Resources Regulator
Department of Regional NSW

Quarterly safety report

January to March 2024

resourcesregulator.nsw.gov.au

NSW GOVERNMENT

About this report

This quarterly health and safety performance report has been prepared by the NSW Resources Regulator for mine and petroleum site operators in NSW. It contains industry and sector specific information, in addition to information regarding hazards. Wherever possible, trends and patterns have been identified.

The report references sector information about the number of 'active' mines. Active mines have the status: open, intermittent, under care and maintenance, open tourist mines, planned and small-scale titles that are current or pending.

The report also contains information on matters of concern to the Regulator including controls and actions that may be implemented to prevent or reduce the likelihood of future safety incidents.

Operators should use the sector specific information, emerging issues and good practice examples presented in this report to assist them in improving safety management systems and undertaking risk assessments at their sites. This report refers to the date the incident was notified rather than the date the incident took place.

Document control

Published by NSW Resources Regulator
Title: Quarterly safety report – January to March 2024
First published: May 2024
Authorised by: Executive Director, NSW Resources Regulator
CM9 reference: RDOC24/40103

Amendment schedule

Date	Version	Amendment
May 2024	1	First published

Contents

Executive summary

This report is prepared to assist mine and petroleum site operators meet their obligations under relevant work health and safety legislation, including the *Work Health and Safety (Mines and Petroleum Sites) Act 2013*. It is also a way in which the NSW Resources Regulator monitors progress in implementing our risk-based compliance and enforcement strategy.

As a high-hazard regulator, we focus on compliance with legislative requirements associated with principal and other high-risk hazards, including mechanical and electrical energy and explosives. This report highlights dangerous and high potential incidents, in addition to incidents where a serious injury occurred. 'Roads or other vehicle operating areas' and 'fire or explosion' are principal mining hazard classifications that feature regularly in incident notifications to the Regulator.

As well as providing an overview of incidents across the mining industry, this report looks at the safety performance and regulatory activities of 6 sectors: coal, large (non-coal) mines and quarries, small mines and quarries (including gemstones), opal mines, petroleum and geothermal sites, and exploration sites.

This report also provides information on significant mining events in Australia and globally, and summarises safety incident notifications, compliance activities and outcomes for Quarter 3 (January to March) of financial year (FY) 2024. For selected measures, data is analysed over a 15-month period from January 2023 to March 2024.

In this quarter, there were a total of 533 incident notifications received — a 4% decrease from the same period in FY 2023 and 7% decrease from the previous quarter.

Incident notifications for the large mines sector increased by 15% from the previous quarter. Conversely, notable decreases occurred in incident notifications for coal mines (11%) and small mines (27%).

Assessments decreased by 6% overall this quarter (including a 19% decrease in reactive desktop assessments — partly explained by a drop in incident notifications), while proactive site assessments increased by 29%.

Quarterly snapshot

0 Work-related deaths

34 Serious injuries or illnesses

96 Dangerous incidents

100 Potentially dangerous incidents

165 Other high potential incidents

533
Incident notifications received*

36 Medical treatment injuries or illnesses

100 Lost time/restricted duty injuries or illnesses

2 Explosives Reg incidents

0 Events at a mine rescue station

* By requirement to report as notified by mines. The actual number of incidents, injuries and illnesses recorded may differ from original incident notifications following assessment of the notified event.

Incident notifications received by sector and operation type

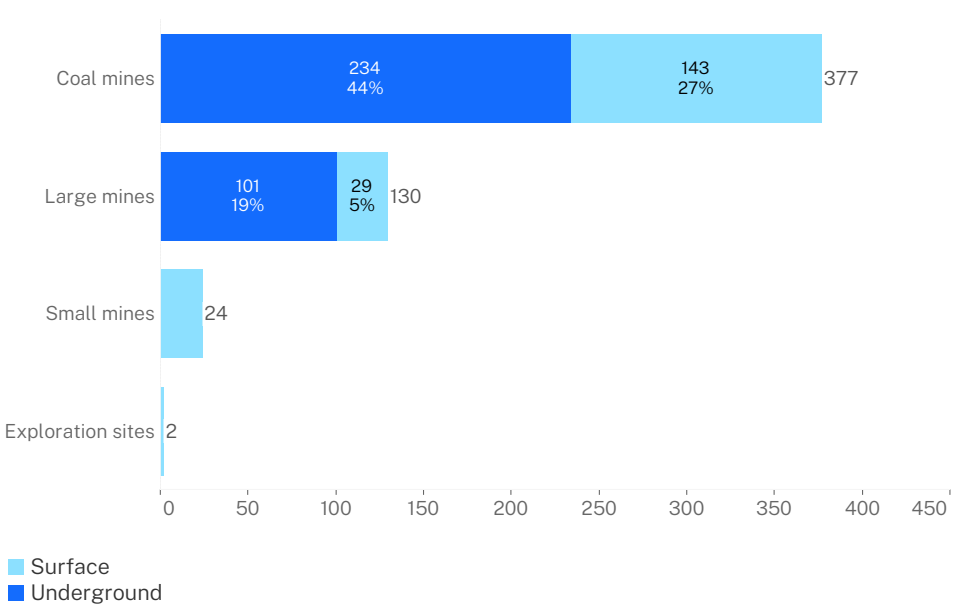
Coal mines
377
down from 424

Large mines
130
up from 113

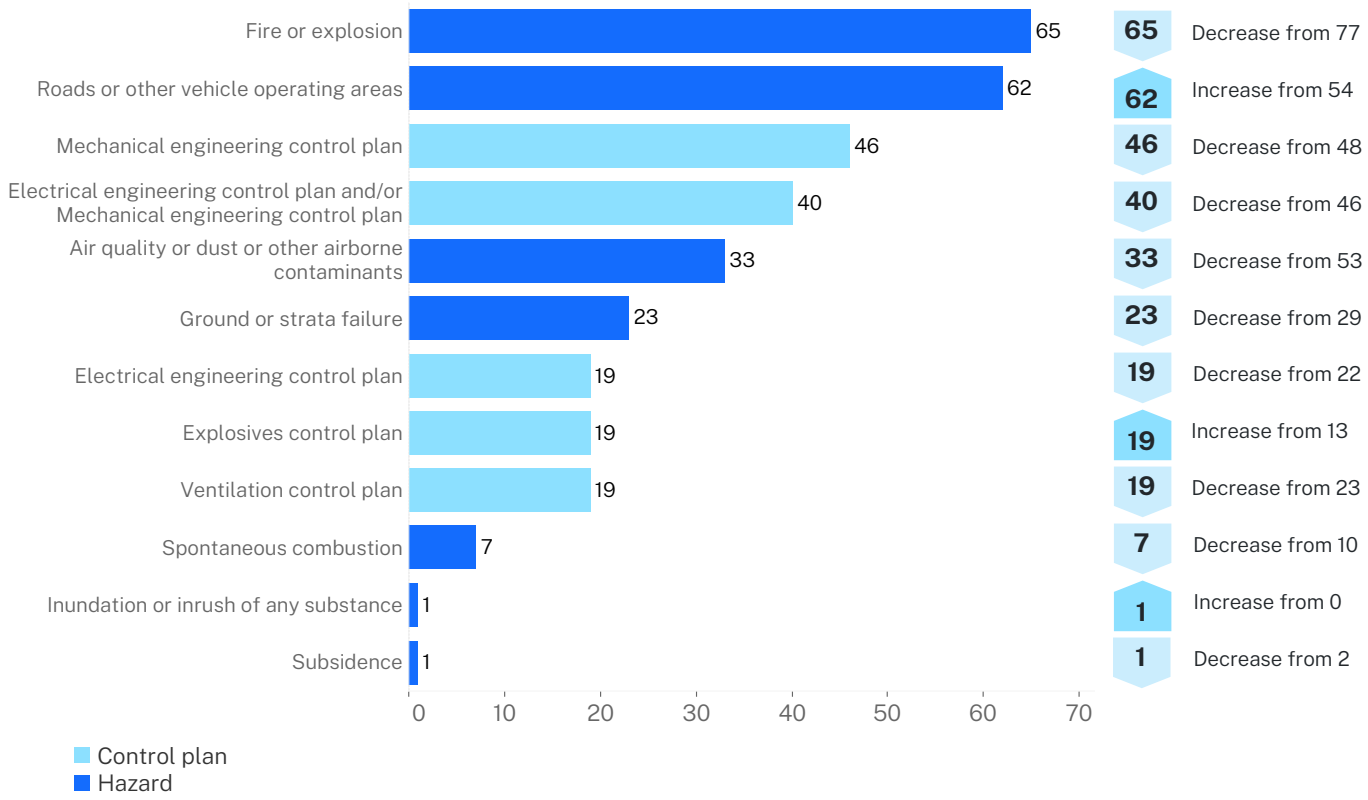
Small mines
24
down from 33

Opal mines
0
down from 1

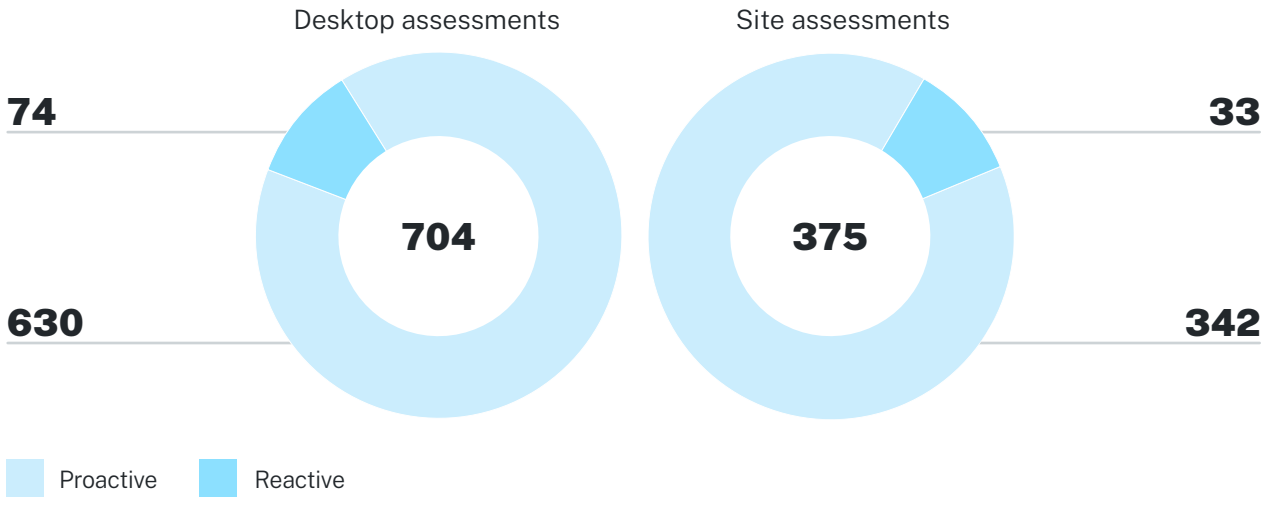
Exploration sites
2
up from 1



Incident notifications classified by principal mining hazard or principal control plan

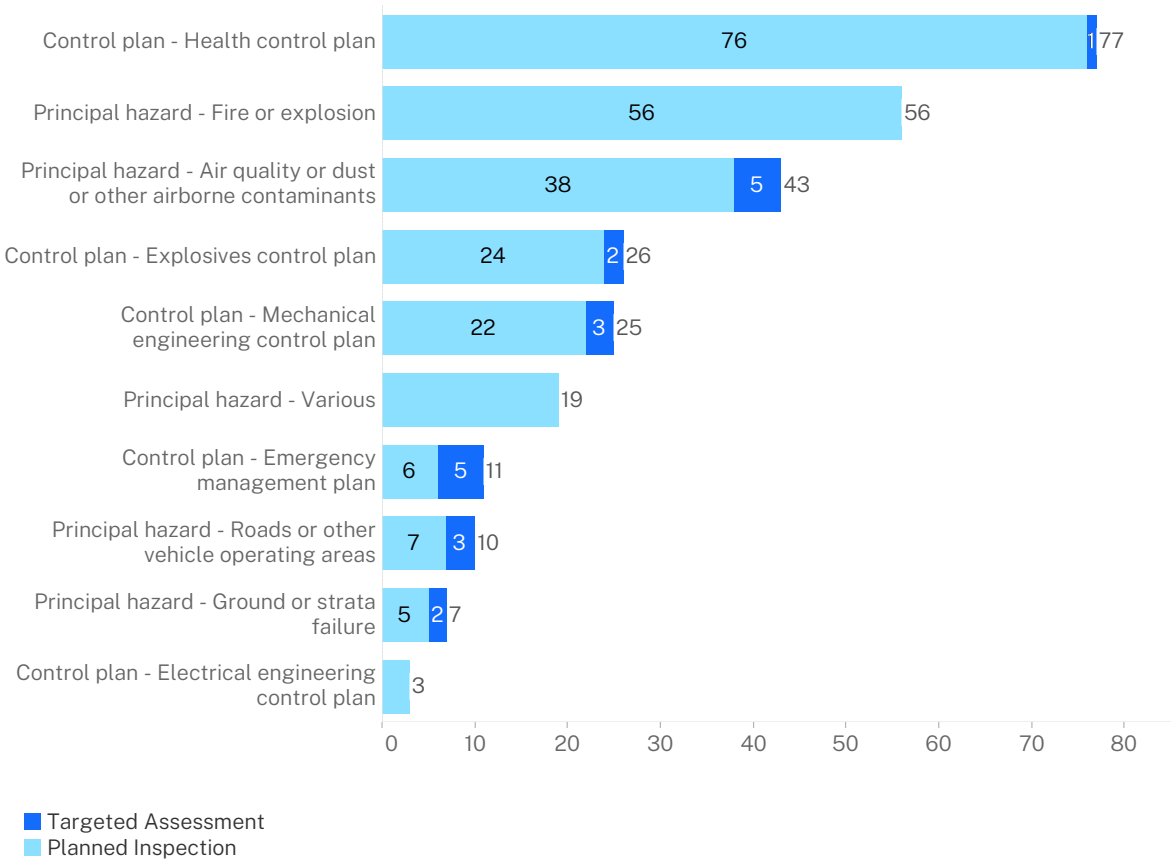


1,079 Assessments commenced



Coal mines	Large mines	Small mines	Petroleum & geothermal sites	Opal mines	Exploration sites	Non-mines
341 down from 397	171 up from 113	130 up from 103	16 up from 9	4 up from 2	7 up from 4	410 down from 514

Programmed site assessments conducted by principal mining hazard and principal control plan



397 Notices issued

1
WHSA s198
non-disturbance notices

36
WHSA s195
prohibition notices

224
WHSA s191
improvement notices

136
WHS(MPS)A s23
notices of concern

National and international significant events

The Regulator is committed to sharing safety information about significant mining-related events and fatalities to increase industry awareness.

The following list includes safety alerts (including fatalities) and bulletins that occurred between 1 January and 31 March 2024.

The incidents selected were based on their relevance to equipment and processes commonly used across the NSW mining industry.

Fatal injuries

Australia

Queensland

On 15 January 2024, two men were working in the fuel-bay area of the open-cut mine around midday when an interaction between 2 vehicles left a 27-year-old coal mine worker with significant crush injuries. The coal mine worker was taken to hospital but later died from his injuries.

Refer to RSHQ article dated 16 January 2024.

Victoria

On 13 March 2024, one worker died and another was seriously injured in a mine collapse at Mount Clear, near Ballarat. It is understood by WorkSafe that workers were undertaking hand-mining operations when 2 of them were trapped by a rock fall. A 37-year-old man died, while another worker was rescued and airlifted to hospital with serious injuries.

Refer to WorkSafe Victoria news article dated 14 March 2024.

International

Chile

On 8 March 2024, a 30-year-old heavy equipment worker at the Radomiro Tomic mine was killed whilst operating an extraction truck in an open area when it suddenly caught fire. Activities in the area were immediately suspended, the competent authorities notified and an investigation started to determine the causes of the event.

Refer to Codelco media release dated 8 March 2024.

China

On 12 January 2024, 8 people were listed as dead and 15 missing after an accident occurred Friday afternoon in a coal mine in the city of Pingdingshan, central China's Henan Province, local authorities said. The accident happened at 2:55 p.m. in a coal mine of the Pingdingshan Tianan Coal Mining Company Ltd. Preliminary investigations showed that it was caused by a coal and gas outburst. A total of 425 people were working underground when the accident took place, and 380 of them have been lifted out of the mine.

Refer to Xinhua news report dated 13 January 2024.

India

The state geology and mining (G&M) department has determined the cause of an accident at a rat-hole mine in Ruchayan village under Bhandari sub-division, Wokha district on 25 January 2024 was due to fire and explosion of methane gas. In a press release, G&M director Dr Kenyelo Rengma said that a team of G&M officials visited the mining site on 26 January to assess the cause of the accident where 6 labourers died and 4 were injured. The director stated that fire and explosion of methane gas could have occurred due to frictional spark while using a portable handheld drilling machine. On inspection and as per the record of the department, the director said the mine was an illegal mine (rat-hole mine 4ft x 4.5ft), which was being operated by locals in collaboration with some non-locals.

Refer to Nagaland Post news article dated 1 February 2024.

Malaysia

On 6 March 2024, an excavator driver was killed after being crushed in a landslide at a mine in Jalan Sungai Kelambu, Banting. The 38-year-old victim from Tanjong Karang died at the scene. Selangor Fire and Rescue Department Assistant Director of Operations, Ahmad Mukhlis Mukhtar said a team of firefighters from the Banting Fire and Rescue Station were dispatched to the scene after receiving an emergency call at 12.34pm. He said further examination found a man buried up to his chest in the landslide at the mine. “The victim was successfully extracted by firefighters within 15 minutes,” he said in a statement. The victim was later confirmed dead by Ministry of Health (KKM) personnel before being handed over to the police for further action.

Refer to Malay Mail article dated 6 March 2024.

Portugal

On 12 February 2024, Lundin Mining Corporation reported a fatality at its Neves-Corvo mine in Portugal. An employee — while operating a piece of equipment underground — was tragically involved in a fall of ground that resulted in a fatal accident. Lundin Mining President and CEO Jack Lundin stated “We are deeply saddened by this tragic incident. Our sincere thoughts and support are with our colleague’s family and co-workers during this difficult time.”

Refer to Lundin company statement dated 12 February 2024.

United States of America

- On 2 January 2024, the driver of an over the road tractor-trailer haul truck died when the trailer tipped over onto the cab of the tractor. The driver was dumping part of the load of gravel from the trailer.

  Refer to MSHA fatality alert dated 2 January 2024.

- On 29 January 2024, a miner died when his haul truck travelled over the edge of a stockpile and overturned.

  Refer to MSHA fatality alert dated 29 January 2024.

- On 1 March 2024, a miner died after a metal slurry pipe struck him. The miner was removing the last bolt connecting 2 metal slurry pipes when the pipe broke free and swung in his direction.

  Refer to MSHA fatality alert dated 1 March 2024.

