



Coal Services

Industry Forum

Airborne Contaminants and Health Surveillance



Industry Forum Agenda



1

Session 1: Standing Committee on Airborne Contaminants and Occupational Hygiene

2

Break

3

Session 2: CS Health

Agenda – Session 1 Overview



1 Welcome and overview of Standing Dust Committee

2 NSW Resources Regulator Update

3 2025 Order 42 Airborne Dust Results and Trends

4 Diesel Particulate Matter

5 2025 Example Exceedances and Learnings

6 Control Considerations and Learnings

7 Questions



Standing Committee on
Airborne Contaminants and Occupational Hygiene
(Standing Dust Committee)





Standing Committee on Airborne Contaminants and Occupational Hygiene



Current industry representatives

Chair:	Lucas Boyne
Deputy Chair:	Scott McNally
Secretary:	Ricki Hainzer
NSW Resources Regulator:	Anthony Margetts, Karen Tripp, Emma Aynscough
NSW Minerals Council:	Frank Fulham, James Barben
Mining and Energy Union:	Steve Barrett, Tony Watson
Mine Managers Association Australia:	Greg Shields, Roger Biddle
Independents:	Peter Knott, Ian Clifton
Coal Services (Hygiene):	Dr Kerrie Burton
Coal Services (Health):	Dr David Meredith
Coal Services (Technical):	Erin Lee

Committee priorities FY27/28

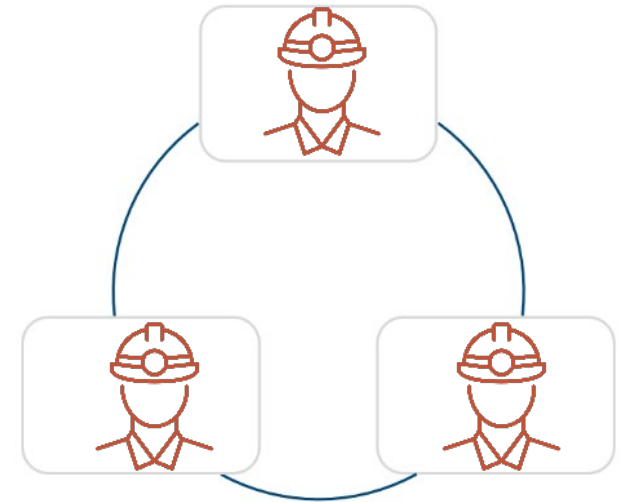


safe work
australia

WEL reductions
scheduled for
Dec 2026



**Practical
Controls**



**Proactive mine
assistance**

Airborne Contaminants Update

Standing Dust Committee Forum

Jen Hines & Karen Tripp
Senior Mine Safety Officers – Occupational Hygiene

April 2026





Airborne Contaminants Update

Section 1 – Changes to regulations and exposure limits

Respirable crystalline silica regulations

Section 2 – Exposure limit changes and contaminant updates

Silica

Diesel particulate

NOx

Welding fume



1

Changes to WHS Regulations ...is
your site compliant?



Silica Regulations are here...

Silica Regulations - Planned inspection program

- Model Regulations commenced on 1st September 2024
- Regulator assessments in underground and surface exposure to dust and airborne contaminants program plan to confirm compliance - underway
- PCBUs have a duty to control exposure to a Crystalline silica substance (CSS)
- Focus questions, has your site:
 - ⇒ Identified CSS and High-Risk CSS processing activities?
 - ⇒ Updated the Airborne Contaminants PHMP to address controls for high-risk CSS processing?
 - ⇒ Provided training to workers conducting high-risk CSS processing?
 - ⇒ Confirmed ALL workers who undertake high-risk CSS processing are included in SEG monitoring and health monitoring?
 - ⇒ Updated the site requirements for supply, use and maintenance of RPE?

NSW legislation

Work Health and Safety Regulation 2025

Chapter 8A Crystalline silica



Silica Regulations continued...



Updating your Airborne Contaminants PHMP to satisfy the requirement for a Silica Risk Control Plan (s529CB)

- Update PHMP and associated RA to **identify CSS processes** and **high-risk CSS processes**
(Controls are not to be included in the determination of high risk CSS processes)
- **Document** your site **controls** for CSS processing – must include at least one of these:
 - Isolation of worker from dust
 - Fully enclosed operator cabin with **HEPA filtration**
 - Effective wet dust suppression
 - Effective on-tool extraction
 - Effective Local Exhaust Ventilation (LEV)
 - RPE – AFTER ALL other controls, as a last resort



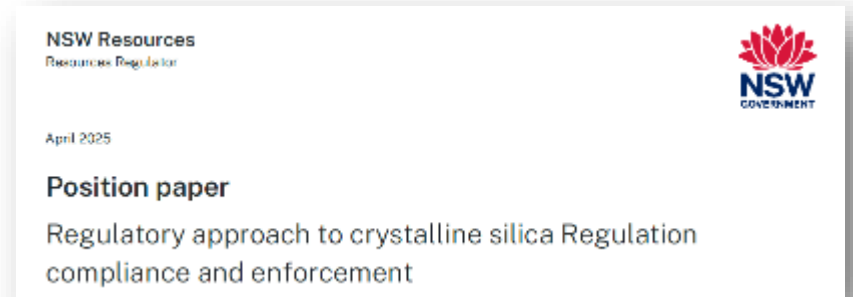
Workers must be provided with the control plan... Controls must be **used** and **maintained**

Silica Regulations continued...

Has your site updated their worker training (s529CD)?

- Does your training contain the components of Regulator 'approved training'?
- On-site training should provide workers with: –
 - Knowledge and understanding of health risks of silica exposure
 - How silica exposure is managed on site
 - The control measures used to reduce exposure to dust and silica
 - What RPE to use and when:
 - Selection, use and maintenance of RPE
 - Tight-fitting RPE requires clean shaven face & fit-testing
- Has your site documented this training for workers?

Internal vs
External
Training



Silica Regulations continued...

Monitoring of workers who carry out high-risk CSS processing:

- Your RA and Airborne Contaminants PHMP must now **identify AND record** all high-risk CSS processes
- Are ALL the workers who undertake these processes / tasks included in your exposure monitoring program?
- Does your Health Control Plan need to be updated to reflect CSS Reg changes?
- The requirement for Health Monitoring under the Silica Regulations is captured by Order 45 medicals
- Workers who are included in Order 45 medicals are exempt from inclusion in the Silica Worker Register.



Silica worker register (SWR) notification

The SWR requires relevant employers to register all workers undertaking high-risk silica processing activities.

Register your workers



**COAL SERVICES HEALTH MONITORING REQUIREMENTS FOR
COAL MINE WORKERS ORDER No. 45
under the
COAL INDUSTRY ACT 2001 (NSW)**



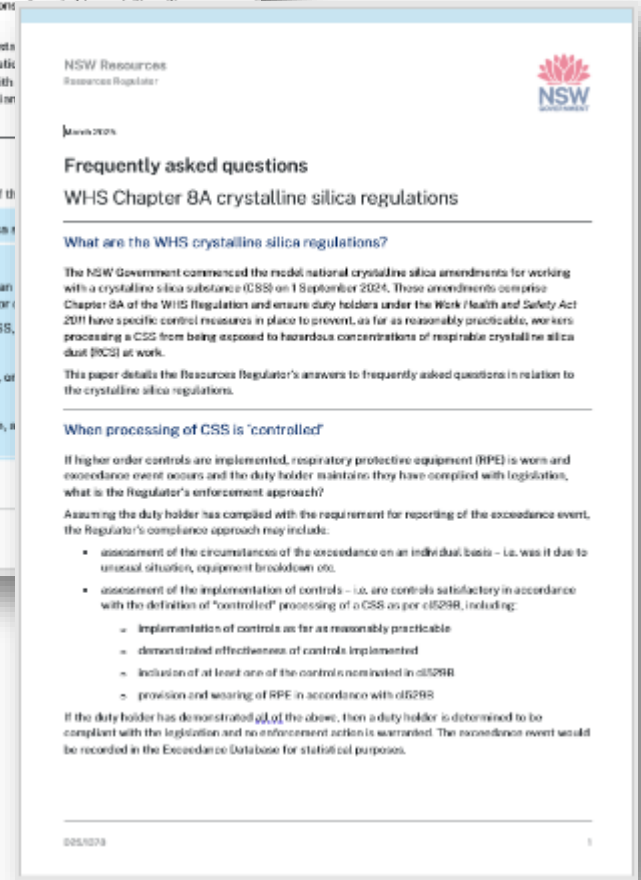
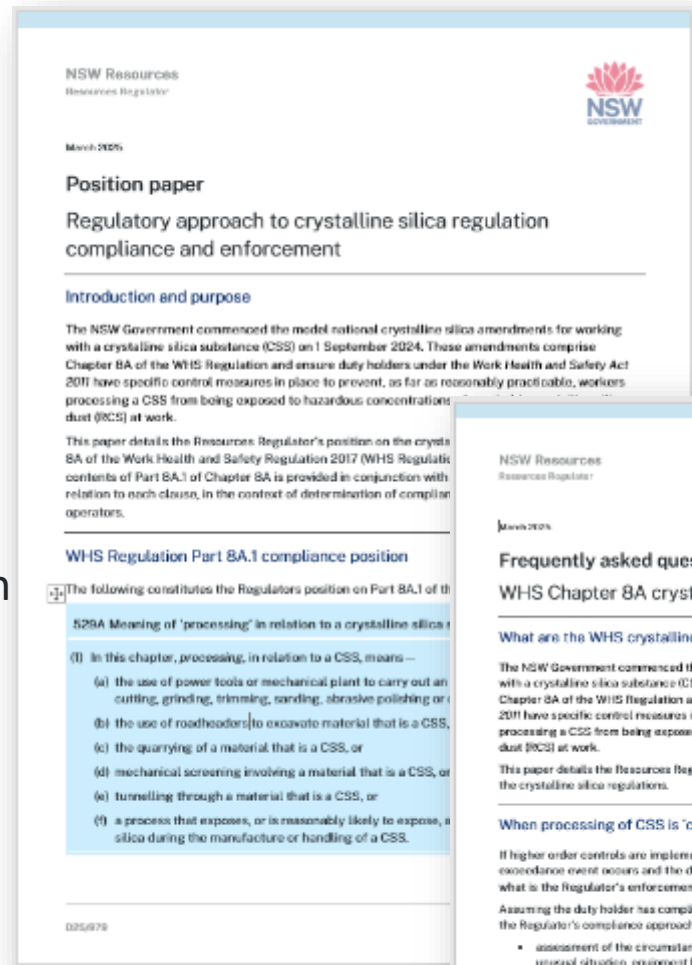
Silica Regulations are here...

Where can you find all the information you need?

Position Paper - Regulatory approach to crystalline silica regulation compliance and enforcement



Frequently Asked Questions - WHS Chapter 8A crystalline silica regulations



Technical Reference Guide

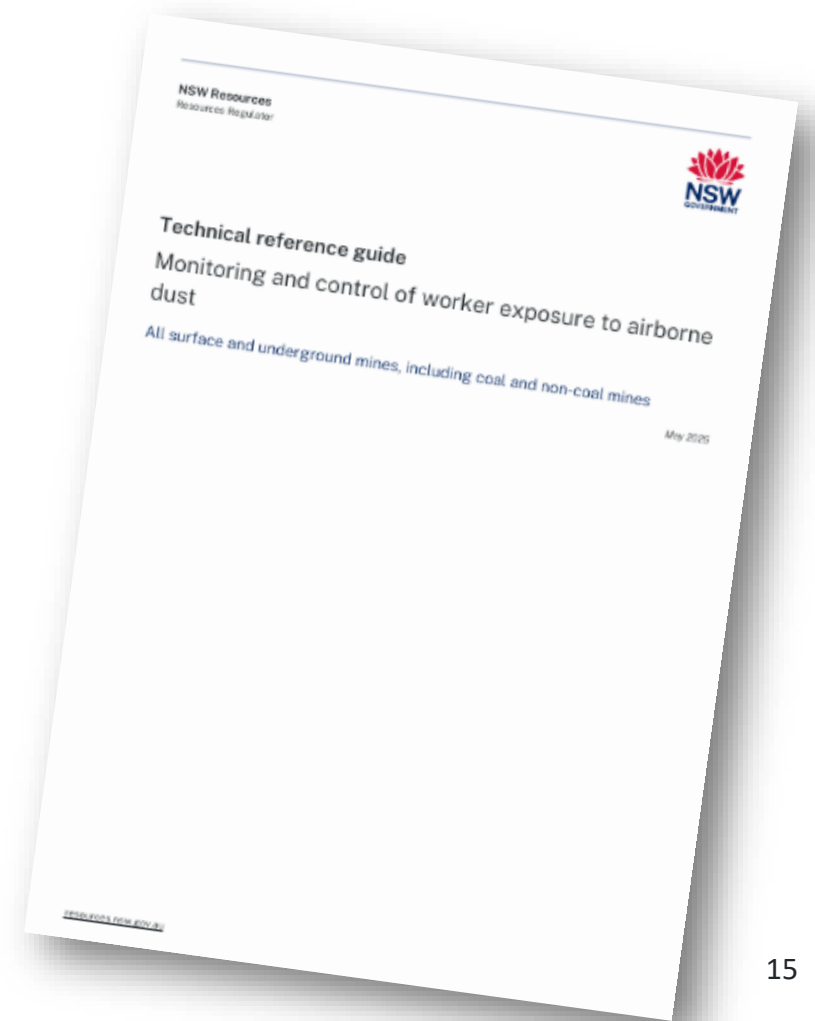
Monitoring and Control of Worker Exposure to Airborne Contaminants

For Coal and Non-Coal, Underground and Large Surface mines.

Section 2: Provides technical guidance on **exposure monitoring**, including:

- Competency requirements
- Types of sampling – personal, static, real-time
- Technical requirements for sampling
- Establishing Similar Exposure Groups (RR SEG group lists Appendix A)
- Strategies for developing monitoring programs (recognised methods)
- Interpretation of exposure monitoring results (statistical methods)
- Reporting and Investigation of exceedances

Section 3: Control of worker exposure



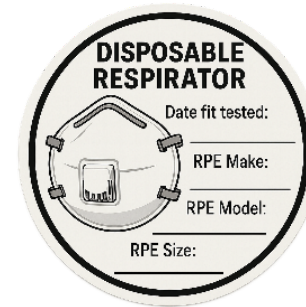
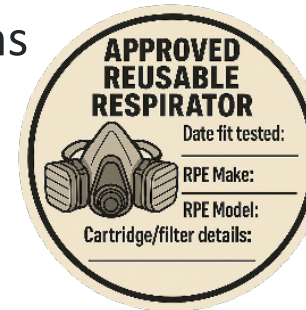
Silica site assessments - what have we found?

