NSW Resources
Resources Regulator

Quarterly safety report

January to March 2025

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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.

All data is subject to continuous improvement due to changes to reporting requirements, internal audit and validation processes and updates from external sources. Incorrectly classified information from past reporting periods is sometimes found and reclassified in source databases. The Regulator's reporting employs the best available data at the time of data extraction, which may differ from previously published figures.

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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 'fires 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 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) 2025. For selected measures, data is analysed over a 15-month period from January 2024 to March 2025.

In this quarter, there were a total of 539 incident notifications received – a small decrease from the previous quarter, but aligned with the equivalent period in FY 2024.

There were 2 fatalities during the quarter. These deaths are currently under investigation but do not appear to be work related.

Incident notifications increased for large mines (12%) and small mines (25%) compared to the previous quarter. Conversely, the coal mines sector saw a 6% decrease of notified incidents.

Assessments increased by 14% overall this quarter from 679 to 772. Increases were seen in every sector and reporting nature except for coal mines, opal mines and exploration sites.

Safety notices increased this quarter from 494 to 696 (41%). This was predominantly led by an increase in s191 improvement notices issued (from 344 to 493).

Quarterly snapshot

2 Deaths (non-work related)

28 Serious injuries or illnesses

81 Dangerous incidents

86 Potentially dangerous incidents

172 Other high potential incidents

539 **Incident notifications** received*

36 Medical treatment injuries or illnesses

134 Lost time/restricted duty injuries or illnesses

0 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

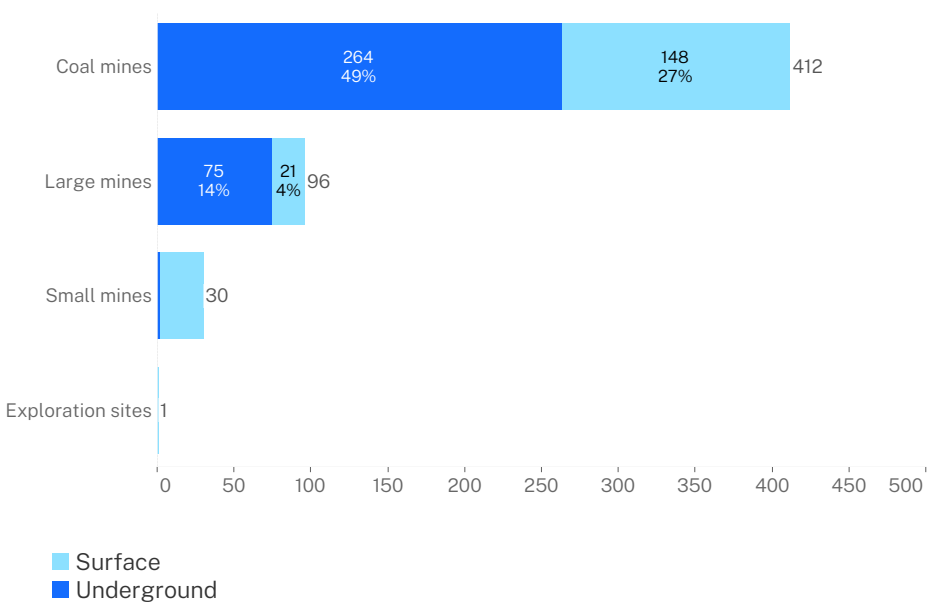
Coal mines
412
down from 438

Large mines
96
up from 86

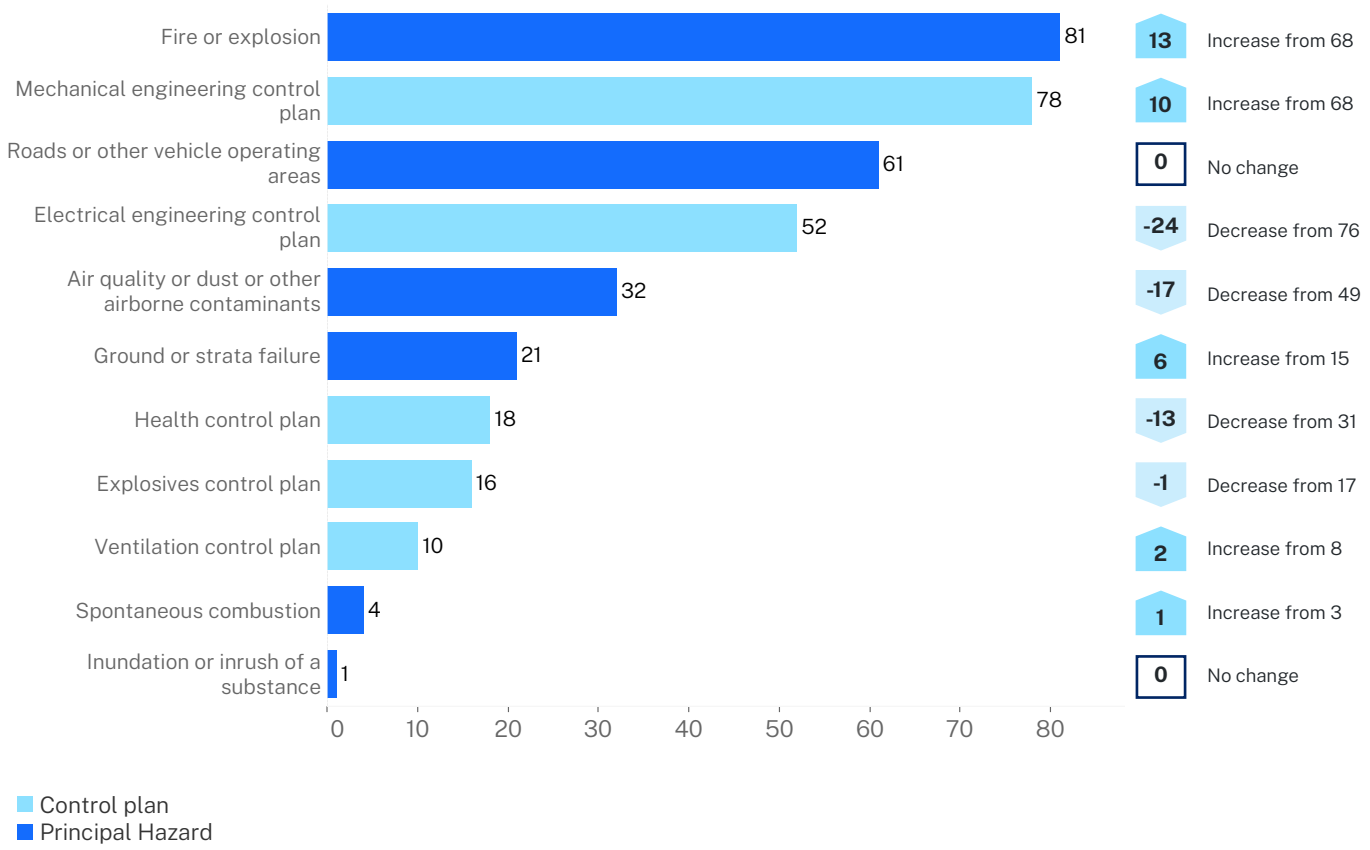
Small mines
30
up from 24

Opal mines
0
(no change)

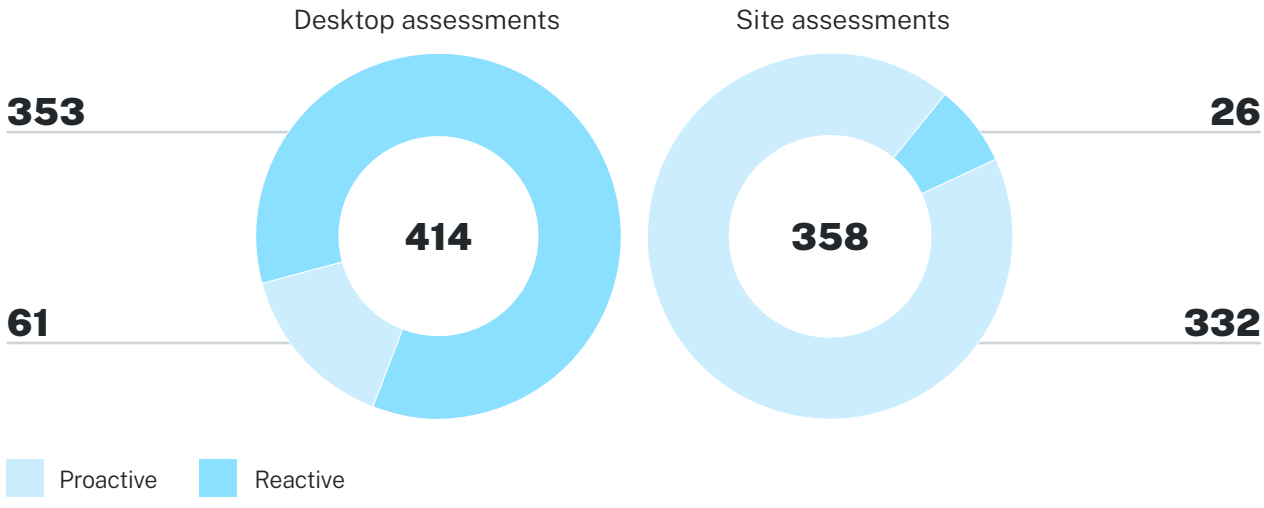
Exploration sites
1
down from 3



Incident notifications classified by principal mining hazard or principal control plan

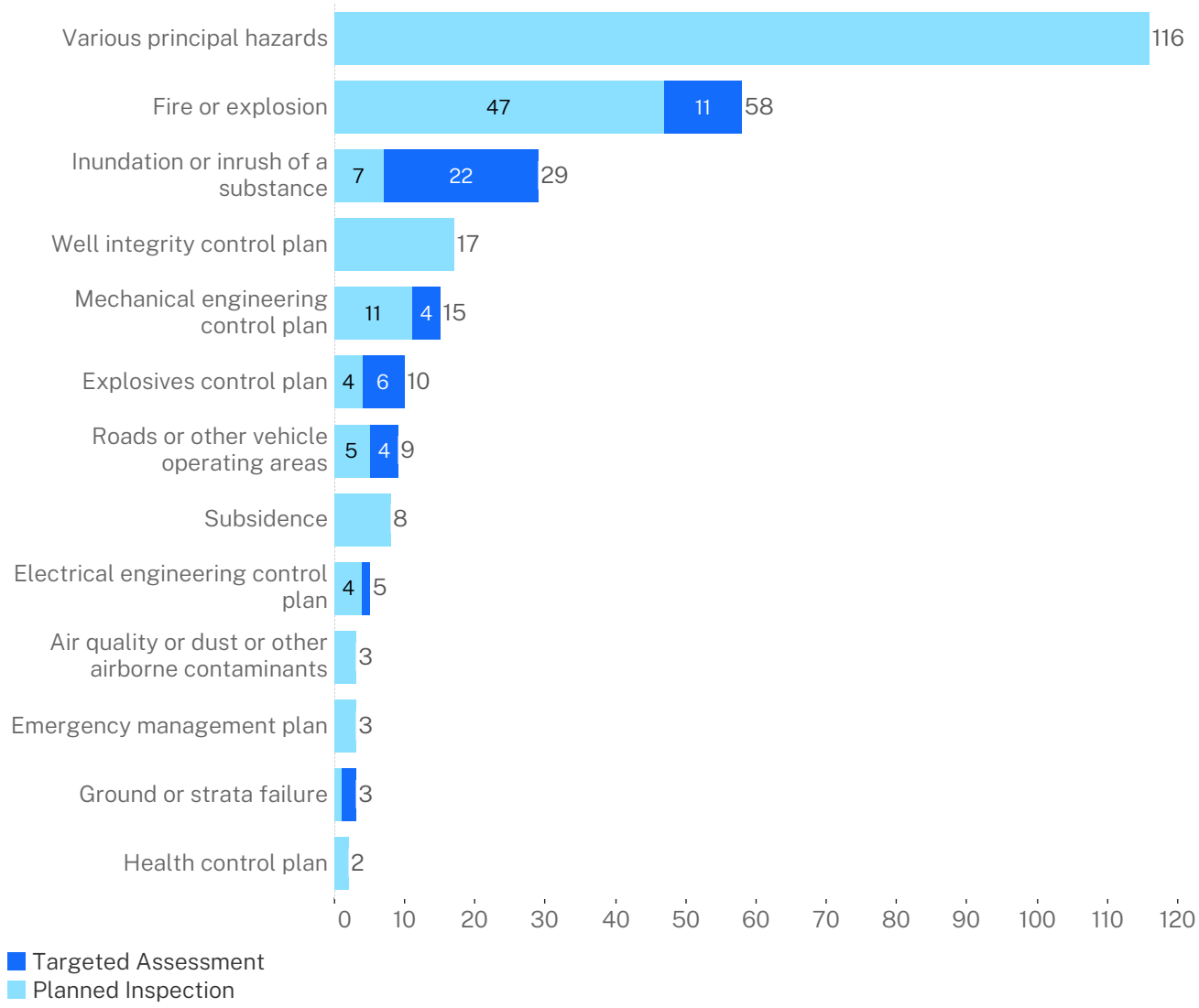


772 Assessments commenced



Coal mines	Large mines	Small mines	Petroleum & geothermal sites	Opal mines	Exploration sites	Non-mines
297 down from 318	109 up from 86	131 up from 108	17 up from 9	1 down from 2	3 down from 5	214 up from 151

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



696 Notices issued

2
WHSA s198
non-disturbance notices

60
WHSA s195
prohibition notices

493
WHSA s191
improvement notices

141
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 published between 1 January and 31 March 2025.

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

Fatal injuries

Australia

Victoria

On 22 March 2025, a worker was found deceased at the bottom of a silo at a quarry in Montrose, east of Melbourne. It is understood the 54-year-old man had fallen about 18 metres though a void at the top of the silo before he was discovered around 3pm. Refer to WorkSafe Victoria news release dated 24 March 2025.

International

Canada

In February 2025, a worker died while working around a water storage reservoir. The worker was working alone at the time of the event. It is believed that the worker was attempting to collect a water sample from a lined water storage reservoir when he fell into the water. The worker was unable to exit the water and drowned as a result. Refer to Energy Safety Canada safety alert dated 11 February 2025.

India

On 2 January 2025, a truck driver travelling from the dump yard to the quarry failed to notice a stopped truck at the west junction, leading to a head-to-tail collision on the driver's side and resulting in injuries to the driver's left leg. The driver succumbed to his injuries 6 days later while undergoing medical treatment. Refer to Government of India Safety Alert 3/2025 dated 20 January 2025.

On 28 January 2025, a contractual worker was engaged in a defoaming operation by spraying water with a hose pipe in Lined Waste Pit No. 2 at the well pad of the mine. The worker suddenly lost his balance and slipped into the lined waste pit resulting in drowning. Another person who was present at the well pad rushed to the site and entered the lined waste pit to rescue him, but he also drowned. Refer to Government of India Safety Alert 4/2025 dated 29 January 2025.

South Africa

On 4 February 2025, Harmony Gold reported 2 separate loss-of-life incidents which resulted in 5 fatalities. Two employees lost their lives following a blasting operation incident at a development end at Doornkop Mine, in Soweto, Gauteng. In a separate incident, 3 employees succumbed to their injuries following a severe fall of ground incident at Joel Mine, near Theunissen in the Free State Province. Refer to Harmony Gold company announcement dated 5 February 2025.

On 20 February 2025, Harmony Gold reported a loss-of-life incident due to a fall of ground following a seismic event at Mponeng mine, near Carletonville. Refer to Harmony Gold company announcement dated 21 February 2025.

United States of America

On 3 January 2025, a miner died when an excavated trench collapsed and engulfed him. The victim was replacing a 12-inch discharge line in the trench when the wall collapsed. Refer to MSHA fatality alert dated 3 January 2025.

On 10 January 2025, a mobile bridge carrier pinned the operator against the coal rib, causing fatal injuries. Refer to MSHA fatality alert dated 10 January 2025.

On 29 January 2025, a miner died when a piece of rock fell from the highwall and struck the cab of the drill he was operating. Refer to MSHA fatality alert dated 29 January 2025.

On 30 January 2025, a miner died when he became entangled in a log washer. The victim was starting the log washer when he lost his balance and fell into the machine. Refer to MSHA fatality alert dated 30 January 2025.

On 30 January 2025, a miner died when a front-end loader operator unknowingly lowered a pallet of stone onto him. Refer to MSHA fatality alert dated 30 January 2025.

On 12 February 2025, a miner died when the ground beneath the drilling rig he was operating failed, causing it to overturn and fall off the highwall. Refer to MSHA fatality alert dated 12 February 2025.

Alerts, bulletins, fact sheets and incident information releases

New South Wales

Safety alerts and bulletins

- **Safety Bulletin: Complaints about blasting notifications increase**

  There has been an increase in complaints about blasting from owners and occupiers of land or structures adjacent to NSW mines. The Resources Regulator has received 12 complaints related to blasting activities at mines throughout NSW over the past 6 months. Half of these complaints related to notifications of blasting activities (10 quarry related and 2 related to large open-cut mines). Complaints received by the Regulator about notifications of blasting activities included: non-notification; receiving notification one week before blasting but not on the day of the blast; no written notification; who must be notified; and when blasting can occur. Refer to SB25-01 Complaints about blasting notices increase dated 7 March 2025.

- **Safety Bulletin: Underground vehicle interaction with high-volt cables puts miners at risk**

  A recent series of incidents involving collisions between underground mobile plant and high voltage (HV) 11 kilo Volt (kV) power cables have been reported to the Resources Regulator. Movement of large mobile plant transporting heavy loads has resulted in multiple incidents where HV cables have been hit, resulting in cable damage and protection trips. These incidents expose mine workers to serious risk of injury from the release of high voltage energy. Refer to SB25-02 Underground vehicle interaction with high-volt cables puts mine workers at risk dated 24 March 2025.