Alerts, bulletins, fact sheets and incident information releases

New South Wales

Safety alerts and bulletins

- **Wheel rim ejected during tyre inflation**

  The rim of a haul truck wheel assembly ejected from the tyre on Friday 15 December 2023 at 5.45am. The wheel assembly was on the mine's workshop floor. The tyre was being inflated after having the rim o-ring seals replaced. The rim weighing around 2.5 tonnes was ejected about 1.5 metres above the tyre. The rim ejection incident occurred in the tyre bay, with the technician about 5 metres from the tyre. The pressure in the tyre was reported to be just above 10 psi at the time. The wheel assembly had been removed from a haul truck during maintenance and the tyre was deflated and stored. The incident occurred during the process of fault-finding the leak.

  Preliminary findings indicate that during the process of replacing the o-ring, the tyre was rotated twice through 180 degrees. Each time it was dropped about 300mm to the floor, due to the rotational limitations of the tyre handler. The impact with the floor appears to have dislodged the components and lock ring. This appears to have allowed the rim to dislodge and be ejected during inflation.

  Refer to SA24-01 Wheel rim ejected during tyre inflation dated 22 February 2024.

- **Bulldozer incident increase**

  The NSW Resources Regulator has observed a concerning upward trend in reported incidents involving bulldozers. There have been 66 incidents involving bulldozers reported to the Regulator since January 2022. On 56 occasions, there was physical equipment damage. An additional 10 incidents reported as a potential for injury or illness. The data cannot reflect on the number of near misses that have gone unreported. The Regulator's review identified the following contributing factors:

  - operators have not identified all the hazards in their workplaces
  - operators and supervisors have not maintained standards in their work areas including windrows, demarcation of work zones, light vehicle park-up areas and exclusion zones
  - operators have not maintained control of dozer work areas
  - a lack of positive communication between operators that is repeatedly a factor in collisions
  - several instances when operators and supervisors did not identify the need for positive communications.

  Refer to SB24-01 Bulldozer incident increase dated 27 March 2024.

Fact sheets

- **Human and organisational factors data review**

  An independent review has found that 74% of human behaviours associated with safety incidents and accidents over the past 5 years were due to unintentional error by individual workers. 23% of behaviours were assessed as intentional or routine non-compliances. There were no instances of intentional harm or sabotage.

  The NSW Resources Regulator engaged the Keil Centre to undertake a comprehensive, independent data review of all human and organisational factors analyses undertaken by the Regulator between August 2018 and May 2023. The data comprised human and organisational factors analyses related to 267 notifiable incidents with 180 incidents at surface mines and 87 at underground mines.

  The Regulator's human and organisational factors analysis tool (S-HOF) was designed in 2017 to analyse the human behaviours associated with safety incidents and accidents. It considers both unintentional behaviours (errors) as well as intentional non-compliances with rules or established processes. It also accounts for the performance shaping factors (from individual through to organisational level factors), which influenced the behaviour. The purpose of the S-HOF analysis was to identify and implement systemic changes that would help reduce unsafe human behaviours that lead to adverse safety incidents.

  Refer to Fact sheet – HOF data review dated 24 January 2024.

Reports

- **Investigation Information Release — Two workers injured when truck tyre explodes**

  During maintenance work at the quarry workshop, a flat tyre was identified on the inside rear axle of a B-double semi-trailer truck on 8 February 2024. Two quarry workers removed the tyre and wheel assembly from the truck's trailer axle so it could be inflated and inspected for damage and/or leaks. They seated the tyre bead onto the wheel rim using a hand-held compressed air tank to create a sufficient seal that caused the tyre to inflate.

  The workshop's compressed air line system continued to pump air into, and inflate, the tyre. Shortly after, there was a loud bang and the 2 workers at the front of the tyre were hit with debris and explosive air pressure. The air pressure knocked one worker to the floor and tore off his shirt. He was later found to have suffered perforated ear drums, hearing loss, cuts and bruises. The other worker was hit directly in the face with debris and later found to have suffered an eye injury. Inspection of the tyre after the incident identified a rupture of its side wall.

  Refer to Investigation information release — Two workers injured when truck tyre explodes dated 29 February 2024.

- **Investigation information release — Worker injured when struck by forklift attachment**

  An apprentice mechanic was conducting an inspection of a tipper truck and dog trailer in the quarry's workshop on 1 March 2024. The hydraulic tilt lift cylinder detached from its mount as the worker tilted the cabin forward. This caused the front and top of the cabin to impact the ground. The quarry operator's managing director, safety officer, mechanic and apprentice mechanic planned to lift the cabin to a position that would permit the hydraulic arm to be reattached on 2 March 2024. It was determined that the safety officer would operate the quarry operator's forklift to perform the task. It had a rated load of 2,500 kilograms.

  A 2.9 metre-long jib was attached to the forklift's tynes. The jib was previously used at the quarry to lift items that were much lower in weight than the truck cabin. Chains were used to connect the jib to 2 connection points on the underside of the cabin. No specific assessment was undertaken to determine the effect that using the jib attachment would have on the forklift's rated load, or the lifting load of the truck cabin.

  The cabin was initially raised about 0.5 to 1 metre above the ground. The mechanic was standing in close proximity to the forklift and jib attachment, approximately 400 millimetres from the truck's front offside bumper. The apprentice mechanic stood on the truck's offside, about 1.3 metres from where the cabin had impacted the ground. The managing director stood near the truck's front nearside wheel. The safety officer raised the jib approximately 200 to 300 millimetres above its original raised position. The jib was approximately 2.5 metres above the ground at this point.

  The headboard detached from the body of the forklift. The forklift's tynes also detached from the headboard, causing the tynes and the forklift end of the jib to swing forward and down. The far end of the jib was suspended by the chains that remained attached to the underside of the truck's cabin. The end of the jib that was connected to the forklift's tynes struck the mechanic's leg, causing him to move to the ground. The tynes remained engaged in the jib pockets and hit the ground in close proximity to the mechanic. The headboard from the forklift and the jib were suspended above the mechanic as he lay on the ground. The worker was treated at the scene and then taken to Lismore hospital where he was admitted. He underwent surgery for fractures to his leg and treatment for a spinal injury.

  Refer to Investigation information release — Worker injured when struck by forklift attachment dated 25 March 2024.

- **Mine safety performance report 2022–23**

  This report provides an overview of the NSW mining industry's health and safety performance for financial year 2022–23, as reported to the NSW Resources Regulator. It compares safety indicators over the 10 years from 2013–14 and includes details of selected regulatory activities over the same period. In this report, the NSW mining industry includes the coal, metalliferous, extractives, petroleum and geothermal, opal and exploration sectors.

  For mine and petroleum site operators, this report presents measures to guide future improvements in health and safety performance and to benchmark performance against other operators in their sector. It also provides a valuable source of information on the types of injuries occurring to guide regulatory activity. Work health and safety regulatory intervention has been in place in the Australian mining industry for more than a century.

  Significant ongoing efforts continue by the NSW mining industry and the Regulator to minimise the health and safety risks to workers. In 2022–23 there was one fatality, 83 serious injuries, 205 lost time injuries and 767 total recordable injuries reported to the Regulator.

  Refer to Annual mine safety performance report 2022–23 dated 8 January 2024.

- **Consolidated report — Emergency first response, underground metalliferous mines March to September 2023**

  A crucial part of the NSW Resources Regulator's Incident prevention strategy involves; targeted assessments and planned inspection programs — focusing on assessing an operation's control of critical risks through evaluating the effectiveness of control measures in the mine's safety management system and priority programs — proactively assessing a topic that is an emerging risk across the industry, which is driven primarily from incident data as well as evolving industry trends. Although these topics may also be contained within the Regulator's planned inspection programs, the aim of compliance priority programs is to gather further information and knowledge about how the industry is managing and controlling a specific issue.

  The Regulator has developed a bowtie hazard management framework and standardised assessment checklist for each program plan. Under each program plan, the effectiveness of the safety management system at each mine site is assessed against a standard set of control supports and critical controls. The emergency plan at underground metalliferous mines manages all aspects of an emergency response. An inspection program was developed to assess how mines are prepared to manage an emergency.

  For the 12 underground metalliferous mines, there were 156 individual assessment findings and of those 35 assessment findings required enforcement action will be taken. The assessment program was conducted between March and September 2023.

  Refer to Consolidated report – Emergency first response, metalliferous underground mines March to September 2023.

Queensland

- **Faulty alternator catches fire on SSAN transport**

  An AB-triple combination fully loaded with security sensitive ammonium nitrate (SSAN) emulsion, parked at the mine security gate, had a failed alternator bearing resulting in a fire. The operator called an emergency as per mine site procedure, and successfully deployed a fire extinguisher against the fire. The investigation identified that a failed bearing in the original equipment manufacturer (OEM) fitted alternator caused the fire. This incident highlights the potential for the alternators to prematurely fail, leading to an unexpected fire. Further enquiries by RSHQ identified 5 other cases of similar bearing failure in alternators with less than 12 months service.

  Refer to RSHQ Explosives Inspectorate Alert No.114 V 1 Faulty alternator catches fire on SSAN transport dated 9 January 2024.

- **Coal mine worker struck by rotating dragline**

  On Sunday 14 January 2024, a worker was struck by a rotating dragline upon completion of cable relocation works, within the operational swing boundaries of the dragline. The worker luckily avoided serious injury. In 2021 a coal mine worker died after being injured in a similar incident. Preliminary investigations suggest the worker undertook cable relocation works, while the dragline was stationary, but the worker has re-entered or remained in the operational swing boundary when the dragline became operational as they were checking the shoe clearance over the cable. The worker was struck by a dragline light on the underside of the house area.

  Refer to RSHQ Coal Inspectorate Alert No. 444 V 1 Coal mine worker struck by rotating dragline Coal dated 8 February 2024.

- **Electric shock from accessing a high voltage enclosure**

  On Thursday 15 February 2024, an electrical worker at an underground coal mine in the Bowen Basin gained access to an 11kv electrical enclosure on a transportable substation. After accessing this enclosure an arcing event occurred and the worker received burns to their left arm and right hand. The worker was admitted to hospital for further treatment. It appears the worker opened and entered an 11kv enclosure without following site procedures for access to high voltage conductors. Initial investigations show that high voltage isolation and access procedures may not have been followed and testing prior to accessing electrical enclosures may not have been adhered to.

  Refer to RSHQ Coal Inspectorate Alert No.446 V 1 – Electric shock from accessing a high voltage enclosure dated 24 February 2024.

Western Australia

- **Hydraulic fluid contamination resulting in uncontrolled movement of elevating work platforms**

  WorkSafe is aware of recent incidents where hydraulic fluid contamination has resulted in the uncontrolled movement of the basket on elevating work platforms (EWPs). This includes the loss of performance related to platform level and jib function. Hydraulic fluid contamination can occur from the use of incorrect oil, dirt entering the hydraulic system or metallic fragments in the hydraulic system due to wear or damage. The maintenance environment, especially when servicing in the field, can cause an increased risk of contamination when the hydraulic system is open. Correct storage of hydraulic components is important to minimise the risk of contamination.

  Refer to WorkSafe WA health and safety bulletin No. 15 Hydraulic fluid contamination resulting in uncontrolled movement of elevating work platforms dated 1 March 2024.

Notifiable incidents relating to hazards

The Work Health and Safety (Mine and Petroleum Sites) Regulation 2022 (the Regulation) identifies principal mining hazards and principal control plans for special consideration.

Principal mining hazards have a reasonable potential to result in multiple deaths in a single incident or a series of recurring incidents.

Principal control plans cover risks to health and safety from hazards, work processes and plant that may result in incidents that are high potential, frequently occurring or of a certain complexity.

Summary of incident notifications received

The table below shows the number of incident notifications received for the past 5 quarters as classified against a principal mining hazard or principal control plan.

Overall, there were 533 incident notifications received in the quarter. Of these, 36% (192) related to principal mining hazards, 27% (143) related to principal control plans, with the remainder (37%) related to other incident types.

Table 1. Incident notifications received by principal mining hazard and principal control plan — January 2023 to March 2024

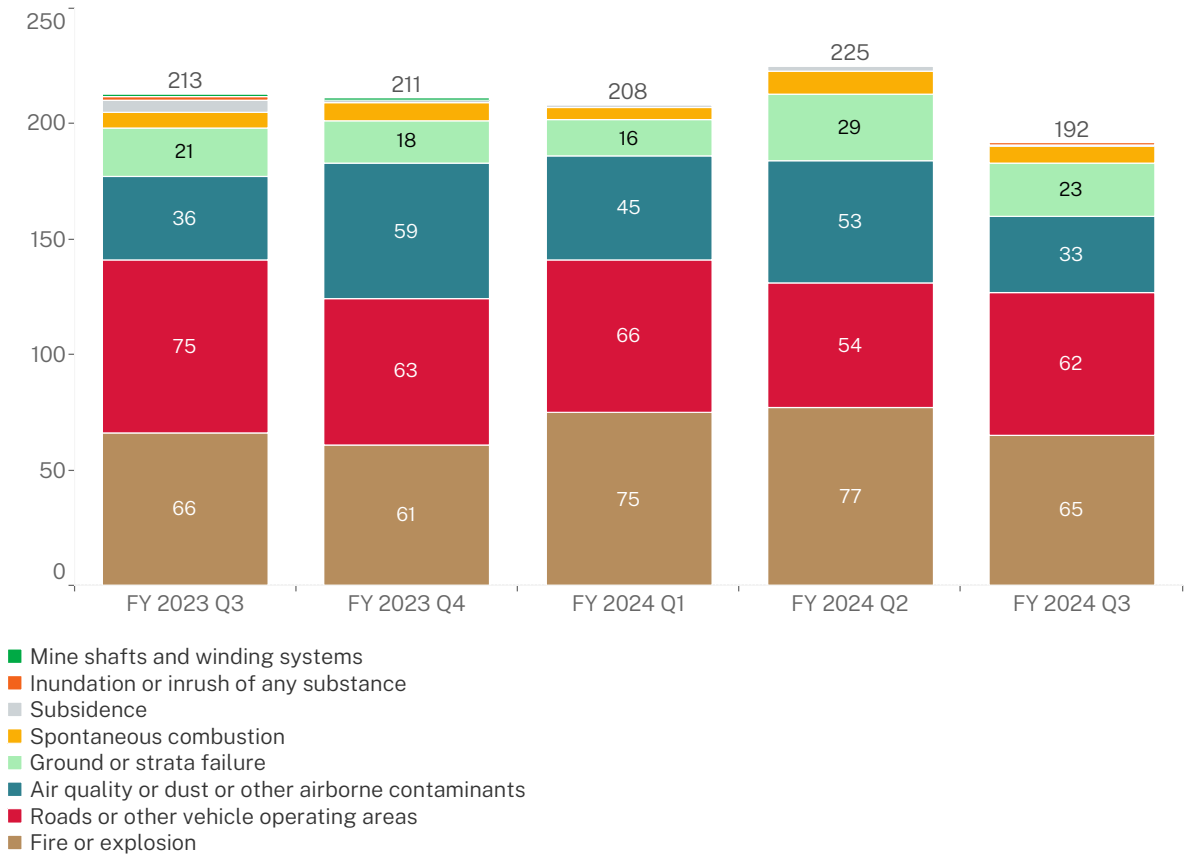
Hazard or Control plan	Hazard/Control plan	FY 2023 Q3	FY 2023 Q4	FY 2024 Q1	FY 2024 Q2	FY 2024 Q3	Grand total
Hazard	Air quality, dust or other airborne contaminants	36	59	45	53	33	226
	Fire or explosion	66	61	75	77	65	344
	Gas outburst	0	0	0	0	0	0
	Ground or strata failure	21	18	16	29	23	107
	Inundation or inrush of any substance	2	0	0	0	1	3
	Mine shafts and winding systems	1	1	0	0	0	2
	Roads or other vehicle operating areas	75	63	66	54	62	320
	Spontaneous combustion	7	8	5	10	7	37
	Subsidence	5	1	1	2	1	10
	Total	**213**	**211**	**208**	**225**	**192**	**1,049**
Control plan	Electrical engineering control plan	31	28	22	22	19	122
	Electrical engineering control plan and/or mechanical engineering control plan	60	45	54	46	40	245
	Explosives control plan	19	21	16	13	19	88
	Mechanical engineering control plan	42	49	48	48	46	233
	Ventilation control plan	9	7	8	23	19	66
	Total	**161**	**150**	**148**	**152**	**143**	**754**
Other	No related principal mining hazard or principal control plan	183	208	175	195	198	959
Grand total		**557**	**569**	**531**	**572**	**533**	**2762**

Principal mining hazards

Note: while only one hazard/control plan per incident appears in the report, it is possible for more than one hazard or control plan to be applicable to the incident.

The chart below presents a further breakdown of numbers of incident notifications received by quarter related to principal mining hazards as defined in section 4 of the Regulation.

Figure 1. Incident notifications received by principal mining hazards — January 2023 to March 2024



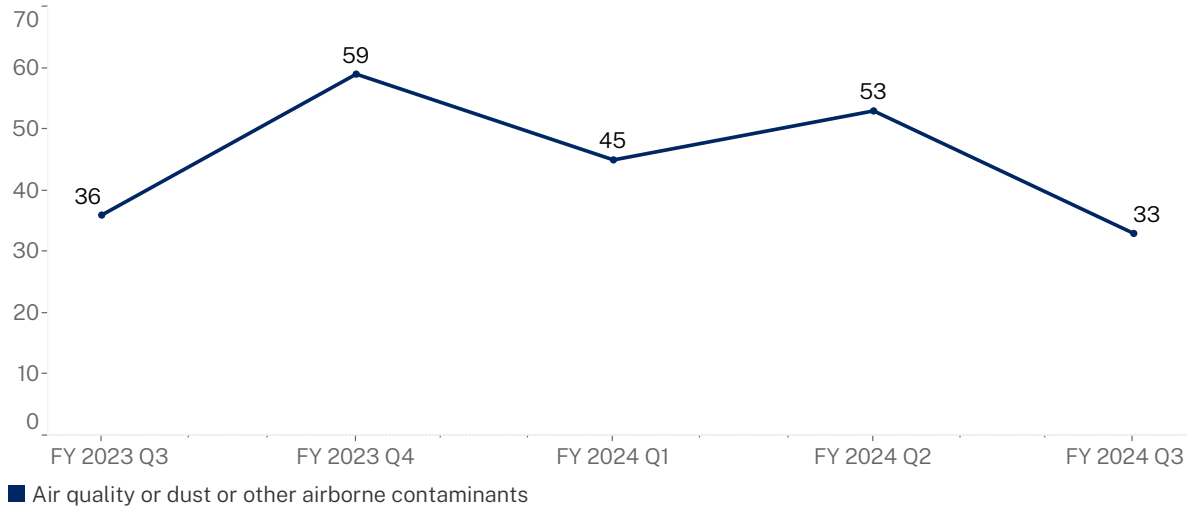
Air quality, dust or other airborne contaminants

Decrease from 53 to 33

Airborne contaminants comprise a large and varied range of substances and forms. Coal and silica particles, along with methane and carbon monoxide, are regularly present in mining as dusts, fumes and vapours. These contaminants have exposure standards and can affect workers rapidly (CO or CO2) or over several years (coal/silica dust).