- Operator positioning
- Misting venturis
- Worker proximity detectors
- Sprays located in correct areas
- Use of remote mining for a portion of operator
- Improved audits – guidance around what ‘good’ looks like
- Workers are generally clean shaven and have a good knowledge of the hazard and controls

#	OPERATIONAL REQUIREMENTS	YES	NO	COMMENT/ACTION
1	Are vehicle traveling roads being treated_ to prevent dust being raised into suspension?			
2	Is adequate ventilation at the face being maintained to dilute airborne dust? <u>Minimum 8.1m3/sec</u>			Ventilation Quantities Reading:.....m3/s
3	Distance of face ducting/slider to cut face. Is it adequate and to standards? <u>Minimum distance of the ducting is up to the last installed roof bolt or in breakaway brattice lead install across road to 1m from non-duct side rib 5.5m inbye breakaway centre.</u>			<u>Ducting _____ m from face</u> <u>Brattice installed as per XXX for breakaways</u>
4	<u>Slider tube in use</u>			
5	Are <u>90%</u> sprays operational and being used on Continuous Miner when cutting coal or stone?			
6	Is an adequate water quantity & pressure being maintained for dust suppression purposes at the Miner? <u>Minimum pressure 1200 kPa on water supply when cutting. Minimum flow is 65 l/min.</u>			<u>Flow measured at the two flow meters l/min</u> <u>Pressure measured at the bag filter kPa</u>
7	Are cutting picks on coal cutting machinery being changed as required? <u>Add picture of pick wear.</u>			

Silica site assessments - what have we found?

- Higher order controls not always considered in investigations
- High-risk tasks are not clearly indicated
- Training does not match requirements
- OEM filters are relied on, but may not be HEPA
- Seals on doors broken, seat covers, windows open
- Workers are not wearing the RPE they were fit-tested for – how do workers know the right one?
- RPE was not worn during 5% of underground exceedances



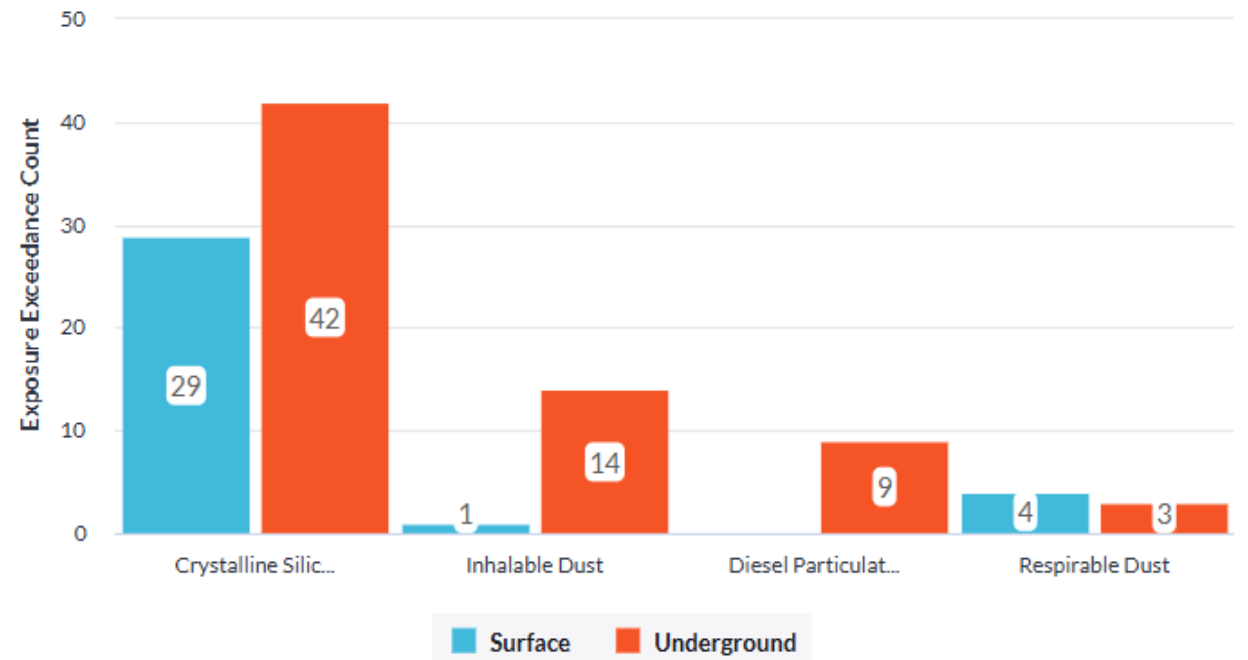
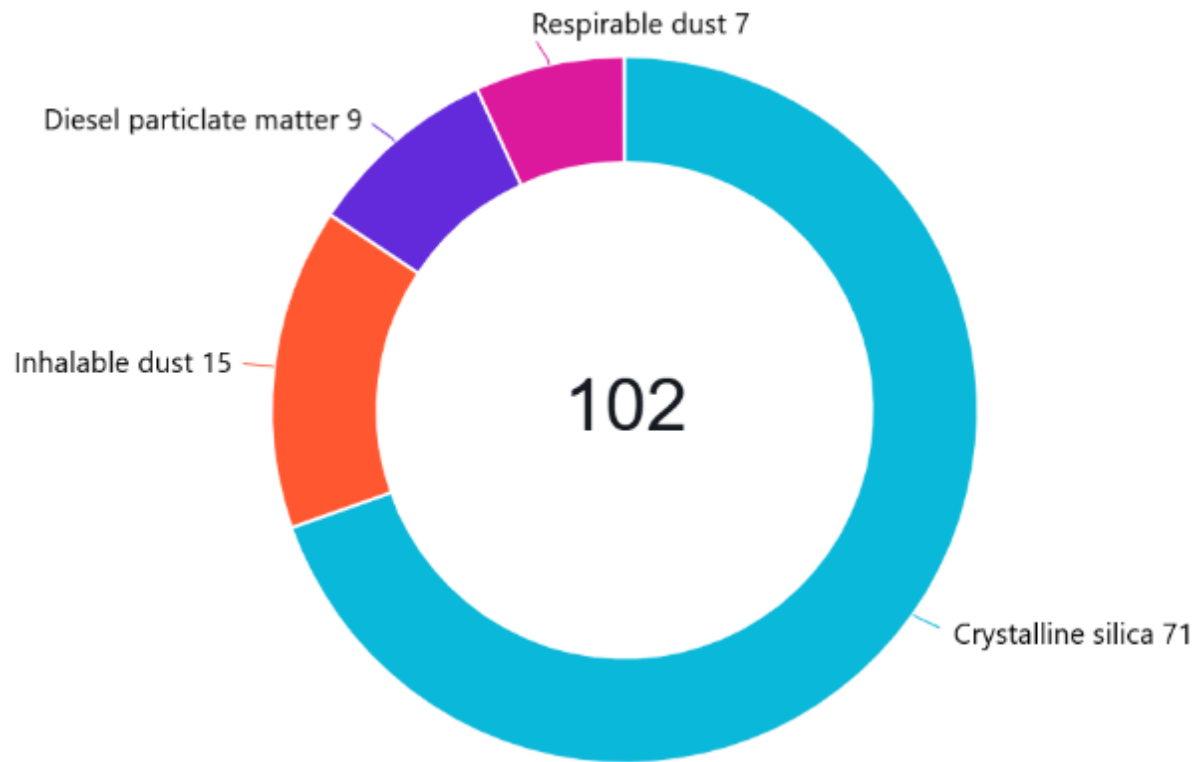


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Exposure limit changes
... its time to act

Exceedance data snapshot...

Total Coal Mine Exceedances 2025



Regulator program for the request for ALL monitoring data is planned for H2, 2026



Silica Exposure Limit changes

Revised version of Workplace Exposure Limits (WELs) released April 2024 and updated November 2025.

Respirable Crystalline Silica exposure limit – *proposed* decrease:

- 0.05 mg/m³ TWA reduced to 0.025 mg/m³ TWA
- WHS ministers will decide whether to implement the proposed change to the Workplace Exposure Standard (WES).

What should you do to prepare?

- ⇒ Start looking at your results NOW.
- ⇒ Undertake an investigation for any results that are >0.025mg/m³ to see why the levels were high and if further controls can be implemented.

Workplace exposure limits for
airborne contaminants



**Changes
December 2026 !**



DPM Exposure Limit changes

Effective 1st December 2026

Revised version of Workplace Exposure Limits (WEL's) released April 2024, updated November 2025.

- **DPM exposure limit** – introduced SWA:
 - 0.01 mg/m³ as respirable elemental carbon
 - 10x lower than current limit in WHS (MPS) Regs
- An **alternative** exposure limit has been **approved** for adoption into the Regulations for all coal mines and underground metalliferous mines:
 - 0.05 mg/m³
 - measured as submicron elemental carbon



Change to WHS (MPS) Regulation 2022 to occur later in 2026



NO_x Exposure Limit changes

Effective 1st December 2026

Revised version of Workplace Exposure Limits (WEL's) released April 2024, updated November 2025.

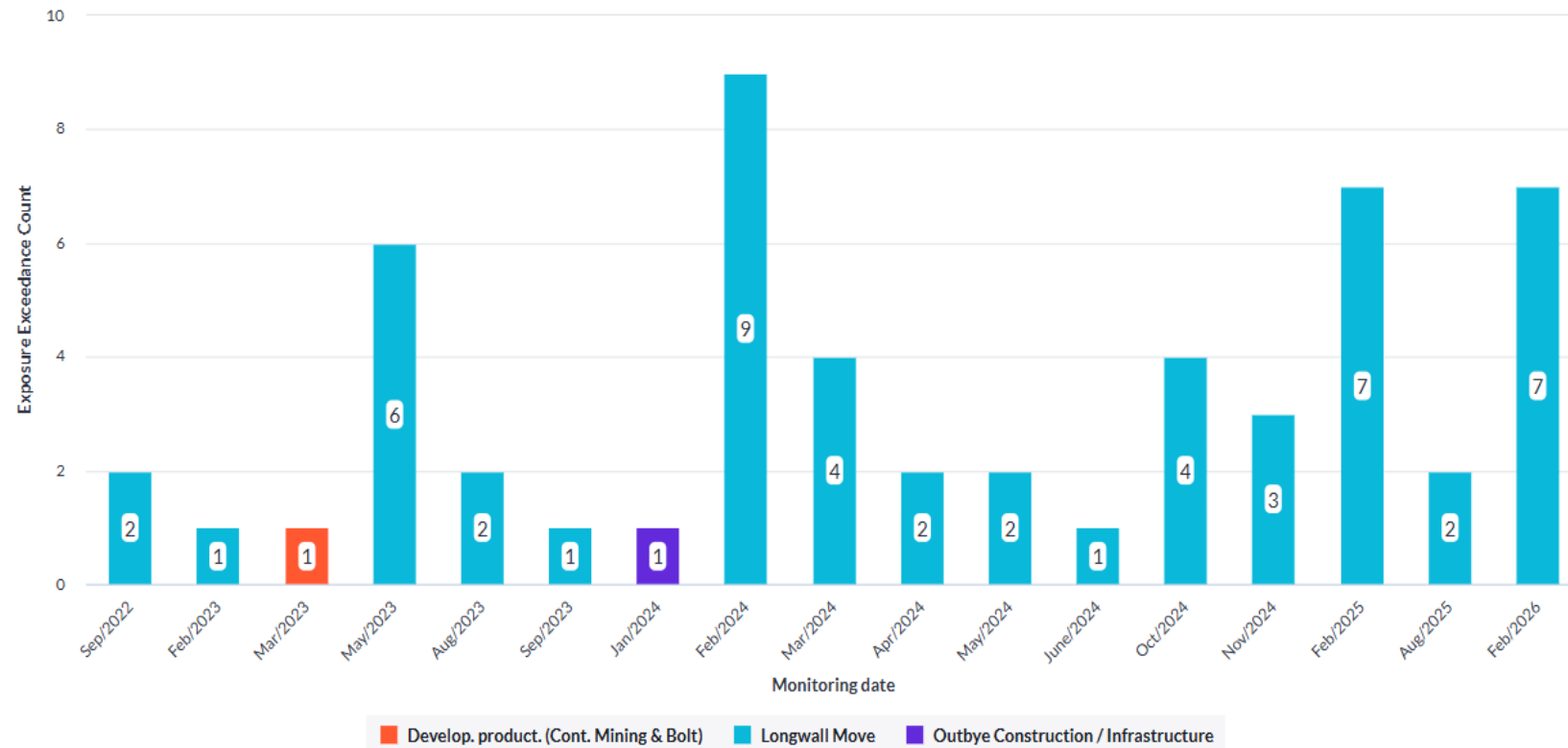
- **Nitrogen Dioxide (NO₂) exposure limit** – proposed decrease:
 - 3ppm TWA reduced to 0.2ppm TWA
 - Removal of existing STEL (5ppm)
 - WHS ministers will decide whether to implement the proposed change to the WES
- **Nitric Oxide (NO) exposure limit** –decreasing:
 - 25ppm TWA reduced to 2ppm TWA
 - 92% reduction of current limit
 - Effects diesel particulate signature - potential significant impact on the required minimum ventilation quantities to operate underground diesel plant – currently points to earlier version of WESs

There are more changes to Exposure Standards than listed here – PCBU's must familiarise themselves with applicable changes



DPM exceedances

- 55 longwall exceedances since reporting began 2022
- 2 other exceedances
- Ranging from 0.11 mg/m³ to 0.81 mg/m³ (WES 0.1 mg/m³)
- 9 sites reported, often several exceedances per LW move
- There are LW moves without exceedances





DPM Longwall move site assessments

- 10 mines are scheduled for a site assessment during LW moves in 2026 to early 2027
- 7 DPM exceedances in the 2026 so far (9 total in 2025) (55 since data collection began 2022)
- What have we found so far:
 - Lack of use of DPM filters
 - DPM filter housing not maintained or fit for purpose
 - Lack of understanding re: maintenance of filter housing seals and O-rings
 - Diesel tag boards not being used effectively
- Starting to receive information / monitoring results from sites on NO and NO₂ reductions and potential impacts

DPM Forum for
Underground
Coal Mines
22 October 2026



DPM control – What works?

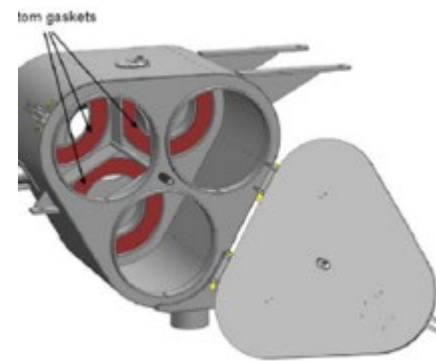
DPM exhaust monitoring – know what to maintain

- Monitor the exhaust – before and after treatment
- Use the data to maintain the engine
- Use the data as live data
- Develop a maintenance tarp – engine specific



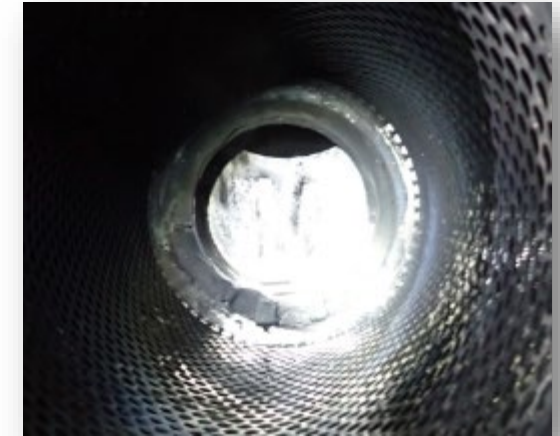
DPM cannister audits

- Check the filters have the right seals
- Check there is pressure to be applied to close the lid
- Check they are changed when necessary
- Check for foreign material in housing



DPM Control – What can be improved?