Fact sheets

- **Preventing worker exposure to respirable crystalline silica – Tier 3 quarries**

  The Work Health and Safety Regulation 2017 was amended to further prevent, as far as reasonably practicable, worker exposure to respirable crystalline silica. These amendments are found in Chapter 8A of the WHS Regulation. This fact sheet describes what is required of tier 3 quarries to comply with the crystalline silica WHS Regulation. Tier 3 quarry operators need to:

  1. Determine if they are processing a crystalline silica substance (CSS) on site
  2. Review control systems and procedures
  3. Implement a silica risk control plan
  4. Review protection measures to ensure they comply with AS/NZ 1716:2021 and AS/NZ1715:2009
  5. Review health monitoring arrangements
  6. Review and provide training for workers in CSS health risks
  7. Monitor dust exceedances and notify the Regulator of any exceedances

  Refer to Fact sheet – Preventing worker exposure to respirable crystalline silica – Tier 3 quarries dated 8 January 2025.

- **Schedule of fees for licences, plant design and item of plant registrations and approved training providers**

  An application for a licence under Part 10, or a plant design or item of plant registration specified in section 187 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, must be accompanied by a fee. The fees are set out in Fact sheet - Schedule of fees for licences, plant design and item of plant registrations and approved training providers dated 31 March 2025.

Reports

- **Investigation Information Release – IIR25-01 Worker suffers serious injury while working on unguarded section of a fixed conveyor**

  A worker suffered a serious injury to his arm while working on an unguarded section of a conveyor. The worker was adjusting the tail arm adjustment screw about 7pm on 2 December 2024. The tail adjustment screw was positioned in an unguarded section on the fixed conveyor. As the worker was attempting to adjust the screw to reposition the belt on the tail drum, the worker's right arm became entangled with the belt and rollers, resulting in a serious injury. A second worker operating a loader nearby responded to the incident. NSW Ambulance attended the site and transferred the injured worker to hospital where he later underwent surgery. The conveyor was installed and commissioned the day before the incident, 1 December 2024.

  Refer to IIR25-01 – Worker suffers serious injury while working on unguarded section of a fixed conveyor dated 16 January 2025.

- **Investigation Information Release – IIR25-02 Causal investigation – polyurethane ground stabiliser fire exposes workers to health, safety risk**

  The Resources Regulator has begun a causal investigation to determine the causal factors that led to an underground mine fire at Perilya Southern Operations, Broken Hill NSW on 12 January 2025. A line of enquiry in the investigation will consider if a polyurethane ground stabiliser (PUR) used to stabilise the ground self-heated after being applied by workers who were undertaking ground support and remedial work in an isolated underground area. Workers undertaking remediation identified fumes and vapour while applying the PUR product. The workers successfully retreated to fresh air bases where they remained until it was assessed as safe to leave the mine. Ultimately, all workers were safely removed from the mine. There were no injuries reported by the mine operator regarding this incident.

  Refer to IIR25-02 Causal investigation – polyurethane ground stabiliser fire exposes workers to health, safety risk dated 31 January 2025.

- **Investigation Information Release – IIR25-03 Haul truck collides with excavator**

  A Caterpillar 789 haul truck used in mining operations at the mine was due to attend the workshop for scheduled maintenance. There was a build-up of material that had become hung up in the truck's tray. A practice had developed at the mine where excavators were used to scrape the material out of the truck tray before a service. This was to mitigate the risk of the material falling from the tray of the truck while it was in the workshop. This practice was known as 'backscratching'. A contractor was operating a ZX470/490H Hitachi 49 tonne excavator as part of a project to reduce a topsoil stockpile. The supervisor of the overburden operation arranged with a representative of the contractor for the haul truck to attend the excavator's location for a 'backscratch'. The haul truck went to the excavator's location on 20 February 2025 at 3:35pm. The truck operator thought he had established communications with the excavator operator, but he was communicating with another of the contractor's representatives. The excavator was on an angle across a relatively narrow bench, which was 1.9 metres high. The haul truck reversed towards the excavator without positive communications established between the operators. The excavator operator tried to move the excavator out of the truck's path but was unable to do so because of the large size of the truck and the position of the excavator on the bench. The rear of the truck and its tailgate collided with the side of the excavator's cabin. This caused the front left side pillar of the excavator to be pushed inward towards the operator and the cabin roof forced upward. Extensive damage was caused to the excavator's cabin and the operator was unable to exit the cabin using the normal means of egress. An emergency was called and an operation was commenced to free the excavator operator. The excavator operator was eventually freed from the cabin uninjured.

  Refer to Investigation Information Release – IIR25-03 Haul truck collides with excavator dated 20 March 2025.

- **Consolidated report – Ground or strata failure – coal underground outbye areas – stage 3 (July 2023 to August 2024)**

  A crucial part of the Resources Regulator's incident prevention strategy for mines and petroleum sites involves targeted assessments, planned inspection programs and priority programs. This planned inspection program for ground or strata failure in underground coal mine outbye areas stage 3 was conducted between July 2023 and August 2024. As part of the planned assessment activities, Regulator inspectors attended 19 underground coal mines with a focus on the critical controls of ground support, ground support life cycle management and control access to unsupported ground. In summary, 13 compliance notices were issued to 10 of the 19 underground coal mines assessed. Nine of the 13 compliance notices issued related specifically to ground or strata failure.

  Refer to Consolidated Report – Ground or strata failure – coal underground outbye areas – stage 3 (July 2023 to August 2024) dated 13 January 2025.

- **Consolidated report – Air quality or, dust or other airborne contaminants – stage 1 – underground coal mines (January to October 2024)**

  The planned inspection program in underground coal mines for air quality or, dust or other airborne contaminants – stage 1 was conducted between January 2024 and October 2024. A bowtie identified the following 4 threats for the material unwanted event (MUE) of unplanned exposures to hazardous atmospheres: low oxygen environment, dust raised in suspension, hazardous chemicals in the atmosphere and carcinogens in the atmosphere. As part of the planned assessment activities, Regulator inspectors attended 18 underground coal mines with a focus on critical controls including ventilate workplace, hygiene monitoring and health monitoring. This planned inspection program was part of an ongoing effort by the Regulator to reduce the potential risks associated with human exposures to hazardous atmospheres in underground coal mines. In summary, 33 compliance notices were issued to 13 of the 18 underground coal mines assessed. 11 of the 33 compliance notices issued related specifically to the assessment of human exposure to hazardous atmospheres in underground coal mines. 22 of the 33 compliance notices issued related to other types of non-compliance issues.

  Refer to Consolidated Report – Air quality or, dust or other airborne contaminants – stage 1 – underground coal mines (January to October 2024) dated 21 February 2025.

- **Consolidated report – Falling objects – stage 2 – surface and underground coal mines (July 2023 to November 2024)**

  The planned inspection program at surface and underground coal mines for falling objects – stage 2 was conducted between July 2023 and November 2024. A bowtie identified the following 3 threats for the material unwanted event (MUE) falling objects expose people to harm: loose items and material, lifting equipment failure and intentional load movement. As part of the planned assessment activities, Regulator inspectors attended 46 surface and underground coal mines with a focus on critical controls including loose item containment, operator protective structures and exclusion zones. This planned inspection program was part of an ongoing effort by the Regulator to reduce the potential risks associated with people exposed to falling objects. In summary, 47 compliance notices were issued to 26 of the 46 mines assessed. 26 of the 47 compliance notices issued related specifically to the assessment of human exposure to falling objects. Twenty-six of the 47 compliance notices issued related specifically to the assessment of human exposure to falling objects, whilst 21 of the notices issued related to other types of non-compliance issues.

  Refer to Consolidated Report – Falling objects – stage 2 – surface and underground coal mines (July 2023 to November 2024) dated 25 February 2025.

- **Consolidated report – Roads or other vehicle operating areas – surface vehicle interaction – stage 2 – surface coal mines (October 2023 to June 2024)**

  The planned inspection program in surface coal mines for the principal hazard of roads and other vehicle operating areas – surface vehicle interaction – stage 2 was conducted between October 2023 and June 2024. A bowtie identified for the threat of vehicles operating in non-production areas a critical control of road standards for the material unwanted event (MUE) of human exposure to surface vehicle interactions. As part of the planned assessment activities, Regulator inspectors attended 22 surface coal mines with a focus on assessing the identified critical control supports for the critical control. This planned inspection program was part of an ongoing effort by the Regulator to reduce the potential risks associated with human exposure to surface vehicle interactions. This report provides information on assessment findings and recommendations for surface coal mine operators. In summary, 5 compliance notices were issued to 5 of the 22 surface coal mines assessed. Three of the 5 compliance notices issued related specifically to the assessment of human exposure to surface vehicle interactions. Two of the 5 compliance notices issued related to other types of non-compliance issues.

  Refer to Consolidated Report – Roads or other vehicle operating areas – surface vehicle interaction – stage 2 – surface coal mines (October 2023 to June 2024) dated 11 March 2025.

- **Consolidated report – Pressure vessels - coal mines (April 2023 to October 2024)**

  The planned inspection program at surface and underground coal mines for the mechanical engineering control plan – pressure vessels was conducted between April 2023 and October 2024. A bowtie identified for the threat of pressure vessel failure identified four critical control criteria for the material unwanted event (MUE) of human exposure to pressure vessel failure. As part of the planned assessment activities, Regulator inspectors attended a total of 51 coal mines (33 surface coal mines and 18 underground coal mines) with a focus on the assessment of the identified critical control criteria. This planned inspection program was part of an ongoing effort by the Regulator to reduce the potential risks associated with human exposure to pressure vessel failure. This report provides information on assessment findings and recommendations for coal mine operators. In summary, 4 compliance notices were issued to 4 of the 51 coal mines assessed. All of the compliance notices issued related specifically to the assessment of human exposure to pressure vessel failure.

  Refer to Consolidated Report – Pressure vessels – coal mines (April 2023 to October 2024) dated 21 March 2025

- **Consolidated report – Slope stability – stage 1 - surface coal mines (July 2023 to December 2024)**

  The planned inspection program in surface coal mines for the principal hazard of ground or strata failure – slope stability stage 1 was conducted between July 2023 and December 2024. A bowtie identified for the threat of strata failure-slope stability two critical controls – drilling and blasting practices and dump to design for the material unwanted event (MUE) of human exposure to strata slope failure. As part of the planned assessment activities, Regulator inspectors attended 20 surface coal mines with a focus on the assessment of the identified critical control supports for the critical control. This planned inspection program was part of an ongoing effort by the Regulator to reduce the potential risks associated with human exposure to strata slope failure. In summary, 4 compliance notices were issued to 4 of the 20 surface coal mines assessed. Three of the 4 compliance notices issued related specifically to the assessment of human exposure to strata slope failure. One of the 4 compliance notices issued related to other types of non-compliance issues.

  Refer to Consolidated Report – Slope stability – stage 1 - surface coal mines (July 2023 to December 2024) dated 21 March 2025

- **Compliance priority report – Risk management and supervision – surface coal mines (July to November 2024)**

  Between May 2023 and May 2024, 31 incidents at surface mines and coal handing and preparation plant (CHPP) were reported to the Regulator. The incident reports identified inadequate hazard identification or control or supervision as contributing factors to the causes of the incidents. In the same period, inspector site assessments resulted in 80 compliance notices being issued which referenced supervision or risk management.

  The compliance priority program for risk management and supervision in surface CHPP was conducted between July 2024 and November 2024. In summary, 11 compliance notices were issued to 9 of the 29 surface coal mines and CHPP assessed.

  Refer to Compliance priority report – Risk management and supervision – surface coal mines (July to November 2024) dated 21 January 2025

- **Compliance priority report – Work platform attachments on multi-purpose mobile plant at coal, metalliferous and extractives mines (July to November 2024)**

  The compliance priority program for work platform attachments on multi-purpose mobile plant was assessed between July 2024 and November 2024. Multi-purpose mobile plant includes integrated tool carriers, load haul dump machines, all terrain telehandlers, and forklifts. The program assessment focus reviewed how coal, metalliferous and extractives mines have responded to the Regulator's recommendations to the mining industry following the publication on 24 April 2024 of the Regulator's Safety Bulletin (SB24-02) Load Haul Dump (LHD) crowd cylinder failures – potential worker injuries. In summary, this resulted in:

  - 6 compliance notices issued to 4 of the 25 underground coal mines assessed
  - 18 compliance notices issued to 13 of the surface and underground metalliferous/extractives mines assessed.

  Refer to Compliance priority report – Work platform attachments on multi-purpose mobile plant at coal, metalliferous and extractives mines (July to November 2024) dated 21 January 2025.

- **Compliance priority report – Airborne contaminants – ventilation metalliferous underground mines (July to December 2024)**

  The compliance priority program for airborne contaminants – ventilation in underground metalliferous mines was conducted between July 2024 and December 2024. This program reviewed how operators of underground metalliferous mines were implementing principal hazard management plans dealing with air quality, dust and other airborne contaminants in underground work environments. The key objective of this program was to ensure that mine operators were taking appropriate action to achieve compliance with the legislation and the mine's own safety management system. This compliance priority program assessed 15 underground metalliferous mines. Some the site assessments were unannounced and included tasks undertaken outside of production areas and targeted plant or machine shut-down work tasks. This report provides information on the assessment findings and recommendations for operators of underground metalliferous mines. Some of the notices issued related to other matters identified during the assessment. In summary, 37 compliance notices were issued to 14 of the 15 underground metalliferous mines assessed during the program. Twenty-five of the 37 notices issued related specifically to the topic of airborne contaminants – ventilation in underground metalliferous mines.

  Refer to Compliance priority report – Airborne contaminants – ventilation metalliferous underground mines (July to December 2024) dated 21 January 2025.

Queensland

- **Failure to conduct effective post blast inspections**

  During recent routine inspections by RSHQ's explosives inspectors, it was identified that several underground metalliferous mines were failing to ensure that all blast hole remnants (butts) were being thoroughly inspected and deemed free of explosives prior to conducting drilling operations at development headings. Several high potential incidents (HPIs) occurred in Queensland mines in 2024 whereby misfired explosives were impacted and detonated during drilling and excavation processes.

  Drilling and/or mechanical scaling of a face that has not been effectively checked for misfires is extremely hazardous. Even small amounts of explosive can release significant amounts of energy when impacted by force. Unplanned initiation of explosives has the potential to harm people and damage equipment being struck by flyrock.

  Refer to RSHQ Explosives Inspectorate Alert No.118 V 1 Failure to conduct effective post blast inspections dated 28 January 2025.

Victoria

- **Operating mobile plant on raised ramps and elevated stockpiles**

  An incident has occurred within a quarry where a Front-End Loader (FEL) has overturned whilst topping up edge protection on the left-hand side of a ramp. The employee involved in the incident was an experienced operator of mobile plant. The employee lost control of the mobile plant and became trapped when it toppled over. The employee was able to call for help and exit the plant safely, without suffering any injuries.

  Refer to Worksafe Victoria Safety Alert – Operating mobile plant on raised ramps and elevated stockpiles dated 24 February 2025.

- **Isolate, de-energise, lockout and tagout plant before maintenance**

  Quarry and mine operators must ensure that all plant is electrically isolated, tagged out and tested for dead before doing maintenance activities. An incident has occurred where a quarry maintenance employee was removing screens from a mobile screening plant. This task required the employee to work on the output conveyor of the plant. During the maintenance activity another quarry employee started the screen plant to loosen grass caught in the screen. The employee working on the screen was ejected from the plant when the conveyor started and was impaled by a 60cm long metal tool around his chest and shoulders, resulting in significant injuries. The injured employee was taken to hospital in an air ambulance.

  Refer to Worksafe Victoria Safety Alert – Isolate, de-energise, lockout and tagout plant before maintenance dated 28 February 2025.

Western Australia

- **Medicinal cannabis in the workplace**

  Medicinal cannabis can affect your ability to work safely just like any other prescribed medication that affects alertness, memory, decision-making, mood and motor coordination. If you are in a role where impairment may present a risk, you have a responsibility to notify your employer that you are taking a prescribed medicinal cannabis product. This is so that they can conduct a risk assessment. Your employer also has a duty of care to ensure, so far as is reasonably practicable, your health and safety in the workplace. The risks from workers taking medicinal cannabis can be managed along the same lines as for prescription medication that can cause impairment at work. The PCBU should consider the risks to the safety of the worker and that of other workers and people in the workplace.

  Refer to WorkSafe WA Information Sheet – Medicinal cannabis in the workplace dated 22 January 2025.

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 539 incident notifications. Of these, 37% (200) related to principal mining hazards, 32% (174) related to principal control plans, with the remainder (31%) related to other incident types.

