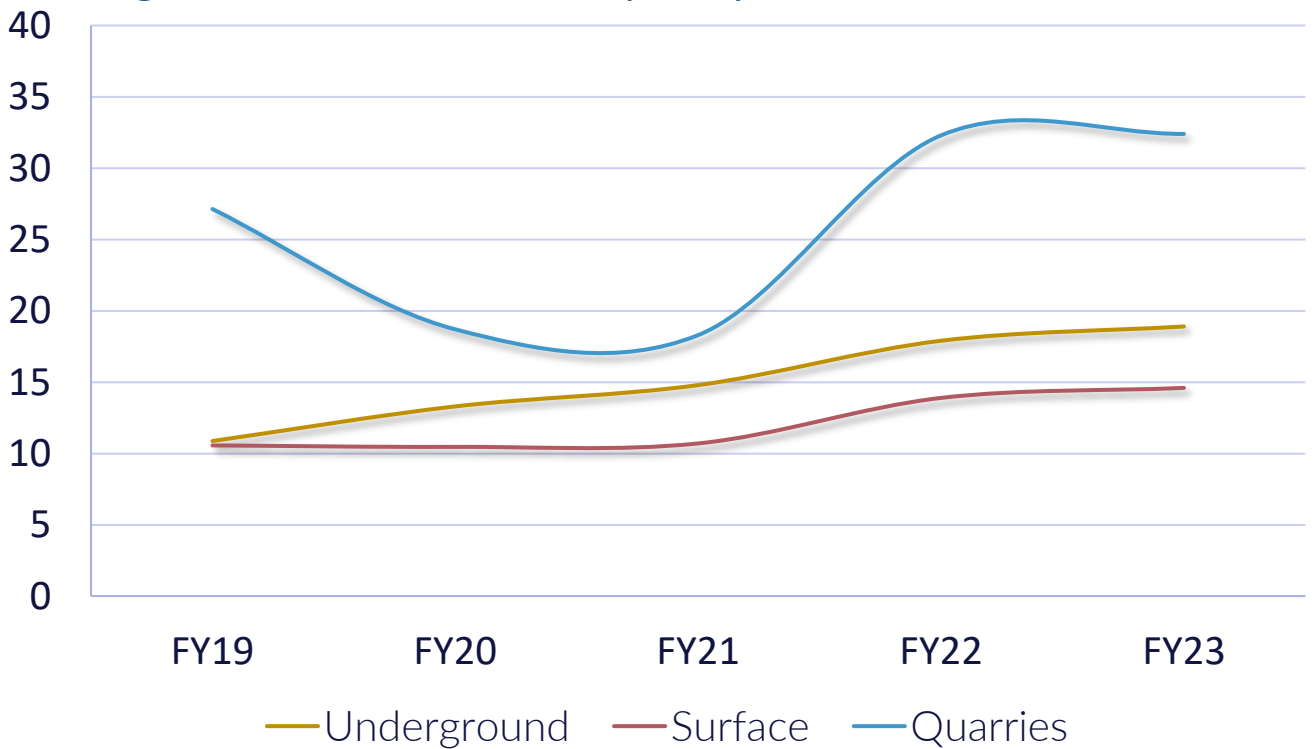


Trends

High Potential Incidents FY 2019 to FY 2024 Q1



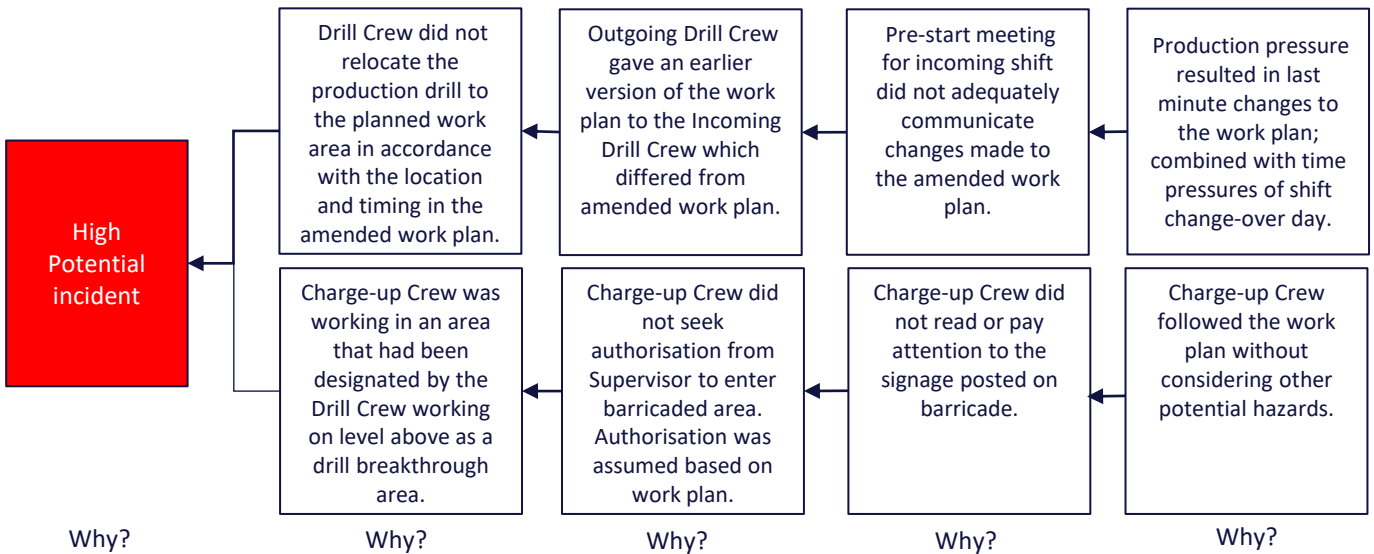
High Potential Incident Frequency Rate FY 2019 to FY 2023





Risk of unplanned detonation of explosives from incompatible operations.

An underground mine charge-up crew observed water running down the rill from the level above and on investigation found down-hole drilling had been occurring on the level above and that drill breakthrough had occurred approximately 4.5 metres ahead of where they were charging an up-hole slot.



Contributing Factors

- **Production pressure** – Blast damage identified during blasting clearances meant the work plan needed to be amended part-way through shift to maintain planned ore grade.
- **Time pressure** – Shift change-over day meant there was limited time to make the necessary changes to the work plan, check the work plan and adequately communicate the work plan before handover occurred.
- **Inadequate document control** – Process for controlling documented work plan did not ensure that plan was checked for errors and that the current version had been distributed to all affected workers.
- **Failure to identify breakthrough drilling hazard** – Charge-up Crew relied on work plan and did not read safety signage before removing a barricade.
- **Misunderstanding of entry authority process** – Charge-up Crew mis-interpreted the work plan as authority from the supervisor for the Charge-up Crew to enter a barricaded area.