There has been a 38% decrease in airborne contaminant related incidents notified from Q2 FY2024. This quarter's figure is the lowest recorded in the past 5 quarters.

Figure 2. Incident notifications received related to the principal mining hazard air quality, dust or other airborne contaminants — January 2023 to March 2024

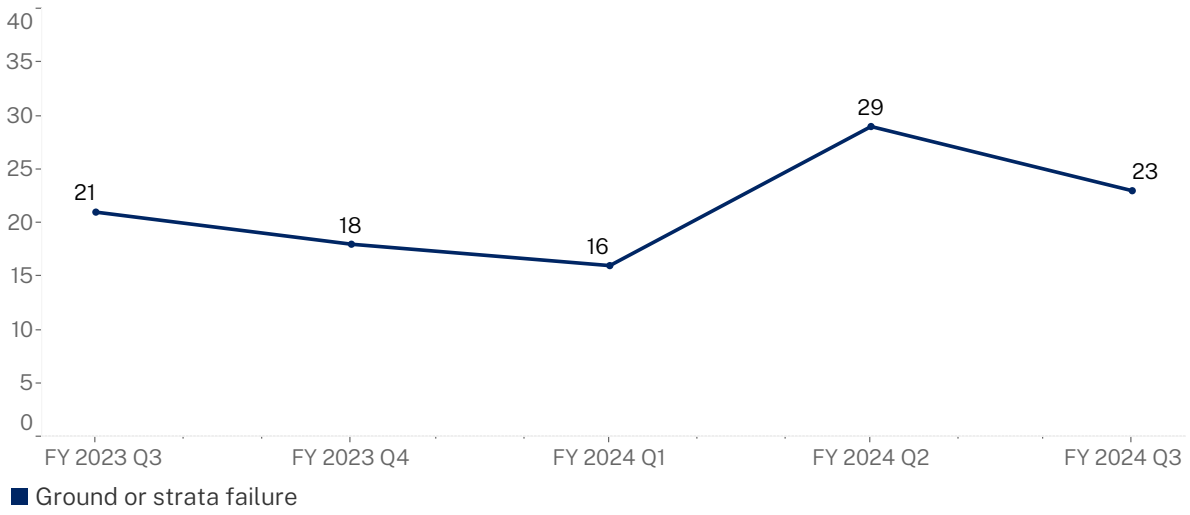


Ground or strata failure

Decrease from 29 to 23

Ground or strata failure is an ever-present hazard in both surface and underground mining, with a significant risk posed to workers from unplanned movement of ground.

Figure 3. Incident notifications received related to the principal mining hazard ground or strata failure — January 2023 to March 2024



Dangerous incident | IncNot0046138 — Underground coal mine roof coal dislodgement

Summary: An operator on a bolting platform was hit on the left shoulder when a drill steel dislodged a piece of roof coal that was about 2 m x 1 m x 0.6 m. The coal made contact with the temporary roof support, slid down the mesh and hit the centre console bolting rig controls before a second piece of coal that was 250 mm x 400 mm x 100 mm hit the operator - standing about a metre from where the coal was dislodged.

Picture 1.
Coal sitting on roof support.

Comments to industry: Mine operators must provide safe systems of work. The work methods and controls used must consider the risk of falling material, the positions of workers, and the use of mechanical aids. Whenever there is a possibility that objects can fall, appropriate no-go zones should be established to protect workers. No-go zones should be clearly delineated and communicated to all workers in the vicinity. When establishing a no-go zone, as a control for falling objects, bouncing or ricocheting must be considered.

Dangerous incident | IncNot0046161 — Operator knocked unconscious by falling strata

Summary: An operator lost consciousness when hit by a large piece of strata that fell from the rib. The miner was pulling back because the vent trunk had fallen out. While pulling back, an unbolted piece of strata fell from the rib and hit the operator. The piece of strata was estimated to exceed 200 kg.

Picture 2.
Unbolted piece of strata.

Comments to industry: Underground mines should review the adequacy of their strata monitoring arrangements and associated trigger action response plans (TARPs) to ensure that workers are not exposed to unacceptable risks associated with strata failure. Mine operators should consider developing procedures to install rib support bolts, so workers are not exposed to unsupported rib conditions during the work cycle at development faces.

Dangerous incident | IncNot0046370 — Stone broke from roof hitting worker

Summary: A large piece of stone broke from a roof, fell over the mesh landing on the temporary roof support (TRS) and hit a worker. The miner had been grading up in stone for a belt chamber and cutting a full face of stone 3500 mm high in a seam split area. The piece of stone was reported as being 1000 mm x 700 mm x 200 mm thick.

Picture 3.
Large piece of stone fallen from roof.

Comments to industry: Additional hazards must be considered when strata conditions change during the production cycle. In such situations, strata support designs should be reassessed to ensure they are adequate.

Dangerous incident | IncNot0046359 — Significant roof fall in underground coal mine

Summary: A significant roof fall occurred in an underground coal mine. The fallen material was about 1.8 m high and the full width of the panel. It occurred 60 m into a runout in the herringbone panel. No workers were present at the time.

Comments to industry: Mine operators are required to have a principal hazard management plan for ground or strata failure and to ensure that the plan is implemented as designed. A system should be in place to update the incoming shift supervisor of trigger action response plans (TARP) risk changes, active TARPs and geotechnical hazards so that relevant information can be relayed to all workers.

Refer to the NSW code of practice: Strata control in underground coal mines

Dangerous incident | IncNot0046529 — Percussion blast liquefies clay material

Summary: After firing a draw point to shake the ore down, approximately 70 linear metres of clay type material flowed down the drive. The shockwave of the percussion blast appears to have caused the clay material in the old block cave to liquefy and push down the drive. There was nobody in the mine when the blast took place.

Picture 4.
Liquified clay following the blast.

Comments to industry: Mine operators must assess the risk of inrush and inundation. When the risk exists, a principal hazard management plan must be in place. When developing the control measures to manage the risks of inundation or inrush of any substance, mine operators must consider:

- the failure or blocking of the flow channels
- the potential for the accumulation of water, gas or other substances, or materials that could liquefy or flow into other workings or locations.

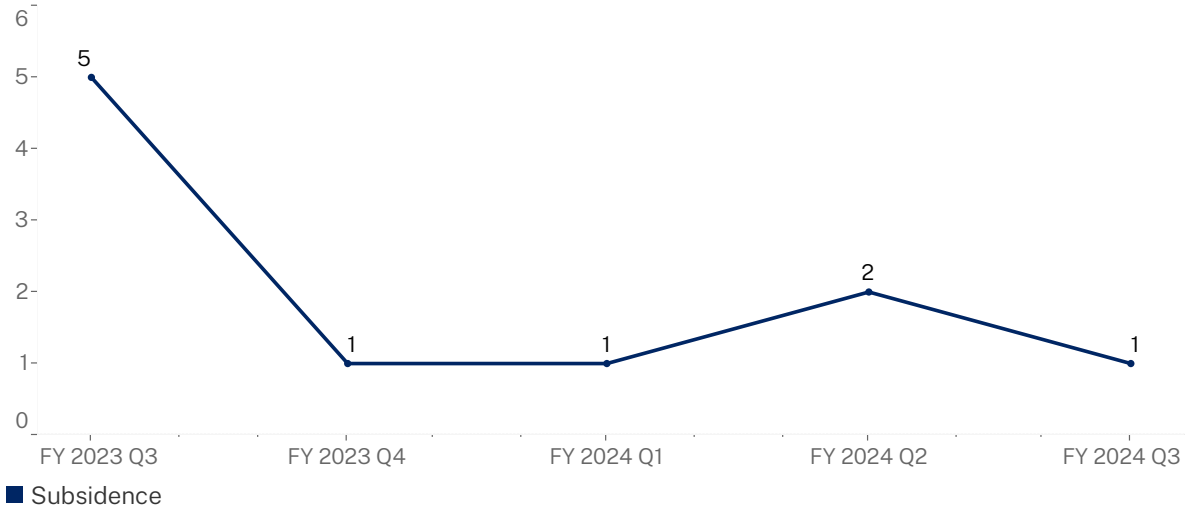
Refer to the code of practice: Inundation and inrush hazard management

Subsidence

Decrease from 2 to 1

Surface subsidence hazards may exist where there has been underground mining. The potential to cause significant damage (from deformation or sinkholes) to infrastructure (roads, dwellings etc.) and injure persons nearby, makes this a principal mining hazard in NSW.

Figure 4. Incident notifications received related to the principal mining hazard subsidence — January 2023 to March 2024

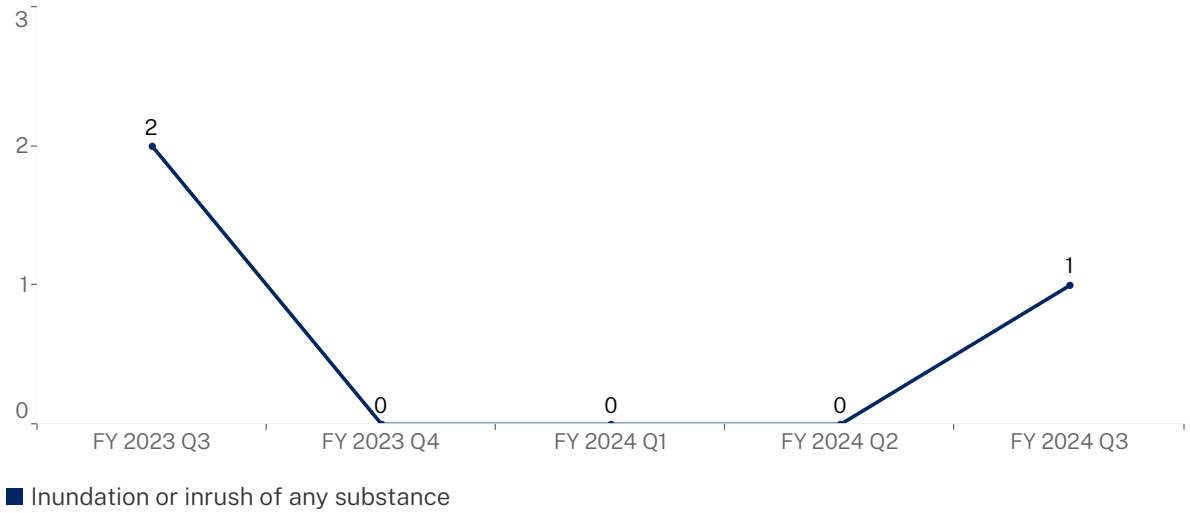


Inundation or inrush of any substance

Increase from 0 to 1

Inundation and inrush is a low frequency, high consequence hazard, particularly in underground mining. Incidents often involve inrushes of water or inundation by denser materials (sand or rock). The potential to cause multiple fatalities in a single event like at Gretley Colliery in 1996 make this a principal mining hazard in NSW.

Figure 5. Incident notifications received related to the principal mining hazard inundation or inrush — January 2023 to March 2024

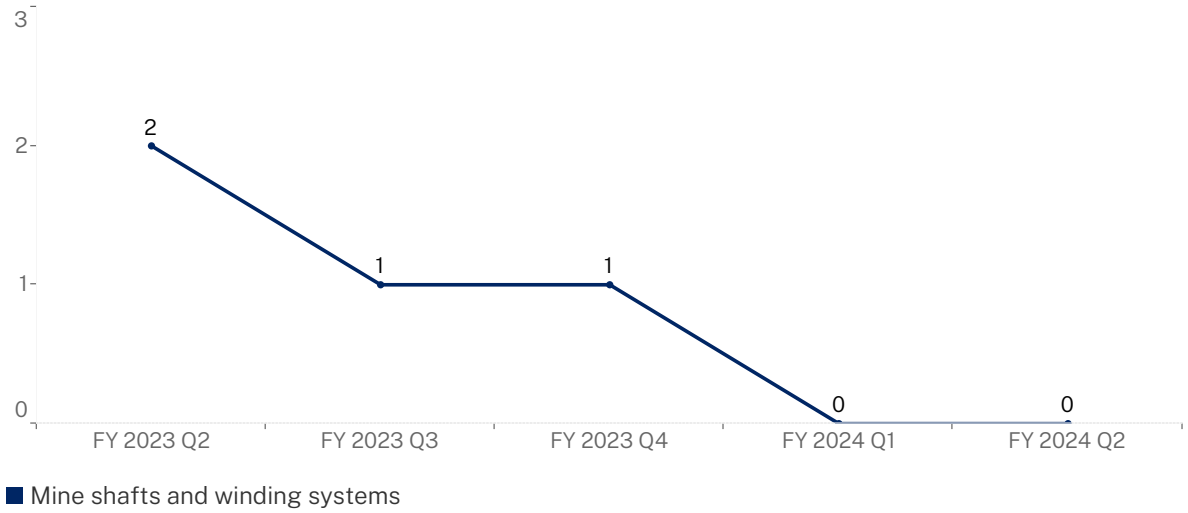


Mine shafts and winding systems

No change (0)

Mine shaft integrity and the operation of winding systems require specific focus. The safe movement of material and workers up and down mine shafts can be hazardous and has the potential to impact on the safety of multiple workers at a mine.

Figure 6. Incident notifications received related to the principal mining hazard mine shafts and winding systems — January 2023 to March 2024

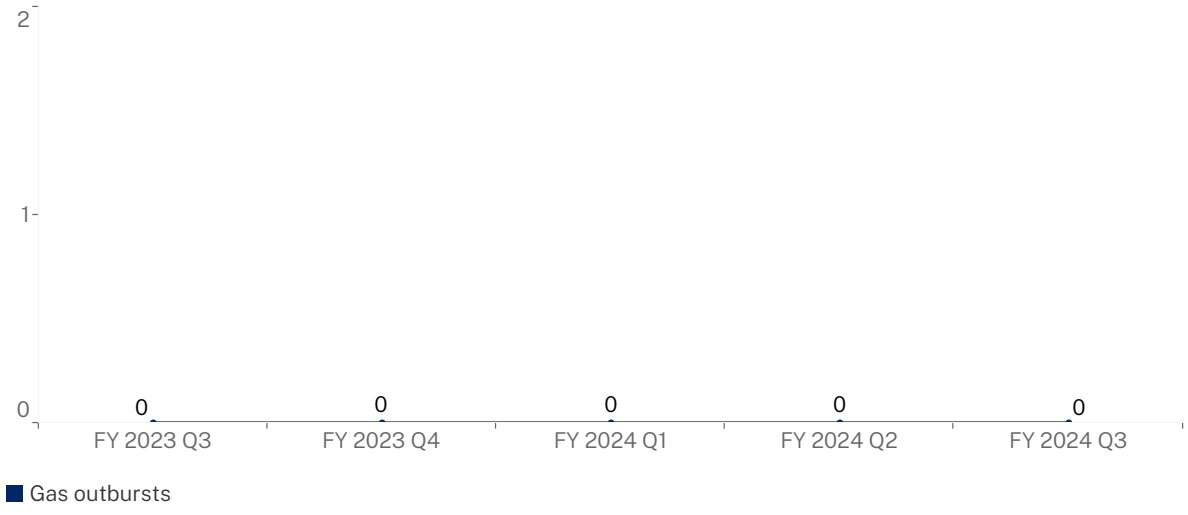


Gas outbursts

No change (0)

The implementation of appropriate risk controls ensure gas outbursts are not a high frequency hazard event, however their often sudden and violent nature has the potential to cause fatalities to workers. This hazard also includes the liberation of gases that can asphyxiate, lead to explosions or cause a fire. These circumstances make this a principal mining hazard in NSW.

Figure 7. Incident notifications received related to the principal mining hazard gas outburst — January 2023 to March 2024

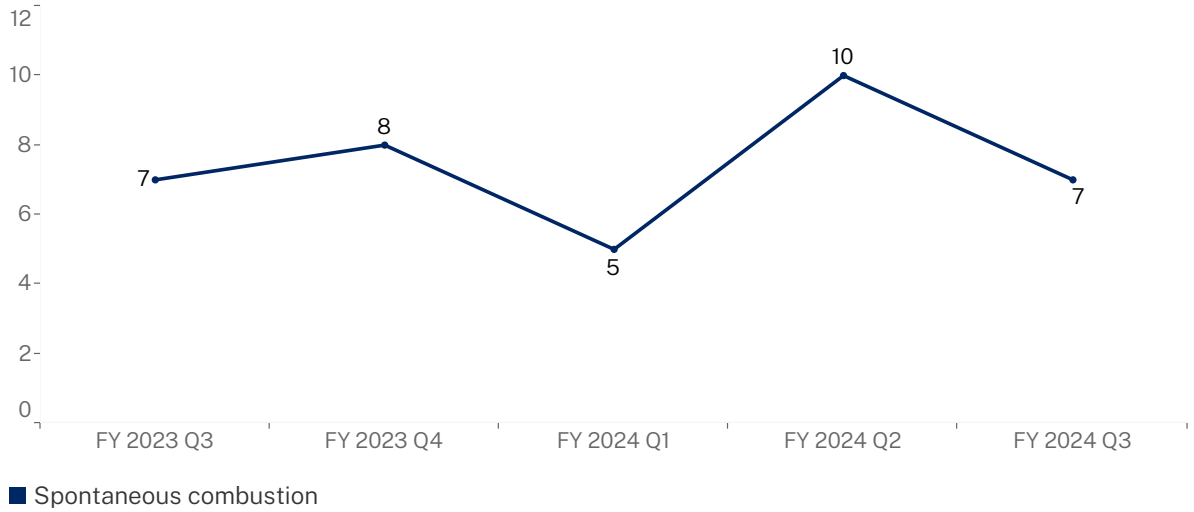


Spontaneous combustion

Decrease from 10 to 7

While spontaneous combustion (of coal) is a hazard exclusive to the coal sector, in the underground parts of the mine the consequences have the potential to cause multiple fatalities. Figure 7 below includes spontaneous combustion incidents underground and on the surface of coal mines.