Table 1. Incident notifications received by principal mining hazard and principal control plan – January 2024 to March 2025

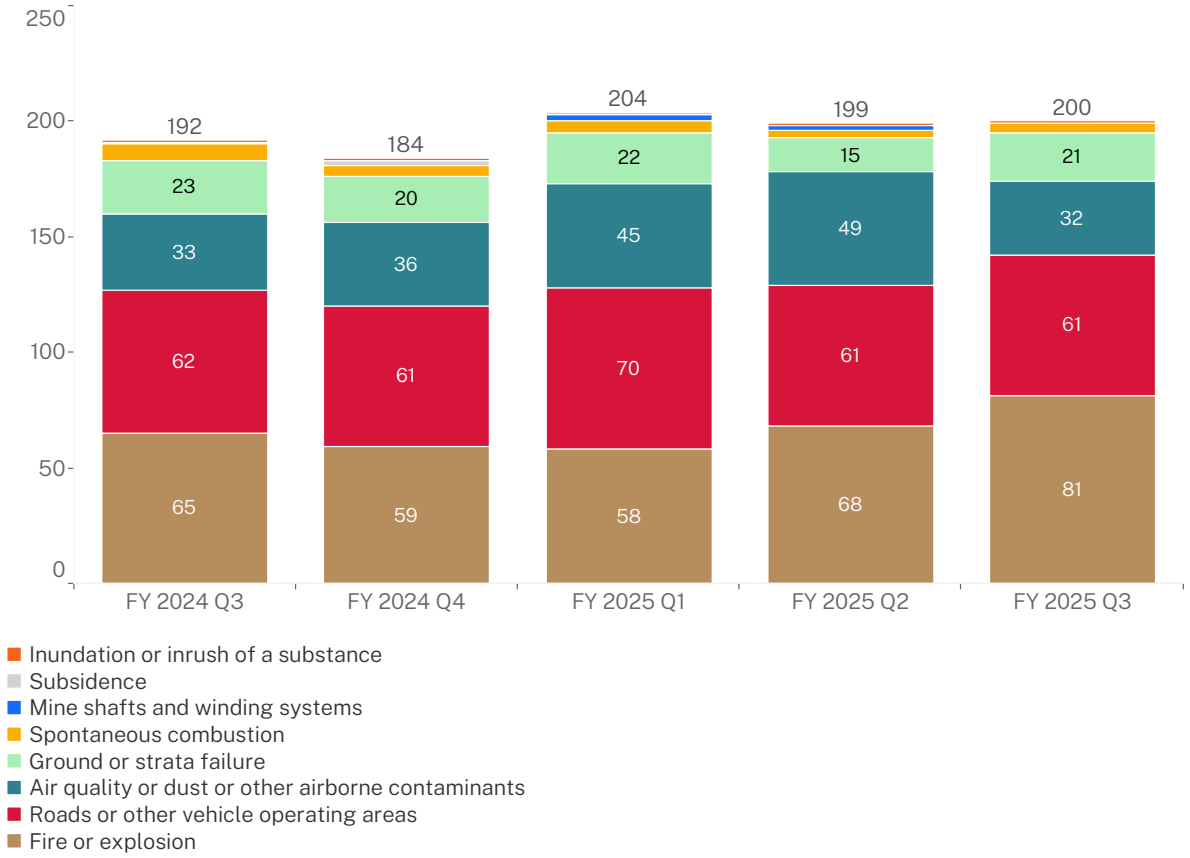
Hazard or Control plan	Hazard/Control plan	FY 2024 Q3	FY 2024 Q4	FY 2025 Q1	FY 2025 Q2	FY 2025 Q3	Grand total
Hazard	Fire or explosion	65	59	58	68	81	331
	Roads or other vehicle operating areas	62	61	70	61	61	315
	Air quality or dust or other airborne contaminants	33	36	45	49	32	195
	Ground or strata failure	23	20	22	15	21	101
	Spontaneous combustion	7	5	5	3	4	24
	Mine shafts and winding systems	0	0	3	2	0	5
	Inundation or inrush of a substance	1	1	0	1	1	4
	Subsidence	1	2	1	0	0	4
	Total	**192**	**184**	**204**	**199**	**200**	**979**
Control plan	Mechanical engineering control plan	88	95	94	68	78	423
	Electrical engineering control plan	19	25	58	76	52	230
	Explosives control plan	19	24	25	17	16	101
	Health control plan	4	9	12	31	18	74
	Ventilation control plan	19	6	3	8	10	46
	Total	**149**	**159**	**192**	**200**	**174**	**874**
Other	No related principal mining hazard or principal control plan	192	173	193	152	165	875
Grand total		**533**	**516**	**589**	**551**	**539**	**2728**

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 classification of incident notifications related to principal hazards is also subject to change once investigations have been finalised.

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 2024 to March 2025



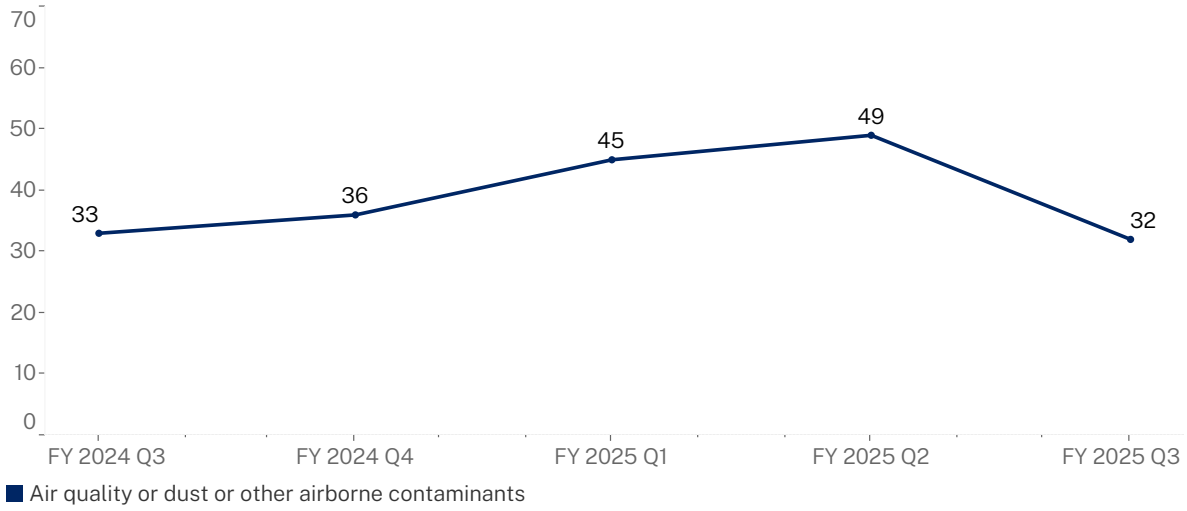
Air quality, dust or other airborne contaminants

Decrease from 49 to 32

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 CO_2) or over several years (coal/silica dust).

There has been a 35% decrease in airborne contaminant related incidents this quarter compared to Q2 FY2025. 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 2024 to March 2025



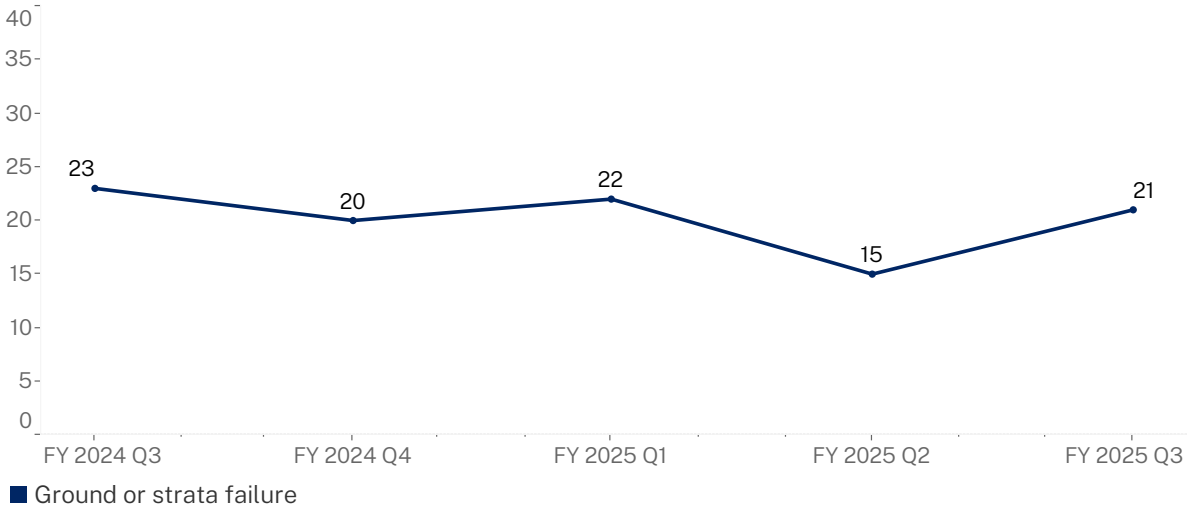
Ground or strata failure

Increase from 15 to 21

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.

After a drop in the previous quarter, the number of ground or strata failure incidents increased by 40% to record a similar figure (21) to those seen in the preceding 3 quarters.

Figure 3. Incident notifications received related to the principal mining hazard ground or strata failure – January 2024 to March 2025



Dangerous incident | IncNot0048373 – Rib slump during support installation

Summary: An operator was injured when a rib slump occurred during rib support installation. Two operators were using an air track when installing secondary rib support. A hole was drilled in the rib and chemical was installed. The operator retracted the drill rig head plate off the rib to install a rib bolt. The rib slumped, and as the operator pulled his hand away, it was caught between the rig mast and the falling rib. The wedge of rib coal that fell was about 1500 mm high, 700 mm wide and 300 mm deep. Before the work started, there was no sign of any deformity and no visual sign of fracture or failure while the drilling was taking place.

Picture 1.
Rib slump in panel

Comments to industry: The potential for a fatal outcome from rib failure is well understood. While there may be no visible signs of potential rib failure, it is nonetheless imperative that consideration is given to this possibility. Any risks to operators should be mitigated by implementing appropriate controls. The method of bolting that affords the most protection to operators by minimising the risk of coming into contact with a slump or fall of rib should be used at all times.

High potential incident | IncNot0048421 – Roof fall after evacuation

Summary: Monitoring a section of roof in a mining place showed movement on a tell-tale. This movement was continually monitored by the panel deputy and undermanager on shift. Mining proceeded until monitoring indicated an increase in displacement to a level which started a trigger action response plan (TARP). About 9am, the undermanager, in accordance with the TARP, withdrew the continuous miner back to the 10-metre chainage mark and commenced upgrading the roof support to code red. At this point, senior management was notified and confirmed the actions being taken. At 12.45pm, the undermanager notified the geotechnical engineer that the tell-tale had moved to 40 millimetres and continued installing additional support with the concurrence of the geotechnical engineer. At 5pm, the undermanager notified the geotechnical engineer that the tell-tale had continued to move to 60 millimetres and that roof deformation was noticeable. As a precaution, the continuous miner was pulled back to the intersection and the erection of additional support was stopped. The geotechnical engineer and undermanager inspected workings at 9pm and saw visible signs of active roof deformation, roof support loading and audible strata noise. The tell-tale at this point read 110 millimetres. All workers and machinery were withdrawn and a breaker line chock timber was installed on the inbye side of the intersection and the place was barricaded. About 9am, a fall occurred inbye of the telltale at 28 metres chainage. The fall extended towards the face. The fall occurred about 12 hours after all workers were withdrawn.

Comments to industry: This incident highlights the need for prompt action when strata monitoring equipment indicates that roof convergence is occurring. Site specific ground support TARPs should incorporate the timely installation of appropriate standing support where rates of convergence indicate accelerating deterioration in the stability of the monitored area. The ongoing improvement of geotechnical inputs into ground support design has significantly reduced the incidence of such failures over the last decade, however strata failure remains a fundamental risk with localised geological anomalies potentially affecting the adequacy of the ground support as it was designed and installed. Ground support designs will ideally be able to tolerate localised changes that demand more load-carrying ability than the installed ground support.

Dangerous incident | IncNot0048603 – Rib slump during support installation

Summary: A continuous miner had completed a cut-out and was preparing to install mesh when a slab of stone 900 x 800 x 100 millimetres fell and hit the timber jacks before rolling back onto the platform of the miner. The operator took evasive action when he saw the stone falling and was uninjured. The slab fell when ramping up through an ironstone band in the roof. The worker was supporting the mesh by hand when the slab fell.

Picture 2.
Slab resting on continuous miner platform after incident

Comments to industry: Loose roof material should be identified and removed before any bolting activities. Under no circumstances should workers be exposed to unsupported roof while bolting. When ramping up or down through stone ply, the continuous miner should be trammed back before installing mesh on timber jacks.

Dangerous incident | IncNot0048700 – Roof fall adjacent to tailgate drive

Summary: A shearer was cutting back into the tailgate for a second shear of shift when the continuous miner worker noticed what appeared to be a roof fall adjacent to the tailgate drive. The longwall mining supervisor was contacted, who inspected and identified a roof fall that was impeding access from the tailgate. The area was barricaded to prevent access.

Picture 3.
Roof failure impeding access

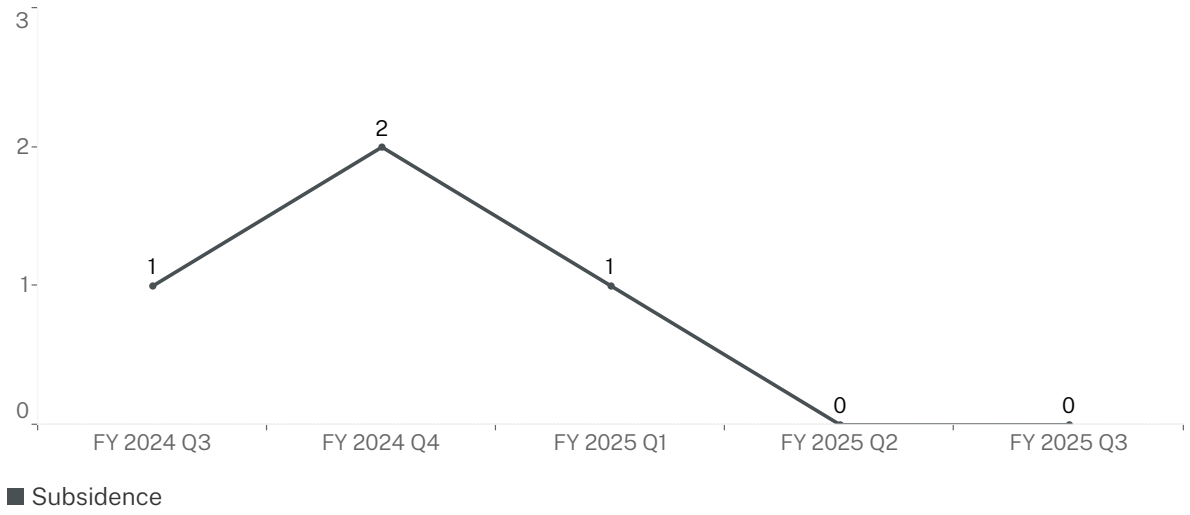
Comments to industry: This incident highlights that loading applied to an active tailgate roadway ground support increases immediately outbye the faceline as the face retreats and abutment loads are redistributed outbye. This increase in loading on the installed ground support, particularly if accompanied by the presence of a localised geological anomaly can result in a fall of ground. The improvement of geotechnical inputs into ground support design has significantly reduced such failures over the past decade, however strata failure remains a fundamental risk with localised geological anomalies potentially affecting the adequacy of the ground support as it was designed and installed. Ground support designs will ideally be able to tolerate localised changes that demand more load carrying ability from the installed ground support.

Subsidence

No change (0)

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 2024 to March 2025

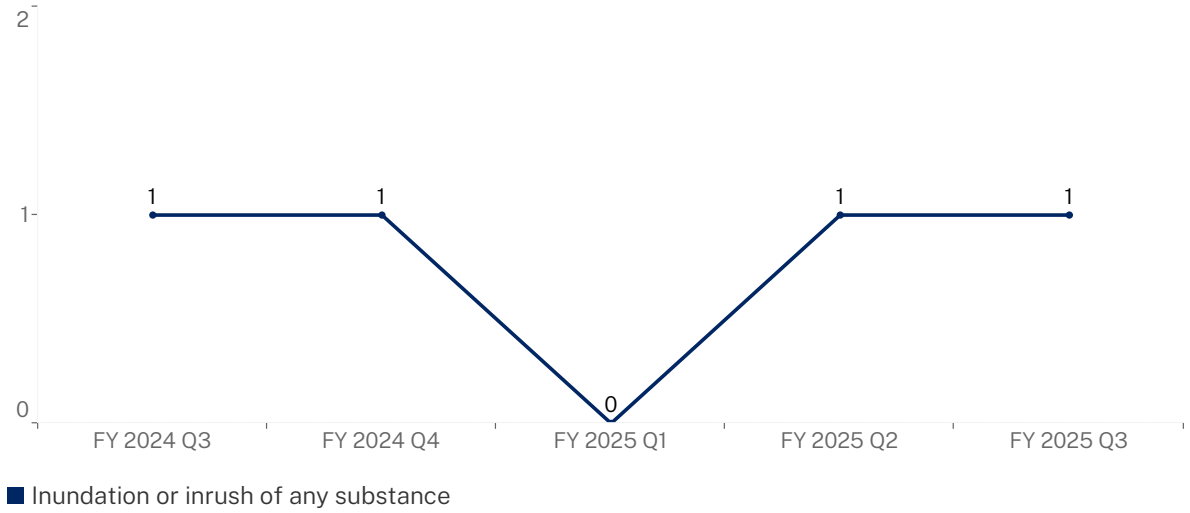


Inundation or inrush of any substance

No change (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 2024 to March 2025



Dangerous incident | IncNot0048321 – Inrush of water from ramp to platform

Summary: There was an inrush of water from a 24-level ramp to a 25-level platform to below the knee level of a worker in the area. The water came from an old stopping area where excess dirt and material had been put in the drive and created a bund. Water had built up behind the bund over a period and when a fall of ground occurred into the water, it created a pressure wave that broke though the bund.

Picture 4.
Damp walls indicating the water level reached

Comments to industry: Mine operators have a legislated duty to identify and manage the risks of inrush. The requirements of Section 48 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, inrush hazards include implementing a system that ensures:

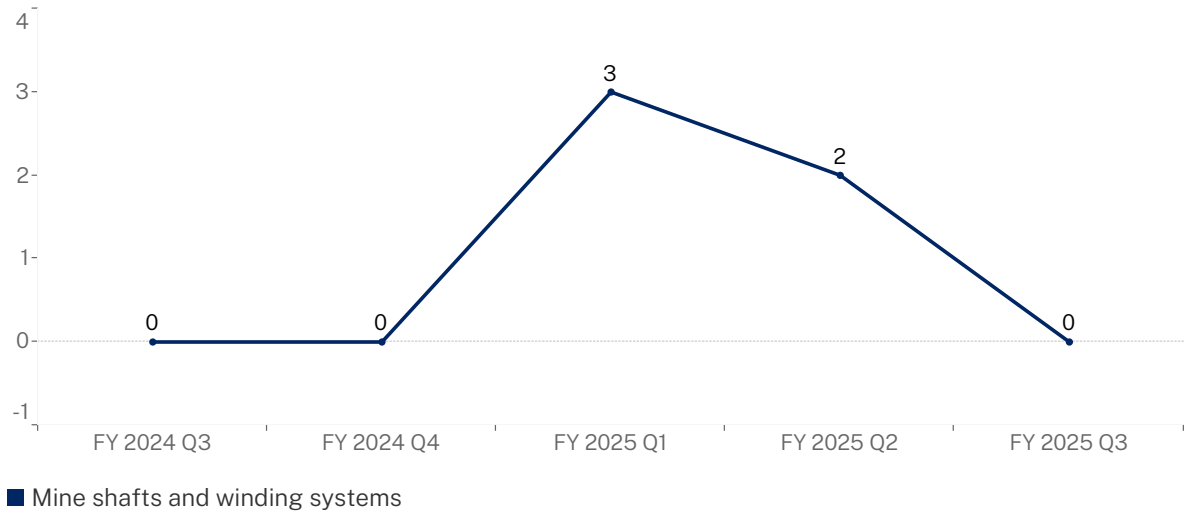
- identifying all reasonably foreseeable inrush hazards at the mine
- communicating the location of identified inrush hazards to all affected people
- determining whether or not an identified inrush hazard is a principal hazard.