Key takeaways

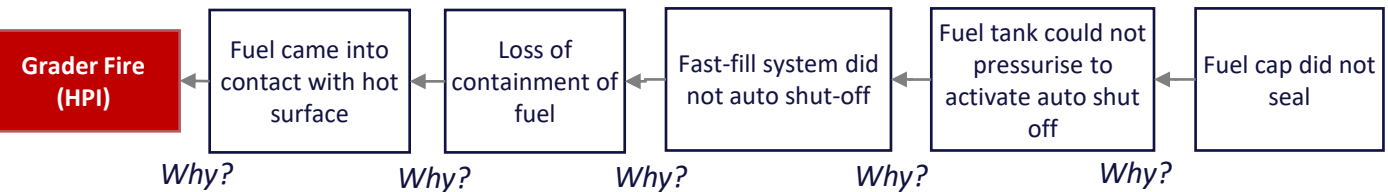
- For risk to remain at an acceptable level, the site senior executive must ensure that change management and communication processes are robust and cannot be compromised by production or time pressures.
- Supervisors must ensure a workplan quality assurance (verification) process as well as effective communication prior to the release of plans to workers.
- As the shift progresses, the work plan may not be a reliable source of information for assessing risk from incompatible operations. In underground mines where work could be occurring on the level above or the level below, a check for incompatible work should form part of the pre-task risk assessment.
- Work plans in underground mines should include activities being undertaken on levels above and below work area.
- A barricaded work area should not be entered unless the conditions for entry have been met and entry has been explicitly authorised by a supervisor.



Fire on Grader while refuelling using a fast-fill system

A worker operating a CAT 16H grader had finished grading site roads for the day. The worker parked the machine near the service truck and proceeded to refuel the machine using the fast-fill hose and wiggins-style fittings. After approximately a minute, there was a spray of fuel and the machine caught fire.