Figure 8. Incident notifications received related to the principal mining hazard spontaneous combustion — January 2023 to March 2024

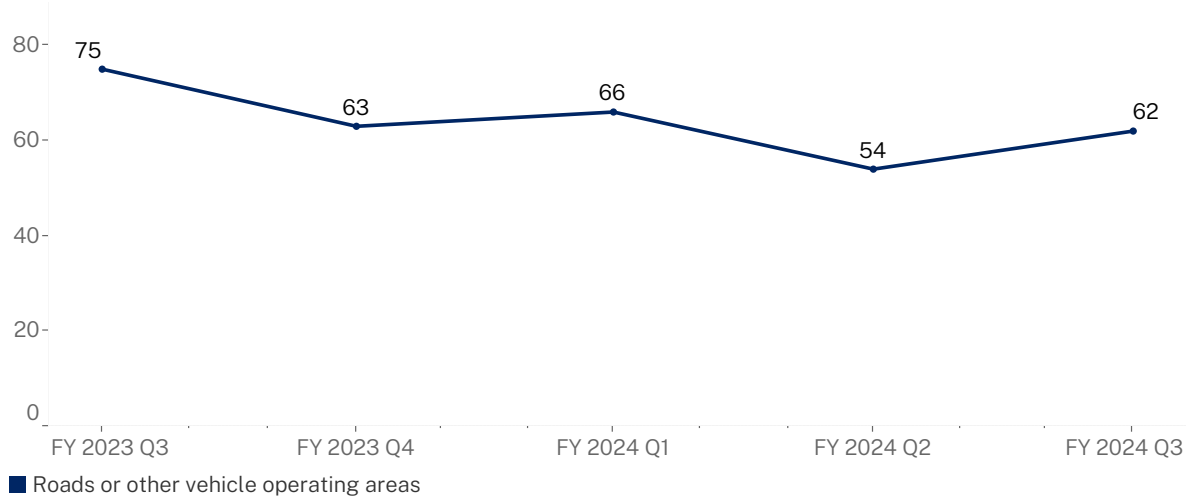


Roads or other vehicle operating areas

Increase from 54 to 62

Vehicle movements in and around mine sites require specific design considerations and controls to ensure that collisions and other vehicular accidents do not occur, and place workers lives at risk. The high volume of vehicular interactions on mine sites and the size of the mobile plant utilised classifies this as a principal mining hazard in NSW.

Figure 9. Incident notifications received related to principal mining hazard roads or other vehicle operating areas — January 2023 to March 2024



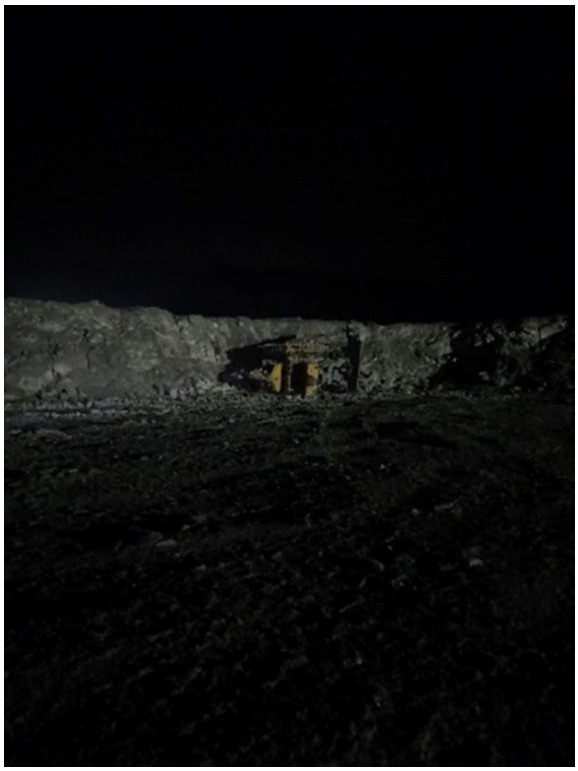
Dangerous incident | IncNot0046221 — Failed brake system on unloaded haul truck

Summary: The service brake system failed on an unloaded haul truck. The brake failure caused the truck to travel on engine braking for about 100 metres before it stopped near to a workshop area. It appears the truck operator did not apply the emergency brake system. The truck had just returned from having repairs carried out on broken wheel studs and had been operational for about 10 to 15 minutes.

Comments to industry: Mine operators should have maintenance systems in place to maintain functionality of braking systems (service, emergency, park). Truck operators must be trained and deemed competent in the use of braking systems, including in emergency situations.

Dangerous incident | IncNot0046292 — Dozer reversed over edge of bench

Summary: While capping a shot, a dozer operator reversed over the edge of a bench and came to rest on a ripper box. The dozer pivoted onto its right-hand side. The dozer operator was a trainee under instruction at the time of the incident. The operator was wearing a seatbelt and was not injured.



Picture 5.
Dozer after fall from bench.

Comments to industry: Situational awareness is a key control when operating mobile equipment. Workers should be trained in the importance of this control and include it in their pre-task risk assessment. Ancillary systems such as GPS guidance, dispatch systems and two-way communication should be used only when it is safe to do so. Refer to safety bulletin: SB19-01 Rise in dozer incidents putting operators at risk.

Dangerous incident | IncNot0046399 — Integrated tool carrier overturned with workers in basket

Summary: An integrated tool carrier overturned while 2 workers were in the basket installing mesh. The workers in the basket instructed the IT operator to turn the IT so that it was square to the wall. When turning to the left on a cross-cut on the ramp (1 in 7) the operator felt the right-hand rear of the machine lift and the IT slowly overturned. Both workers in the basket were wearing harnesses and were uninjured.

Picture 6.
Trucks after collision.

Comments to industry: Drivers should remain focused on the task at hand and not be distracted while driving. Drivers should find a safe place to stop and address any issues, rather than continuing to drive. Schedule 2 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 includes the requirement that a health control plan must address control measures for minimising the risk that a worker will be impaired by fatigue. Mine operators should include worker fatigue monitoring and response technology as a part of their fatigue risk analysis.

Dangerous incident | IncNot0046452 — Loss of control of haul truck

Summary: An operator lost control of a haul truck when leaning down to pick up a water bottle. The 2 front wheels ended up over a bund where there was a 1.5 m drop into bush land.

Picture 7.
Haul truck on bund.

Comments to industry: Inattention and distraction while driving can have fatal consequences. Drivers should remain focused on the task at hand and not be distracted while driving. Drivers should find a safe place to stop and address any issues, rather than continuing to drive. Principal hazard management plans for roads or other vehicle operating areas should consider all factors that may affect operator concentration. Collision detection and avoidance systems, visual aids and segregation should be implemented before relying on procedural controls.

Dangerous incident | IncNot0046493 — Loaded trucks collide on ramp

Summary: Two loaded trucks collided while driving up a ramp. The truck in front stopped and the truck behind ran into the back of it. The tray of the front truck went over the cab of the rear truck as per design and there were no injuries.

Picture 8.
Trucks after collision.

Comments to industry: Drivers should remain focused on the task at hand and not be distracted while driving. Drivers should find a safe place to stop and address any issues, rather than continuing to drive. Schedule 2 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 includes the requirement that a health control plan must address control measures for minimising the risk that a worker will be impaired by fatigue. Mine operators should include worker fatigue monitoring and response technology as a part of their fatigue risk analysis.

Dangerous incident | IncNot0046495 — Dump truck driver injured by hidden pipe

Summary: The operator of a load haul dump (LHD) sustained a fractured nose and required numerous sutures when hit by a 15 cm pipe. The operator was picking up exchange rollers from a cut-through when he reversed over the buried pipe, which travelled slowly up the wheel arch and into the cabin, hitting the operator.

Comments to industry: Situational awareness is a key control when operating mobile equipment. Workers should be trained in the importance of this control and include it in their pre-task risk assessment.

Dangerous incident | IncNot0046563 — Near miss as light vehicle failed to obey stop sign

Summary: A light vehicle driver failed to obey stop signs at an intersection, resulting in a near miss with a haul truck. A review of hours worked found that the light vehicle driver's work hours did not comply with the rules as set out in the site's fatigue management plan.

Comments to industry: Schedule 2, Section 1 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 includes the requirement that a health control plan must address control measures for minimising the risk that a worker will be impaired by fatigue. Mine operators should include worker fatigue monitoring and response technology as a part of their fatigue risk analysis. Mine operators must continue to remind workers of the need to comply with a site's road rules. There have been fatalities and multiple near misses in relation to heavy and light vehicle interactions and enforcement of transport rules must be a priority of all operators.

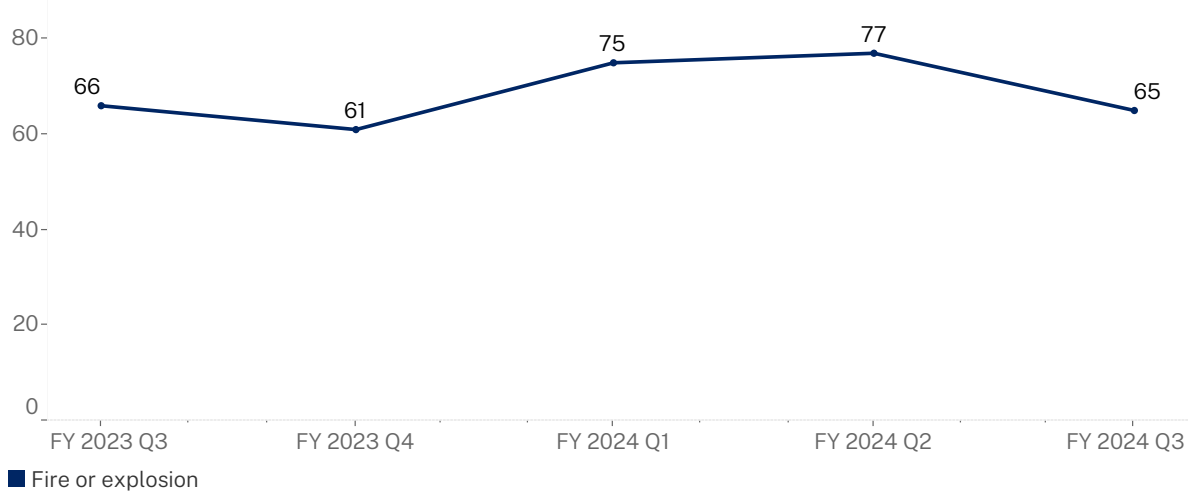
Fire or explosion

Decrease from 77 to 65

This principal mining hazard includes risk associated with all sources of flammable, combustible and explosive substances and materials in the working environment. A common source of these incidents are fires on mobile plant. This principal mining hazard is distinct from the hazards covered in the explosives control plan.

This quarter fire or explosion notified incidents decreased after 2 quarters of increases.

Figure 10. Incident notifications received related to principal mining hazard fire or explosion — January 2023 to March 2024



Dangerous incident | IncNot0046232 — Air conditioner condenser unit fire

Summary: An air-conditioner condenser unit at the rear of an operator's cabin on a long-hole drill rig caught fire while it was underground. A fitter was inspecting a fault on the unit and observed fire and smoke. The fire was extinguished immediately by the fitter and the driller.

Picture 9.
Condenser unit after fire.

Comments to industry: Mine operators should ensure that risk control measures to prevent the occurrence of fires, and the escalation and response to underground fires, are implemented and remain effective. Inspection regimes, housekeeping standards and emergency response procedures should be routinely examined to ensure minimum standards are met or exceeded. Mine operators should ensure stringent monitoring and quality control of maintenance and repair activities.

Dangerous incident | IncNot0046285 — Remote-control loader caught fire underground

Summary: A remote-control automated loader caught fire underground. The mine's fire suppression system initiated but did not fully extinguish the fire. The loader continued to burn, and the mine's emergency response was activated. All people were accounted for in refuge chambers and the loader was allowed to burn until the fire went out.

Picture 10.
Fire damage to automated loader.

Comments to industry: This incident is under investigation and further information may be published later. Mine operators should ensure that risk control measures to prevent the occurrence of fires, and response to underground fires, are implemented and remain effective. Emergency response procedures should be routinely examined to ensure minimum standards are met or exceeded.

Dangerous incident | IncNot0046451 — Small fire on top of return belt

Summary: While standing on a longwall maingate, a deputy noticed a burning smell and identified 4 ppm carbon monoxide on a Drager X-am gas detector. The deputy travelled outbye to investigate and found a small ball of material about 20 cm diameter burning on top of the return belt. This was then extinguished with a fire extinguisher. The cause of the fire was a troughing idler failure.

Picture 11.
Fire damage.

Comments to industry: Mine operators must have systems to identify and change-out defective conveyor rollers. Workers conducting conveyor inspections must be aware of the increased risk of roller failure at high tension areas of conveyors. They must also diligently inspect for fire risks such as accumulation of material, failing or collapsed idlers and contact between conveyor belts and fixed structures.

Dangerous incident | IncNot0046464 — Fire on compressor at underground metals mine

Summary: Underground workers had to retreat to refuge chambers following a fire on a compressor. An emergency response team was sent to one person who was in a refuge chamber close to the fire location. Nobody was injured.

Picture 12.
Damaged compressor after fire.

Comments to industry: Maintenance systems must be comprehensive and should consider all reasonable, foreseeable risks of fire or explosion. Plant and equipment must be maintained in accordance with Work Health and Safety Regulation 2017 clause 213 Maintenance and inspection of plant. Non-destructive testing (NDT) inspections should be scheduled at pre-determined intervals to minimise the risk of equipment failure.

Serious injury | IncNot0046525 — Sulphide dust explosion underground

Summary: A sulphide dust explosion occurred underground after a heading was fired. Approximately 70 metres of ventilation bag was either blown down or melted.

Picture 13.
Damaged ventilation bag.

Comments to industry: Mine operators should manage risks to health and safety arising from combustible dust. In the presence of an ignition source, sulphide dust, when at the right concentration, can ignite and/or explode uncontrollably. Mine operators should:

- identify geological settings likely to contain sulphides and other combustible dusts
- identify processes that generate dust
- identify sources of ignition
- prepare combustible dust hazard maps
- develop and implement processes or procedures to communicate combustible dust risk in a timely manner, and to manage risk effectively
- identify, implement and monitor the effectiveness of the risk control measures.

Procedures should be developed for re-entry into the mine, this should include controls for the exposure of workers to potentially hazardous atmospheres.

Dangerous incident | IncNot0046589 — Melted busbar plug on underground conveyor

Summary: A switchroom starter for an underground conveyor tripped and couldn't be reset. An electrician could smell something burning and opened the cubicle doors. The cubicle emitted smoke, but no flames were seen. A further investigation revealed that the busbar plug had melted.

Picture 13.
Melted busbar plug.

Comments to industry: Mine operators must review the service life of all circuit breakers considering the operating conditions and clearance of fault conditions. Mine operators should also ensure workers are aware of procedures and competency requirements for the restoration of electrical protection. Mine operators should ensure that the electrical protection devices are rated for the application.

Dangerous incident | IncNot0046613 — Fire in transmission area of service truck

Summary: After filling a service truck underground, the service truck was trammed back and parked up. The operator noticed a flame in the transmission area of the service truck. The automatic fire suppression system was used to extinguish the flame and a fire extinguisher was used when a secondary flare up was observed. An initial investigation suggested a possible overflow of hydrocarbons during refuelling made contact with hot components of the truck during tramming.

Comments to industry: Refuelling systems must be engineered and matched with the fuel tank, breather, and delivery systems. Confirm that overflow piping and breathers direct fuel away from ignition points.

Refer to:

- Safety Bulletin SB21-01 Fires occur while refuelling plant
- Safety Bulletin SB15-03 Fires ignite while refuelling mobile plant with quick-fill fuel systems

Dangerous incident | IncNot0046615 — Facial burns after fallen spray can caused fire on alternator terminals

Summary: A fitter working on a haul truck in a workshop bumped a can of spray that fell onto the alternator terminals causing a fire. The fitter suffered facial burns and was taken to hospital.

Comments to industry: The following issues contributed to the incident: Before starting work on or around engines when using contact cleaner products, the battery system should be full isolated. Alternatives to 'highly flammable' sprays should be considered and live alternator terminals should remain covered to prevent inadvertent contact with the terminals.

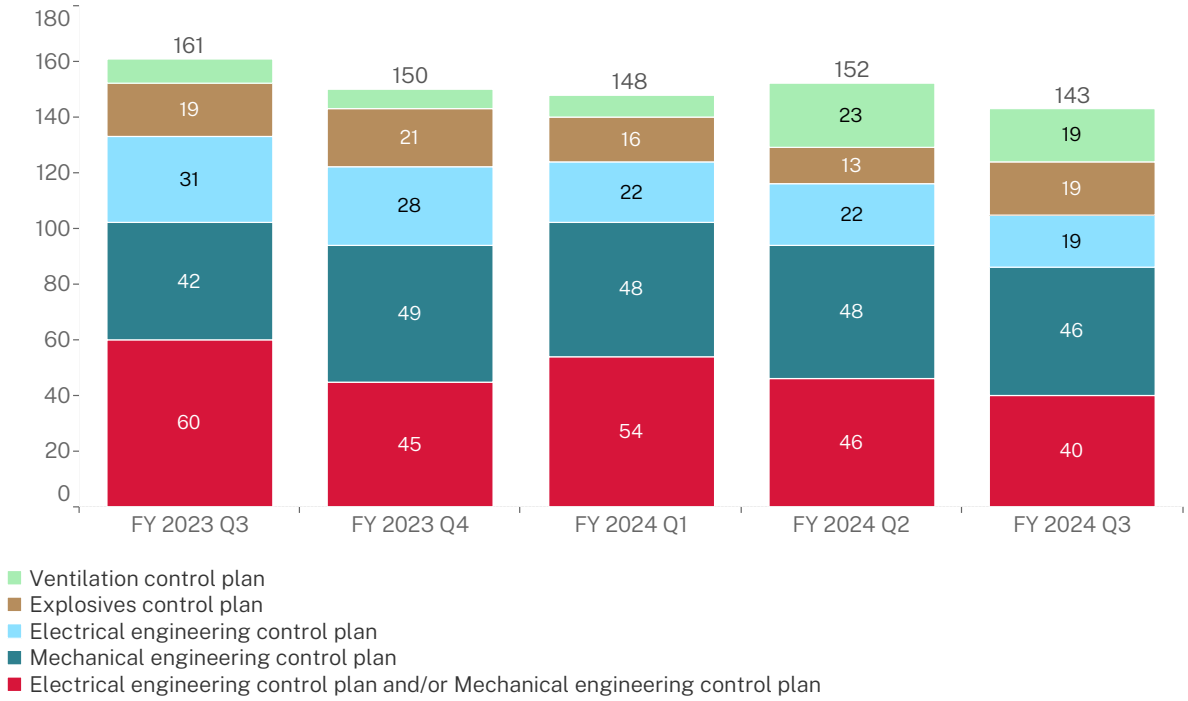
Principal control plans

The Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 specifies principal control plans for managing certain risks associated with hazards at mine and petroleum sites.

There are 5 principal control plans specified in the Regulation.

The figure below presents a further breakdown of numbers of incident notifications received related to principal control plans as defined in section 19 and Schedule 2 of the Regulation. Note: no incidents were notified in relation to health control plans or well integrity control plans.