Mine shafts and winding systems

Decrease from 2 to 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 2024 to March 2025



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.

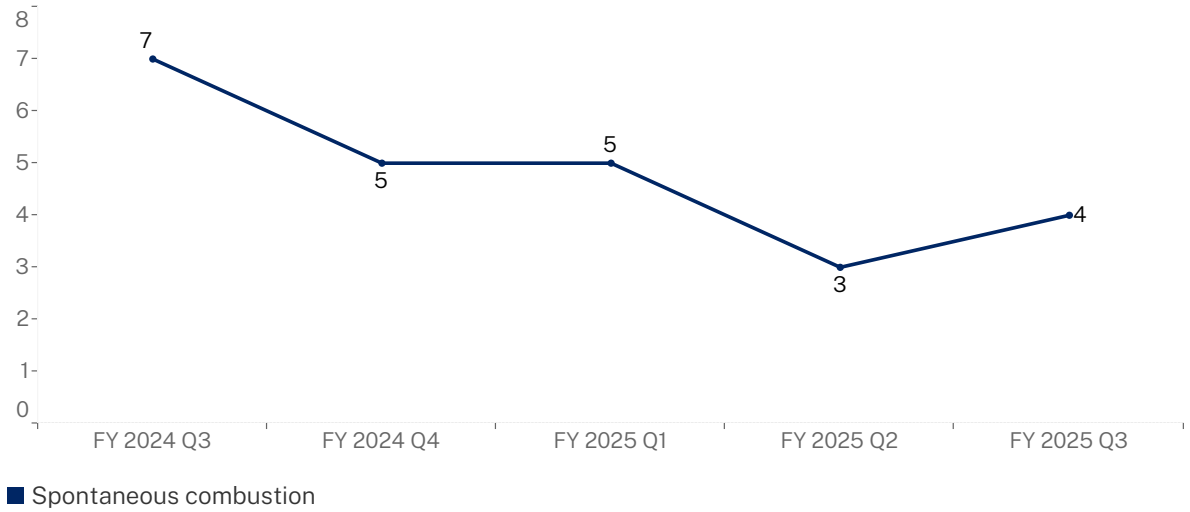
There have been no notified incidents of gas outbursts in the NSW mining sector since November 2022.

Spontaneous combustion

Increase from 3 to 4

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. The chart below includes spontaneous combustion incidents underground and on the surface of coal mines.

Figure 7. Incident notifications received related to the principal mining hazard spontaneous combustion – January 2024 to March 2025

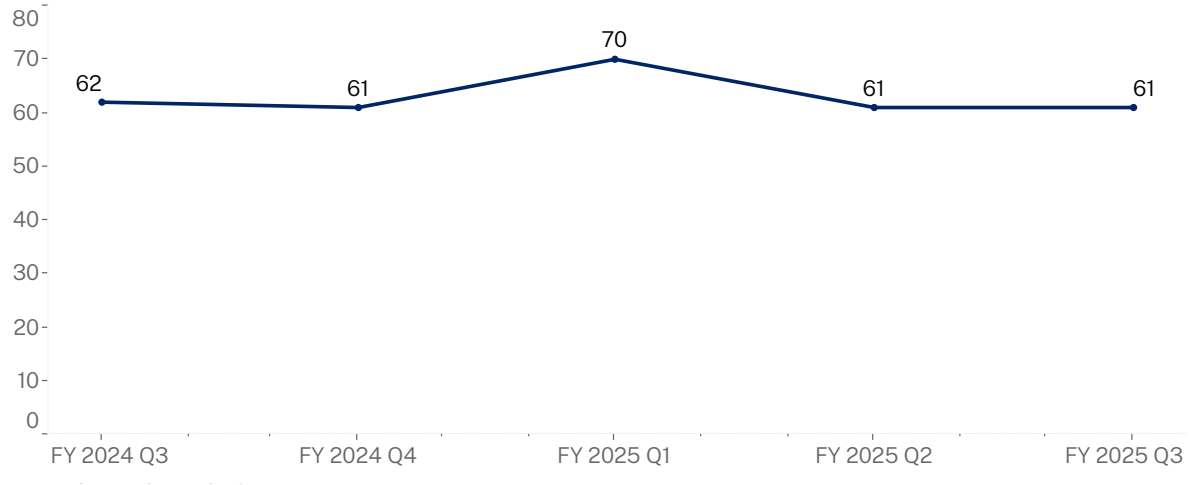


Roads or other vehicle operating areas

No change (61)

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 8. Incident notifications received related to principal mining hazard roads or other vehicle operating areas – January 2024 to March 2025



Dangerous incident | IncNot0048381 – Haul truck and wheel dozer collision

Summary: A wheel dozer was working on a dump when it reversed 30 metres and collided with the front of a stationary haul truck. The truck operator was waiting for direction from the wheel dozer operator. The wheel dozer operator did not look behind him while reversing.

Picture 5.
Collision scene between truck and dozer

Comments to industry: Workers have a duty to take reasonable care for themselves and others while in the workplace. Operators should always check their path when reversing. Mine operators should prioritise segregation between dozers and haul trucks on dumps over lower order controls such as positive communications and work procedures.

Dangerous incident | IncNot0048469 – Towed monorail cassettes hit and fracture poly pipe

Summary: A loader was travelling out of a mine towing 2 longwall monorail cassettes. The rear monorail frame hit a 250 mm water-filled poly-pipe, causing the pipe to fracture. The poly-pipe was not pressurised above gravity-feed pressure. However, a high-tension cable (11kV) power line above the poly-pipe was also hit by the damaged pipe and caused cable sheath damage. Crews were evacuated from the mine. The trailing cassette wandered towards the ribline – making contact with the pipe flange, which in turn made contact with, and damaged, the cable.

Picture 6.
Fractured poly pipe

Comments to industry: Mine operators must undertake an assessment of proposed travel routes when transporting loads to ensure installed services are not interfered with.

Dangerous incident | IncNot0048490 – Dozer tipped onto right-hand side

Summary: A dozer operator was completing floor clean-up at a dig area and after completing a push, he reversed at 45 degrees. The operator stopped, ready to begin another push when the dozer slowly started to tip onto the right-hand side. The operator said it felt like the bench the dozer was sitting on slumped.

Picture 7.
Tipped dozer at dig area

Comments to industry: Pre-task inspections of work areas should be undertaken to identify and manage any hazards present. Where the work area conditions change, workers should stop and re-assess the area. Refer to safety bulletins:

- SB19-01 Rise in dozer incident putting operators at risk
- SB19-10 Dozer incidents increase despite warnings

Dangerous incident | IncNot0048456 – Forklift truck failed to stop when applying brakes

Summary: While carrying a load into a mine, a forklift truck failed to stop after the brakes were applied. The operator had to steer the forklift into a wall to bring it to a stop. The operator was not injured.

Picture 8.
Forklift truck against wall

Comments to industry: When transporting loads underground, the selected vehicle needs to be fit for its intended purpose. Operational testing of service and park brakes should be included in pre-use inspections

Dangerous incident | IncNot0048482 – Mover and trailer tipped after reverse gear issue

Summary: A prime mover with a single trailer was moving coal between a washery and a train-loading facility when an issue occurred with the reverse gear. The trailer was being tipped when the coal hung-up in the top part of the trailer and caused it to tip over on its side. In the process, the prime mover also rolled onto its side. The location selected to tip the load had a 5% cross slope. The cross slope was enough to cause instability in the truck as the load was being tipped, resulting in the truck tipping onto its side.

Picture 9.
Tipped mover and trailer

Comments to industry: Pre-task inspections of work areas should be undertaken to identify and manage any hazards that are present. Where the work area conditions change, workers should stop and reassess the area. This is particularly important when a task is being conducted in unusual circumstances such as tipping a load away from a designated dump area.

Dangerous incident | IncNot0048561 – Speeding haul truck breached centre bund

Summary: A haul truck operator approached a left-hand turn at an intersection at speed. The truck breached a centre bund and crossed onto the opposite side of the road. No other road users were in the immediate vicinity of the truck at the intersection, however a vehicle was 100-150 metres away and the occupants witnessed the incident.

Picture 10.
Bund damage after incident

Comments to industry: The incidence of truck operators driving at speed and not to the conditions is all too prevalent at mine sites. Drivers are reminded that they have a legislative duty to care for their own health and safety and that of others (Section 28 of the *Work Health and Safety Act 2011*). One of the duties is to cooperate with any reasonable policy or procedure. Failure to comply with a duty is an offence. A Category 1 offence – Gross negligence or reckless conduct carries a potential imprisonment term of up to 10 years. Engineering controls that minimise the risk of loss of control should be considered, including using speed limiting devices, speed monitoring and alarms.

Dangerous incident | IncNot0048564 – Haul truck lost traction on wet, muddy road

Summary: A new-to-industry trainee was operating a haul truck when the trainee felt a loss of traction. The operator attempted to correct the loss of traction but oversteered and crossed the centreline of the road before correcting the steering sharply and stopping against a windrow.

Picture 11.
Truck stopped at windrow after traction loss

Comments to industry: Wet weather training for new truck operators must be undertaken and the driver deemed competent before driving in wet conditions. Mine operators should ensure that all truck operators have the requisite skills before they commence operating on site. When road surfaces are degraded after rain, they must be remediated as a priority. Workers must operate vehicles at a speed that is appropriate to the prevailing conditions.

Dangerous incident | IncNot0048571 – Scraper slid 57m then collided with haul truck

Summary: A scraper collided with a haul truck at the intersection of the main pit and a haul road. The scraper was operating under hierarchy conditions. The scraper slid approximately 57 metres before colliding with the haul truck.

Picture 12.
Scraper and haul truck with visible slide marks

Comments to industry: When operating machinery, particularly on wet surfaces, the driver's primary focus must remain on the operation and control of the vehicle. Low speeds are critical in such conditions and drivers must operate vehicles at a speed that is appropriate to the prevailing conditions. Engineering controls that minimise the risk of loss of control should be considered, including using speed-limiting devices, speed monitoring and alarms. Mobile plant operating characteristics, including stopping distances, manoeuvrability and speeds must be considered when developing control measures to manage the risks of operating vehicles.

Dangerous incident | IncNot0048597 – Dump truck reversed into excavator

Summary: A rear dump truck and a 49-tonne excavator collided when the truck reversed into the cab of the excavator. The operator of the excavator was not injured but required assistance to egress from the machine. The truck had material hanging up in the tray that was going to be removed with the intervention of the excavator. Both vehicles were using different communication channels so positive communication was not established as the truck was reversing.

Picture 13.
Excavator cab collision damage

Comments to industry: Systems of work involving interaction between plant should consider the hierarchy of controls and not solely rely on administrative controls such as positive communications.

Dangerous incident | IncNot0048782 – Light vehicle with worn tyres rolled on haul road

Summary: A light vehicle operator was travelling on a haul road when they lost control of the vehicle and rolled it onto its left side. The driver was the single occupant in the vehicle. The road was flat and straight and was watered to the mine's standard at the time. The vehicle had worn tyres, which contributed to the loss of traction.

Picture 14.
Worn tyre on rolled light vehicle

Comments to industry: Multiple incidents of this nature have been notified recently. Mine operators should communicate this with workers and reinforce relevant controls. Tyre condition is crucial to maintaining stability on wet roads. When operators report defects or concerns, thorough inspections should be conducted to ensure vehicles are safe to operate. Where vehicles are found not to be safe to operate they are to be removed from service until repaired. Engineering controls that minimise the risk of loss of control should be considered, including using speed-limiting devices, speed monitoring and alarms.

Dangerous incident | IncNot0048820 – Haul truck lost power and rolled backwards

Summary: A haul truck lost power on a ramp and rolled 30 metres backwards before coming to rest on a bench. The operator had stopped on the ramp with the motor running, waiting for another task to be completed. When the task was completed, the operator put the truck in gear, released the handbrake and took his foot off the footbrake to accelerate. The engine cut out and the truck began rolling backward. The operator pumped the footbrake and pulled the retarder up and down multiple times with no result. He couldn't use the secondary retarder as he was trying to steer the truck. He managed to steer the truck over a water diversion bund and bring it to a halt.

Picture 15.
Stricken truck after incident

Comments to industry: Mine operators must have systems in place to ensure the regular review and effectiveness of fit-for-purpose safety critical components over their lifecycle. This includes driving, braking, steering and emergency systems.

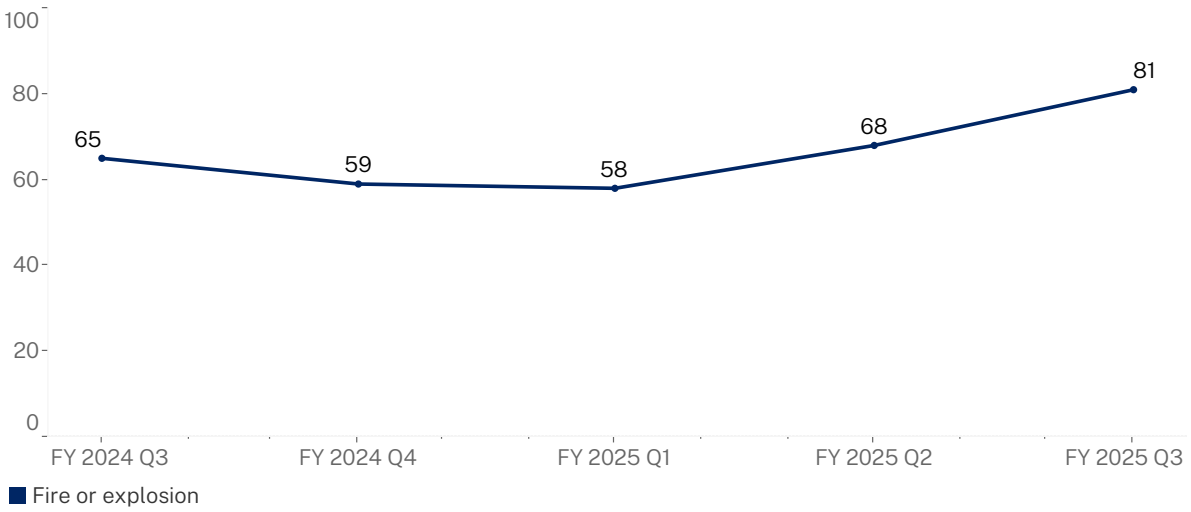
Fire or explosion

Increase from 68 to 81

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 increased from 68 to 81, recording the highest figure over the past 5 quarters.

Figure 9. Incident notifications received related to principal mining hazard fire or explosion – January 2024 to March 2025



Dangerous incident | IncNot0048320 – Sprayed fluid ignited on hot machine parts

Summary: A fire occurred at the rear of a load haul dump (LHD) while operating underground. The operator noticed the fire and activated the fire suppression. He exited the machine and used a hand-held extinguisher to extinguish the fire. Smoke dissipated to return air with no impact elsewhere underground, and no withdrawal or refuge. A hose at the back of the LHD near the radiator cooling fan had burst and sprayed fluid onto hot machine parts.

Picture 16.
Hose damage at rear of dozer

Comments to industry: Mine operators should ensure that risk control measures to prevent 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 | IncNot0048425 – Skid pump battery splits casing

Summary: A battery on a surface skid pump pressurised and split the casing, releasing battery fluid in an uncontrolled manner. After an operator completed refuelling a dewatering skid pump, the operator started the diesel engine. During the starting process, the operator heard a loud bang as one of the 2 sealed lead acid batteries on the skid pressurised and split the battery casing causing plastic pieces of the battery to eject outward, along with battery fluid. The pressure release pushed open the unsecured hinged battery enclosure lid. An internal battery fault caused the battery fluid to vaporise while the engine started and drew current, pressurising the battery casing and causing the plastic casing to fail.

Picture 17.
Battery enclosure minus unsecured lid

Comments to industry: When developing maintenance strategies, mine operators need to ensure they are appropriate to each item of plant at the mine and that the overall life cycle is taken into consideration. Recommendations of designers and manufactures must be followed when determining maintenance requirements.

Dangerous incident | IncNot0048434 – Failed turbo truck fire incident

Summary: While driving up a ramp in an open cut pit, a truck operator noticed a failed turbo and reported it on the maintenance channel. As the truck ascended, flames erupted from the right-hand side, prompting the operator to call an emergency. Dispatch activated a site-wide emergency response. The operator stopped, exited the truck via the stairway, but went back to retrieve his hard hat and exited the burning truck again. The operator did not shut down the truck, and fire suppression was not triggered. Engine oil from the failed turbo ignited on the exhaust, spreading to the right-hand fender's sound suppression material. A mining supervisor activated the emergency stop and fire suppression from the front bumper. A water cart attended the scene and extinguished the fire.

Picture 18.
Fire location underneath right-hand fender

Comments to industry: Mine operators should regularly assess the emergency preparedness capabilities of their heavy vehicle operators. Understanding what the appropriate actions are when a fire breaks out on a heavy vehicle and implementing the actions immediately can significantly reduce the risks that the operator may be exposed to during egress from the vehicle. Understanding the best method of rapid activation of onboard fire suppression systems is an essential item of competence for all heavy vehicle operators.

Dangerous incident | IncNot0048480 – Truck fire during refuelling

Summary: A fire occurred on an underground haul truck as it was being refuelled. A breather hose came loose from a pipe, resulting in atomised diesel interacting with a hot surface.