- Machines without filters – remember ALARP
- Ineffective Tag Boards – design and layout are important
- Pass/fail/Exceedance for exhaust engine testing (TARP)
- Little to no sealing on filters
- Poor disposal of used filters
- Dirty fuel (jerry cans)
- No – go zones – where to stand with an engine running nearby
- Scrubber cleaning not adequate



Welding fume Exposure Limit changes

Welding fume (total) (not otherwise classified) exposure standard –decreased January 2024:

- from 5 mg/m³ TWA reduced to 1 mg/m³ TWA

⇒ **Aluminium (welding fumes) exposure standard** –decreased November 2025:

- from 5 mg/m³ TWA reduced to 1 mg/m³ TWA

⇒ **Manganese fume (inhalable) exposure limit** – will decrease December 2026:

- from 1 mg/m³ TWA reduced to 0.1 mg/m³ TWA

⇒ **Nickel Metal (inhalable) exposure limit** – will decrease December 2026:

- from 1 mg/m³ TWA reduced to 0.1 mg/m³ TWA

⇒ **Zinc Oxide fume (inhalable) exposure limit** – will decrease December 2026:

- from 5 mg/m³ TWA reduced to 2 mg/m³ TWA



Workplace exposure limits for
airborne contaminants



**Changes
December 2026 !**

Welding fume exposure

Welding in the coal industry... what are the typical exposures?

Qld coal industry study indicated:

- workers are exposed to high levels of welding fume
- RPE use was poor

324	49
Personal welding fume results reported	Coal mines monitored for welding fume
63%	10%
Full shift samples exceeded the site specific OEL (1 mg/m ³ from Feb 2024)	Those who were overexposed and reported they wore no RPE

Is welding conducted at your site? Are your workers exposed?



QGN36 Managing welding fume in coal mines



Welding fume control – the good, bad and ugly

Good



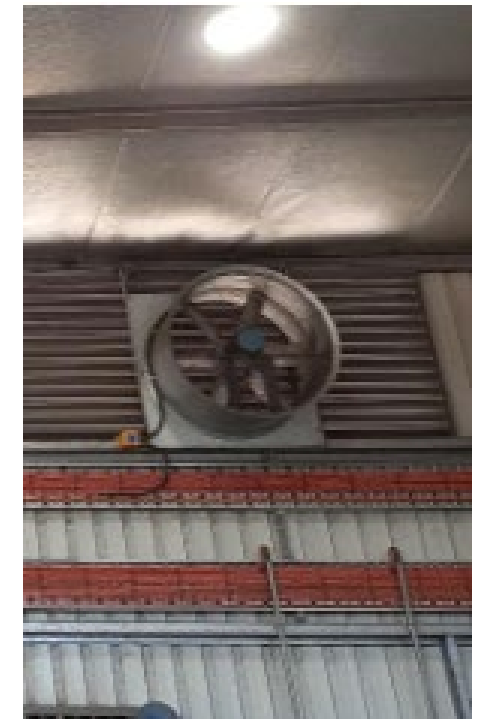
Robot performing weld repairs



On-tool extraction system



Fume extraction hood



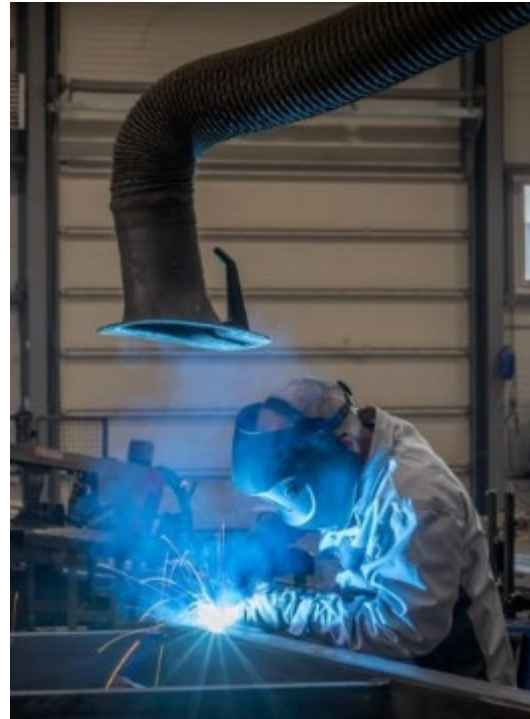
Wall mounted exhaust fans

Welding fume control – the good, bad and ugly

☹️ Bad



Disused fume extraction unit



Incorrect location of extraction hood



No extraction system used



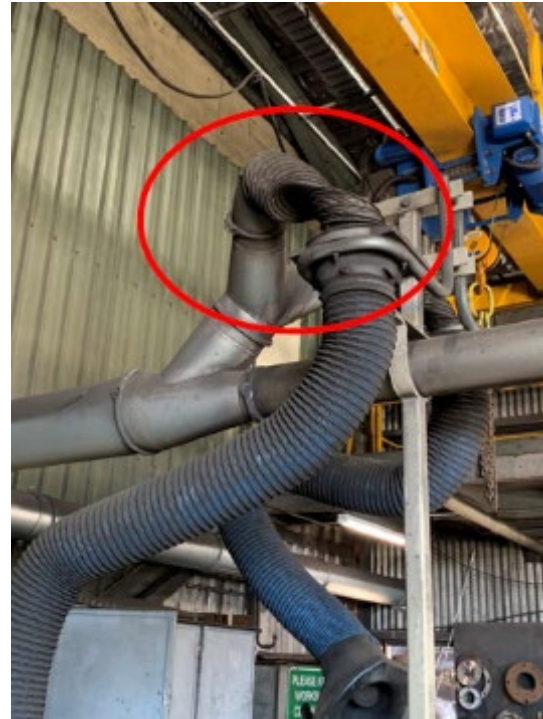
Bystander exposure in workshop

Welding fume control – the good, bad and ugly

Ugly



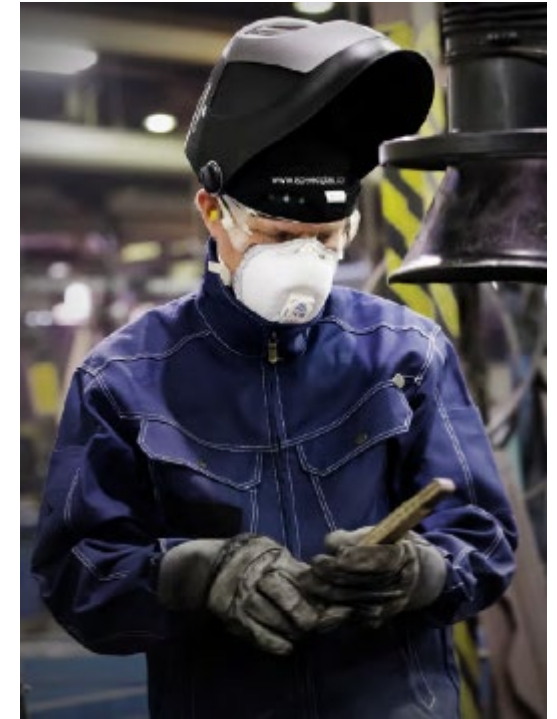
Damaged fume extraction unit



Damaged extraction ducting



Poorly maintained PAPER units



Minimum RPE use

Welding fume exposure

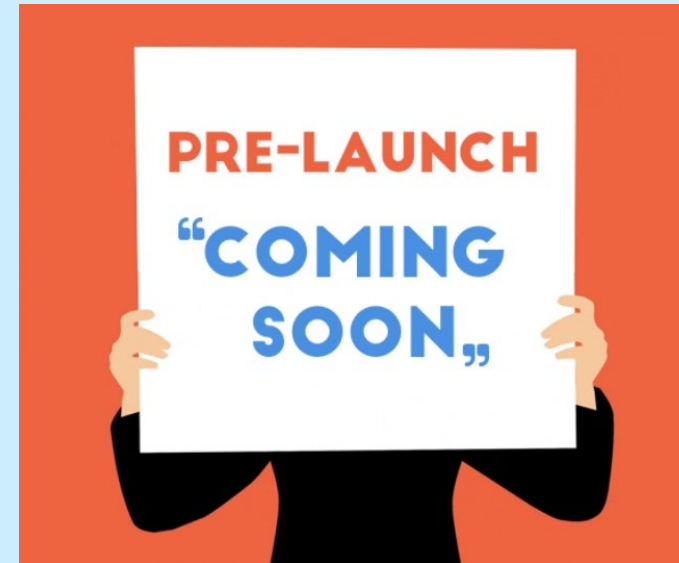
Things to consider at your site...

- Do you know your risk – have your welding activities been sampled?
- Grinding – grinding generates very fine dust – is this part of your welding monitoring?
- Most controls do not suit all situations
- One control will not keep workers below the exposure standards
- Consider other workers in the workshop / area – not just the welder
- Train workers in health effects, how to use controls, type / use / limitations of RPE, including PAPR, maintenance of PAPR
- If PAPR is a control on your site – manage it i.e. maintenance, checks, etc.



Health Seminar

- Early 2027
- Target Audience
 - Health & Safety Managers/Officers
 - Human Resources practitioners
 - Occupational Hygienists
 - Managers/Supervisors
 - Those who influence or manage Psychosocial Safety, Human and Organisational Factors, and Occupational Hygiene in the NSW mining sector
- Practical, health-focussed capability building
- Psychosocial risk, human factors, dust, DPM, noise exposure and controls.







2025 Order 42 Airborne Dust Results Summary





2025 Monitoring Data – Key Trends



Reduction in

- RCS (quartz) exceedances, exceedance rate and average exposures
- Average RCS exposure for all work groups ($<0.025\text{mg}/\text{m}^3$)
- Average DPM exposure
- Percentage of workers not wearing RPE when airborne dust results exceed WES
- Percentage of workers not clean shaven when airborne dust results exceed WES



Increases in

- RCS exceedance rate for surface workers
- Respirable and inhalable dust exceedance numbers and exceedance rates (small number of samples)
- Average inhalable dust exposure for cement sprayers and underground other

RCS – Respirable Crystalline Silica (quartz)
WES – Workplace Exposure Standards
RPE – Respiratory Protective Equipment



Order 42/Schedule 6 Airborne Dust Monitoring



Respirable dust,
respirable quartz &
inhalable dust



Min. frequency
Each shift, 6-12 months



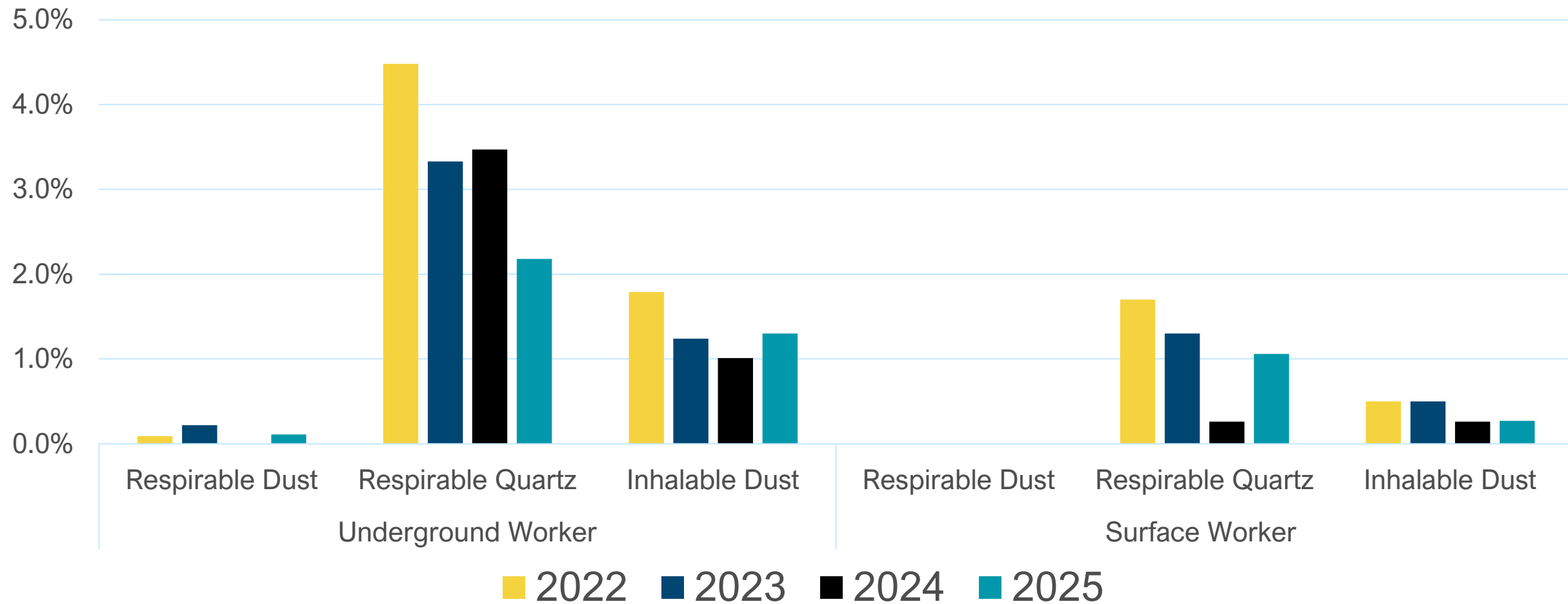
5 workers
monitored per shift
LW, Cont Miner, Outbye
Surface, CHPP