Figure 11. Incident notifications received by principal control plans — January 2023 to March 2024

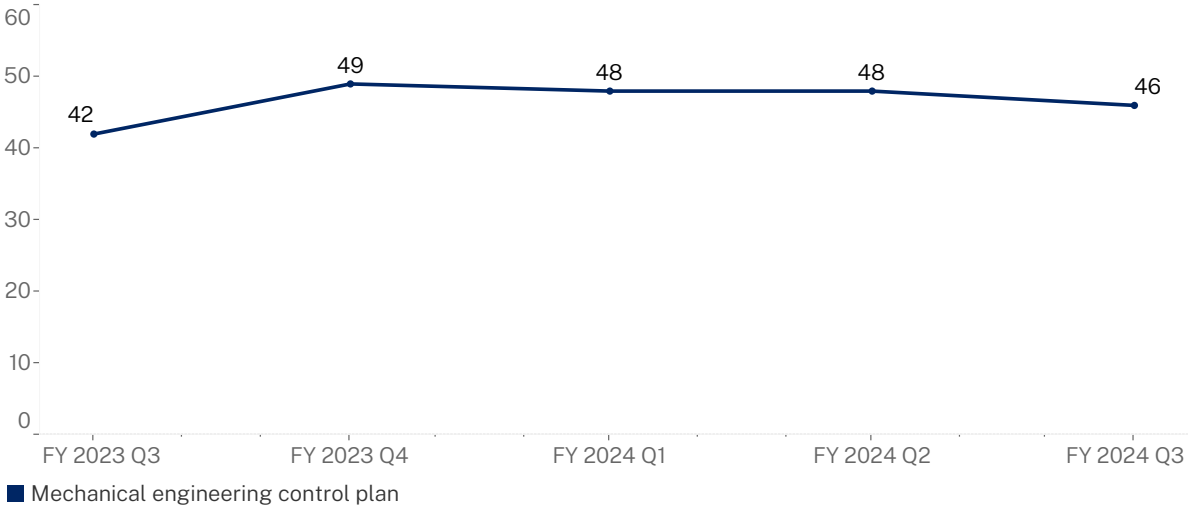


Mechanical engineering control plans

Decrease from 48 to 46

The mechanical engineering control plan covers ‘lifecycle’ risks associated with mechanical hazards (vehicles, plant and mechanical systems and structures) that workers may be exposed to. This includes risks associated with pressurised fluids.

Figure 12. Incident notifications received related to mechanical engineering control plans — January 2023 to March 2024



Dangerous incident | IncNot0046231 — Rear trailer rolled while unloading rejects on ROM pad

Summary: The rear trailer of a road registered B-double side-tipper truck rolled over while unloading rejects on the ROM pad. The load was a mixture of belt press filter and coarse rejects with about 21 tonne in trailer.

Picture 15.
Rolled rear trailer.

Comments to industry: Mine operators should consider the most appropriate truck type for the material being transported. The stability of articulated vehicles is a known risk that needs to be managed at mines and was the subject of a compliance priority program in 2018.

Refer to the following outcome report for more information: Articulated truck rollovers and falls from mobile plant.

Dangerous incident | IncNot0046294 — Tyre exploded while reinflating

Summary: While inspecting and reinflating a truck tyre that had been run flat, the tyre exploded while a worker was standing in front of it. The worker was knocked over by the force. He was transported to hospital. A second worker suffered a cut over their left eye.

Pictures 16.
Exploded tyre.

Comments to industry: Mine operators should review their safety management systems for assessment, inflation and management of tyres that may have been run underinflated or been subject to damage in service including consideration of reduced inflation pressures for leak testing and inspection. Consider the hierarchy of controls when conducting this process and what training and authorisation is required to conduct this type of work. Procedures should stipulate that maximum rated inflation pressures are not exceeded during inflation. Ensure that workers who have been appropriately trained and appointed are the only ones to conduct tyre fitting and inflation activities.

Dangerous incident | IncNot0046389 — Unintended movement of crowd cylinder holding platform

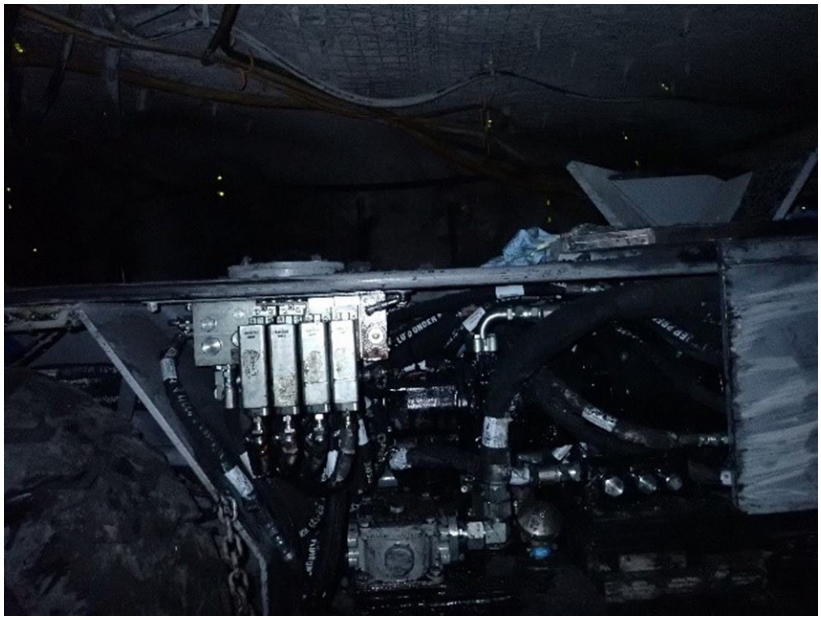
Summary: A worker was being lifted in a quick detach system (QDS) bolter basket attached to a load haul dump (LHD) when the crowd cylinder holding the platform levelled suddenly and unexpectedly extended. The basket was about 1.8 metres above the ground at the time.

Comments to industry: Mechanical engineering control plans must set out the control measures for the unintended operation of plant. This must include function testing as part of the introducing plant to site process, and pre-use inspections by operators. Mine operators should ensure:

- all pieces of hired equipment have a thorough mechanical and electrical inspection to assess the plant's operation
- thorough pre-work inspections are carried out by competent people
- hired equipment is maintained in accordance with a suitable maintenance strategy considering the original equipment manufacturer's recommendations and relevant Australian Standards. For elevated work platforms (EWPs) this should include AS 1418.10 and AS 2550.10.

Dangerous incident | IncNot0046591 — Hydraulic oil sprayed on worker's face

Summary: A shuttle car had a leaking valve bank during night shift that was repaired. On the day shift, it was found to be leaking again during the prestart. A fitter isolated the shuttle car and was sprayed with hydraulic oil in the face and chest while removing the brake pressure solenoid. The fitter had oil in his left eye despite wearing safety glasses. The accumulator circuit pressure was not dissipated.

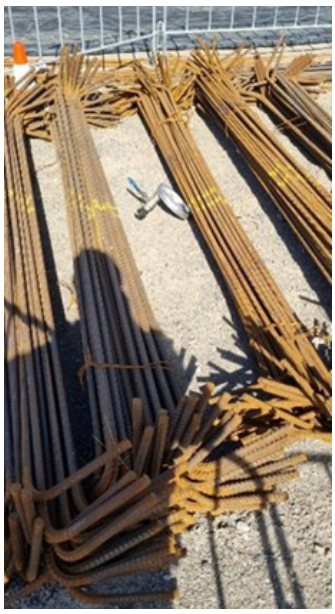


Picture 17.
Valve bank.

Comments to industry: Mine operators should review their safety management systems for assessment, inflation and management of tyres that may have been run underinflated or been subject to damage in service including consideration of reduced inflation pressures for leak testing and inspection. Consider the hierarchy of controls when conducting this process and what training and authorisation is required to conduct this type of work. Procedures should stipulate that maximum rated inflation pressures are not exceeded during inflation. Ensure that workers who have been appropriately trained and appointed are the only ones to conduct tyre fitting and inflation activities.

Dangerous incident | IncNot0046622 — End cap ejected from poly pipe during pressure testing

Summary: While pressure testing poly pipe during commissioning, the end cap ejected 50 metres, landing 2 metres from a worker. The failure occurred 20 minutes into a 25-minute test. No one was injured.



Picture 18.
Landing place of ejected end valve.

Picture 19.
Poly pipe end valve.

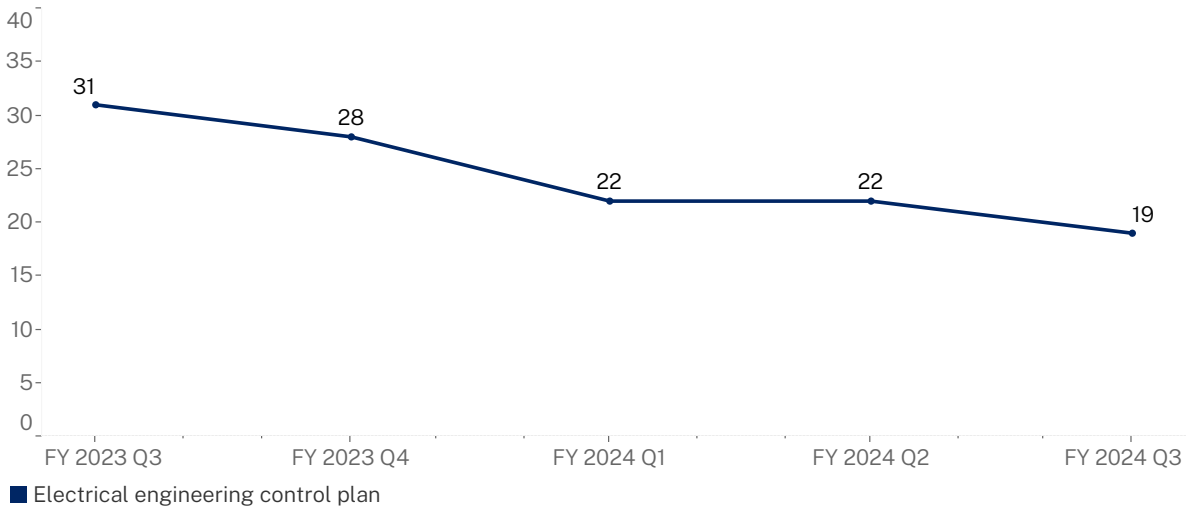
Comments to industry: This incident is being investigated and a safety Information will be published shortly. Pressure testing of any welded polyethylene, (or other plastic) pipe, should be carried out in accordance with a safe work procedure (SWP) that is documented and has been endorsed by the mine's statutory mechanical engineer. All workers conducting pressure testing should be trained and assessed as being competent in that SWP.

Electrical engineering control plans

Decrease from 22 to 19

The electrical engineering control plan covers ‘lifecycle’ risks associated with electrical hazards (supply, vehicles, plant or infrastructure) that workers may be exposed to.

Figure 13. Incident notifications received related to electrical engineering control plans — January 2023 to March 2024



Dangerous incident | IncNot0046027 — Electric shock using electric rotor broach

Summary: A worker suffered an electric shock while installing a new skirting system to a conveyor using an electric rotor broach to drill holes. A gland on the portable drill was pulled out and allowed ingress of moisture to internal electrical components.

Picture 20.
Electric rotor broach

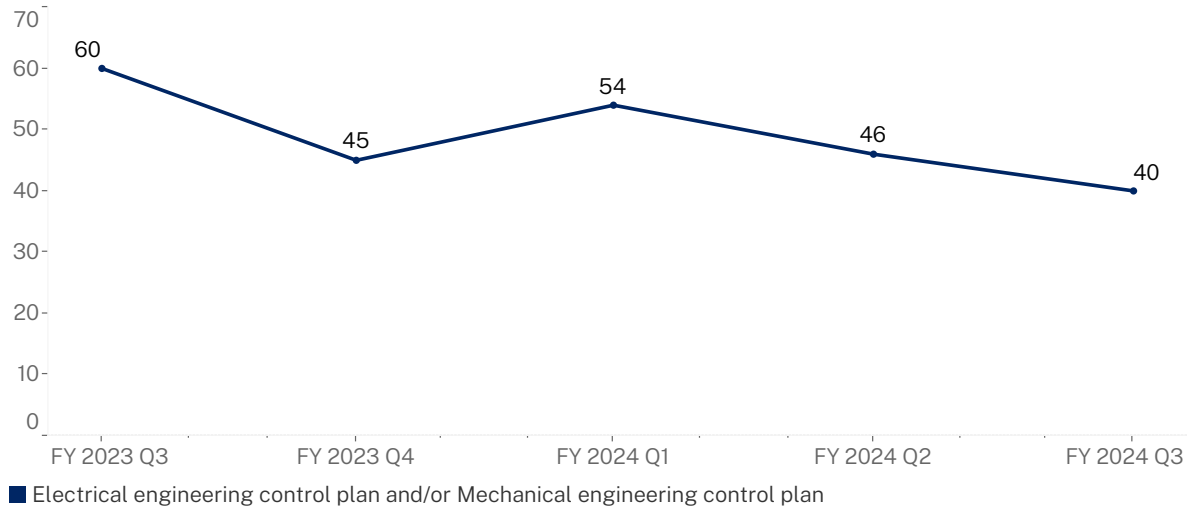
Comments to industry: Mine operators should seek every opportunity to apply the hierarchy of controls when managing electrical equipment in harsh environments. Using extra low voltage electrical equipment and field devices considerably reduces the risks associated with electric shock. Where this control cannot be applied, the maintenance of the ingress protection (IP) rating for the electrical equipment should be paramount.

Electrical and/or Mechanical engineering control plans

Decrease from 46 to 40

Notified incidents may relate to either electrical and mechanical engineering control plans or both.

Figure 14. Incident notifications received related to electrical and/or mechanical engineering control plans — January 2023 to March 2024



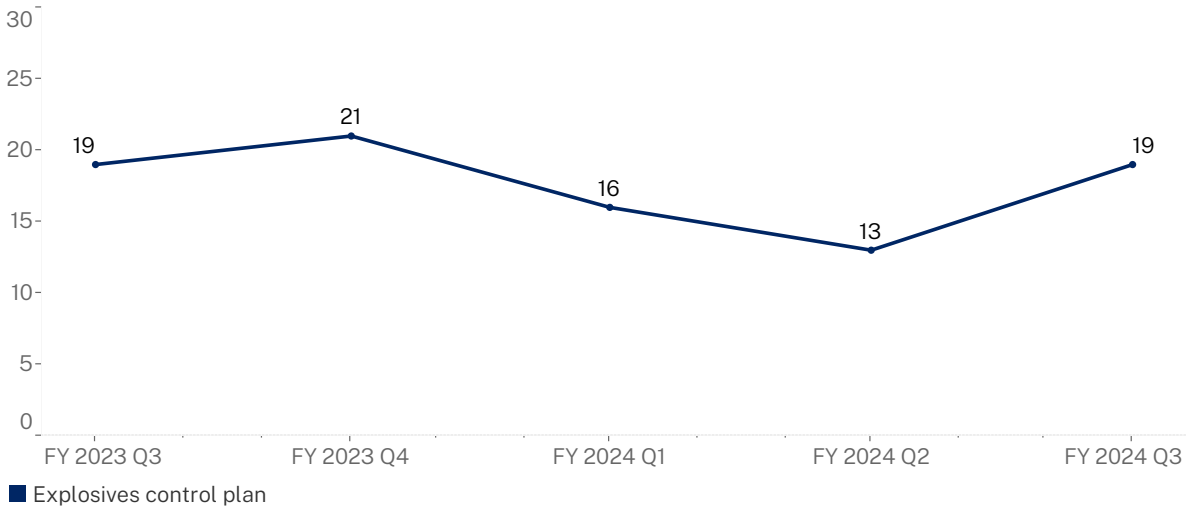
Explosives control plans

Increase from 13 to 19

The explosives control plan covers risks associated with the use and management of explosives hazards workers may be exposed to. This includes incidents involving 'flyrock' and misfire events.

This quarter notified incidents about explosives control plans continued a downward trend observed over the past 5 quarters.

Figure 15. Incident notifications received related to explosives control plans — January 2023 to March 2024



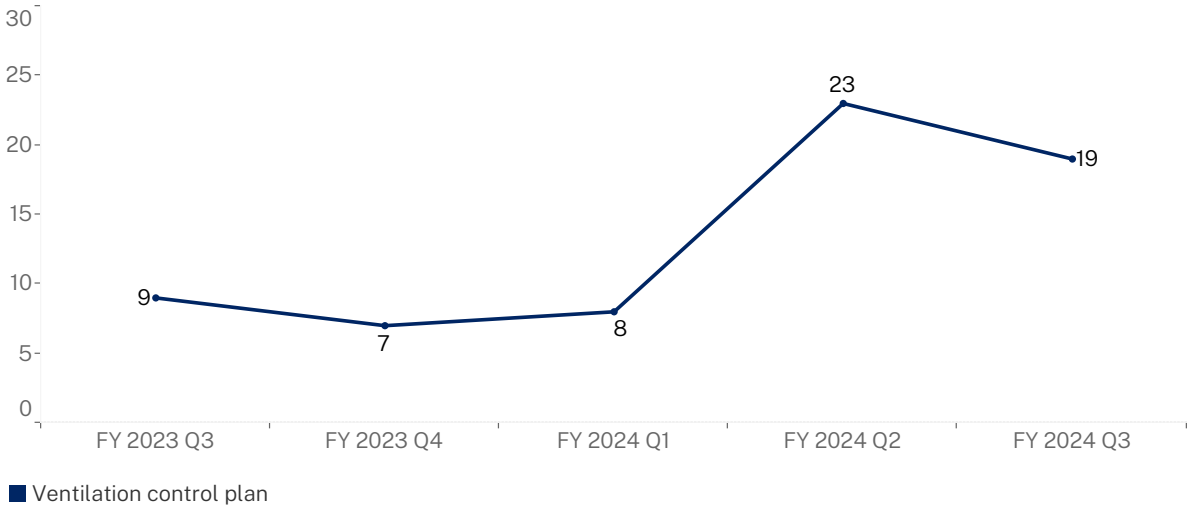
Ventilation control plans

Decrease from 23 to 19

A ventilation control plan covers risks associated with ventilation in underground mines. This includes incidents involving failed atmospheric conditions and where trigger action response plans may have been activated.

This quarter notified incidents about ventilation control plans decreased by 18% from 23 to 19. This quarterly figure was still the second highest number seen over the past 5 quarters.