Picture 19.
Loose breather hose on haul truck

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

Dangerous incident | IncNot0048549 – Materials caught fire with no apparent cause

Summary: A pile of pallets, vent bag, and poly pipe caught fire underground with no apparent ignition source. An operator pulled into the level, smelled smoke and realised that smoke was coming out of the drive. The shift supervisor initiated evacuation back to the refuge chambers for all underground workers. Workers in the refuge chambers on levels below the fire were evacuated after the fire was extinguished. Workers spent between 2.5 and 5 hours in refuge.

Picture 20.
Fire damaged detritus underground

Comments to industry: Fires underground have enormous capacity to result in multiple fatalities, which is why risk control measures to prevent fires are of utmost importance. Inspection regimes, housekeeping standards and emergency response procedures should be routinely examined to ensure minimum standards are met or exceeded. Piles of flammable materials should never be allowed to accumulate underground.

Dangerous incident | IncNot0048582 – Explosives truck fire in transmission area

Summary: An explosives truck carrying about 900 kilograms of emulsion had a fire start in the transmission area. The truck was tramming up a decline when the operator noticed smoke and heat and initiated the fire suppression.

Comments to industry: Mine operators should ensure stringent monitoring and quality control of maintenance and repair activities. Refer to: MDG15 Guideline for mobile and transportable plant for use at mines (other than underground coal mines). AS 5062 Fire protection for mobile and transportable equipment provides further guidance for mines. For more resources, refer to our Fires on mobile plant safety web page.

Dangerous incident | IncNot0048672 – LHD diesel engine suffered catastrophic failure

Summary: A load haul dump machine (LHD), fitted with an explosion-protected diesel engine, was picked up from pit bottom in an underground coal mine. After driving a short distance, the LHD operator heard a ticking noise from the diesel engine. The operator stopped and returned towards pit bottom for maintenance to check the machine. After driving 3-4 pillars, the operator heard a loud bang and the LHD stopped. The top end of the explosion-protected diesel engine systems (ExDES) had catastrophically failed with a hole blown in the side of the diesel engine and internal engine components being exposed to the mine atmosphere. The machine was quarantined with a root cause investigation being conducted by the mine and the original equipment manufacturer.

Picture 21.
Catastrophic failure of diesel engine

Comments to industry: The catastrophic failure of a diesel engine system presents a significant risk because the temperature of the ejected components created an ignition source that had the potential to cause an explosion. Persons conducting a business or undertakings in control of ExDES should ensure maintenance, inspection and testing is carried out in accordance with the manufacturer's recommendation, and thorough inspection and testing is undertaken before commissioning plant. In particular:

- Ensure correct operation of automatic engine shutdown systems (loss of engine oil pressure).
- Engine oil should be maintained at the correct level.
- Engine oil and filter changes should occur at a frequency recommended by the engine manufacturer.
- Engine oil should be used to the engine manufacturer's specifications and suited for the ambient temperature range of the environment.
- Engine oil should be stored and decanted to prevent contamination by dirt or water.
- Oil sampling and analysis should be conducted regularly.

Further information on a similar event can be found in Causal investigation: Catastrophic engine failure in underground coal mine.

Dangerous incident | IncNot0048757 – Electrical fire in loader cabin

Summary: An electrical fire occurred in an operator's cabin of a loader. The operator reported seeing flames within the cabin and he extinguished the fire with fire extinguishers. The fire brigade arrived at the incident scene and called an ambulance to check on the operator. He was taken to hospital suffering from smoke inhalation.

Comments to industry: Mine operators should have procedures in place that clearly outline workers' responsibilities in the event of mobile plant fires. Operators should also convey to workers that their health and safety is paramount and in no circumstances should a worker put themselves in danger while attempting to control a fire on mobile plant.

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.

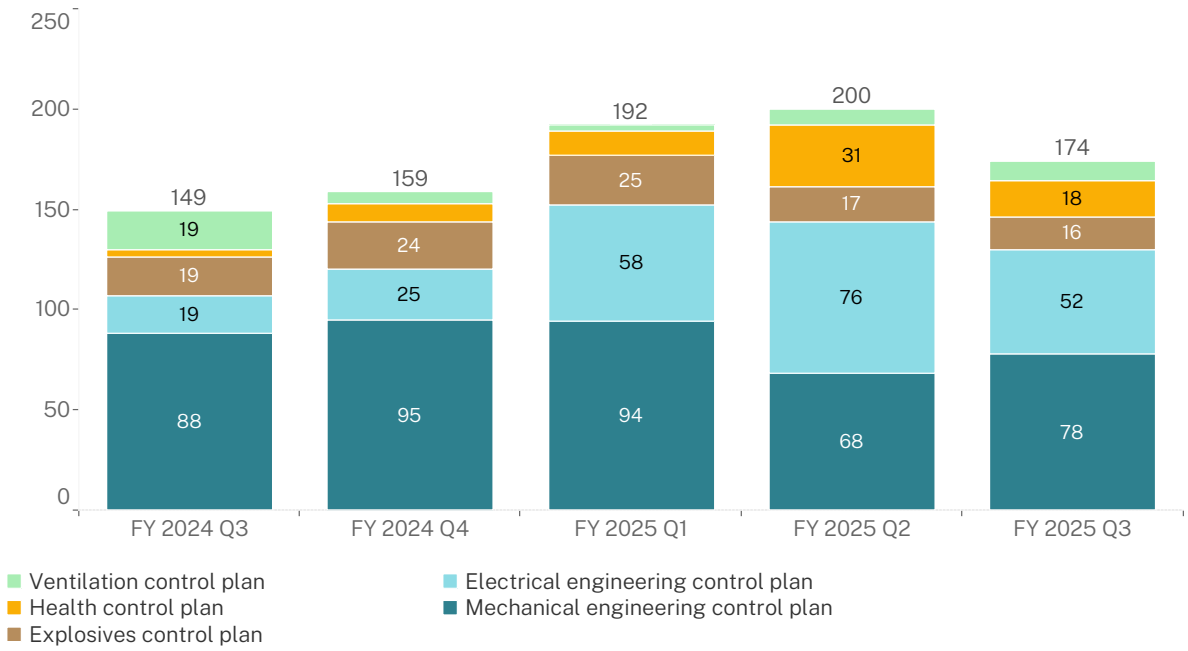
There are 5 principal control plans specified in the Regulation.

Note – while the legislation references 5 principal control plans – Health control plan, Mechanical Engineering control plan, Electrical Engineering control plan, Explosives control plan and Well Integrity control plan, there is also the Ventilation control plan and Emergency Management control plan (although no incidents yet relating to emergency management control plan).

From FY25 Q1, the classification 'Electrical and/or mechanical engineering control plan' was discontinued and existing data was mapped to 'Mechanical engineering control plan'. The number of electrical engineering control plan and mechanical engineering control plan incident notifications across each of the quarters may be influenced by these changes.

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.

Figure 10. Incident notifications received by principal control plans – January 2024 to March 2025

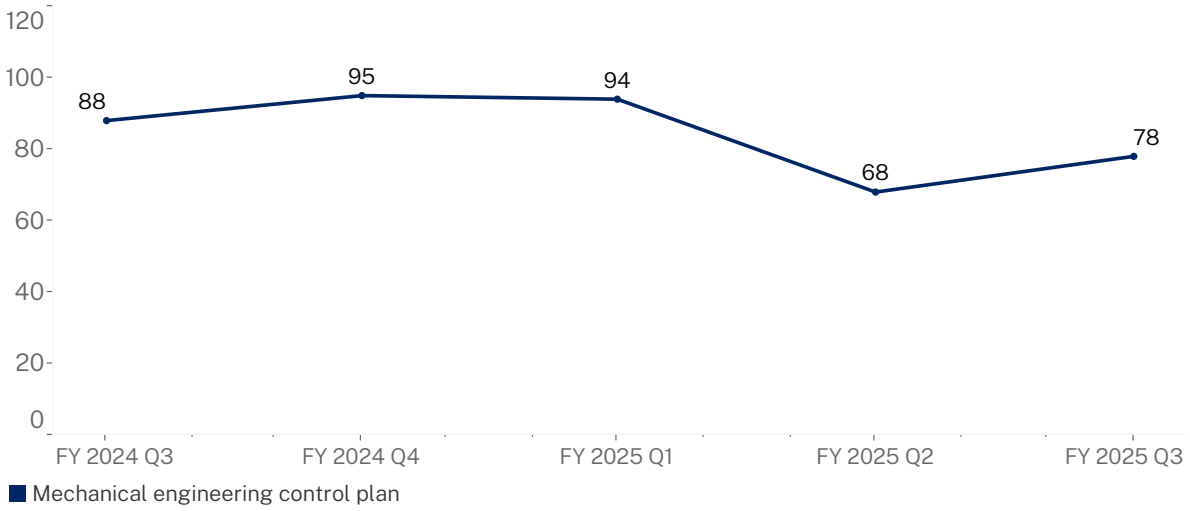


Mechanical engineering control plans

Increase from 68 to 78

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 11. Incident notifications received related to mechanical engineering control plans – January 2024 to March 2025



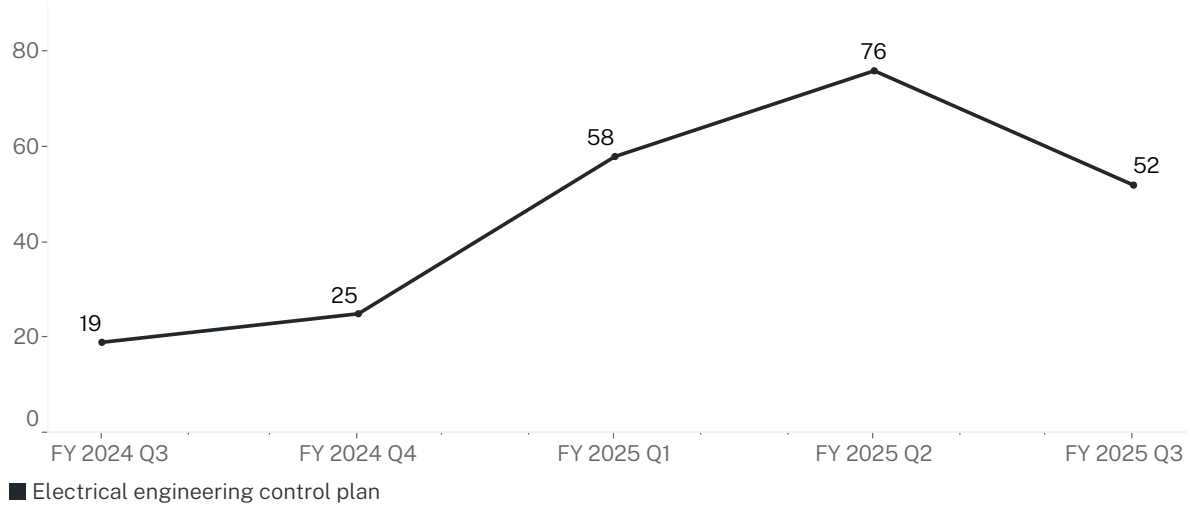
Electrical engineering control plans

Decrease from 76 to 52

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

Notified incidents related to electrical engineering control plans decreased by 32% this quarter, following 3 successive quarterly increases.

Figure 12. Incident notifications received related to electrical engineering control plans – January 2024 to March 2025

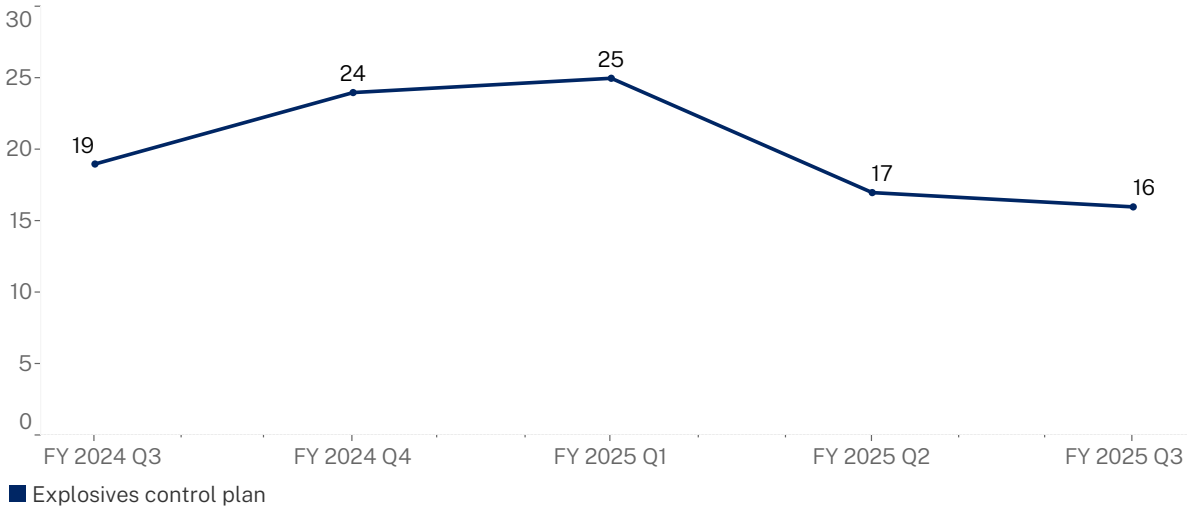


Explosives control plans

Decrease from 17 to 16

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.

Figure 13. Incident notifications received related to explosives control plans – January 2024 to March 2025



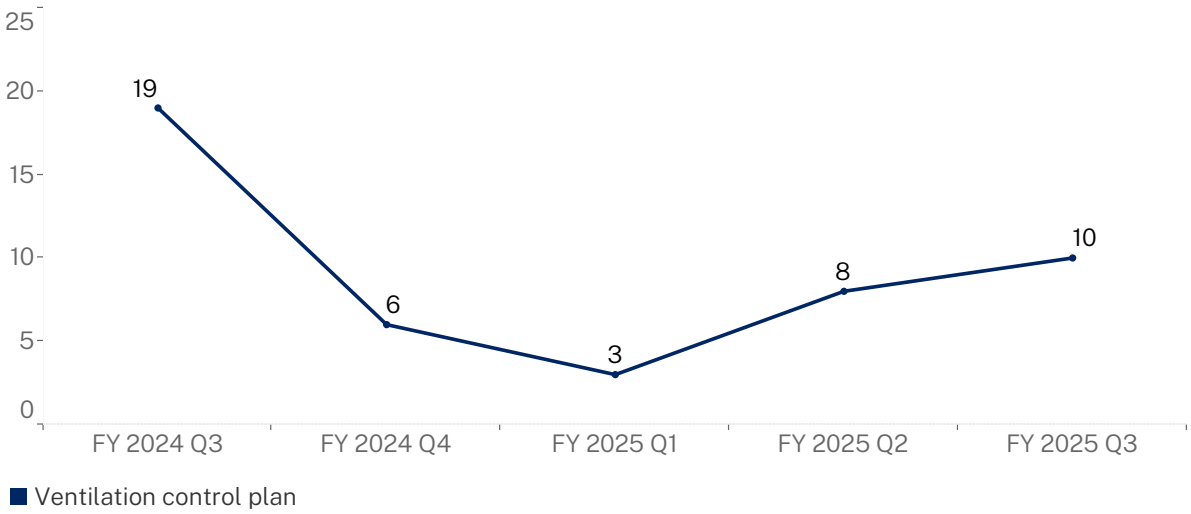
Ventilation control plans

Increase from 8 to 10

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 increased by 25% compared to the previous quarter (8 to 10). However, this figure is still noticeably fewer than the high of 19 incidents in FY2024 Q3.

Figure 14. Incident notification received related to ventilation control plans – January 2024 to March 2025



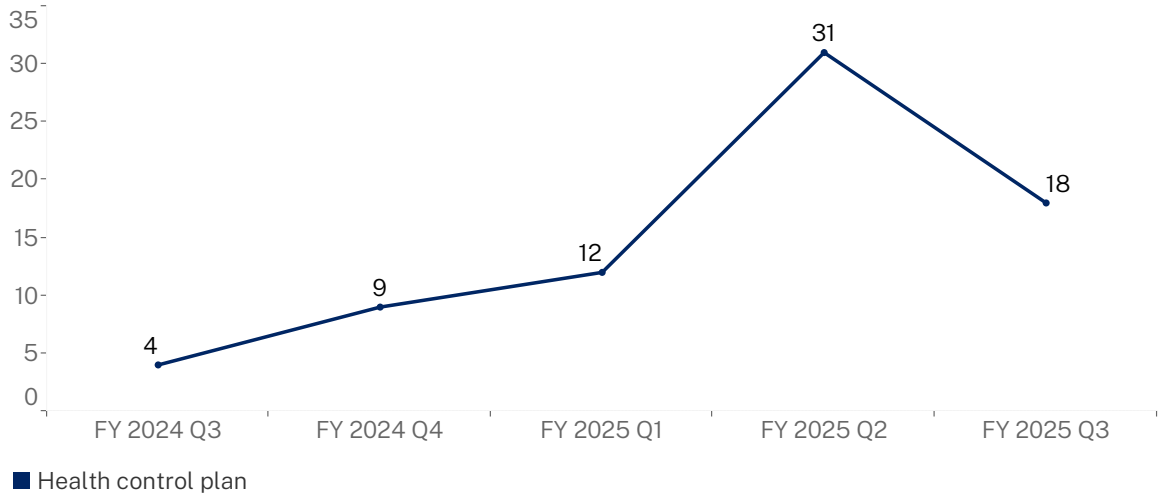
Health control plans

Decrease from 31 to 18

A health control plan (HCP) sets out how the operator will manage the risks to health associated with their mining or petroleum operations. The HCP forms part of the safety management system (SMS). An HCP identifies the hazards which present a risk to health of workers and measures to control them.

This quarter saw a decrease of 42% in notified incidents regarding health control plans compared to the previous quarter.