2025 Order 42 Airborne Dust Monitoring



NSW Airborne Dust Exceedance Rates

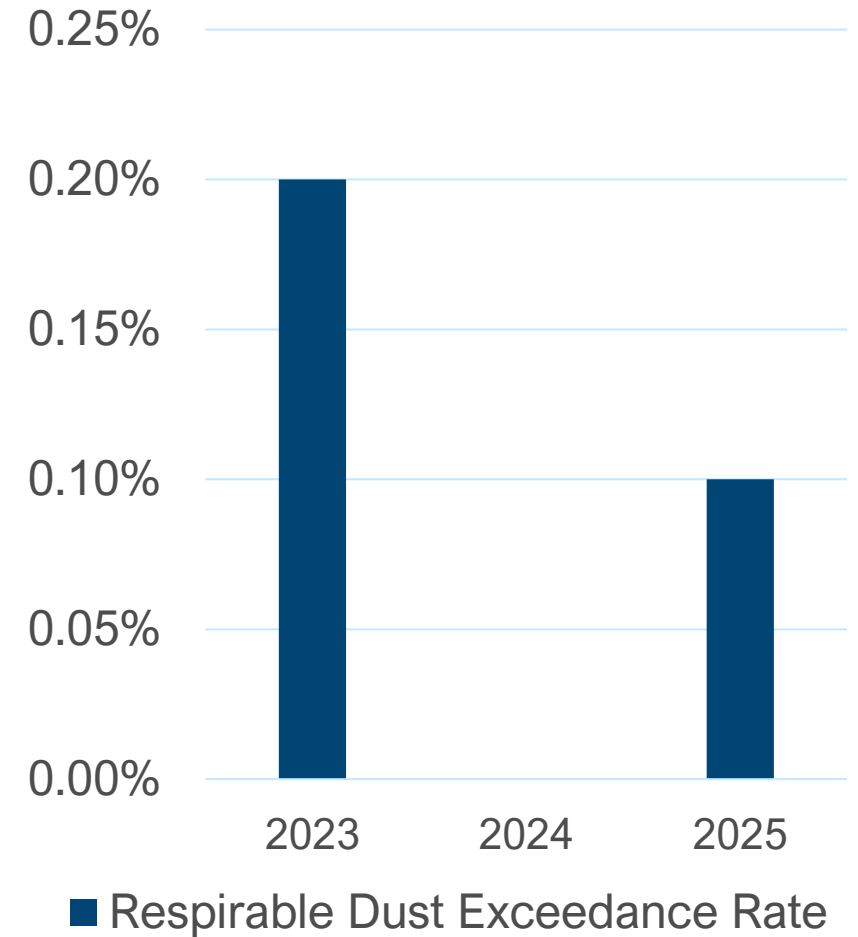




Respirable Dust Results and Exceedances



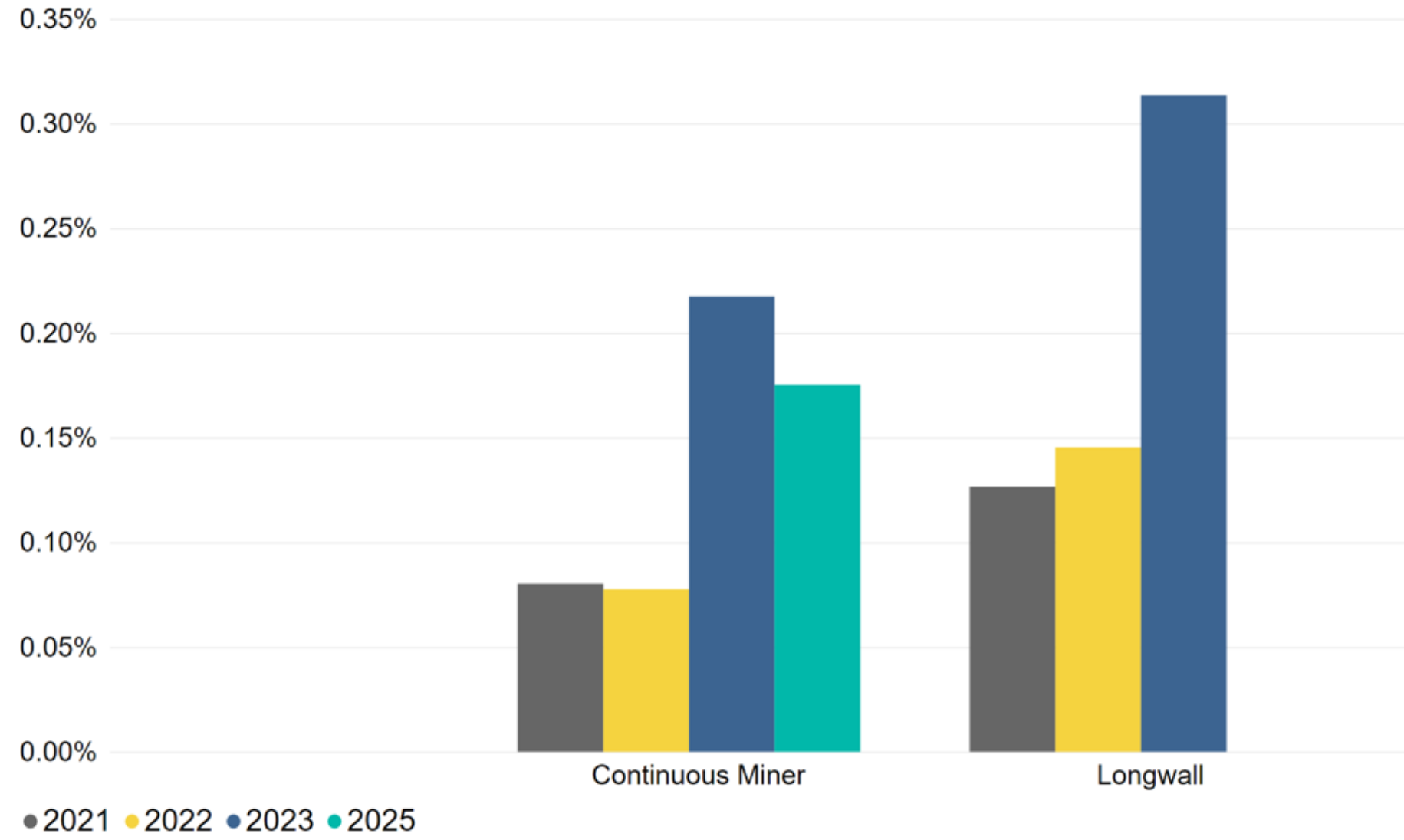
	2023	2024	2025
Respirable Dust Results	2602	2337	2150
Respirable Dust Exceedances	5	0	2
Respirable Dust Exceedance Rate %	0.2%	0.0%	0.1%





2025 Order 42 Respirable Dust Monitoring Results

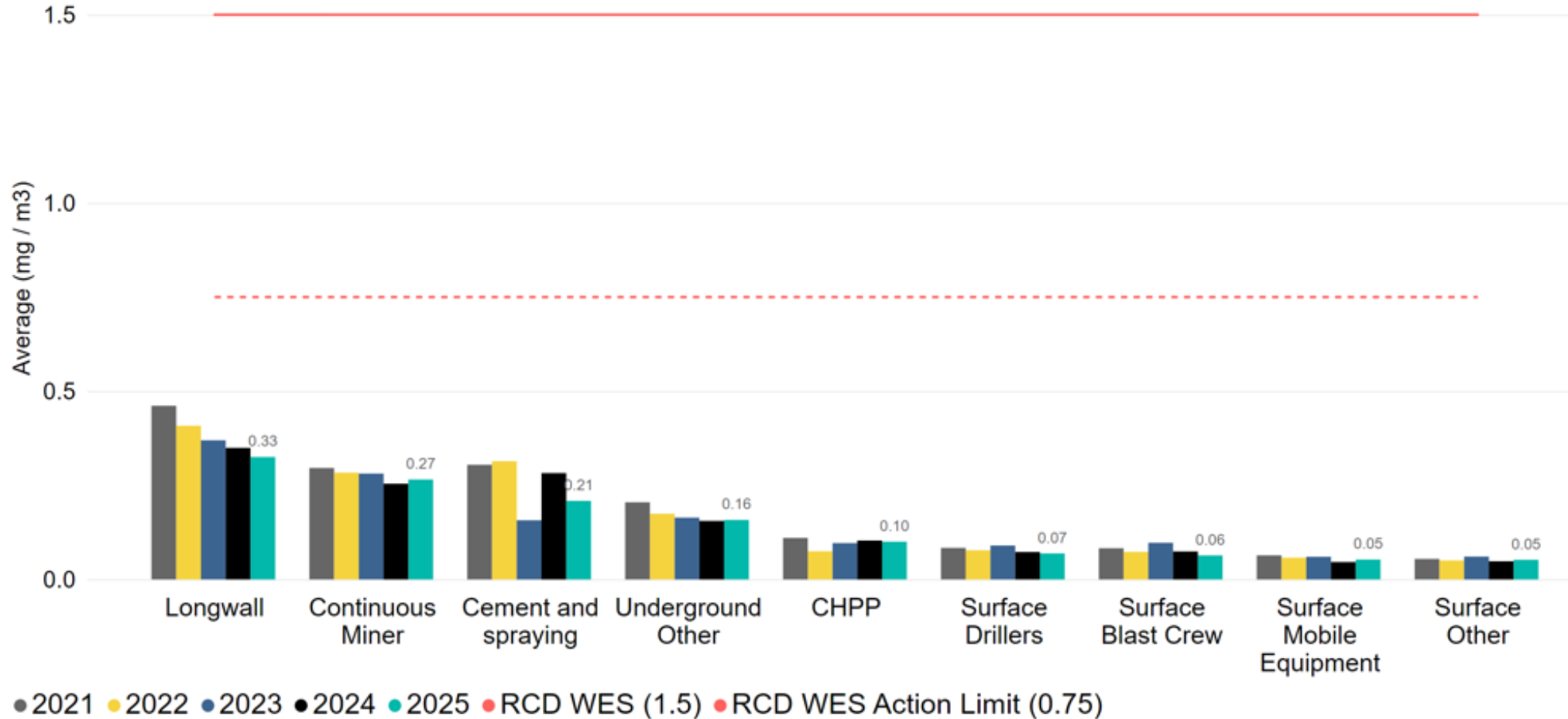
WES Exceedance Rate by SEG





2025 Order 42 Respirable Dust Monitoring Results

Average Exposure by SEG

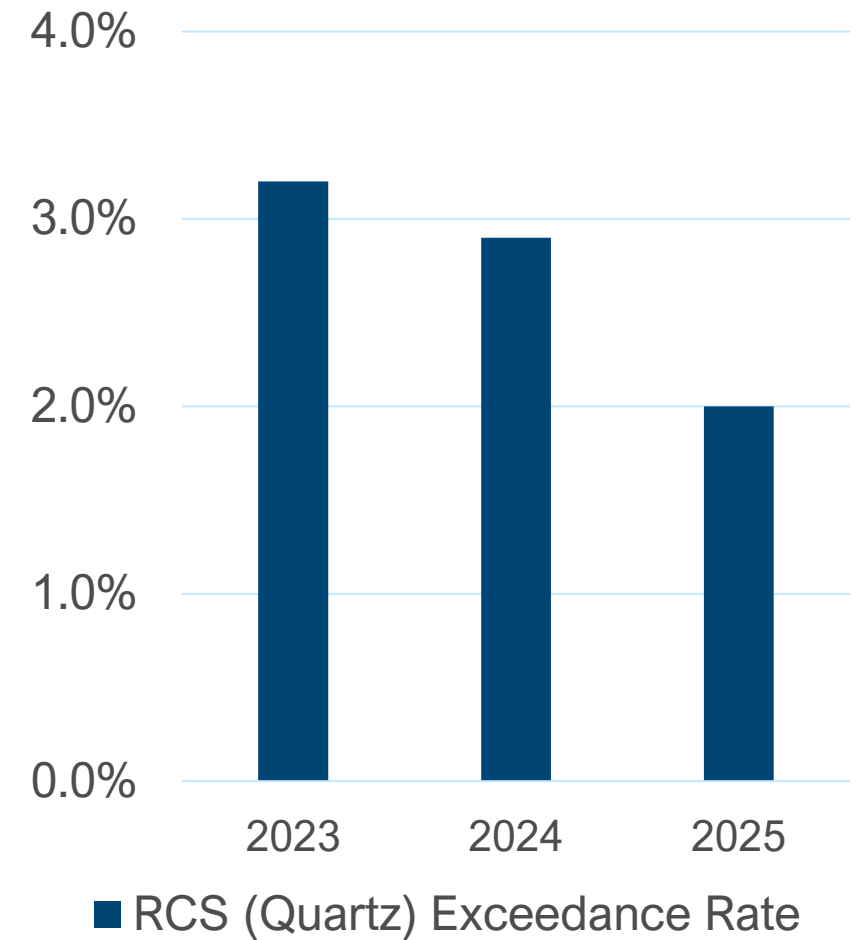




RCS (Quartz) Results and Exceedances



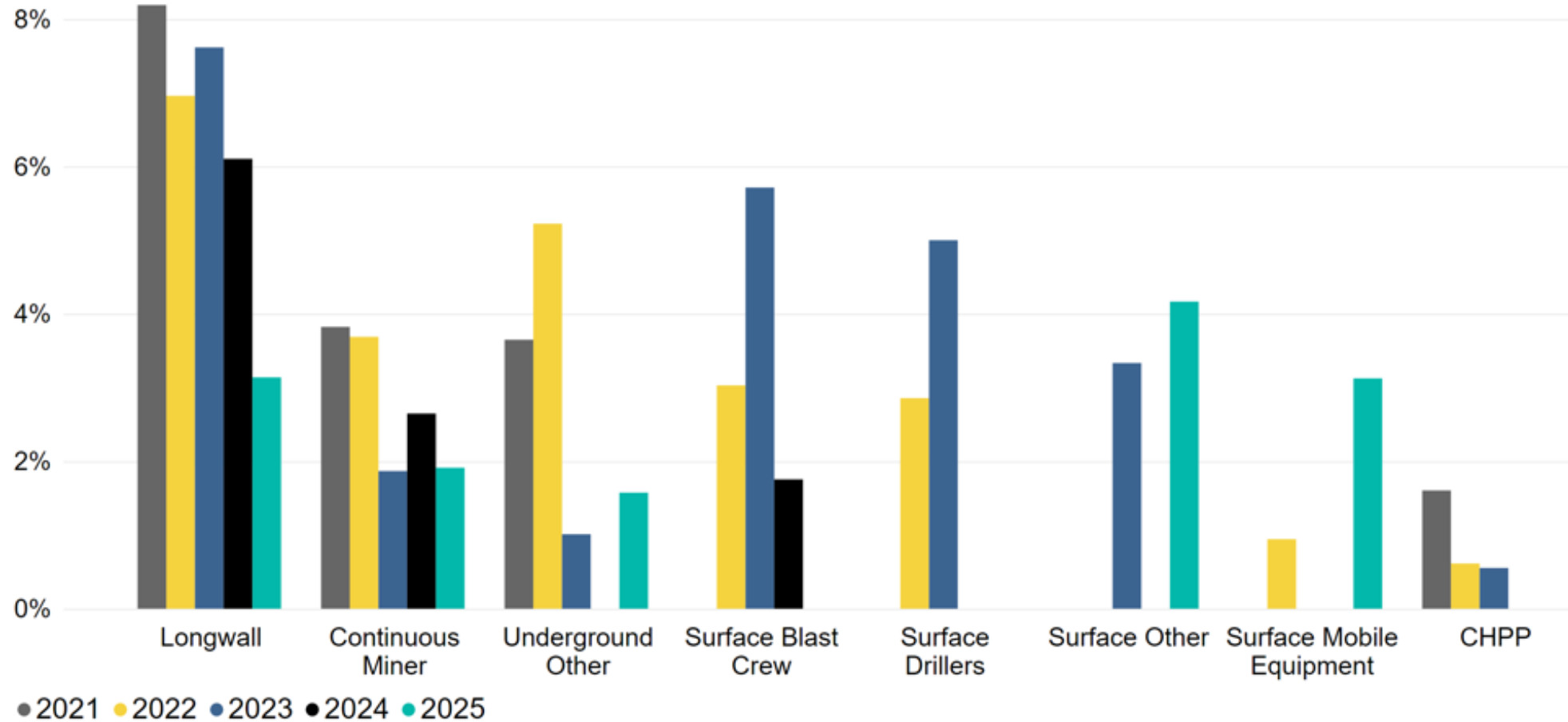
	2023	2024	2025
Respirable Quartz Results	2442	2197	2076
Respirable Quartz Exceedances	79	64	41
Respirable Quartz Exceedance Rate %	3.2%	2.9%	2.0%