The worker and a colleague then extinguished the fire using a hand-held extinguisher. No persons were injured and there was minor damage to the machine.



Figures 1 & 2 – Photos showing the machine and fire location

Contributing Factors

Safety and Health Management System

- The hazards of refuelling the grader while hot using the fast-fill system had not been identified

Plant Maintenance

- There was no maintenance system in place to check the integrity of the fuel cap and seal
- Heat shielding had been fitted to the engine however gaps exposed hot parts

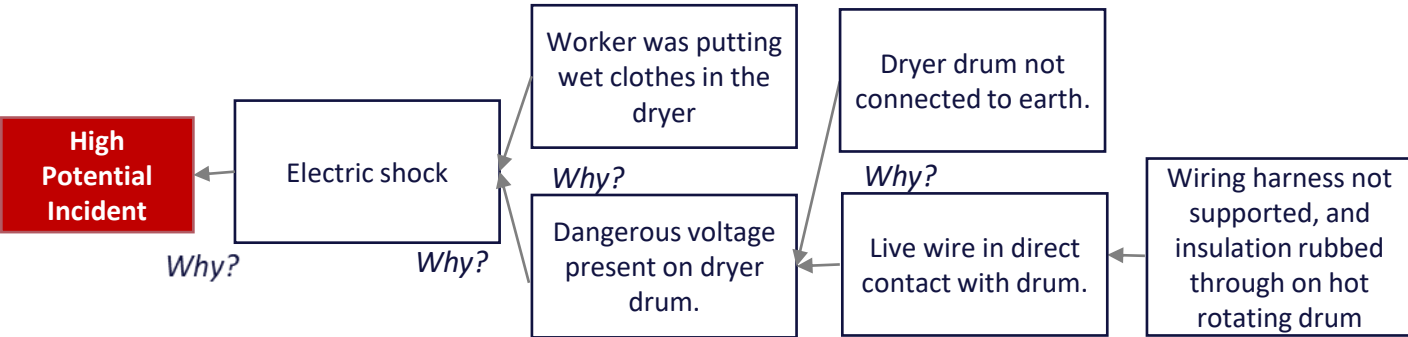
Key takeaways

- Some fast-fill systems rely on the ability to pressurise the fuel compartment to activate the auto shut-off mechanism. Components with poor seals can stop the auto shut-off mechanism
- Consider cold refuelling where possible
- This is not a new incident in the industry. Several safety notices are available regarding mobile equipment fires while refuelling
- The Australian Standard – AS 5062:2022 - *Fire prevention and protection for mobile and transportable equipment* should be used to undertake a fire risk assessment for each type and model of machine on site, with primary focus on preventative controls



Worker received electric shock while putting wet clothing in dryer

A worker received an electric shock while transferring wet clothes from a washing machine to a dryer in the camp laundry. The RCD protection device tripped, and the worker reported immediately to ERT for a medical assessment. No injuries were sustained.



Contributing Factors

Equipment

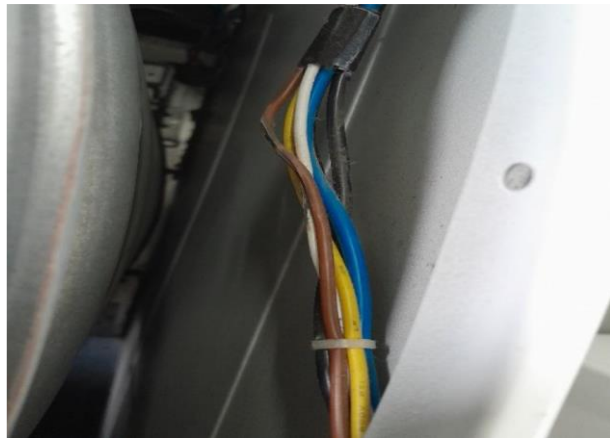
The wiring loom running down the front right-hand side of the machine was unsecured, touching the drum and the insulation had rubbed through, causing the drum to become live.

Engineering

The metallic drum of the dryer isn't earthed. The rotating part of the drum does not have a directly connected electric motor, or other electrical component that is required to be earthed.