Figure 15. Incident notification received related to health control plans – January 2024 to March 2025



Sector profiles

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

Includes onshore petroleum and geothermal sites, and includes exploration

Opal mines

Includes small scale titles, opal claims and opal mining and processing, and excludes exploration

Exploration

Includes exploration sites, and excludes petroleum and geothermal

Non-mine

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

Coal sector

Incident notifications

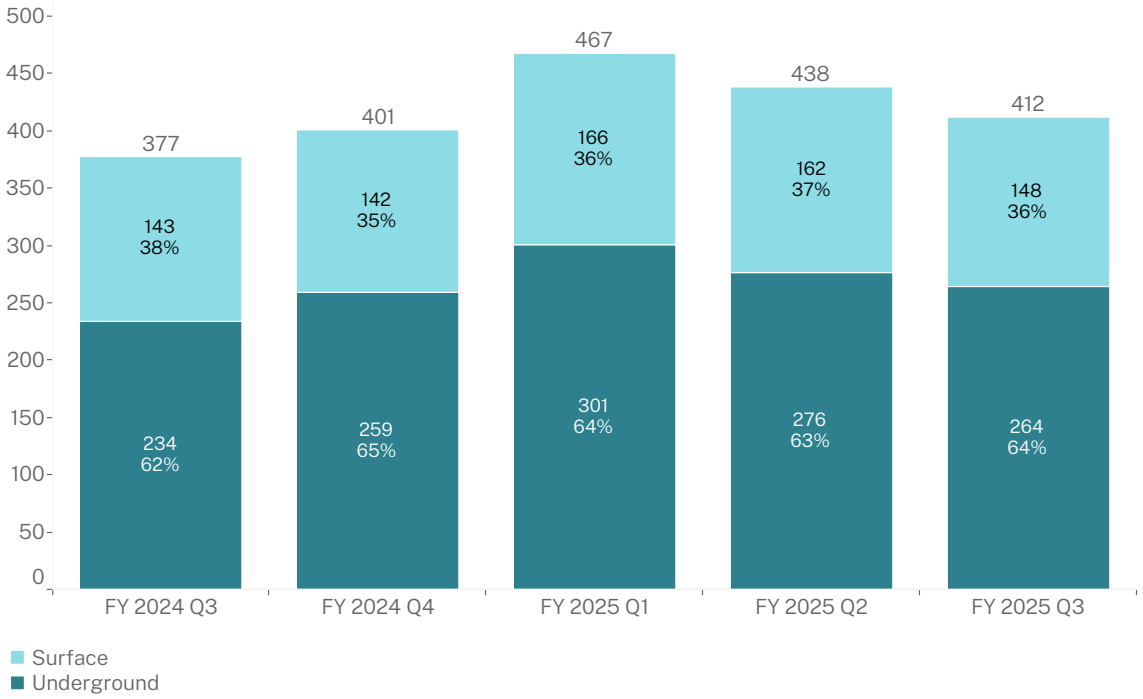
Under work health and safety legislation, mine operators must notify the Regulator about the occurrence of certain types of safety incidents. Incident notification data (by active mine) provides insights into sector-specific reporting trends.

Table 2. Coal sector incident notification rates – January 2024 to March 2025

Measure	FY 2024 Q3	FY 2024 Q4	FY 2025 Q1	FY 2025 Q2	FY 2025 Q3
Incidents	377	401	467	438	412
Active mines	103	102	99	98	98
Incident rate per active mine	3.66	3.93	4.72	4.47	4.20
Mines that notified incidents	50	48	54	51	49
% of mines notifying an incident	49%	47%	55%	52%	50%
Incident rate per notifying mine	7.54	8.35	8.65	8.59	8.41

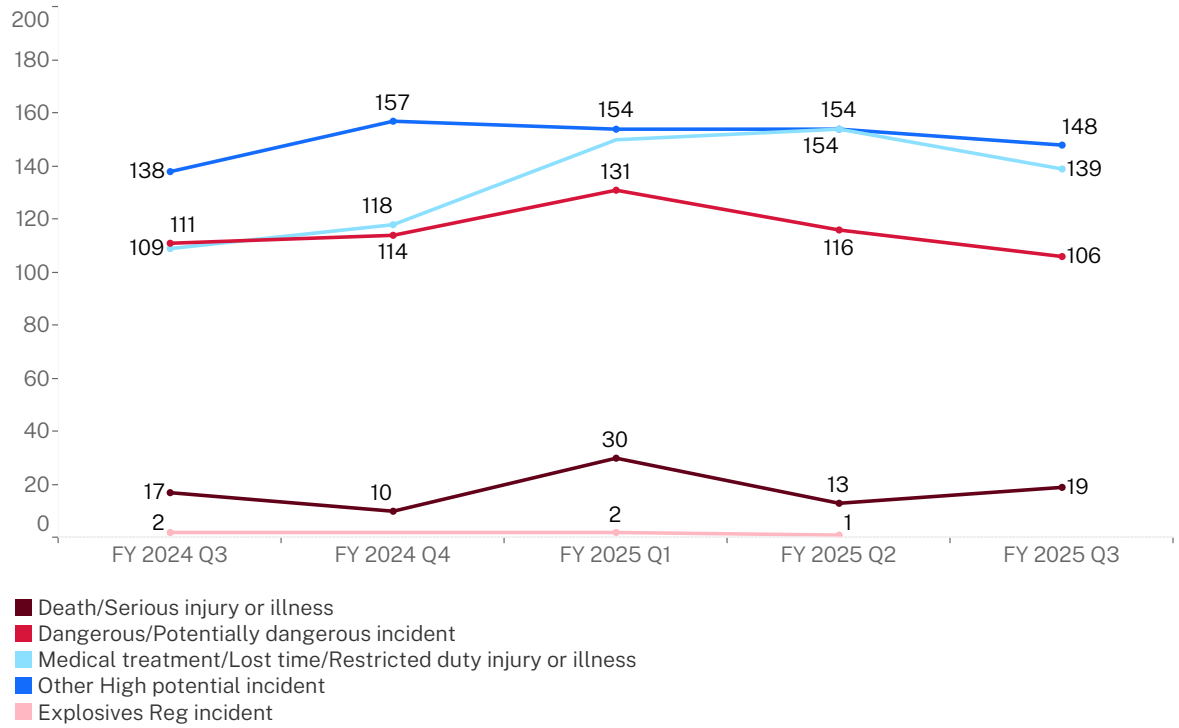
The following graph shows the proportion of safety incident notifications received from surface and underground coal operations. This quarter there were decreases in both surface and underground sectors resulting in an overall drop of 6%.

Figure 16. Coal sector incident notifications received by operation type – January 2024 to March 2025



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. Compared to the previous quarter, decreases were seen in all categories except for Death/serious injury or illness incidents in the coal sector which increased by 50% (from 13 to 19). Dangerous/potentially dangerous incidents recorded its lowest figure (106) of the past 5 quarters. There were no Explosives Regulation incidents this quarter.

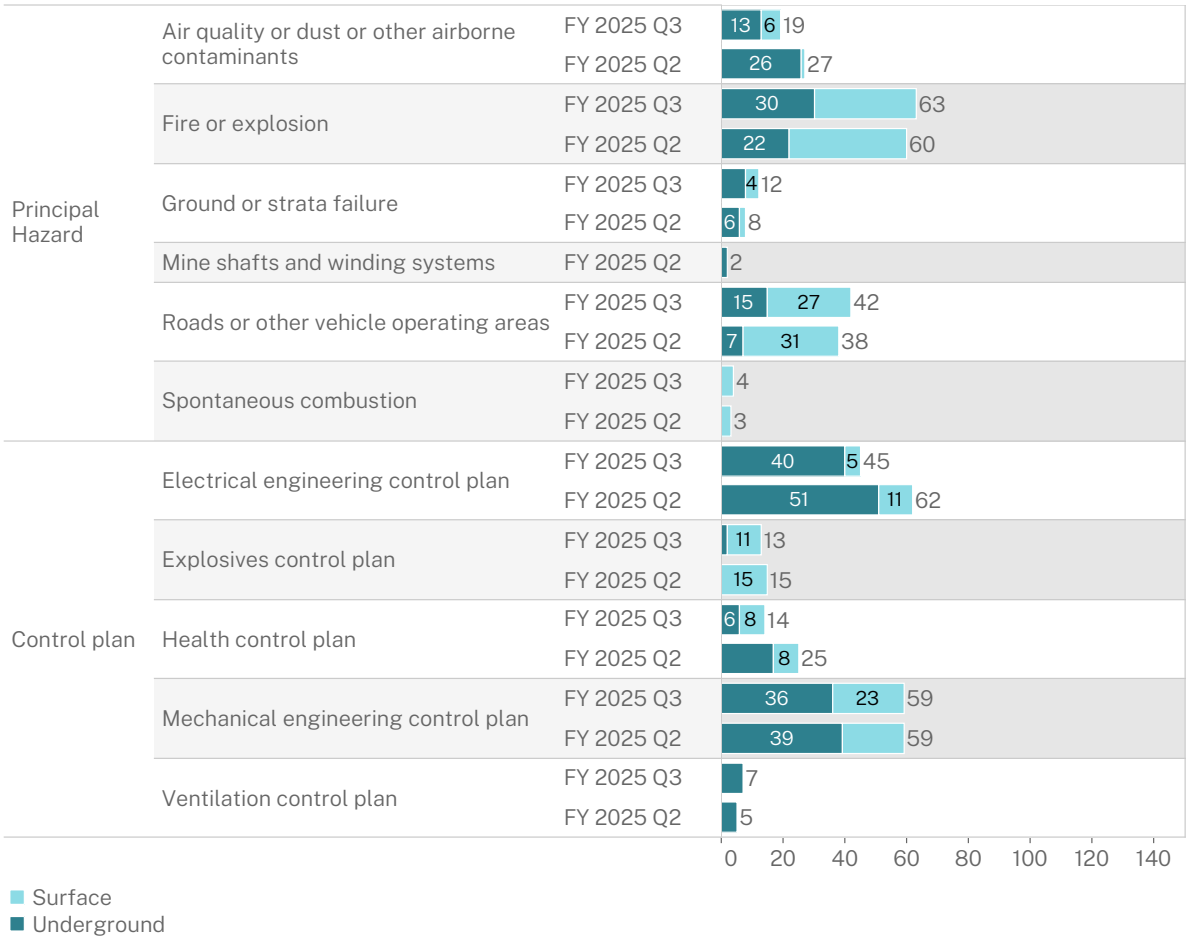
Figure 17. Coal sector incident notifications received by requirement to report – January 2024 to March 2025



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.

Figure 18. Coal mine incident notifications received by principal mining hazard or principal control plan, and by operation type – October 2024 to March 2025



Large mines sector

Incident notifications received

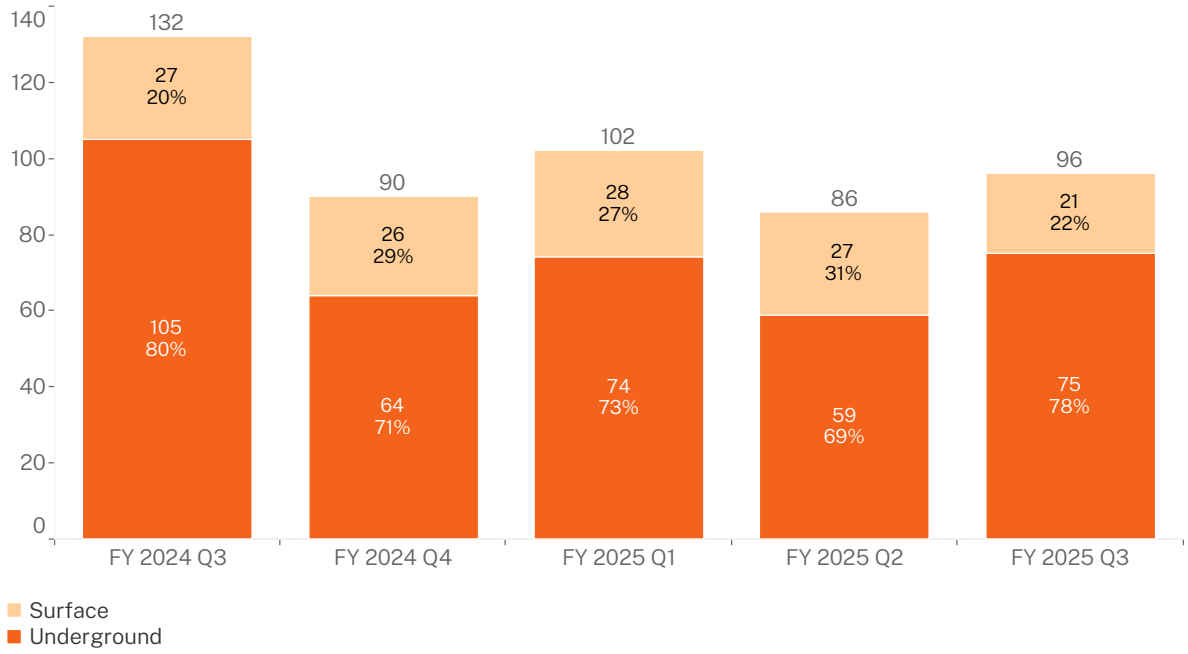
Under work health and safety legislation, mine operators must notify the Regulator about the occurrence of certain types of safety incidents. Incident notification data (by active mine) provides insights into sector specific reporting trends.

Table 3. Large mines and quarries incident notifications received rates – January 2024 to March 2025

Measure	FY 2024 Q3	FY 2024 Q4	FY 2025 Q1	FY 2025 Q2	FY 2025 Q3
Incidents	132	90	102	86	96
Active mines	70	67	67	64	61
Incident rate per active mine	1.89	1.34	1.52	1.34	1.57
Mines that notified incidents	28	28	30	34	27
% of mines notifying an incident	40%	42%	45%	53%	44%
Incident rate per notifying mine	4.71	3.21	3.40	2.53	3.56

The following graph shows the proportion of safety incident notifications received from large mines and quarries by operation type. Against the previous quarter, notified incidents increased overall by 12% to record the third-highest figure seen over the past 5 quarters. This increase was predominantly observed in the underground sector (from 59 to 75).

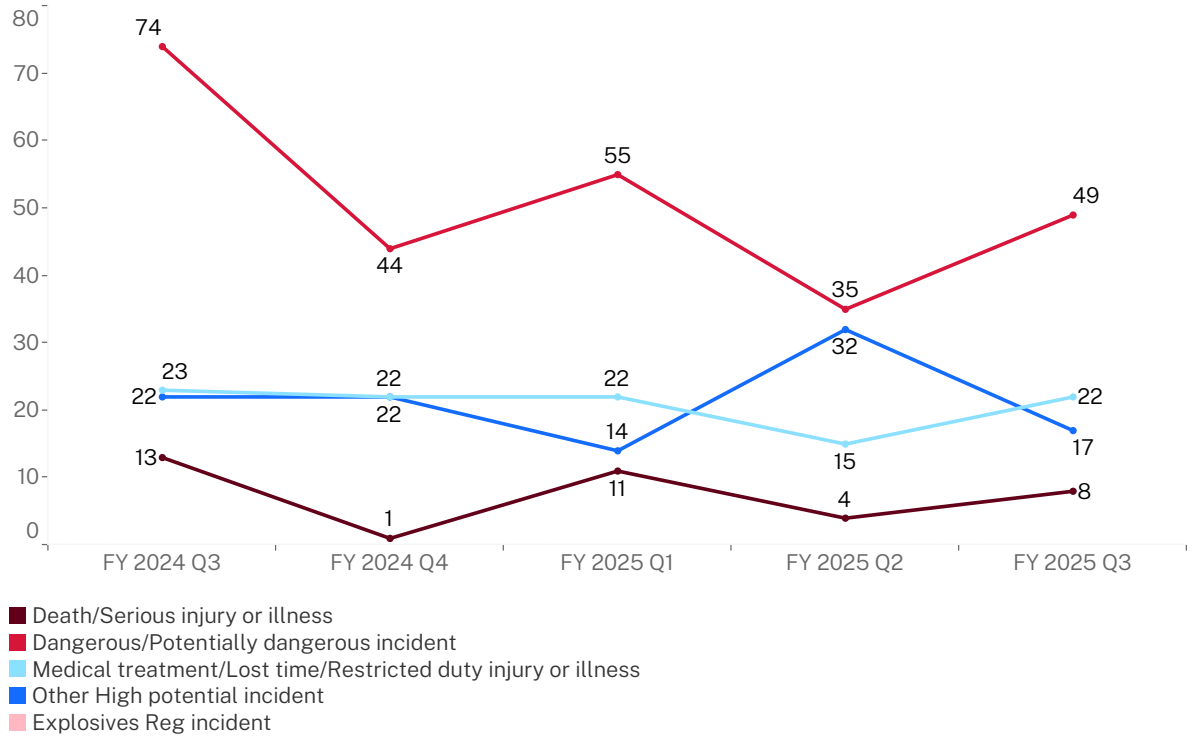
Figure 19. Large mines and quarries incident notifications received by operation type – January 2024 to March 2025



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.

Death/serious injury or illness incidents doubled compared to the previous quarter from 4 to 8, and additionally, a 40% increase in dangerous/potentially dangerous incidents was observed. A notable decrease was seen for other high potential incidents which dropped from 32 to 17.