2025 Order 42 Respirable Quartz Monitoring Results

WES Exceedance Rate by SEG

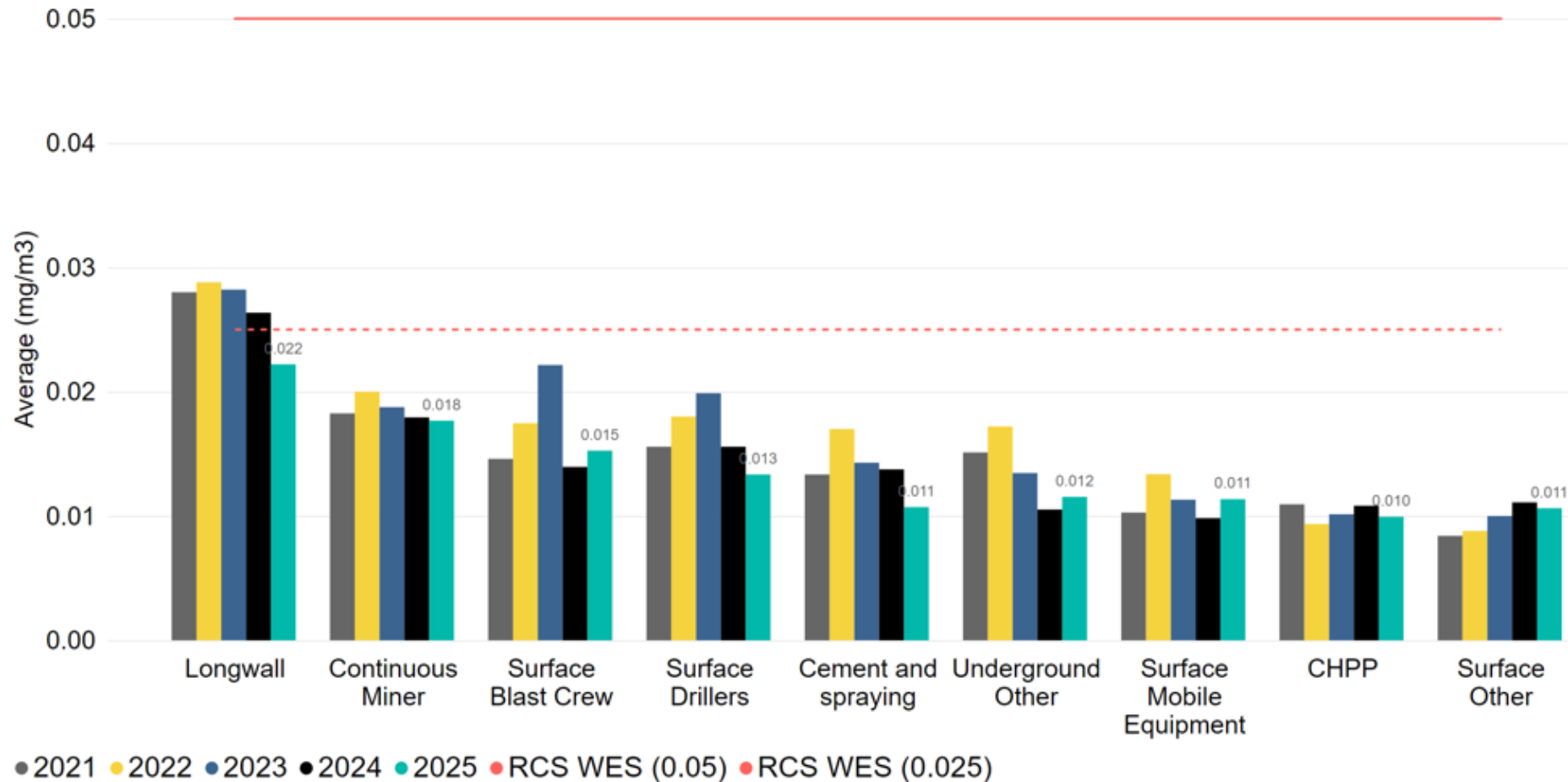




2025 Order 42 Respirable Quartz Monitoring Results



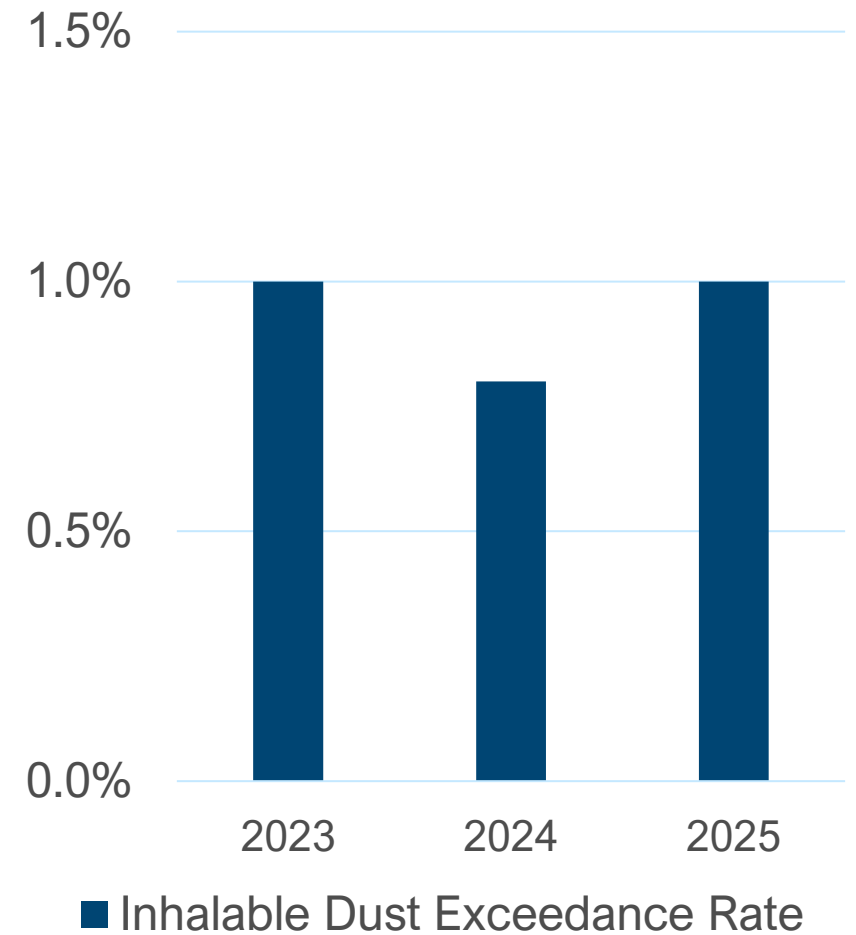
Average Exposure by SEG



Inhalable Dust Results and Exceedances



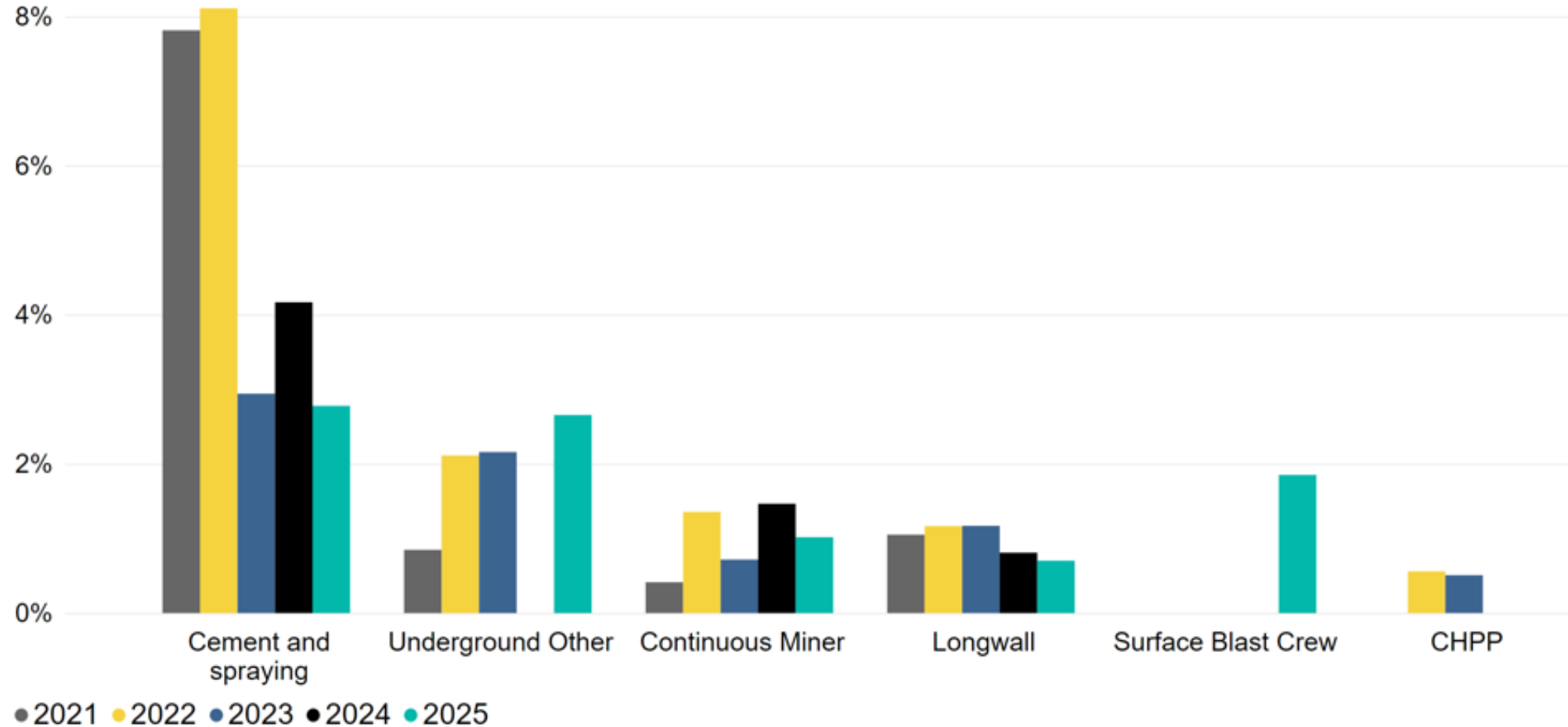
	2023	2024	2025
Inhalable Results	1268	1183	1142
Inhalable Dust Exceedances	13	9	11
Inhalable Dust Exceedance Rate %	1.0%	0.8%	1.0%





2025 Order 42 Inhalable Dust Monitoring Results

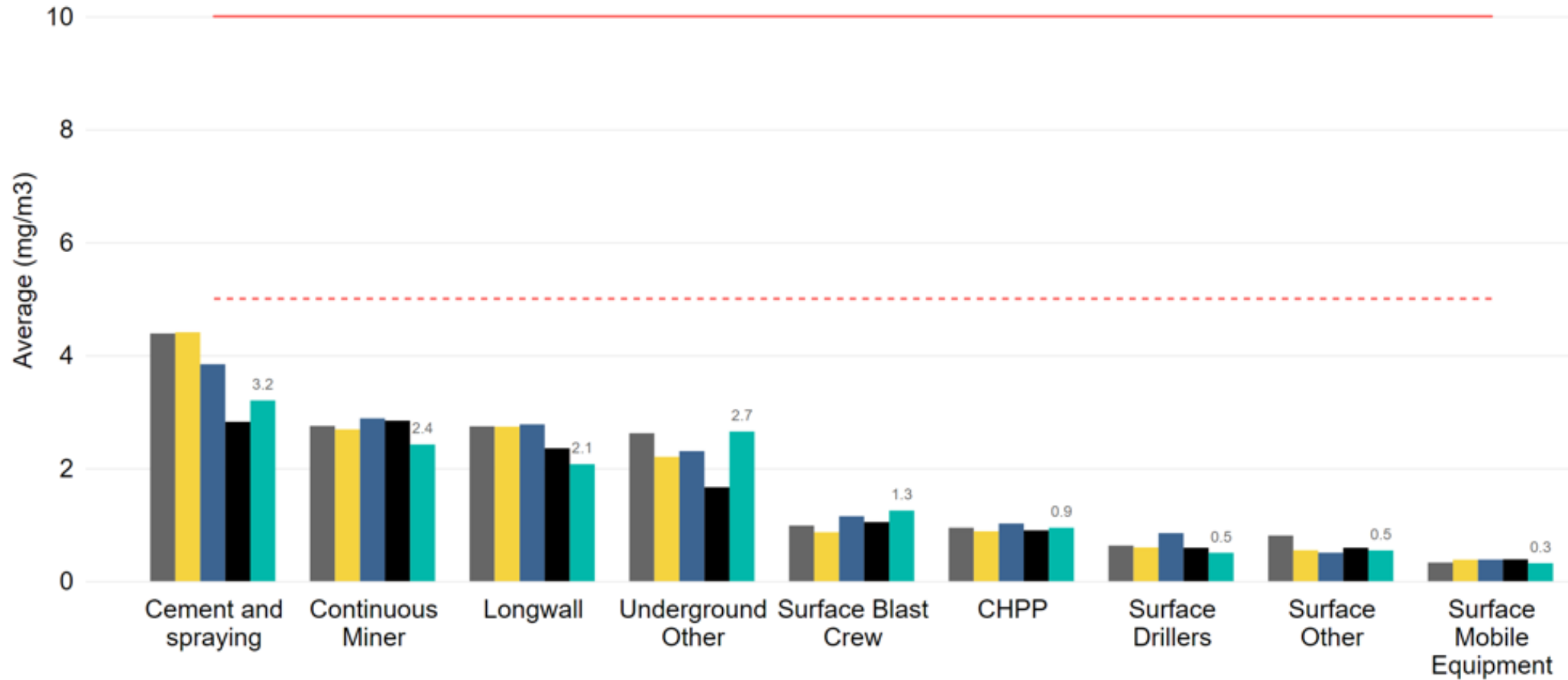
WES Exceedance Rate by SEG





2025 Order 42 Inhalable Dust Monitoring Results

Average Exposure by SEG

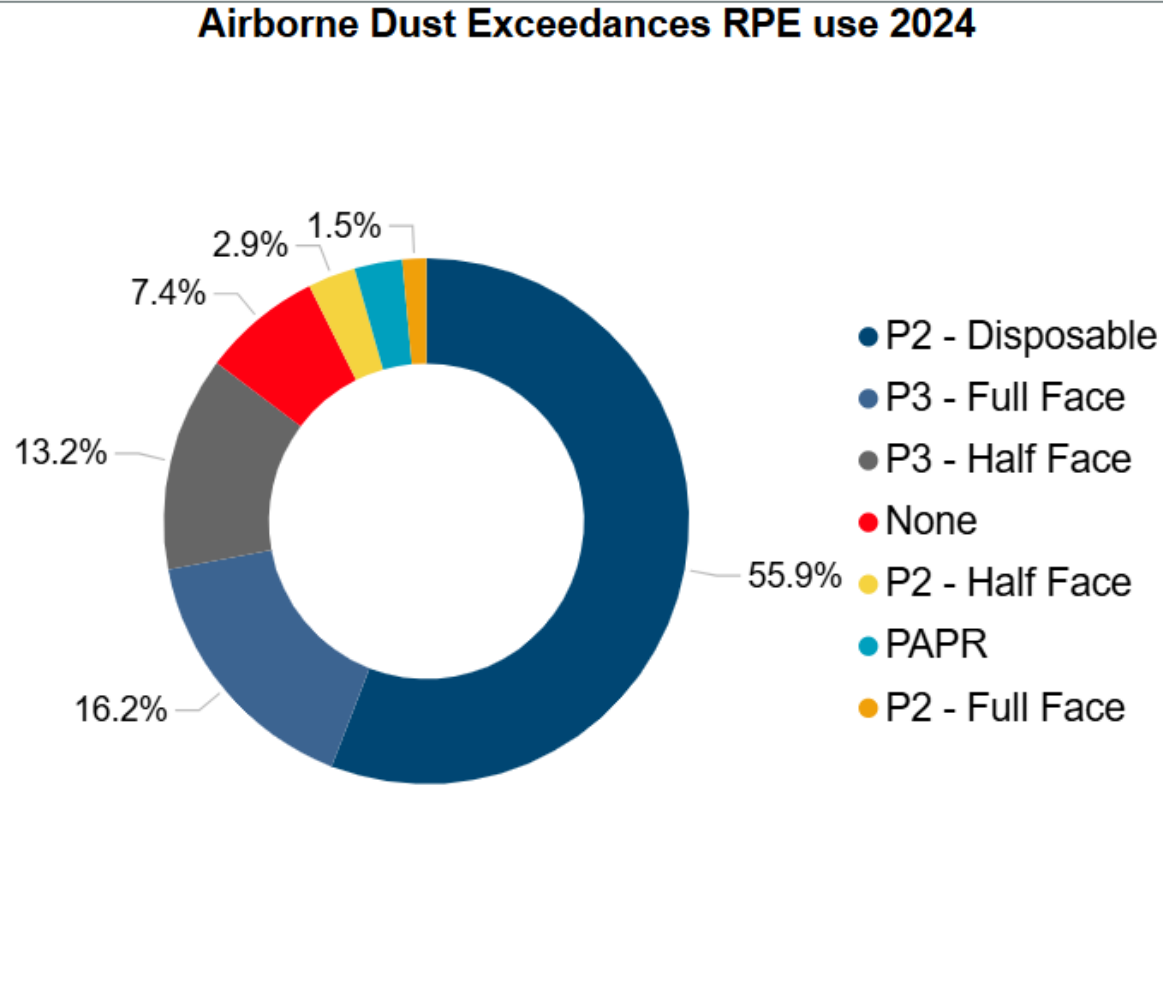


● 2021 ● 2022 ● 2023 ● 2024 ● 2025 ● Inhalable Dust WES (10) ● InhD Action Limit (5)