Maintenance

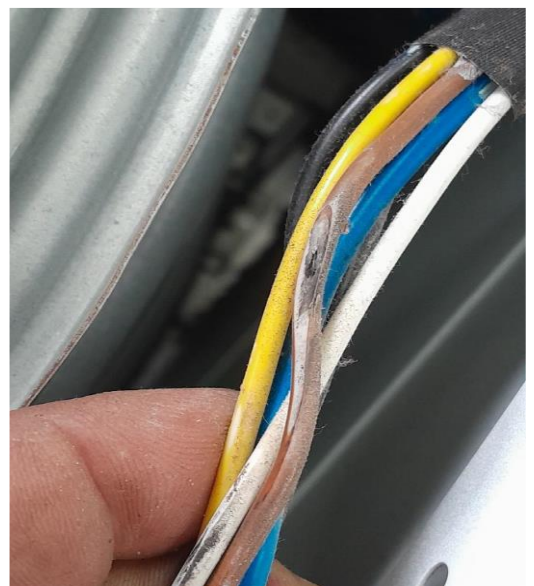
The appliance was inspected and tested 2 months prior to the incident, but the fault was not identified. The appliance had to be disassembled to identify the loose and damaged wiring.



Key takeaways






Metallic drums on belt driven Speed Queen dryers are not connected to the protective earthing system, so a fault to the rotating drum may not be disconnected automatically.

Earth leakage devices and RCDs must be routinely tested, to ensure that they will function correctly, to disconnect the power supply if an earth fault occurs. Where accessible metal parts of appliances are not earthed, they should be tested for insulation resistance to live parts, during routine insulation testing.





Interstate and around the world

Location	What has been happening
	<p>Chile launches probe into deadly mining accidents SANTIAGO, Aug 27 (Reuters) - Chile's government has sent officials to investigate accidents at two mines in the South American country's metropolitan and Tarapaca regions that killed three workers, it said on Sunday. Newly appointed mining minister Aurora Williams is closely monitoring the inspections, her ministry said in a statement. The country's mining and geology service over the weekend announced the deaths - all on Saturday - of two workers at Anglo American's (AAL.L) Los Bronces copper mine some 40 miles (64 km) from the capital, Santiago, and one at Minera ACF, which produces iodine and nitrate in the northern Tarapaca region. Reuters</p>
	<p>Alarming Rise in Miner Deaths on the Job in 2023, Warns MSHA - On Mining is becoming more and more dangerous in this country with a sudden and alarming rise in the number of miners who have died in 2023 from on-the-job injuries suffered in mining accidents. This is of particular concern for safety agencies and those advocating for work accident victims and their loved ones here in Illinois and Indiana, where mining is a critical part of our local economies. Read more Allen Law Group</p>
	<p>Support system failure and strata fall in main drift at an underground coal mine. Safety Alert No. 435 - On 21 May 2023 Coal Mine Workers (CMWs) were conducting remedial strata control work in the drift which serviced both the M&M (dolly car) and the conveyor. The CMWs observed the roof strata dribbling after undertaking scaling of the area. The CMWs waited to assess the area before moving in to bolt the location. A fall of ground occurred. No injuries were sustained.. Further information.</p>
	<p>Conveyor tail pulley fire Safety Alert Oct23 Underground mine workers investigating a burning smell discovered a fire on a longwall conveyor tail pulley. Workers tried unsuccessfully to extinguish 300 mm high flames with water hoses and fire extinguishers while the conveyor was running. The fire reignited when the cool water was removed. The conveyor was stopped, and the fire was extinguished.. Further information</p>
	<p>SafeWork SA reminds all mine operators to develop, implement and maintain safe systems of work following a serious injury to an underground miner on 3 August 2022. The incident occurred when a Jumbo operator was in the process of installing a dewatering pump using the Jumbo boom. Further information</p>





What are psychosocial hazards?

A psychosocial hazard arises from or relates to the design or management of work, a work environment, plant at a workplace, or workplace interactions and behaviours, and which may cause psychological and/or physical harm to workers. Common psychosocial hazards include:

- harassment (incl. sexual harassment)
- bullying,
- exposure to a traumatic event,
- remote or isolated work,
- violence and aggression.

Managing the risks of psychosocial hazards

The following resources are available to assist Operators and Site Senior Executives (SSE) reduce the risk of psychological and physical harms to workers from psychosocial hazards:

- [People at Work](#) a free, evidence-based psychosocial risk assessment tool.
- [Code of Practice](#) published by Workplace Health and Safety Queensland.
- [RSHQ's website](#) has further information about managing the risks of psychosocial hazards in the workplace.