Figure 20. Large mines and quarries incident notifications received by requirement to report – January 2024 to March 2025

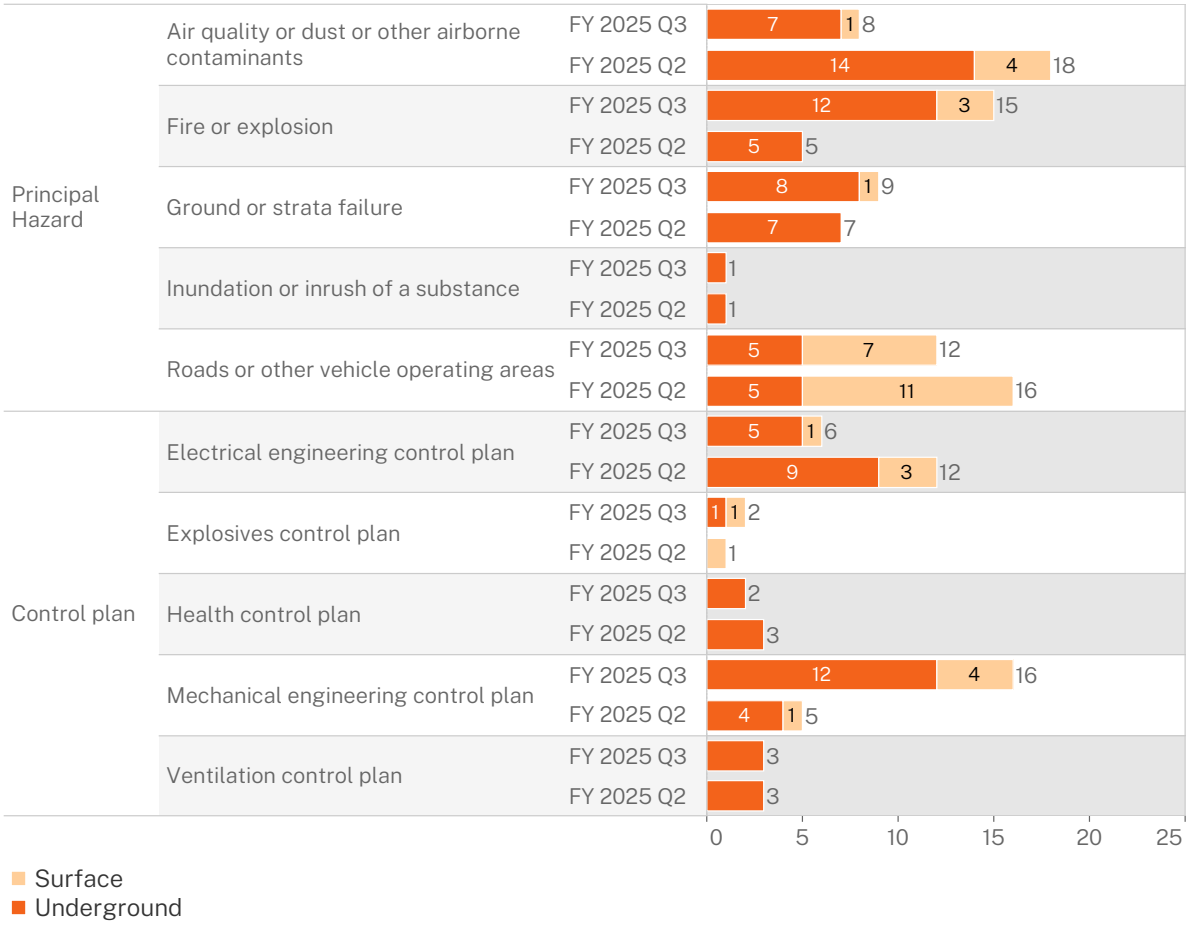


Incident notifications received by principal mining hazard or principal control plan

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 (5 to 15) and mechanical engineering control plan (5 to 16). Notable decreases were seen in roads or other vehicle operating areas (16 to 12), electrical engineering control plan (12 to 6) and air quality or dust or other airborne contaminants which fell by 55% from 18 to 8.

Figure 21. Large mines and quarries incident notifications received by principal mining hazard or principal control plan, and operation type – October 2024 to March 2025



Small mines sector

Incident notifications received

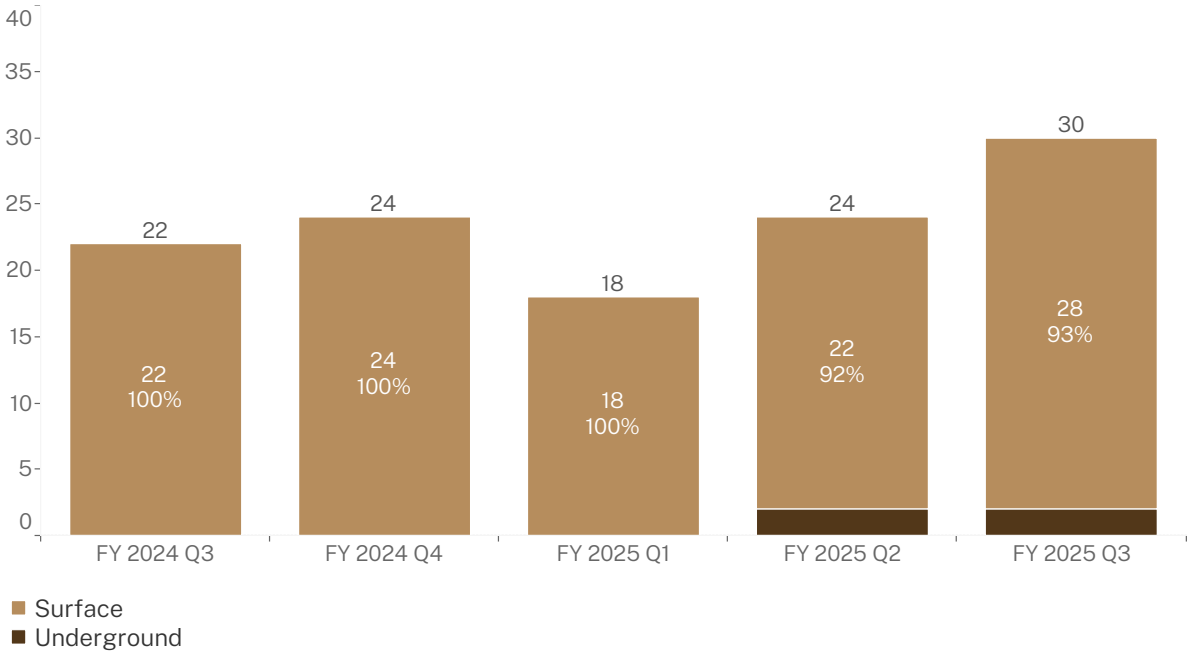
Under work health and safety legislation, mine operators must notify the Regulator about the occurrence of certain types of safety incidents. Incident notification data (by active mine) provides insights into sector specific reporting trends.

Table 4. Small mines and quarries incident notifications received rates – January 2024 to March 2025

Measure	FY 2024 Q3	FY 2024 Q4	FY 2025 Q1	FY 2025 Q2	FY 2025 Q3
Incidents	22	24	18	24	30
Active mines	2,314	2,310	2,288	2,208	2,123
Incident rate per active mine	0.01	0.01	0.01	0.01	0.01
Mines that notified incidents	21	20	17	21	27
% of mines notifying an incident	0.91%	0.87%	0.74%	0.95%	1.27%
Incident rate per notifying mine	1.05	1.20	1.06	1.14	1.11

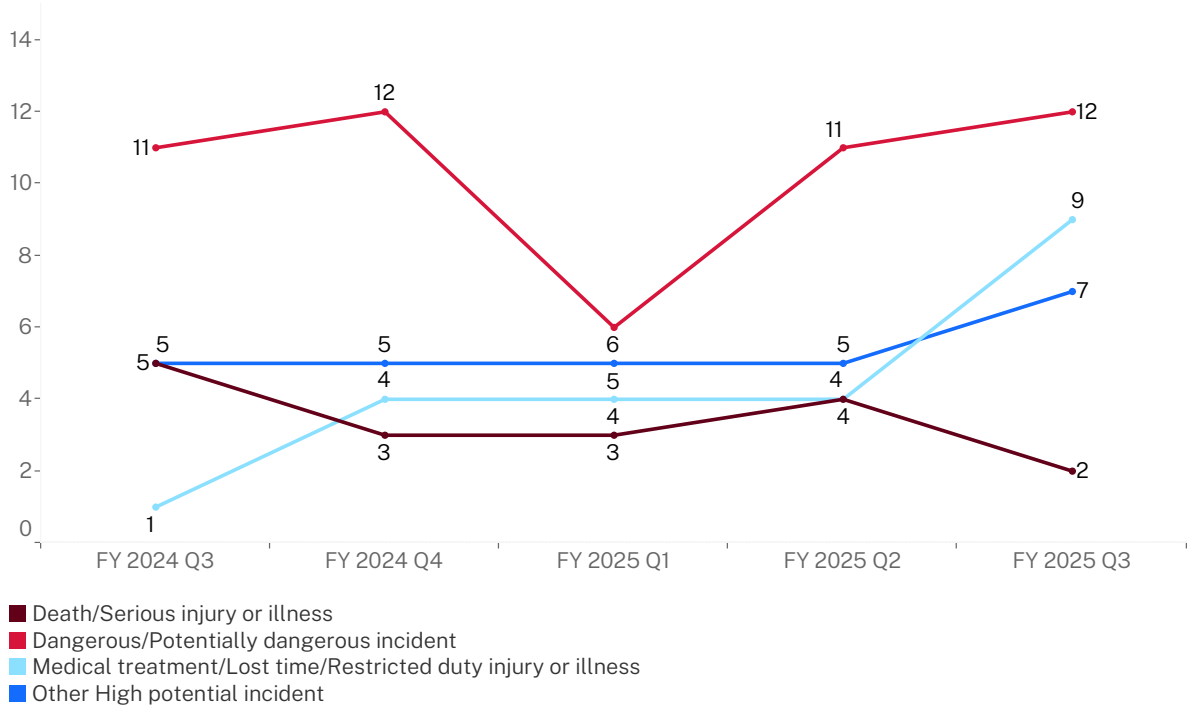
The graph below shows the proportion of safety incident notifications received from small mines and quarries by operation type. In this quarter, notified incidents increased overall by 25%, recording the highest figure over the past 5 quarters.

Figure 22. Small mines and quarries incident notifications received by operation type – January 2024 to March 2025



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 of 125% (from 4 to 9) in medical treatment/lost time/restricted duty illness or injuries. Smaller increases were seen in dangerous/potentially dangerous incidents, and other high potential injuries. Death/serious injury or illness halved from 4 to 2 compared to the previous quarter.

Figure 23. Small mines and quarries incident notifications received by requirement to report – January 2024 to March 2025

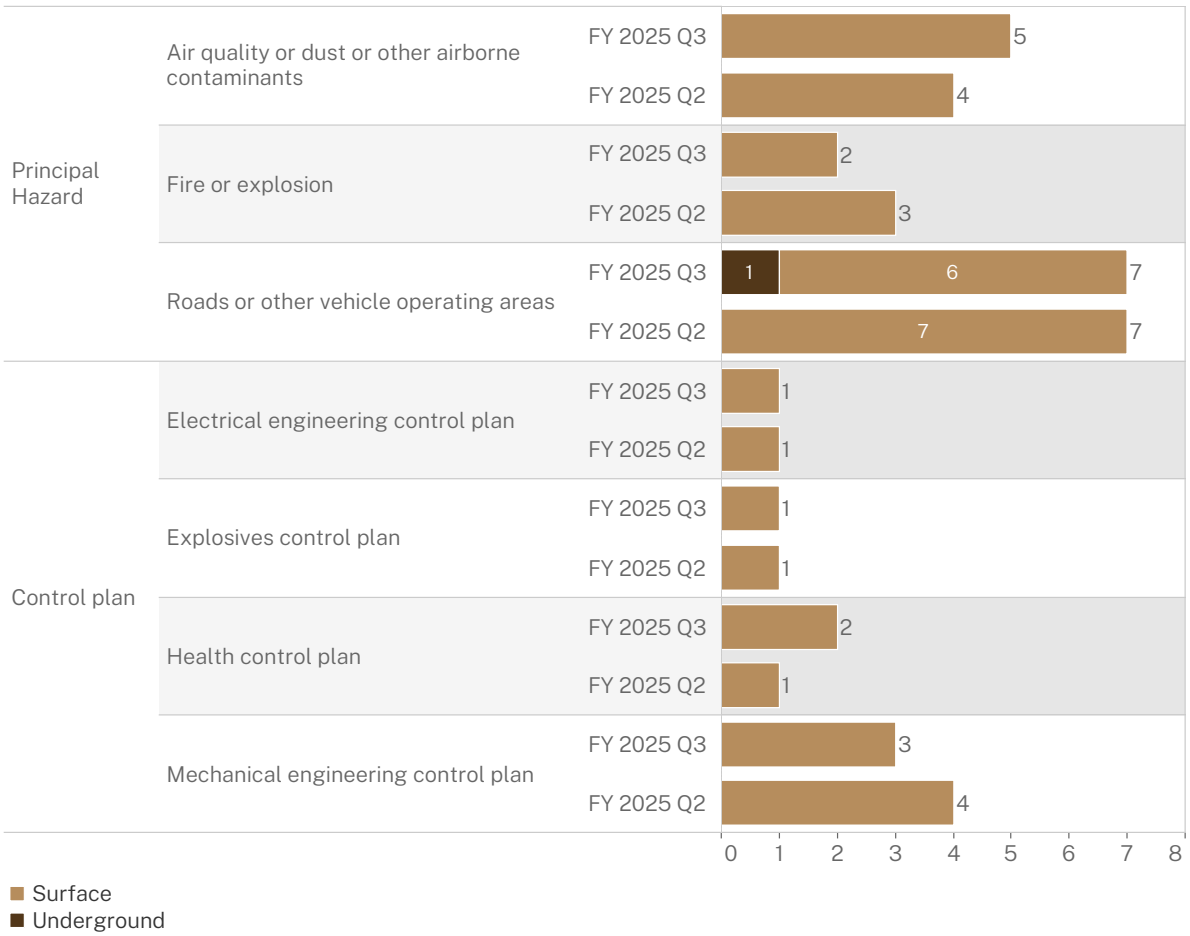


Incident notifications received by principal mining hazard or principal control plan

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.

Increases were observed in incidents notified relating to air quality or dust or other airborne contaminants (4 to 5) and health control plan (1 to 2). Decreases were observed in fire or explosion (3 to 2) and mechanical engineering control plan (4 to 3).

Figure 24. Small mines and quarries incident notifications received by principal mining hazard or principal control plan, and operation type – January 2024 to March 2025



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 2024 to March 2025

Sector	Measure	FY 2024 Q3	FY 2024 Q4	FY 2025 Q1	FY 2025 Q2	FY 2025 Q3
Petroleum and geothermal sites*	Incidents	0	0	0	0	0
Opal mines	Incidents	0	0	1	0	0
Exploration sites**	Incidents	2	1	1	3	1

* includes exploration
** excludes petroleum and geothermal

Table 6. Opal mines and exploration sites incident notifications received by requirement to report – January 2024 to March 2025

Sector	Requirement to report measure	FY 2024 Q3	FY 2024 Q4	FY 2025 Q1	FY 2025 Q2	FY 2025 Q3
Opal mines	Death/Serious injury or illness	0	0	1	0	0
	Total	0	0	1	0	0
Exploration sites**	Death/Serious injury or illness	1	0	0	2	1
	Dangerous/Potentially dangerous incident	0	0	1	1	0
	Medical treatment/Lost time/ Restricted duty injury or illness	1	1	0	0	0
	Total	2	1	1	3	1

** excludes petroleum and geothermal

Table 7. Opal mines and exploration sites incident notifications received by principal mining hazard and other hazards – January 2024 to March 2025

Sector	Principal hazard or control plan	FY 2024 Q3	FY 2024 Q4	FY 2025 Q1	FY 2025 Q2	FY 2025 Q3
Opal mines	No related principal mining hazard or principal control plan	0	0	1	0	0
	Total	0	0	1	0	0
Exploration sites**	Electrical engineering control plan	0	0	0	1	0
	Health control plan	1	0	0	2	0
	Mechanical engineering control plan	0	0	1	0	0
	No related principal mining hazard or principal control plan	1	1	0	0	1
	Total	2	1	1	3	1

** excludes petroleum and geothermal

Compliance and enforcement

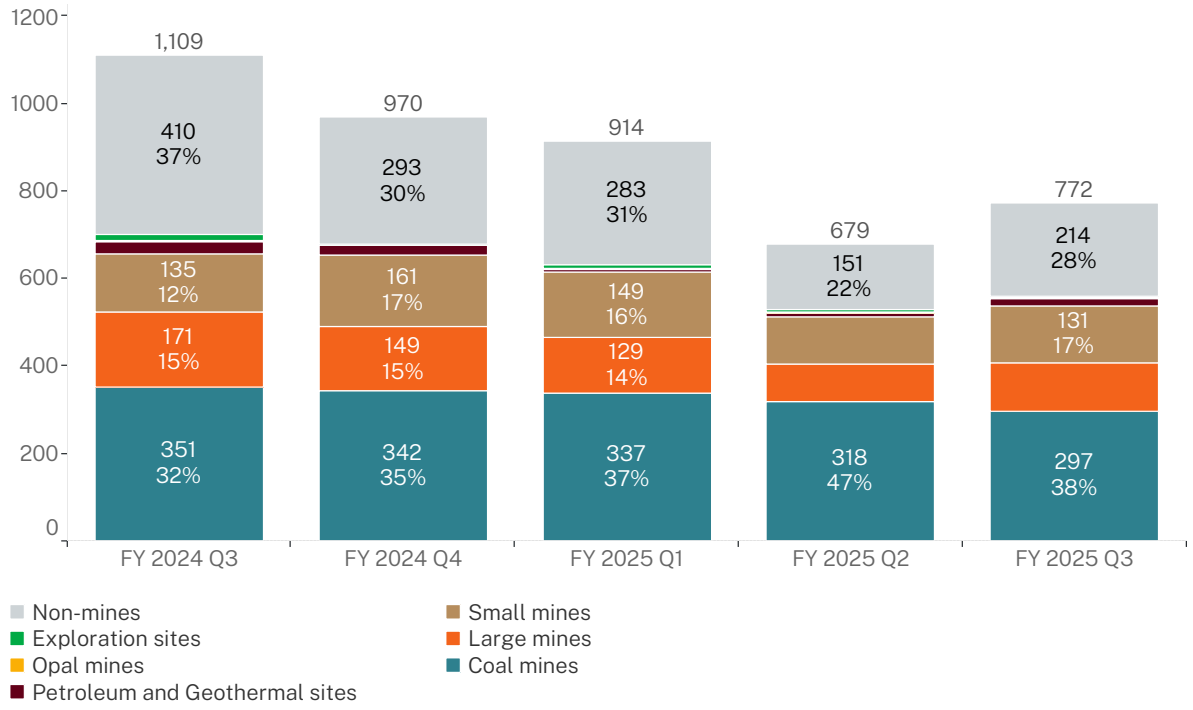
The Regulator uses a range of tools to promote and secure compliance in mines and petroleum sites in relation to work health and safety legislation. These include desktop assessments, site inspections, investigations and enforcement actions, such as issuing notices and commencing prosecutions.