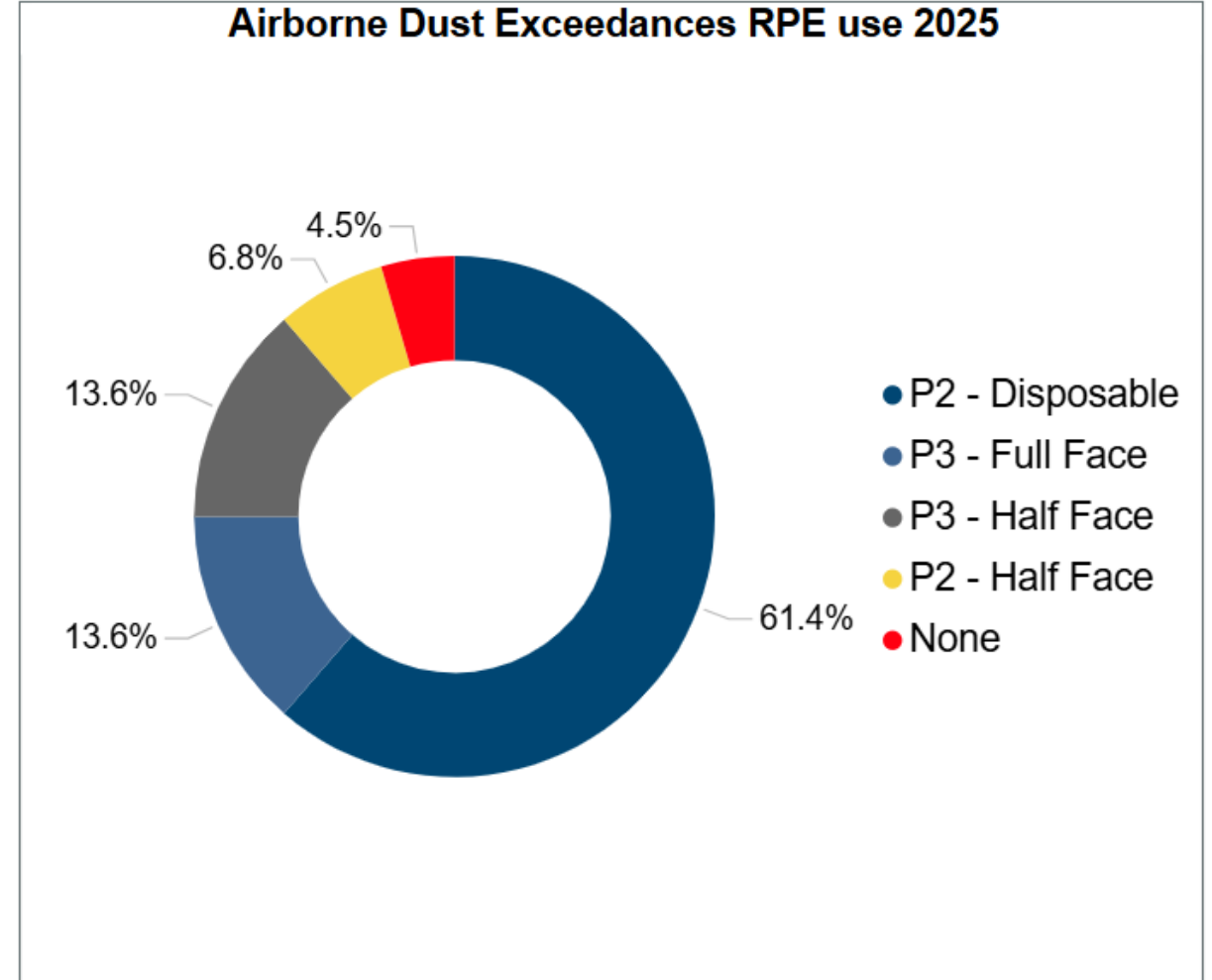
2024/25 Order 42 Respiratory Protective Equipment Use for WES Exceedances – Underground Workers



Airborne Dust Exceedances RPE use 2024



Airborne Dust Exceedances RPE use 2025

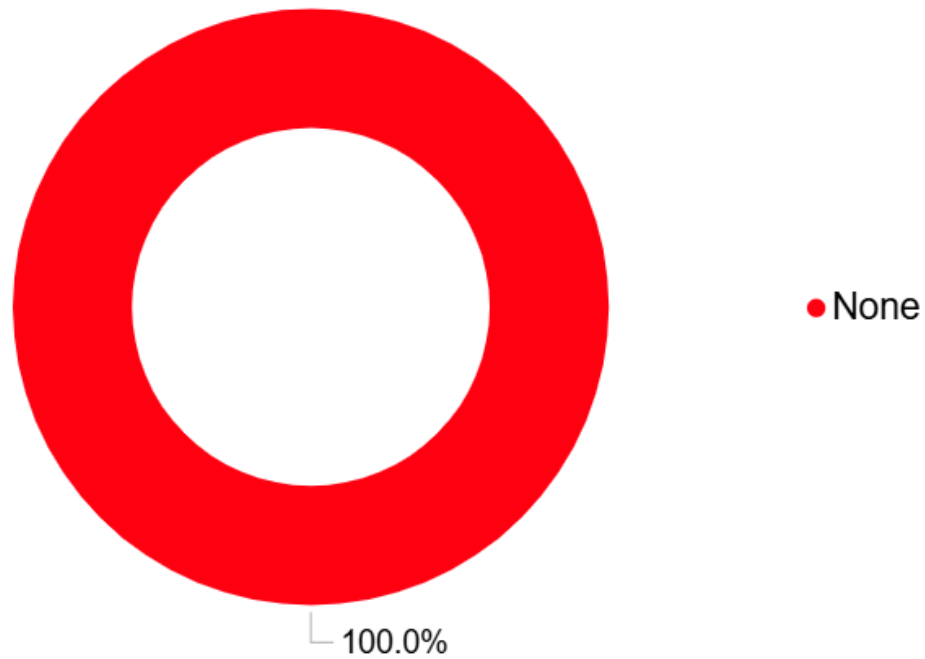




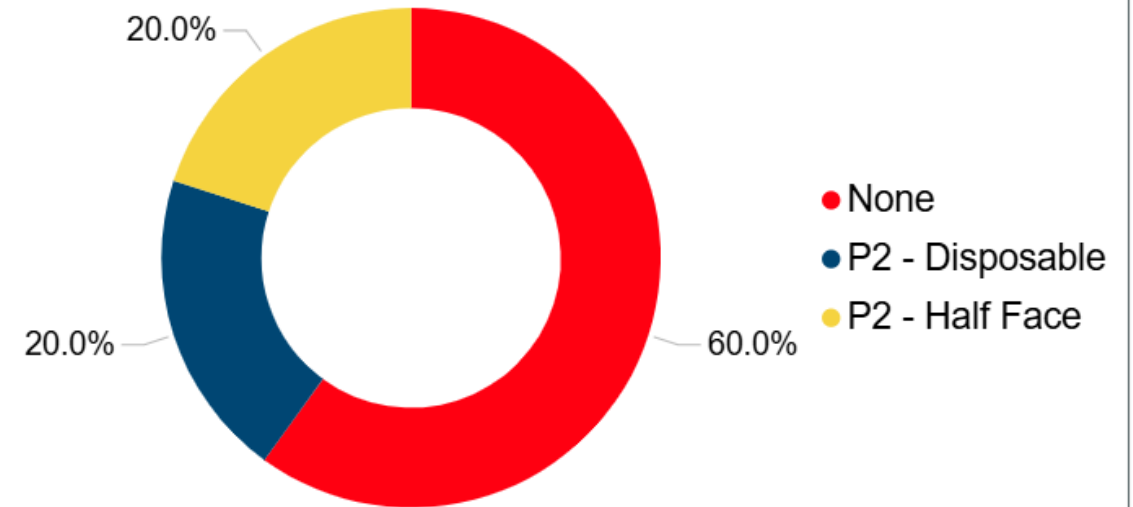
2024/25 Order 42 Respiratory Protective Equipment Use for WES Exceedances – Surface Workers



Airborne Dust Exceedances RPE use 2024

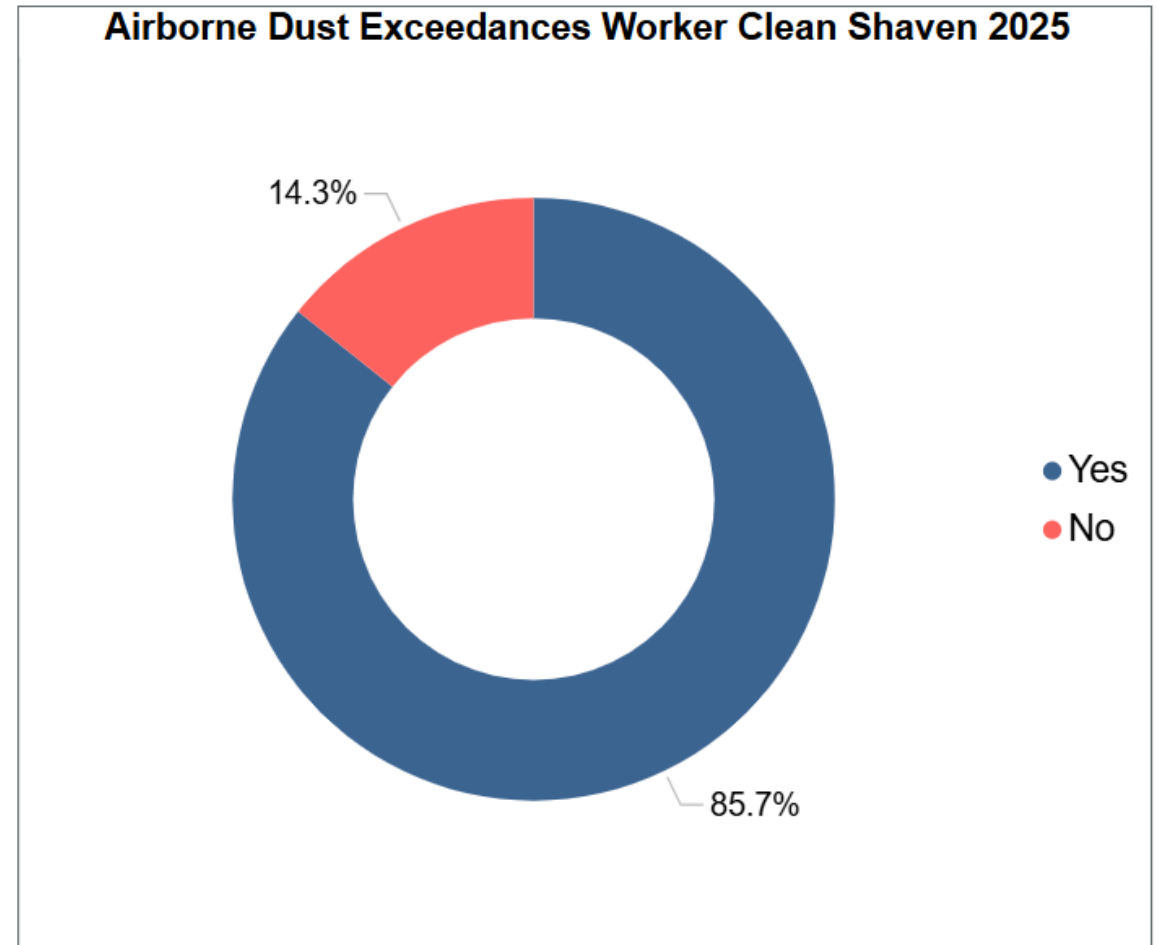
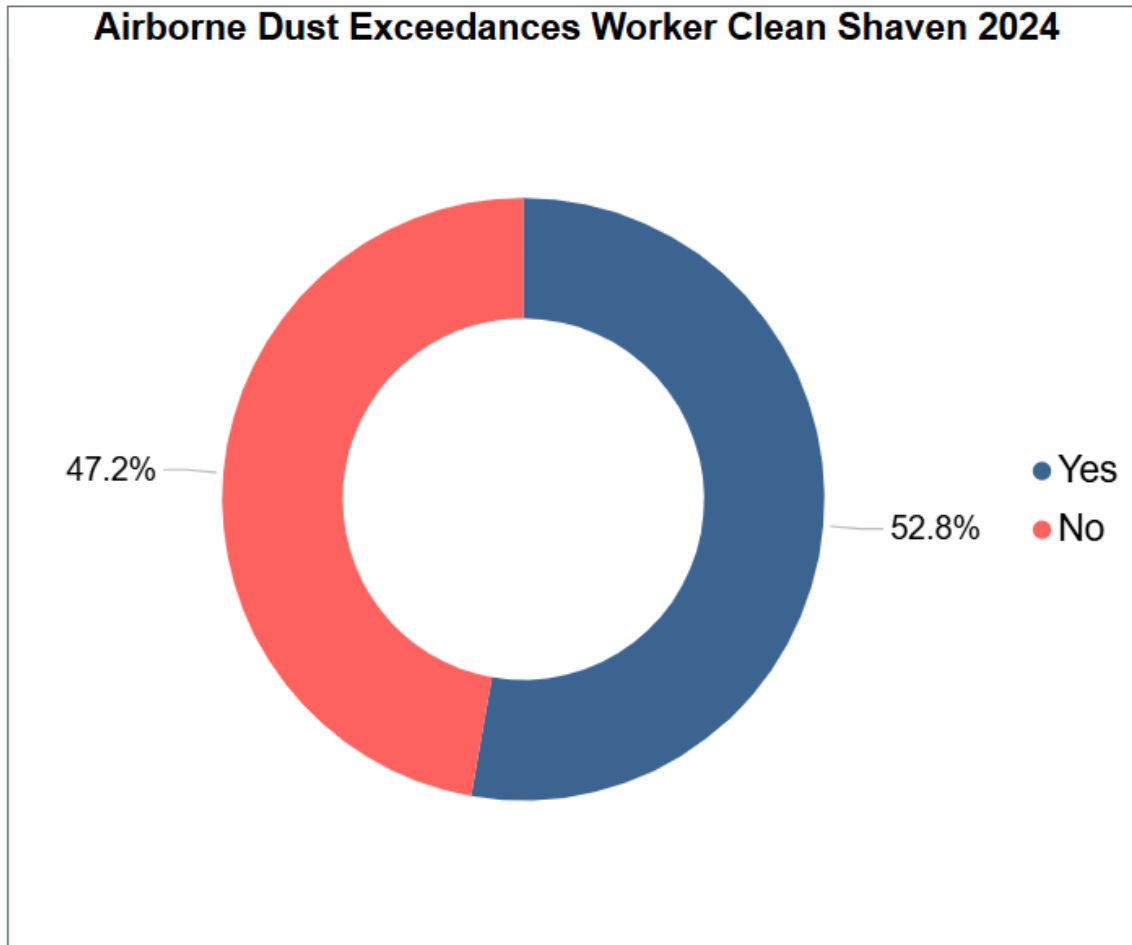