Figure 16. Incident notification received related to ventilation control plans — January 2023 to March 2024



Sector profiles

NSW Resources Regulator
Sector reporting

Coal mines

Open cut, underground and coal preparation plants

Large mines

Metalliferous and quarries
Quarries that produce >900,000 tonnes pa and large open cut or underground metalliferous mines

Small mines

Metalliferous, quarries and other gemstones
Quarries and other mine types (e.g. sand, clay, lime) that produce >900,000 tonnes pa, open cut or underground metalliferous mines and gemstone mines

Petroleum and Geothermal

Onshore petroleum and geothermal productions and exploration sites

Opal mines

Opal mines at Lightning Ridge and White Cliffs

Exploration

Exploration sites (excluding petroleum)

Non-mine

Includes many manufacturers (including OEMs), suppliers, designers, importers, licence holders and registration holders

Coal sector

Incident notifications

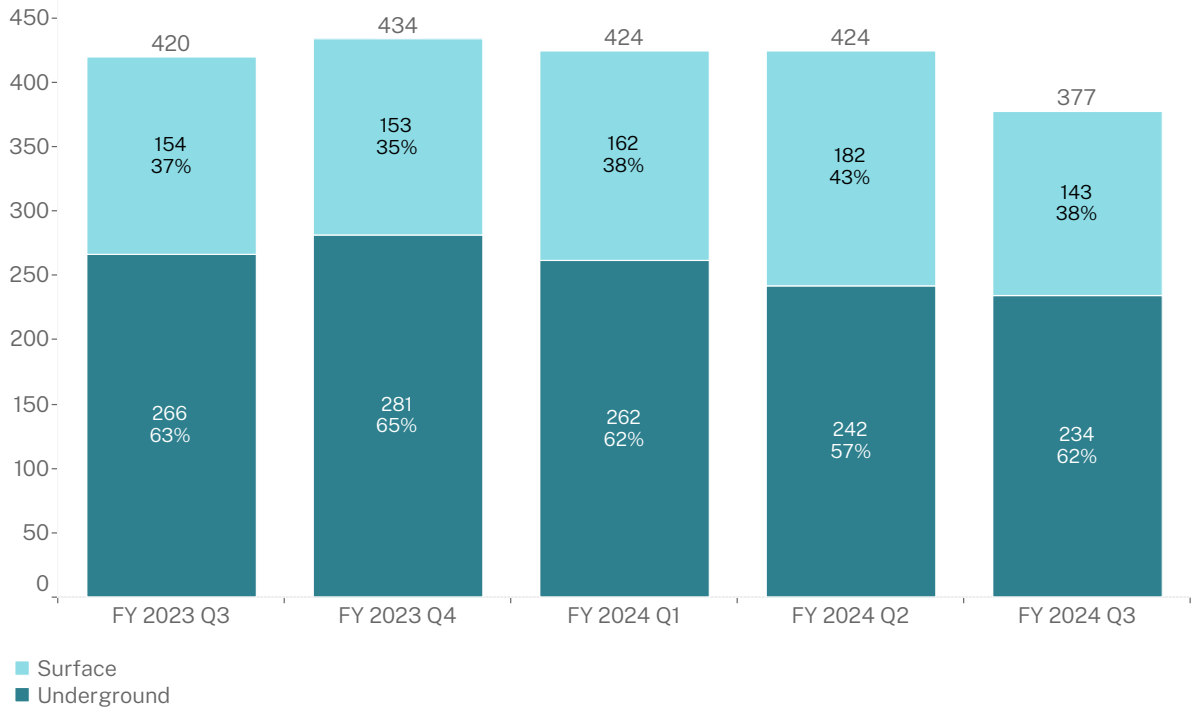
Under work health and safety legislation, mine operators must notify the Regulator about the occurrence of certain types of safety incidents. Incident notification data (by active mine) provides insights into sector-specific reporting trends.

Table 2. Coal sector incident notification rates — January 2023 to March 2024

Measure	FY 2023 Q3	FY 2023 Q4	FY 2024 Q1	FY 2024 Q2	FY 2024 Q3
Incidents	420	434	424	424	377
Active mines	101	101	103	103	103
Incident rate per active mine	4.16	4.30	4.12	4.12	3.66
Mines that notified incidents	51	49	51	52	50
% of mines notifying an incident	50%	49%	50%	50%	49%
Incident rate per notifying mine	8.24	8.86	8.31	8.15	7.54

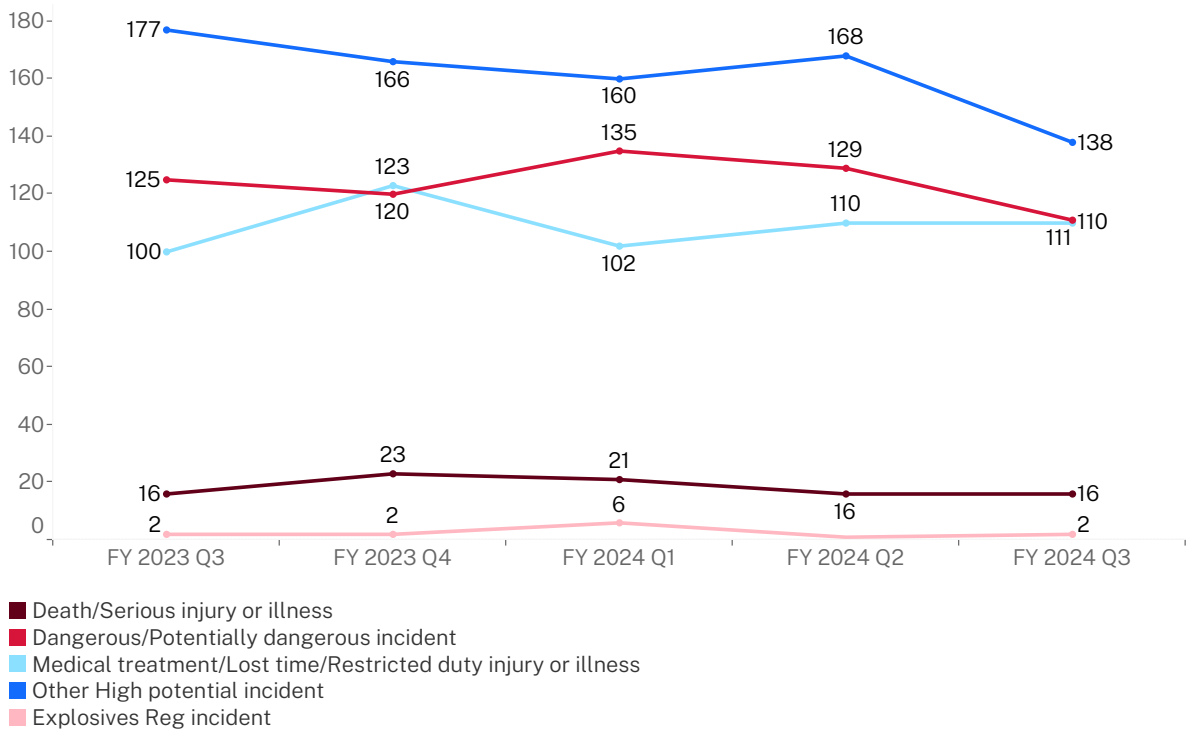
The following graph shows the proportion of safety incident notifications received from surface and underground coal operations. This quarter there were decreases in both surface and underground sectors resulting in an overall drop of 11% and the lowest incident rate over the 5-quarter period.

Figure 17. Coal sector incident notifications received by operation type — January 2023 to March 2024



The graph below presents a breakdown of safety incidents notified to the Regulator by the coal sector by the requirement to report under safety legislation. This quarter saw a decrease of notifications of other high potential incidents (18%) and dangerous/potentially dangerous incidents (14%). Compared to the previous quarter, no changes were recorded for medical treatment/lost time/restricted duty injuries or illnesses (111) or death/serious injury or illness incidents (16). Explosives Regulation incidents remain low.

Figure 18. Coal sector incident notifications received by requirement to report — January 2023 to March 2024

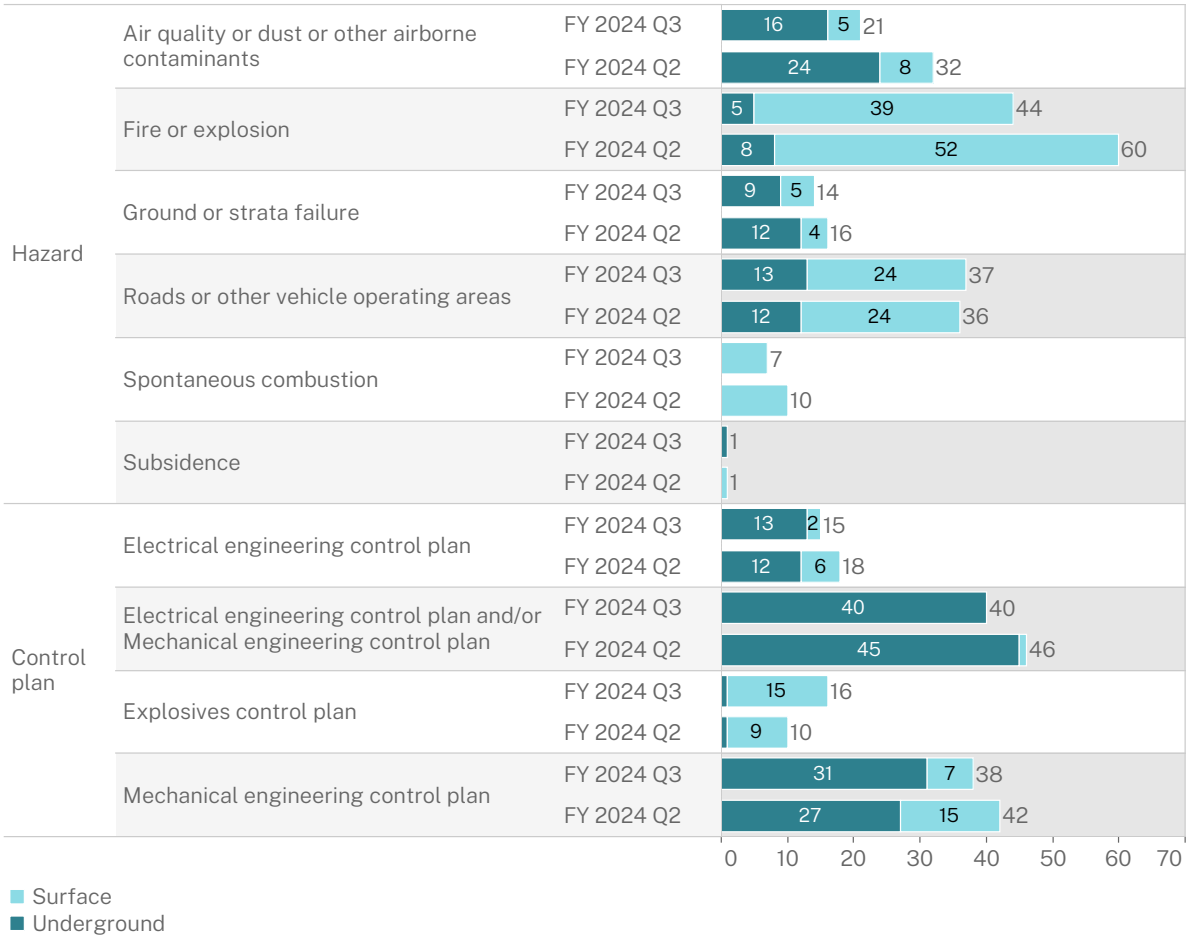


Incident notifications received by principal mining hazard or principal control plan

The figure below shows the number of incident notifications received from the coal sector during the past 2 quarters, as classified against related principal mining hazards and principal control plans. The findings highlight hazards where mine operators need to ensure their risk management controls remain fully effective.

In this quarter, notable decreases were observed in notified incidents relating to air quality, dust or other airborne contaminants (34%), fire or explosion (27%) and electrical engineering control plan and/or mechanical engineering control plan (13%). A 60% increase was seen in explosives control plan incidents notified.

Figure 19. Coal mine incident notifications received by principal mining hazard or principal control plan, and by operation type — October 2023 to March 2024



Large mines sector

Incident notifications received

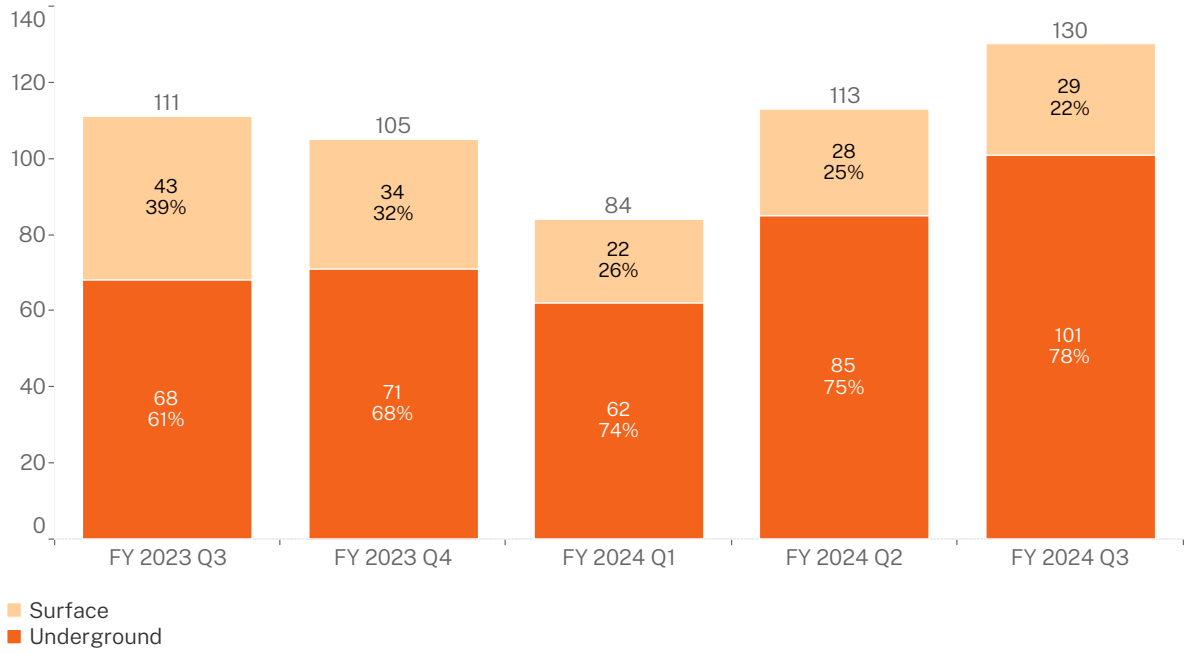
Under work health and safety legislation, mine operators must notify the Regulator about the occurrence of certain types of safety incidents. Incident notification data (by active mine) provides insights into sector specific reporting trends.

Table 3. Large mines and quarries incident notifications received rates — January 2023 to March 2024

Measure	FY 2023 Q3	FY 2023 Q4	FY 2024 Q1	FY 2024 Q2	FY 2024 Q3
Incidents	111	105	84	113	130
Active mines	57	57	57	69	70
Incident rate per active mine	1.95	1.84	1.47	1.64	1.86
Mines that notified incidents	36	30	26	29	27
% of mines notifying an incident	63%	53%	46%	42%	39%
Incident rate per notifying mine	3.08	3.50	3.23	3.90	4.81

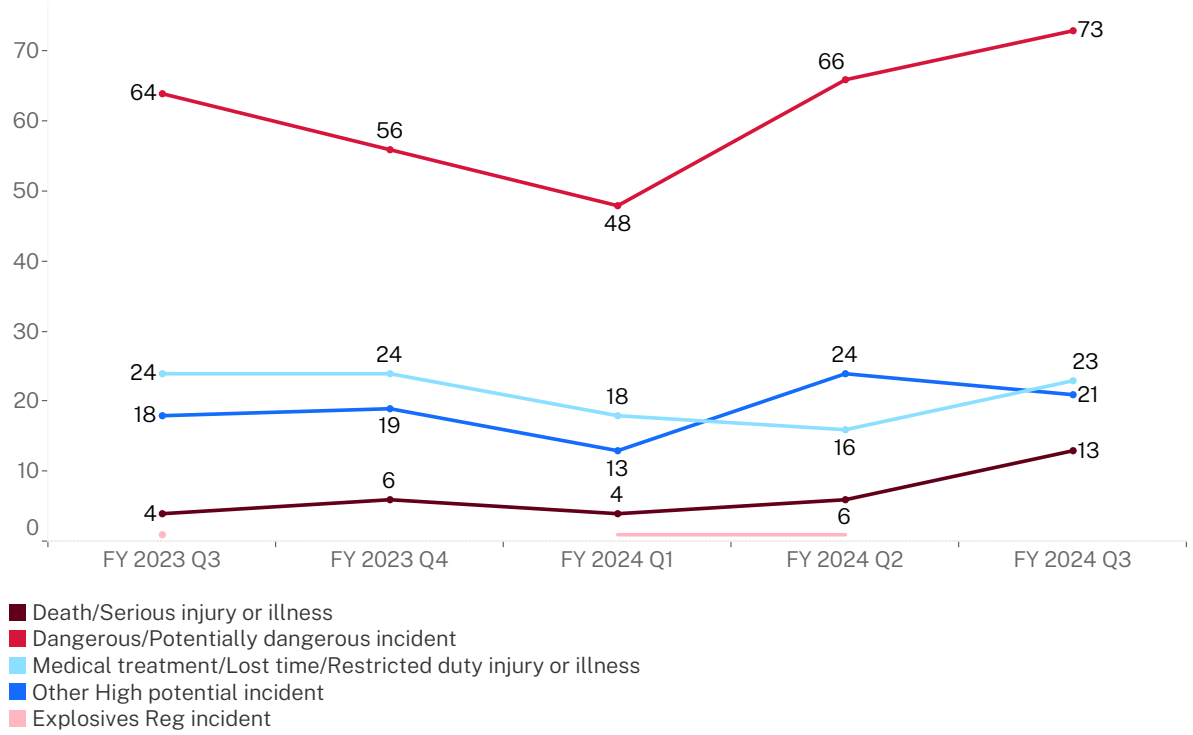
The following graph shows the proportion of safety incident notifications received from large mines and quarries by operation type. In this quarter, notified incidents increased overall by 15% to record the highest figure seen over the past 5 quarters. This was primarily due to an increase of notified incidents in underground mines (19%).

Figure 20. Large mines and quarries incident notifications received by operation type — January 2023 to March 2024



The following graph presents a breakdown of safety incidents notified to the Regulator by the large mines and quarries sector based on the requirement to report under safety legislation. This quarter an 11% increase in dangerous / potentially dangerous incidents was observed, recording the highest figure seen over the past 5 quarters. Notable increases were also seen in medical treatment / lost time / restricted duty injury or illness incidents (44%) and death/serious injury or illness which more than doubled from 6 to 13 incidents. Other high potential incidents decreased by 13%.