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 14% increase in the number of safety assessments commenced by the Regulator. The largest proportion of assessments (38%) were conducted in coal mines, followed by 28% in non-mines and 17% in small mines.

Figure 25. Safety assessments by sector – January 2024 to March 2025

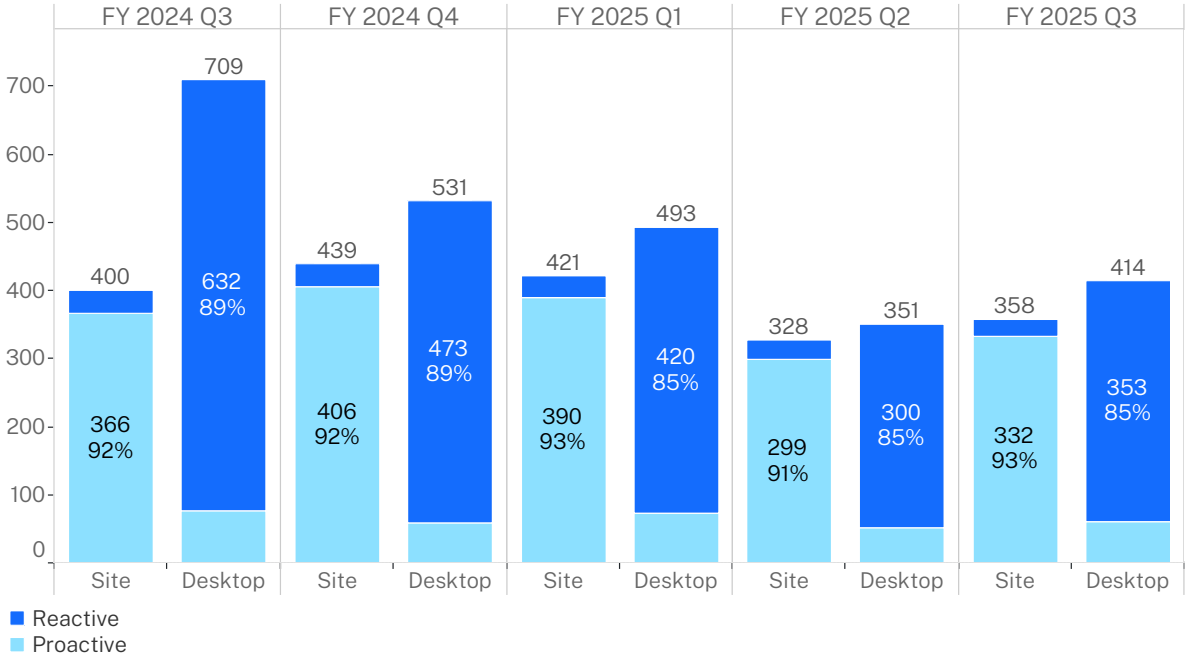


Safety assessments by category and nature

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.

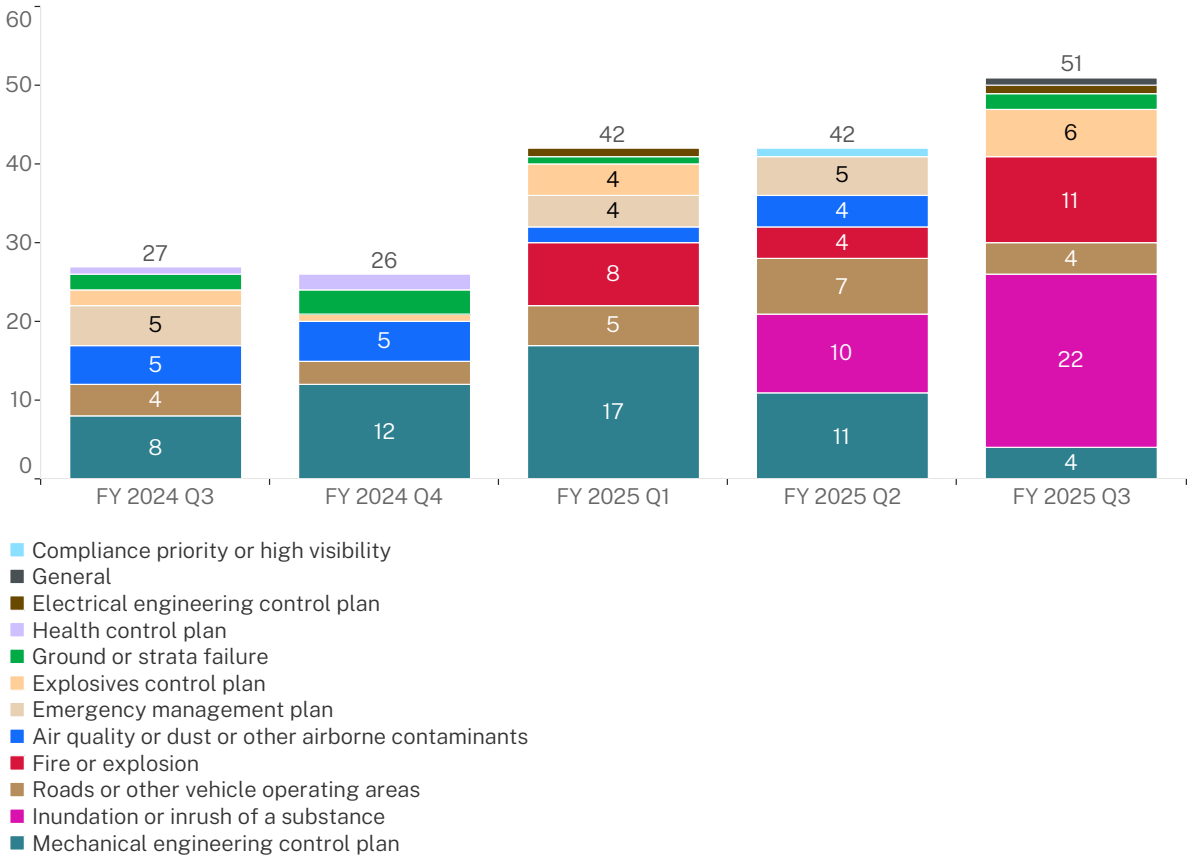
Figure 26. Safety assessments by category and nature – January 2024 to March 2025



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 27. Targeted assessments by principal mining hazards, principal control plans and other programs – January 2024 to March 2025

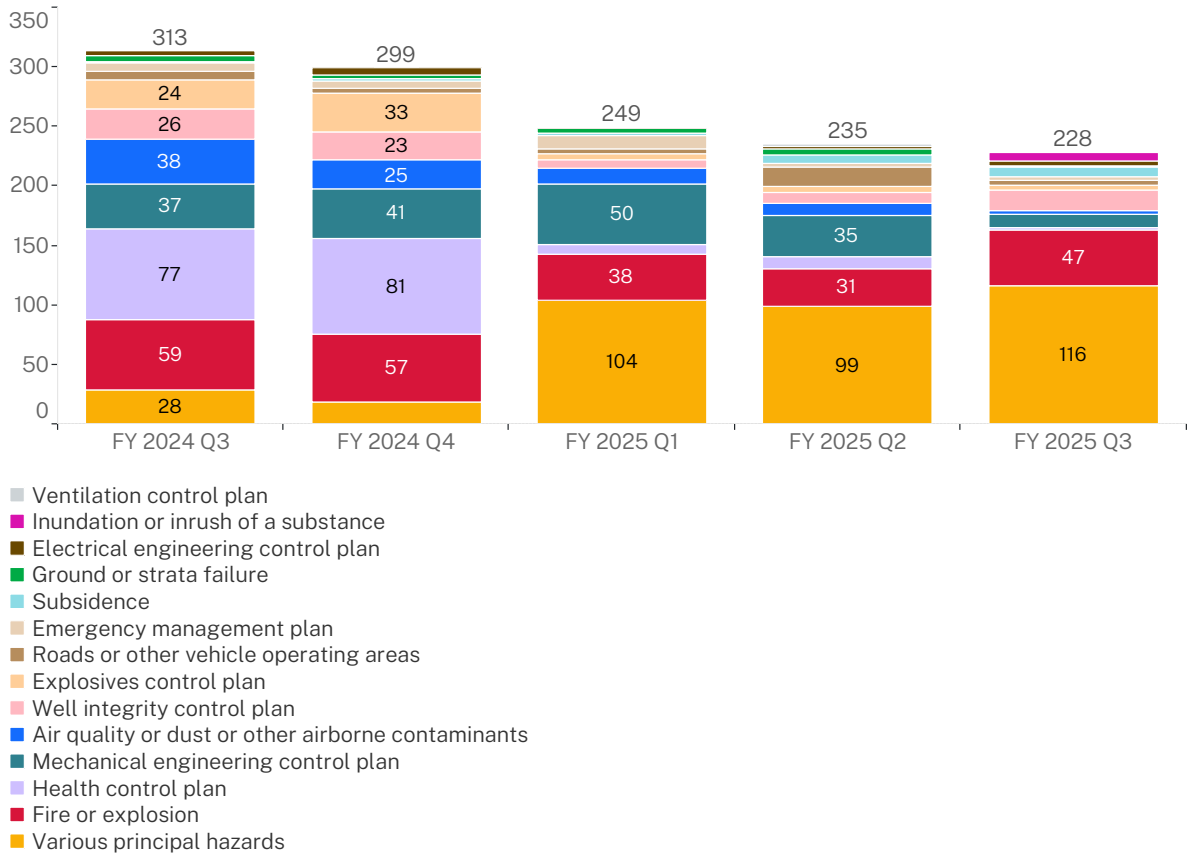


Planned inspections

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.

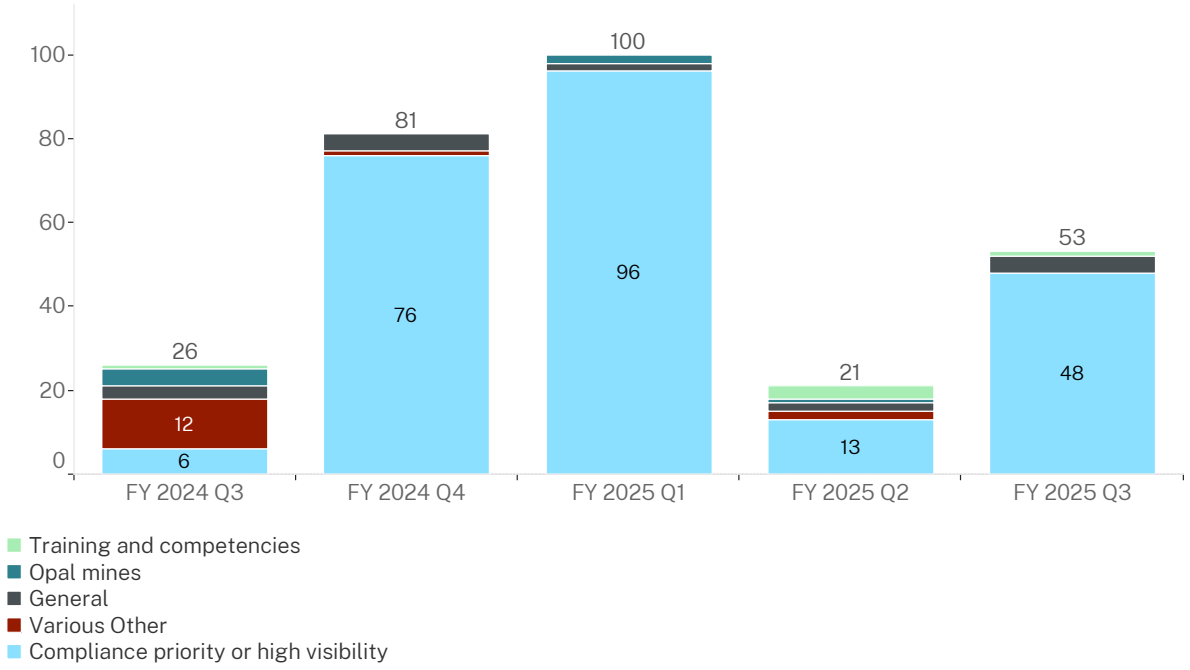
Planned site inspections were commenced on the principal mining hazards and control plans shown in the graph below.

Figure 28. Planned inspections by principal mining hazard and principal control plan – January 2024 to March 2025



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 29. Planned inspections by ‘other’ programs – January 2024 to March 2025



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 2024. Compared to the previous quarter, the number of safety notices issued increased by 41%. This change was predominantly led by s191 improvement notices which rose from 344 to 493.

Figure 30. Safety notices issued by notice type – January 2024 to March 2025

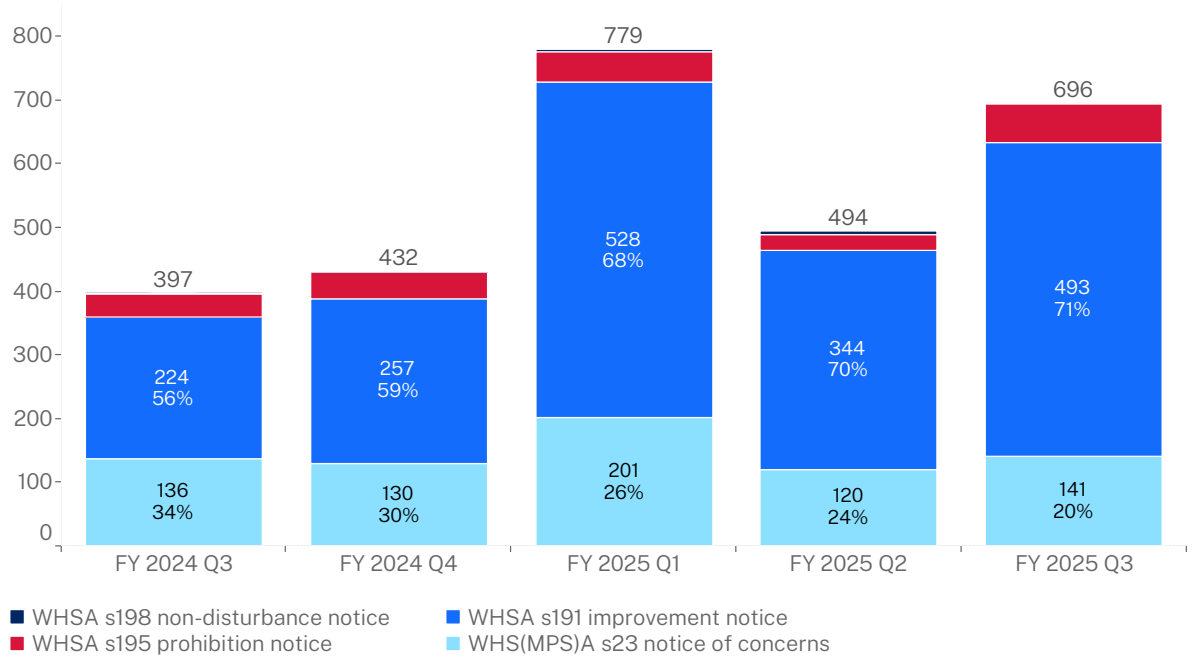
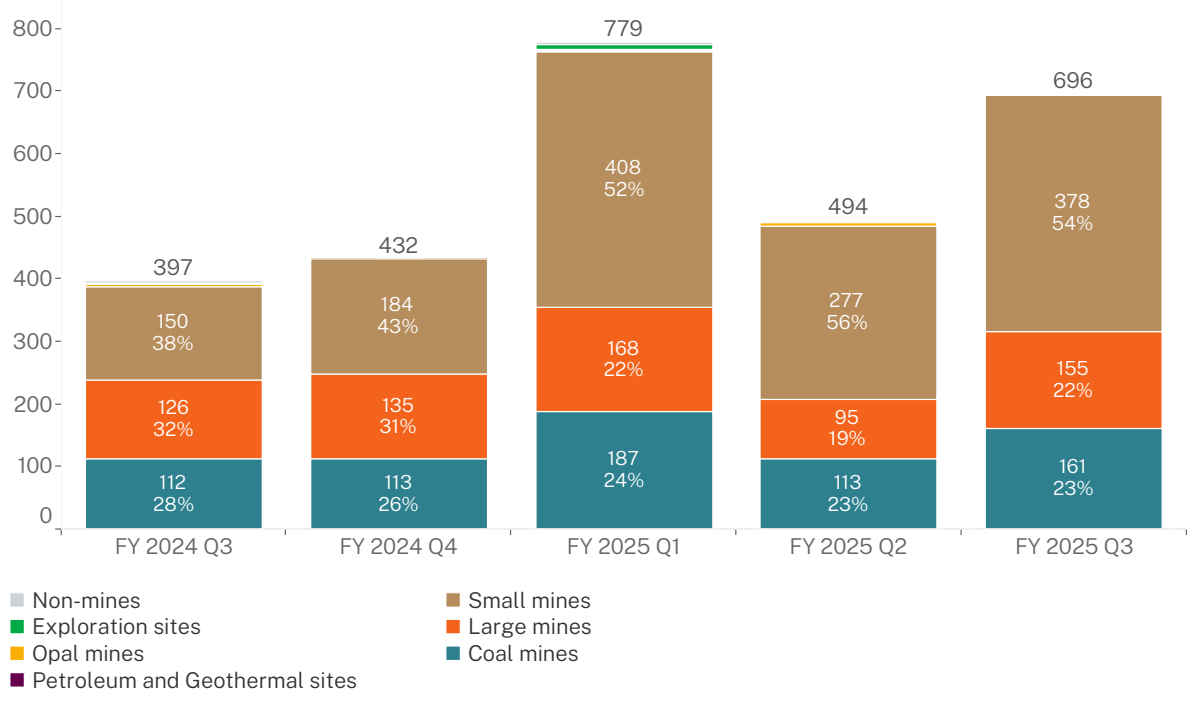


Figure 31. Safety notices issued by sector – January 2024 to March 2025



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