Findings from a psychosocial risk assessment must be incorporated, where necessary, into a site's safety and health management system

Notifying RSHQ

Mining Operators and SSE have an obligation to report incidents involving psychosocial hazards. Workers also have the option of reporting complaints relating to psychosocial hazards, including sexual assault or sexual harassment.

Incidents can be reported to RSHQ by calling **1300 581 077**.

Further information is available on [RSHQ's website](#).



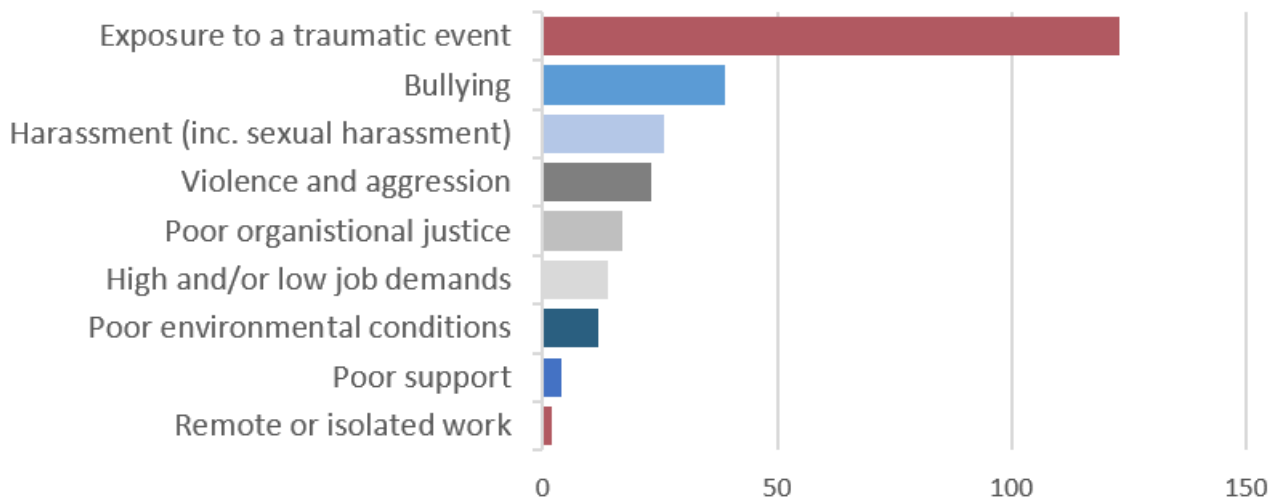


What are psychosocial hazards? *cont.*

Psychological injury claims in the Queensland resources industry

RSHQ has conducted analysis of de-identified workers' compensation data (including self-insurers) relating to 222 accepted psychological injury claims from 2018-19 to 2022-23. This data was specific to the Queensland resources industry and included claims from Queensland resources industry. A wide range of psychosocial hazards were identified in the claims, with exposure to a traumatic event featuring most prominently, followed by bullying and harassment, including sexual harassment (see Figure 1). In many claims, multiple psychosocial hazards were identified.

Figure 1: Psychosocial hazards identified in workers' compensation data



Support for workers experiencing psychological injury

If you, or someone you know, is experiencing a work-related psychological injury, there are a range of support options available. The [Workers' Psychological Support Service](#) is a free, confidential service available to all Queensland workers.

Further advice and support options are available on [RSHQ's website](#).

Please go to the Contacts & Links page for the full link addresses





Respirable dust letter



Resources Safety & Health
Queensland

GPO Box 1321
Brisbane QLD 4001
www.rshq.qld.gov.au

16 October 2023

To the SSE, Operator, Occupational Hygienist and Occupational hygiene technician

In August 2017, the [Guideline \(QGL02\) “Management of respirable dust in Queensland Mineral Mines and Quarries”](#) commenced.

This Guideline provides a way for a site senior executive (SSE) and other persons to:

- Identify, analyse and monitor risk associated with respirable dust hazards.
- Establish, maintain and assess effective controls associated with respirable dust hazards.

This Guideline applies to all Queensland mineral mines and quarries.

As part of the requirements of the guideline, it is mandatory for all sites to assess the risk of exposure to dust, in consultation with a competent Occupational Hygienist.

Workers' exposure to respirable dust must be monitored. Sampling is to be conducted in accordance with AS2985 - Workplace atmospheres – Method for sampling and gravimetric determination of respirable dust and the requirements of [QGL02](#).