Figure 21. Large mines and quarries incident notifications received by requirement to report — January 2023 to March 2024

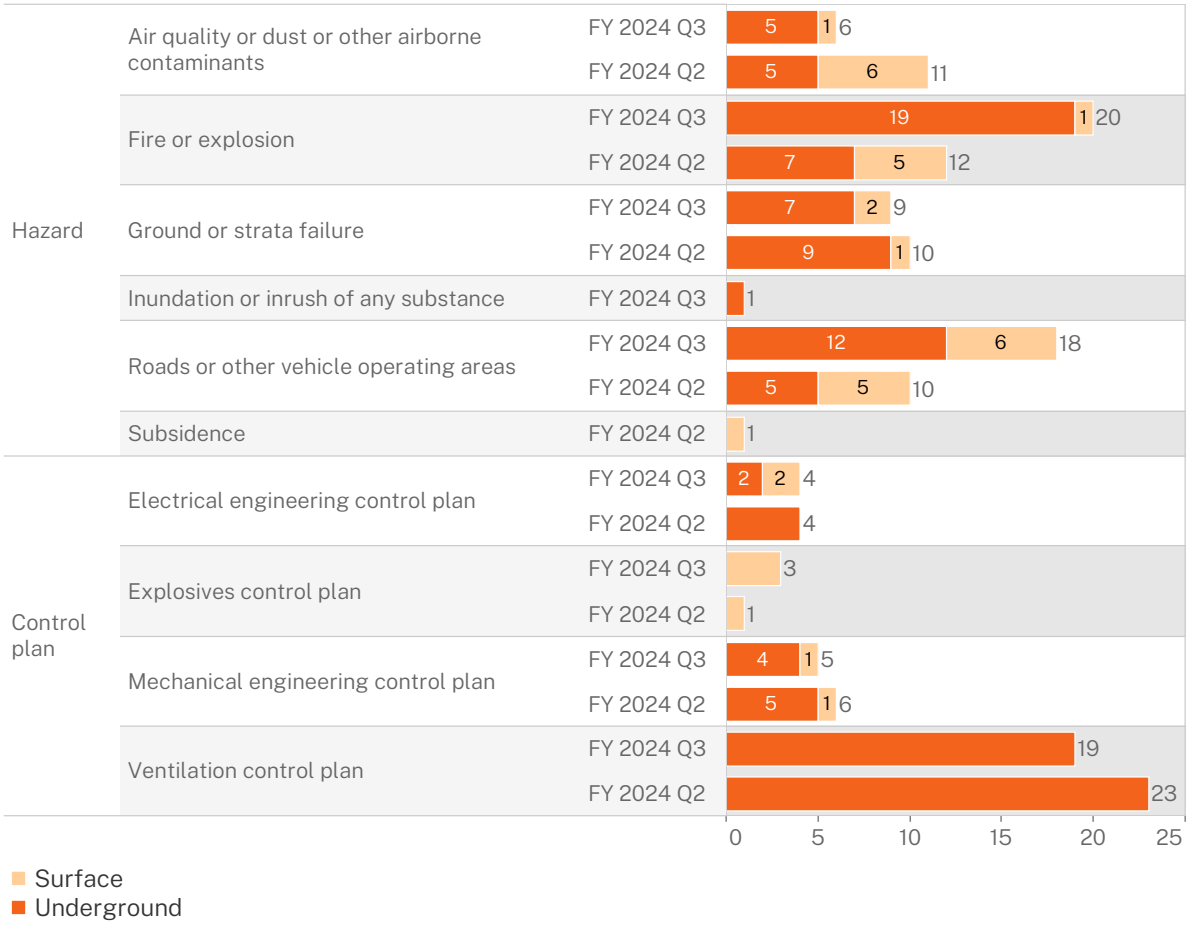


Incident notifications received by principal mining hazard or principal control plan

The figure below shows the number of incident notifications received from the large mines and quarries sector during the past 2 quarters as classified against related principal mining hazards and principal control plans. The findings highlight hazards where mine operators need to ensure their risk management controls remain fully effective.

In this quarter, notable increases were observed in notified incidents relating to fire or explosion (12 to 20) and roads or other vehicle operating areas (10 to 18). Notable decreases were seen in incidents notified regarding air quality, dust or other airborne contaminants (11 to 6) and ventilation control plans (23 to 19).

Figure 22. Large mines and quarries incident notifications received by principal mining hazard or principal control plan, and operation type — October 2023 to March 2024



Small mines sector

Incident notifications received

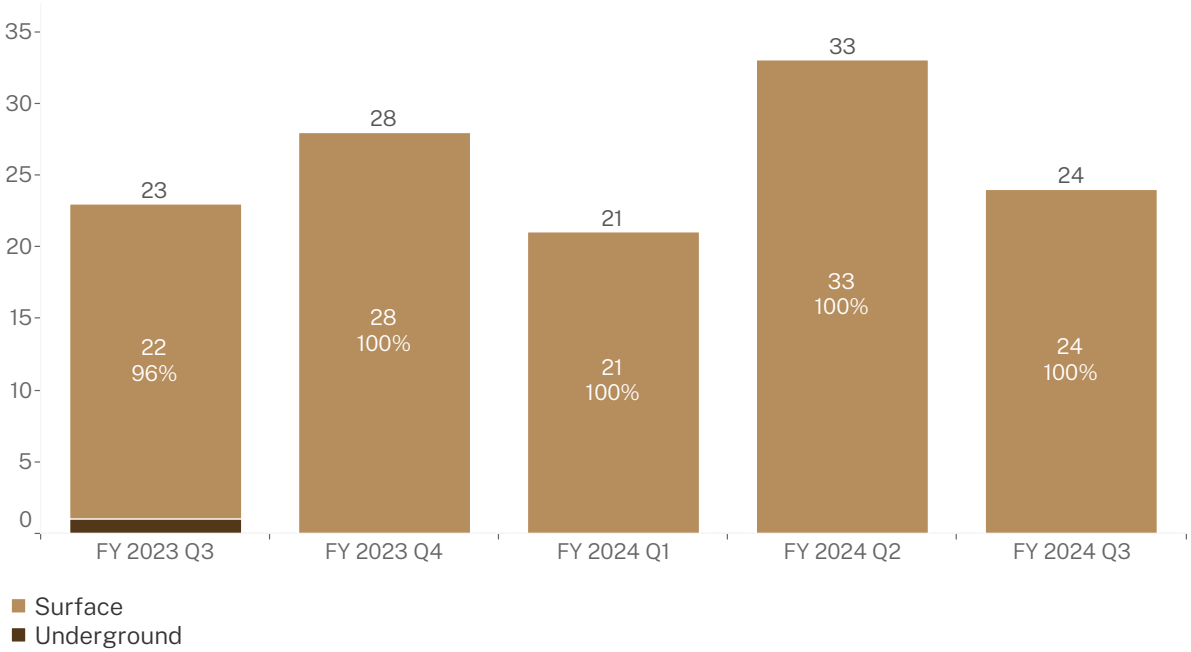
Under work health and safety legislation, mine operators must notify the Regulator about the occurrence of certain types of safety incidents. Incident notification data (by active mine) provides insights into sector specific reporting trends.

Table 4. Small mines and quarries incident notifications received rates — January 2023 to March 2024

Measure	FY 2023 Q3	FY 2023 Q4	FY 2024 Q1	FY 2024 Q2	FY 2024 Q3
Incidents	23	28	21	33	24
Active mines	2527	2536	2552	2399	2314
Incident rate per active mine	0.01	0.01	0.01	0.01	0.01
Mines that notified incidents	18	19	23	29	22
% of mines notifying an incident	0.71%	0.75%	0.90%	1.21%	0.95%
Incident rate per notifying mine	1.28	1.47	0.91	1.14	1.09

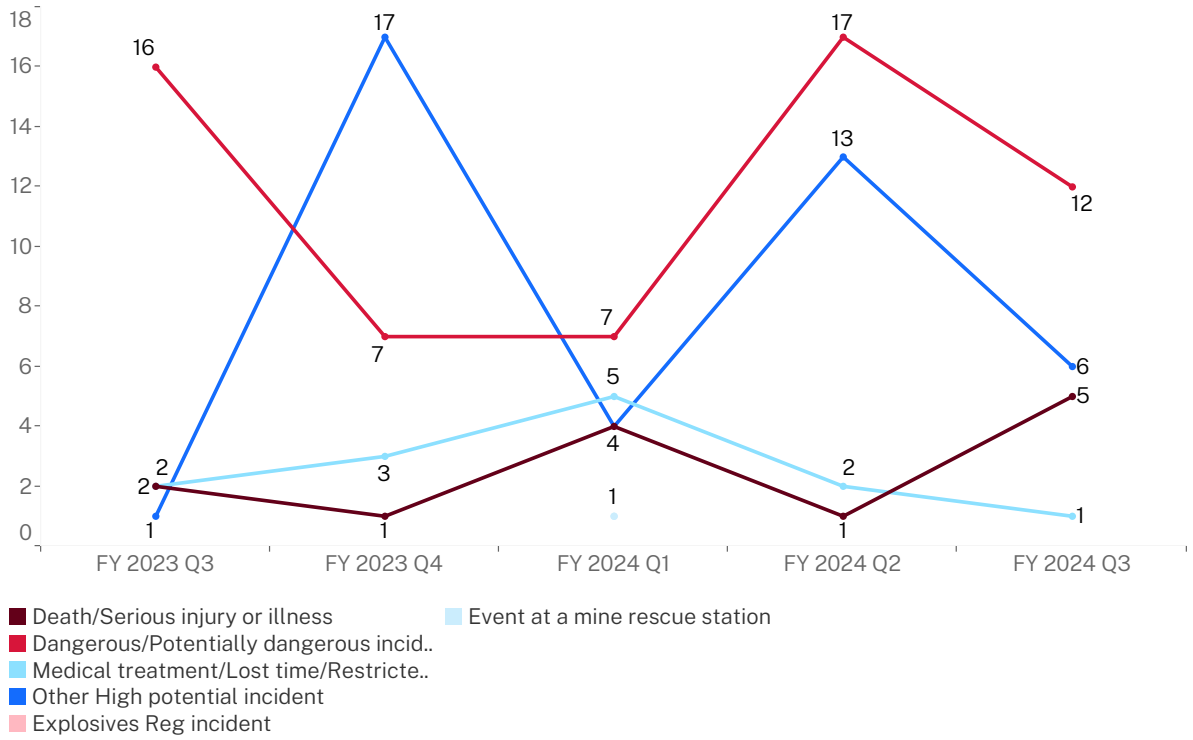
The graph below shows the proportion of safety incident notifications received from small mines and quarries by operation type. In this quarter, notified incidents decreased overall by 27%.

Figure 23. Small mines and quarries incident notifications received by operation type — January 2023 to March 2024



The graph below presents a breakdown of safety incidents notified to the Regulator by the small mines and quarries sector by the requirement to report under safety legislation. This quarter saw an increase in death/serious injury or illness incidents (from 1 to 5). Decreases were seen in all other categories this quarter, in particular dangerous/potentially dangerous incidents (17 to 12) and other high potential incidents (13 to 6).

Figure 24. Small mines and quarries incident notifications received by requirement to report — January 2023 to March 2024

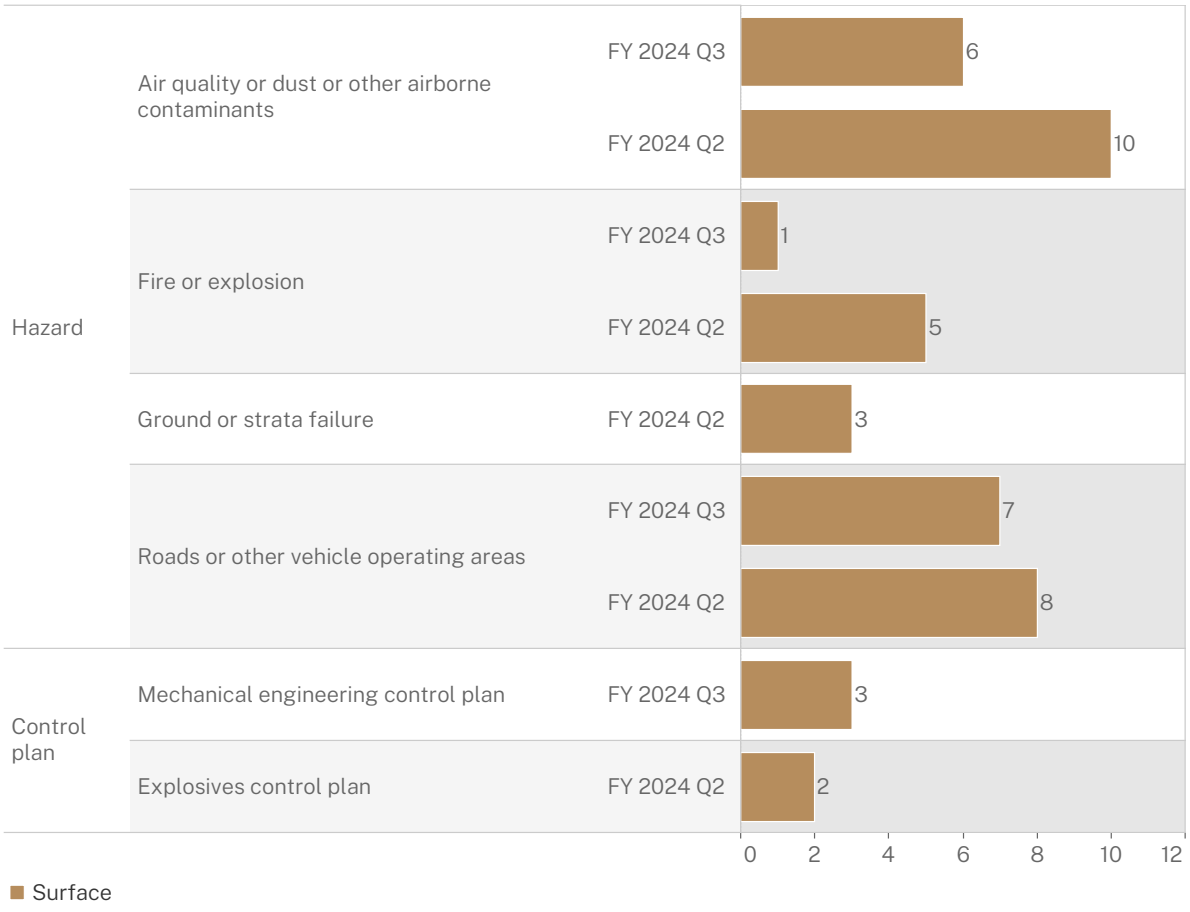


Incident notifications received by principal mining hazard or principal control plan

The figure below shows the number of incident notifications received from the small mines and quarries sector during the past 2 quarters as classified against related principal mining hazards and principal control plans. The findings highlight hazards where small mine and quarry operators need to ensure their risk management controls remain fully effective.

Decreases were observed in incidents notified relating to all present principal mining hazards — air quality, dust or other airborne contaminants (10 to 6), fire or explosion (5 to 1), ground or strata failure (3 to 0), and roads or other vehicle operating areas (8 to 7).

Figure 25. Small mines and quarries incident notifications received by principal mining hazard or principal control plan, and operation type — October 2023 to March 2024



Other mines sector profiles

Incident notifications received

Under work health and safety legislation, mine operators must notify the Regulator about the occurrence of certain types of safety incidents.

This section relates to petroleum and geothermal sites, opal mines and exploration sites. The tables below show the number and types of incident notification received by requirement to report under safety legislation and by principal mining hazard.

Table 5. Petroleum and geothermal sites, opal mines and exploration sites incident notifications received — January 2023 to March 2024

Sector	Measure	FY 2023 Q3	FY 2023 Q4	FY 2024 Q1	FY 2024 Q2	FY 2024 Q3
Petroleum and geothermal sites*	Incidents	0	0	0	0	0
Opal mines	Incidents	0	1	1	1	0
Exploration sites**	Incidents	3	1	1	1	2

* includes exploration
** excludes petroleum and geothermal

Table 6. Opal mines and exploration sites incident notifications received by requirement to report — January 2023 to March 2024

Sector	Requirement to report measure	FY 2023 Q3	FY 2023 Q4	FY 2024 Q1	FY 2024 Q2	FY 2024 Q3
Opal mines	Death/Serious injury or illness	0	1	0	1	0
	Dangerous/Potentially dangerous incident	0	0	1	0	0
	Other High potential incident	0	0	0	0	0
Exploration sites	Dangerous/Potentially dangerous incident	1	0	0	1	0
	Medical treatment/Lost time/ Restricted duty injury or illness	2	1	1	0	2

Table 7. Opal mines and exploration sites incident notifications received by principal mining hazard and other hazards — January 2023 to March 2024

Sector	PH/PCP	FY 2023 Q3	FY 2023 Q4	FY 2024 Q1	FY 2024 Q2	FY 2024 Q3
Opal mines	Roads or other vehicle operating areas	0	0	1	0	0
	No related principal hazard or principal control plan	0	0	0	1	0
	Not classified	0	1	0	0	0
Exploration sites	Mechanical engineering control plan	1	0	0	0	0
	No related principal mining hazard or principal control plan	2	1	1	1	2

Compliance and enforcement

The Regulator uses a range of tools to promote and secure compliance in mines and petroleum sites in relation to work health and safety legislation. These include desktop assessments, site inspections, investigations and enforcement actions, such as issuing notices and commencing prosecutions.

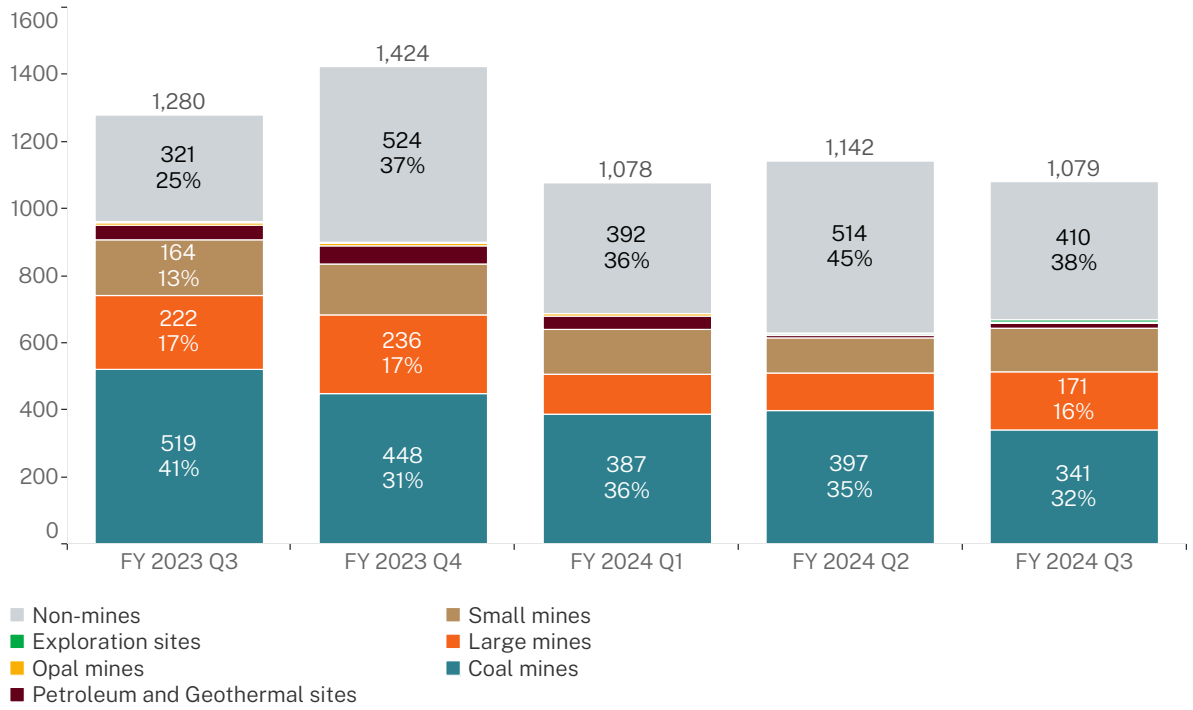
Detailed information regarding compliance activities, priorities, outcomes and reports are published on our website and in our business activity reports.