Airborne Dust Exceedances RPE use 2025





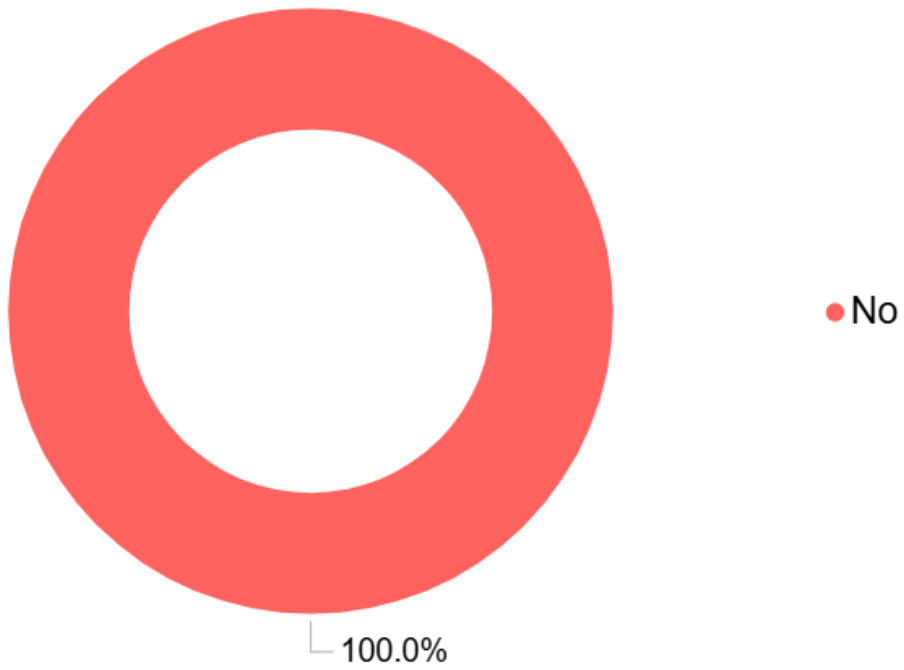
2024/2025 Order 42 Clean Shaven Status for WES Exceedances – Underground Workers



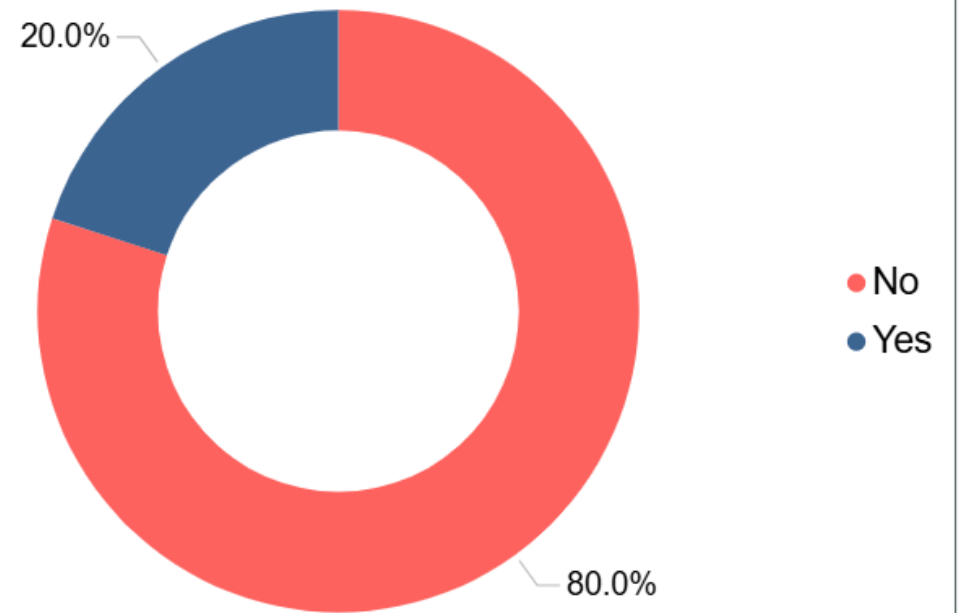
2024/2025 Order 42 Clean Shaven Status for WES Exceedances – Surface Workers