With the recent reduction (and further proposed reduction) of the respirable crystalline silica (RCS) workplace exposure standard the discipline and attention to detail around sample collection must be scrupulous.

It has come to the attention of RSHQ that there are occupational hygiene sampling practices occurring which do not conform to the requirements of AS2985 or [QGL02](#).

These include, and are not limited to:

- Sampling timeframes less than 50% of the shift length. QGL02 Appendix 3, tables 3 & 5 clearly state that the sample duration:
 - Should be the full shift,
 - Shall be as long as possible,
 - Must be at least 50% of the shift.
- Sampling equipment being left with workers during afternoon/night shifts to remove for themselves at end of shift.
- Sampling equipment being left unattended in “clean rooms” for pumps to run out of battery or automatically turn off on a pre-set time duration.
- Flow rate checks for end of shift sampling occurring next day and not at end of sample collection – AS2985 clearly states at s.8.3(d) ‘At the conclusion of the sampling period prior to switching the pump off, record time, and immediately re-measure the flow rate through the sampling device’. Best practice is that the sampling head and pump should be attached and removed (with consent or at least under direct supervision) by the occupational hygienist/technician so the sampling head is placed correctly in breathing zone and the hose isn't kinked or cyclone inverted etc
- Contaminated blanks with no apparent attempt to identify the cause of the contamination



- Monitoring equipment being left on site for an untrained worker or SSE to collect samples to reduce cost. QGL02 has a sampling competency in Appendix 4 which must be adhered to without exception.
- Information collected prior to and during sampling is incomplete or erroneous.
- Incorrectly calculated shift adjustments.

Any respirable dust samples that are not collected in terms of AS2985 and [QGL02](#) will be considered invalid by RSHQ and will only be accepted as invalid data. Invalid samples cannot be used towards statistical analysis for the site to meet the requirements of QGL02.

If occupational hygiene technicians or occupational hygienists; or occupational hygiene consultancies listed on the [RSHQ register](#) are found to be undertaking these, or other non-compliant practices, they will be required to show cause including:

- Why that occupational hygienist or consultancy should not be removed from the register,
- Why all samples collected by that occupational hygienist/technician or consultancy should not be considered as potentially compromised and invalidated,
- Why the practice should not be reported to the Australian Institute of Occupational Hygienists (AIOH) for consideration under the AIOH ethics policy.

Please contact samantha.forster@rshq.qld.gov.au or mmqocchygiene@rshq.qld.gov.au for any questions

A handwritten signature in blue ink, appearing to read 'Hermann Fasching'.

Regards

Hermann Fasching

Chief Inspector of Mines / Chief Inspector of Explosives

 Key engagement & activities

KEY TRAINING – BOE LAW EXAM SCHEDULE FY24Q1



October	Brisbane	Monday 9	9:00AM
	Dysart	Friday 13	9:00AM
	Mackay	Wednesday 18	9:00AM
	Moranbah	Thursday 14	9:00AM
	Rockhampton	Thursday 5	9:00AM
November	Brisbane	Monday 6	9:00AM
	Dysart	Friday 17	9:00AM
	Mackay	Wednesday 15	9:00AM
	Moranbah	Thursday 9 & 30	9:00AM
	Rockhampton	Thursday 2	9:00AM
December	Brisbane	Monday 4	9:00AM
	Dysart	Friday 8	9:00AM
	Mackay	Wednesday 20	9:00AM
	Moranbah	To be Advised	9:00AM
	Rockhampton	Thursday 7	9:00AM

Contact & Links



Townsville: (07) 4447 9282

Mt Isa: (07) 4745 4117

Brisbane: (07) 3330 4273

www.rshq.qld.gov.au

Psychosocial hazards - Links

People at Work	https://www.peopleatwork.gov.au/
Code of Practice	https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice/managing-the-risk-of-psychosocial-hazards-at-work-code-of-practice-2022
RSHQ Website - Managing psychosocial hazards	https://www.business.qld.gov.au/industries/mining-energy-water/resources/safety-health/occupational-health-risks/managing-psychosocial-hazards
RSHQ Website - Sexual assault and sexual harassment information	https://www.business.qld.gov.au/industries/mining-energy-water/resources/safety-health/occupational-health-risks/sexual-assault-harassment
Workers' Psychological Support Service	https://wpss.org.au/

Incidents can be reported to RSHQ by calling 1300 581 077