Safety assessments by sector

This quarter saw a 6% decrease in the number of safety assessments commenced by the Regulator.

Non-mines assessments are the largest sector (38%) and predominantly relate to licensing and practising certificate applications and renewals.

Figure 26. Safety assessments by sector — January 2023 to March 2024

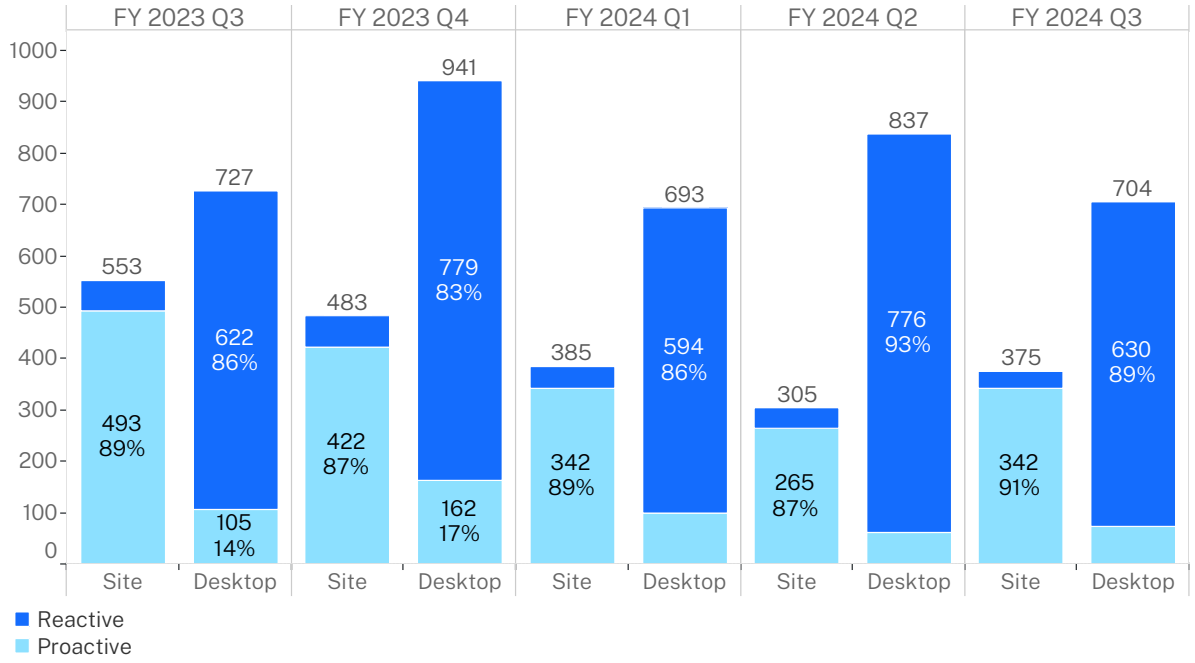


Safety assessments by category and nature

Site-based (visiting mine sites) and desktop activities are both important regulatory tools. While the focus of our on-site compliance activity is on preventing incidents through planned risk-based proactive assessments, our desktop activities are mainly reactive.

Site-based proactive assessments focus on establishing whether critical controls have been effectively implemented. Meanwhile desktop assessment activities include reviews of control measures following an incident, review of personal dust monitoring reports submitted by coal mine operators, assessment of high-risk activity notifications, applications for exemptions from work health and safety laws, subsidence management plans and preparation for site work.

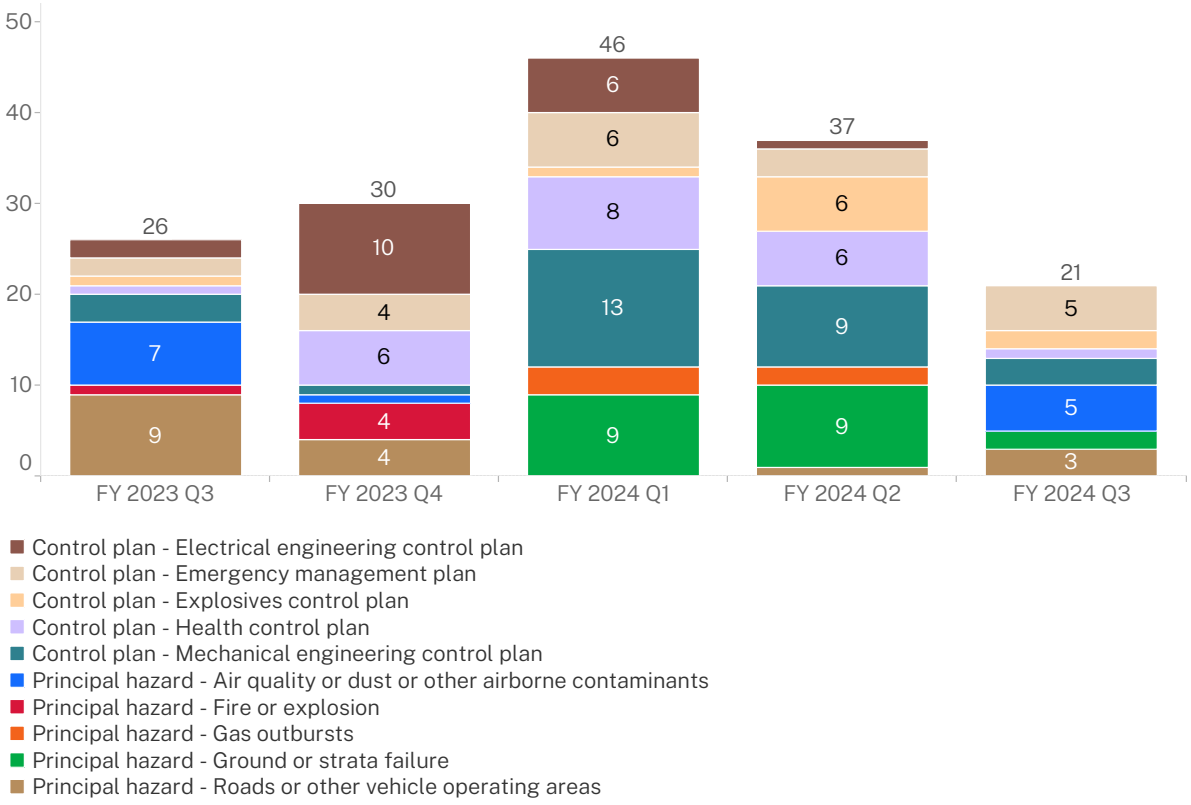
Figure 27. Safety assessments by category and nature — January 2023 to March 2024



Programmed site assessments

Our targeted assessment program establishes a risk-based and proactive approach for assessing the extent to which critical controls for managing principal mining hazards, principal control plans and other programs have been identified, implemented and are being monitored.

Figure 28. Targeted assessments by principal mining hazards, control plans and other programs — January 2023 to March 2024

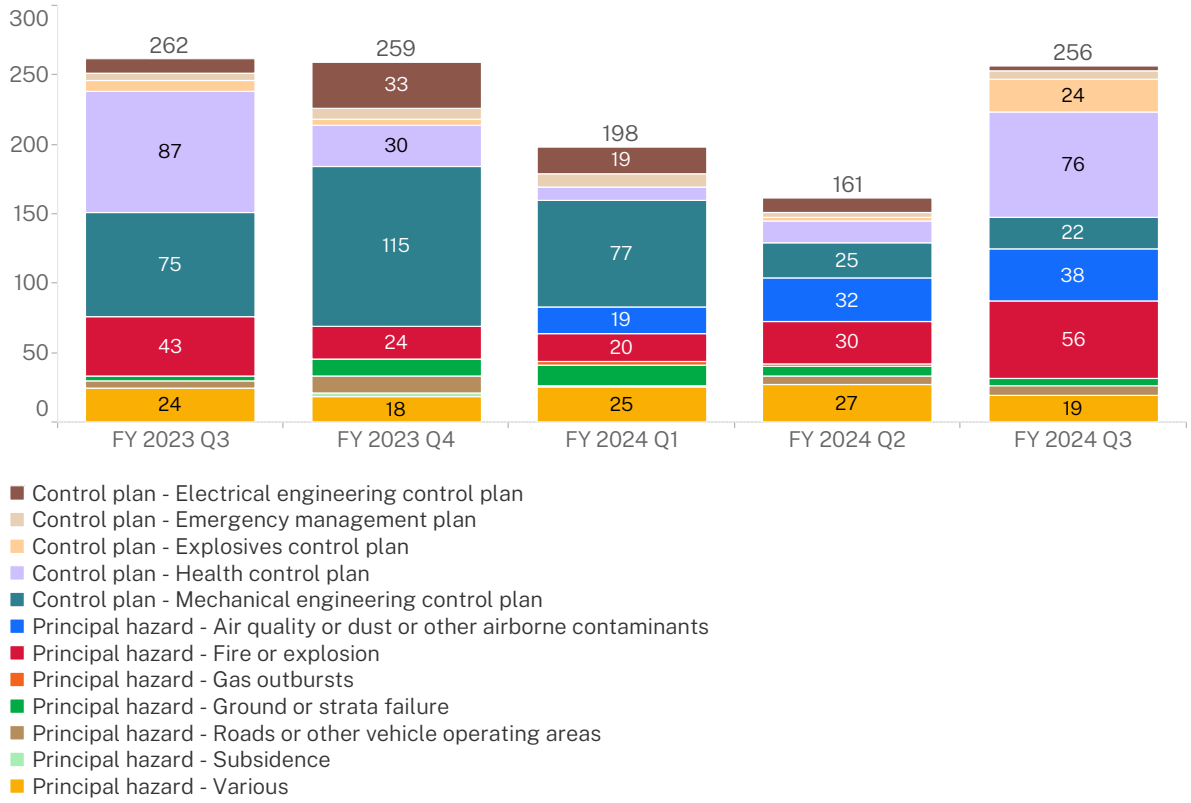


Planned inspections

Planned inspections assist in identifying compliance weaknesses which could lead to an incident or injury. These assessments focus on the physical implementation of critical controls in the operating areas of a mine.

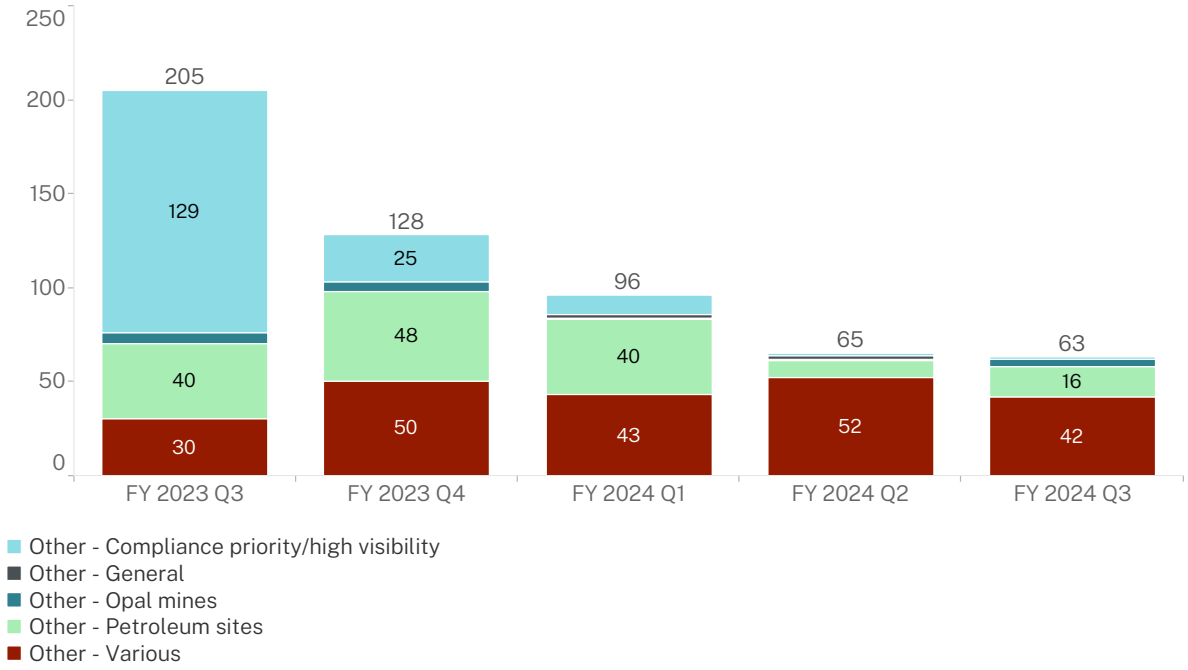
Planned site inspections were commenced on the principal mining hazards and control plans shown in the graph below.

Figure 29. Planned inspections by principal hazards and control plans — January 2023 to March 2024



The graph below shows planned site inspections commenced for ‘other’ hazards. ‘Other’ hazards are those hazards that are not related to principal mining hazards or principal control plans.

Figure 30. Planned inspections by ‘other’ programs — January 2023 to March 2024

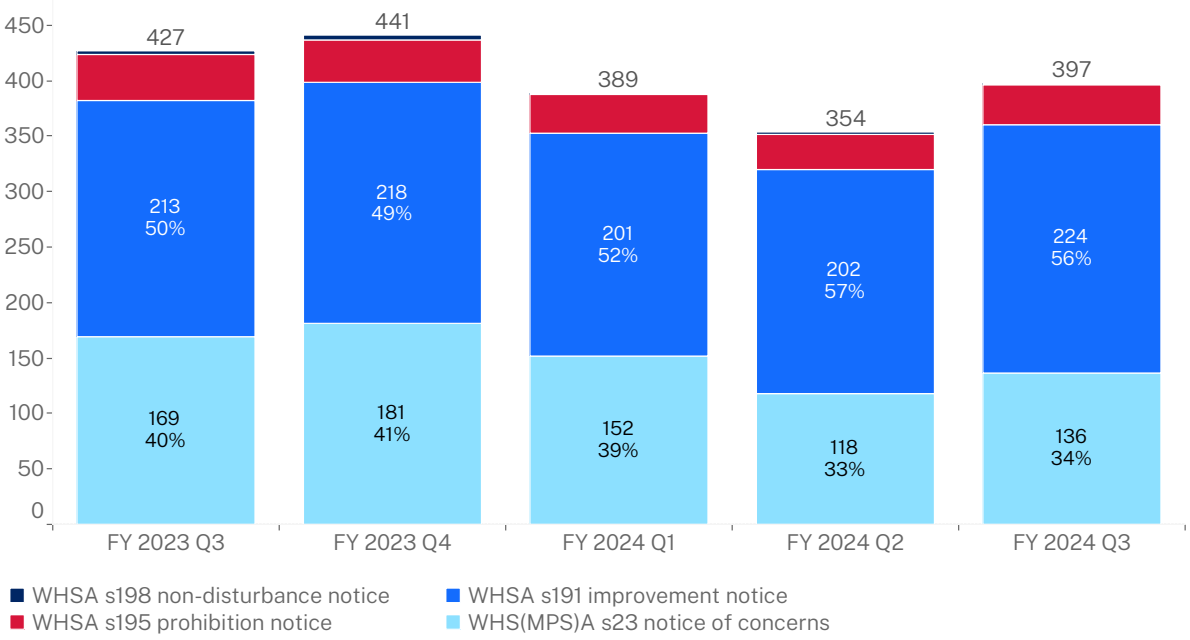


Safety notices issued

We issue risk-based safety notices including prohibition and improvement notices, notices of concern (written notice of matters) and non-disturbance notices.

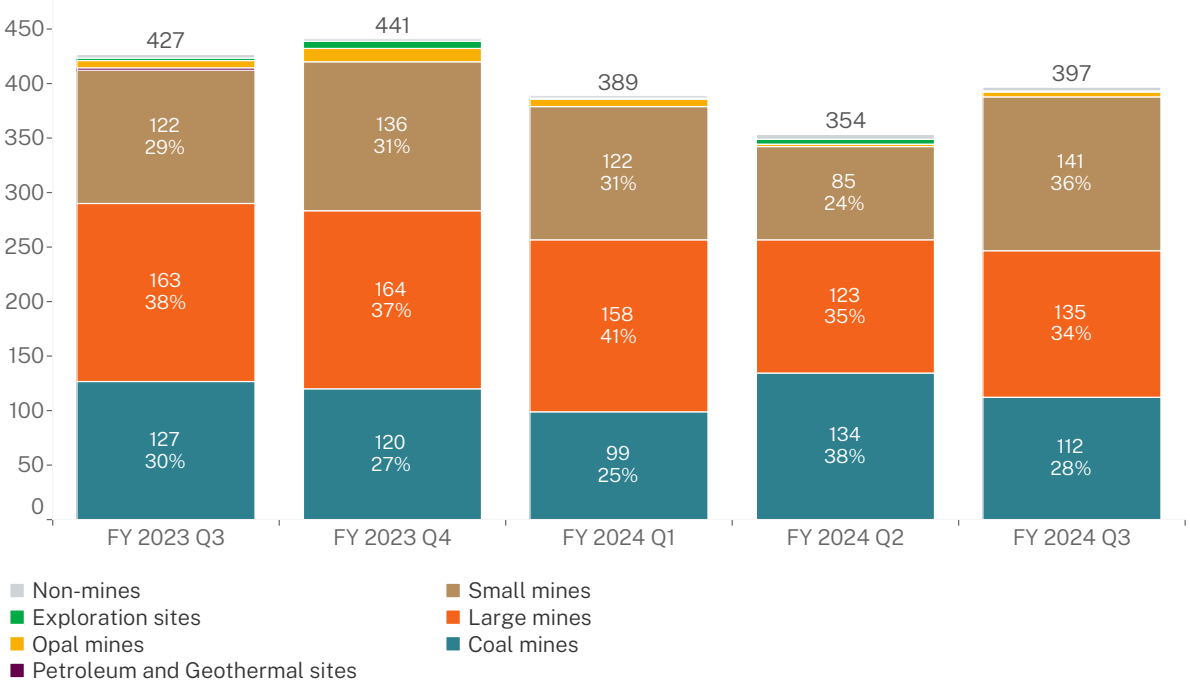
The graph below shows the number and type of safety notices issued during each of the 5 quarters from January 2023.

Figure 31. Safety notices issued by notice type — January 2023 to March 2024



The proportion of safety notices issued has increased by 12% overall this quarter. Notable increases in notices issued to large mines (123 to 135) and small mines (85 to 141) have driven this change, in conjunction with a decrease in notices issued to coal mines (134 to 112).

Figure 32. Safety notices issued by sector — January 2023 to March 2024



NSW Resources Regulator
W: resourcesregulator.nsw.gov.au

NSW GOVERNMENT