Airborne Dust Exceedances Worker Clean Shaven 2024

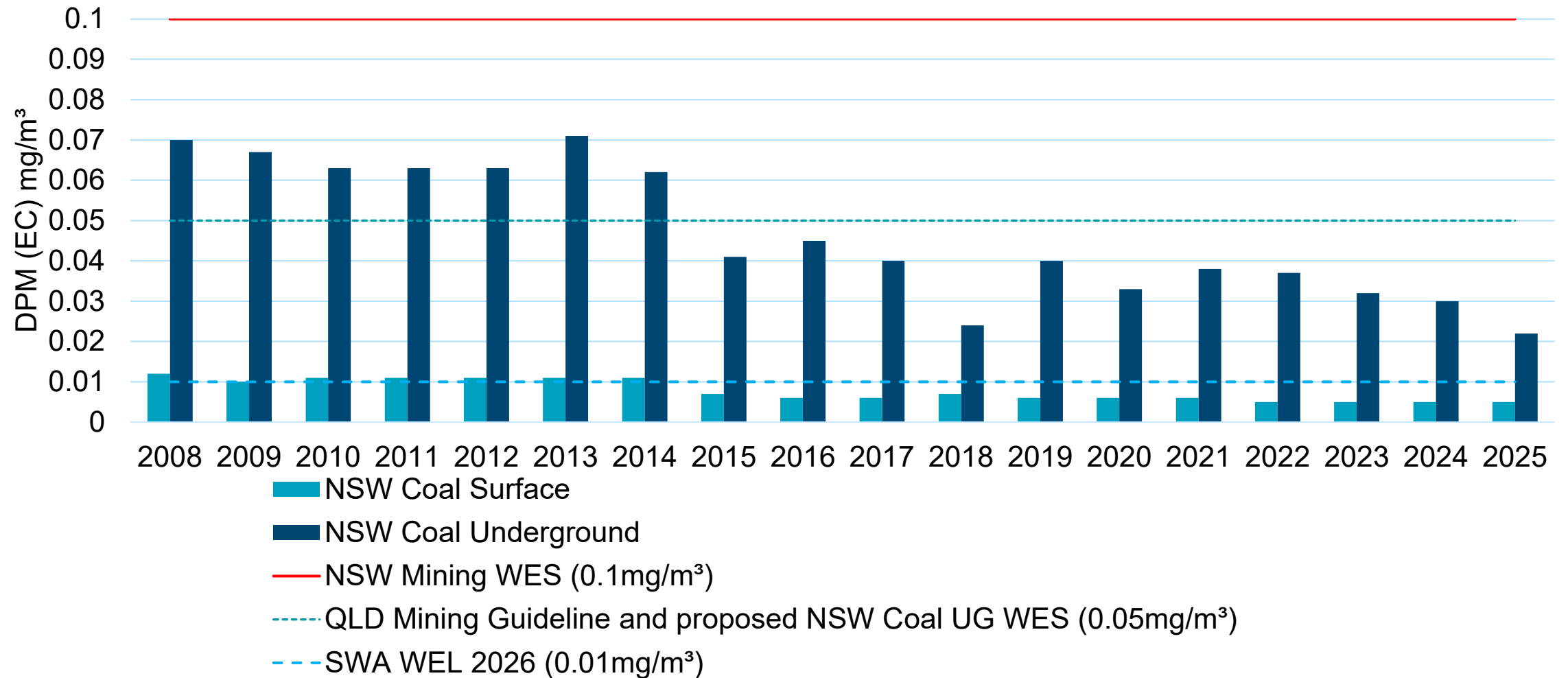


Airborne Dust Exceedances Worker Clean Shaven 2025



Average NSW coal mine DPM (EC) exposure

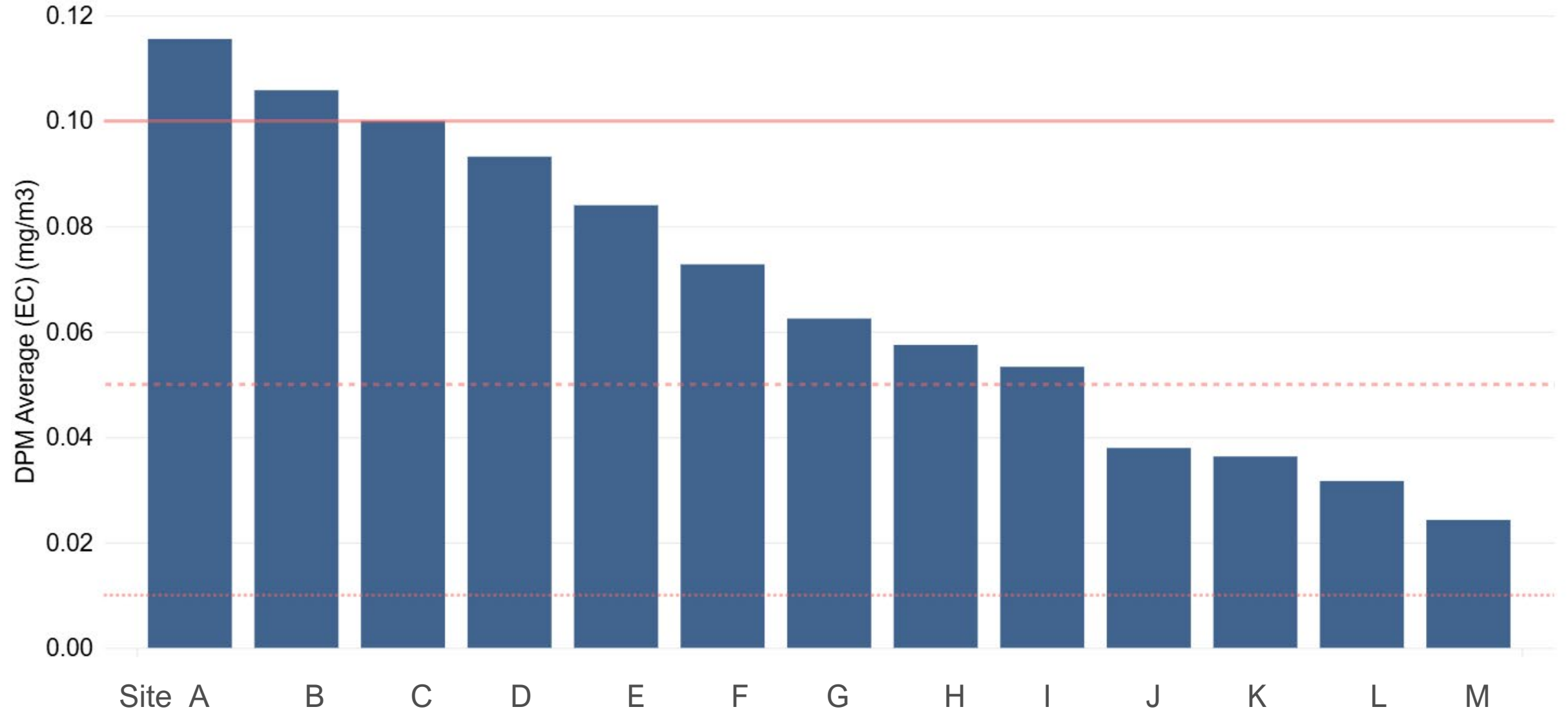
Coal Services 2008-2025





Average NSW DPM (EC) exposure by site - LW move

Coal Services Data - 2024 and 2025 combined





DPM: 2025 Coal Services exceedance results comparison to Proposed WES/WEL



**Worker
exceedances
(Total n=516)**

**Underground worker
exceedance rate
(Total n=449)**

**Surface worker
exceedance rate
(Total n=67)**

**Current WES
0.1mg/m³**

9

2.0%

0.0%

**Safework WEL
0.01mg/m³
From 1 December 2026**

170

38%

0.0%

**NSW coal revised WES and
Qld coal guideline
0.05mg/m³**

40

8.9%

0.0%

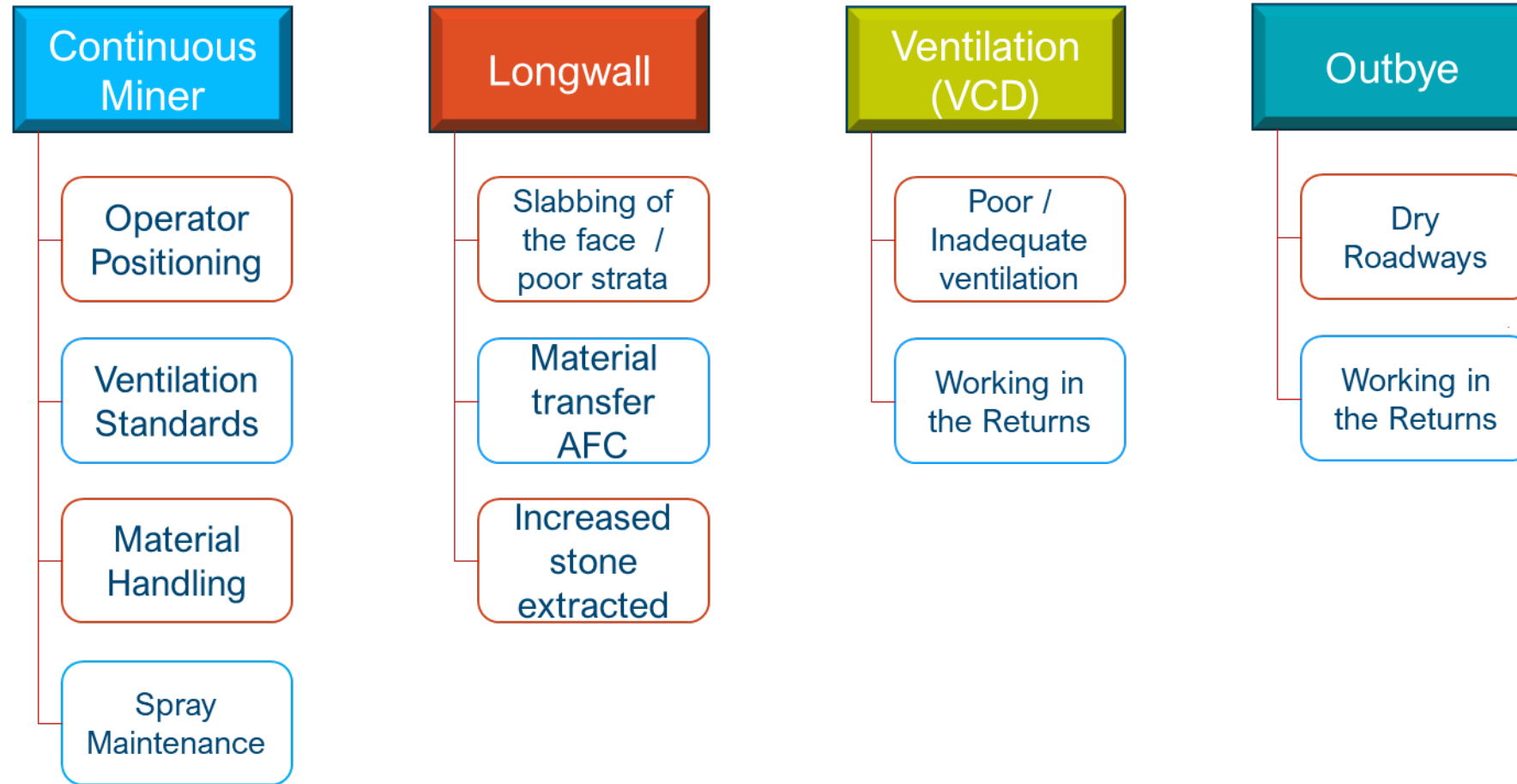


Exceedance Contributors and Examples



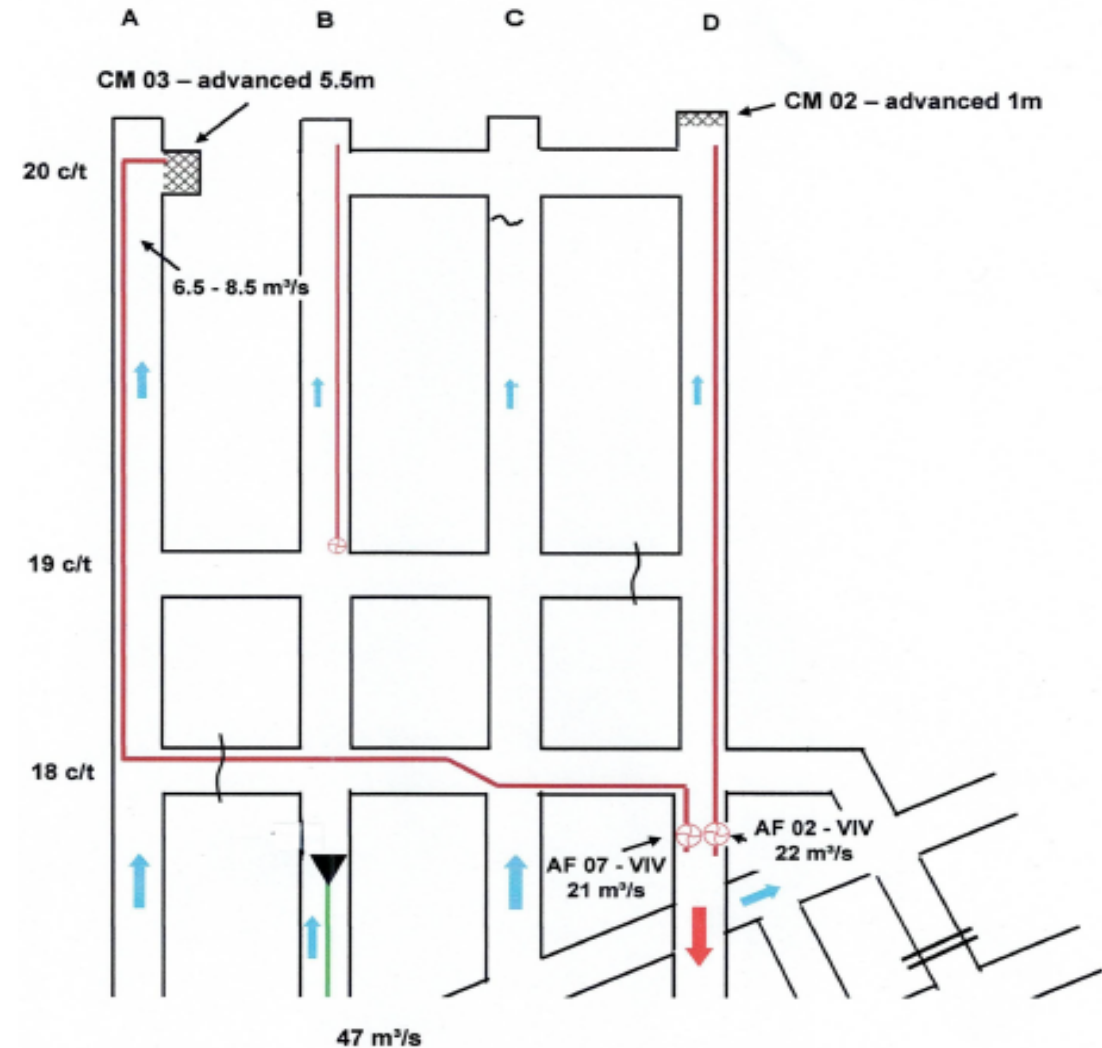
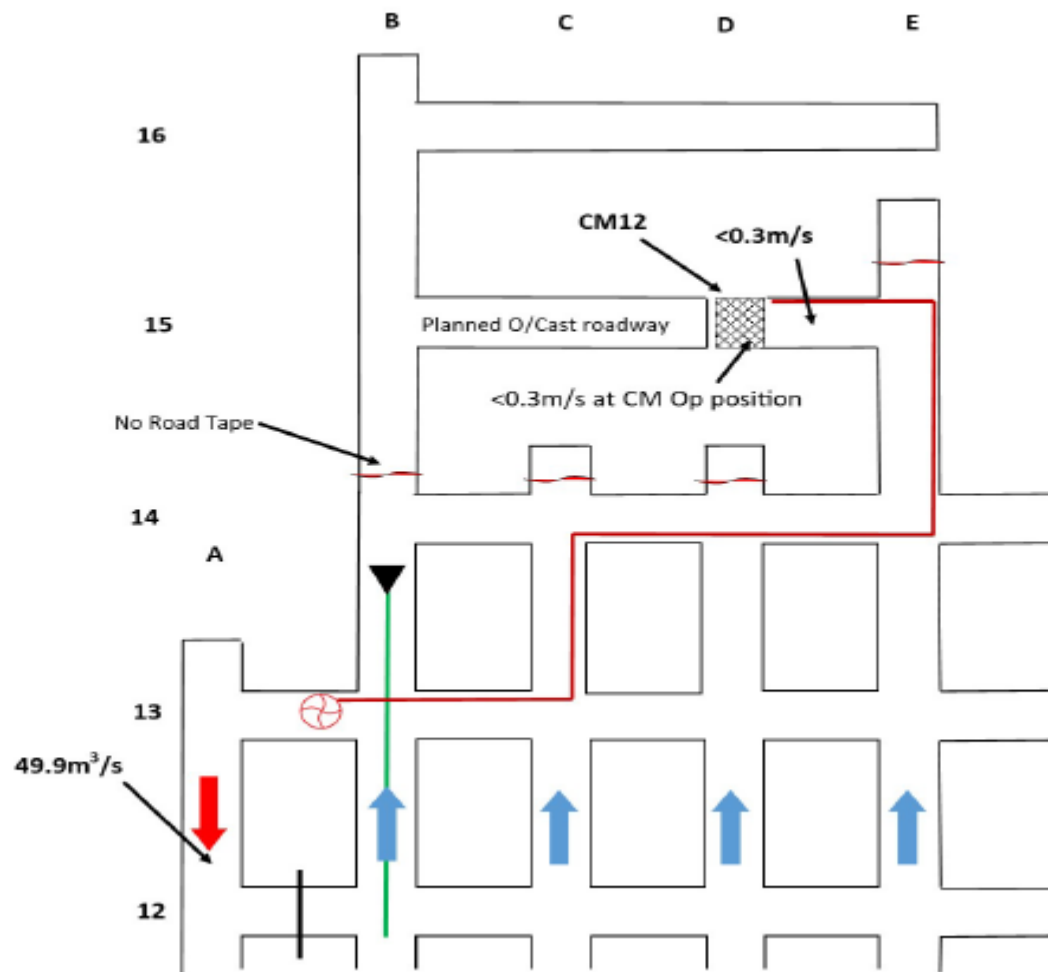


2025 Underground Airborne Dust Exceedance Contributing Factors



2025 Order 42 underground dust monitoring

Exceedance contributors and review findings — development



Order 42 UG exceedances – example

Development Respirable quartz exceedances



Test information

Two Development Operators – production - exceeded the respirable quartz WES with results of $0.06\text{mg}/\text{m}^3$



Exceedance contributing factors

- Cutting through a high-quartz geological horizon (0.6 m of combined stone),
- Ventilation was not yet able to be advanced into the breakaway
- Partial spray system underperformance
- Dust control verification was not completed before stone cutting



Order 42 UG exceedances – example 1

Development respirable quartz exceedances



Site actions

- Review of breakaway design and ventilation sequence
- Deputy to audit ventilation and spray arrangement before breakaway - note in statutory report
- Deputy presence required during the first 3 breakaway sequences
- Reinforce spray performance requirements

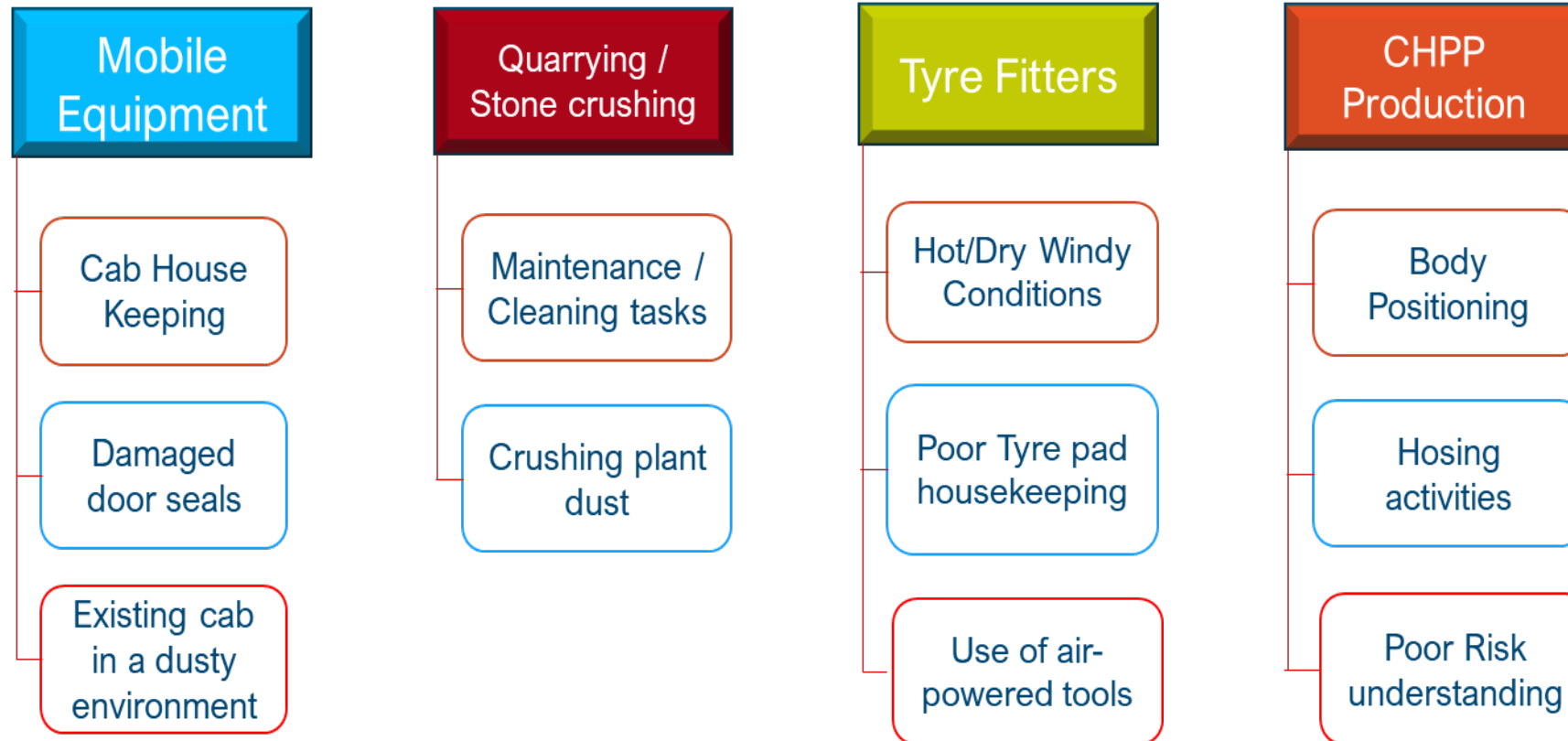


Exceedance re-sample outcome

- Resample completed all results below WES



2025 Surface Airborne Dust Exceedance Contributing Factors



Note: 5 O42 exceedances in 2025
RR has supplied site-reported contributing factors for 29 additional risk-based exceedances



Order 42 OC exceedances – example

Dozer Operator respirable quartz exceedance

Test information

A Dozer operator recorded a respirable quartz result of $0.05\text{mg}/\text{m}^3$.



Exceedance contributing factors

- Damaged door seal
- Poor cabin housekeeping
- Non-compliance with Daily inspections



Order 42 OC exceedances – example

Dozer Operator respirable quartz exceedance





Order 42 surface exceedance – example

Dozer operator respirable quartz exceedance



Site actions

- Basic investigations for results >50%
- Targeted safety interactions
- Communicate actions if dust-related hazards are identified
- Review relevant cab cleaning procedures




Exceedance re-sample outcome

- Resample recorded Respirable Quartz results of 0.01mg/m³


Information bulletins available at coalservices.com.au

Dust Control References and Resources: Standing Dust Committee

NSW Standing Dust Committee
Information bulletin



Review of exposure risk from airborne dust




Respirable Crystalline Silica (RCS) Surface Mobile Equipment Operators

Observations

Over the last 12 months, the NSW Standing Dust Committee has identified an increase in RCS exposure and exceedances of the workplace exposure standard among surface workers operating mobile equipment, including excavators, dozers, tyre handlers, drills, trucks and other ancillary equipment.

Common issues identified during exceedance investigations include:

- damaged or worn cabin seals (door/window), compromising cabin pressurisation and allowing dust ingress
- cabins not cleaned adequately
- cloth seat covers retaining dust
- vacuums not available or out of service
- cabin cleaning undertaken using dry sweeping or compressed air
- respiratory protective equipment (RPE) not worn.



Above: Example of poor cabin floor conditions that contributed to a worker exceedance of the RCS workplace exposure standard.

Health impacts of RCS

Exposure to silica dust can have serious long-term health effects, including silicosis, lung cancer and kidney disease. Silica-related disease is prevented when effective controls are implemented to eliminate or minimise exposure.

Recommendations

- Inspect cabin seals regularly and repair or replace if damaged
- Consider cabin pressure, filtration and monitoring guidance outlined in AS/NISO 23875 Mining: quality control systems for operator enclosure Performance requirements and test methods
- Implement a pre-start cabin cleaning check
- Clean cabins using a HEPA-filtered vacuum method – do not dry sweep or use compressed air
- Ensure workers are aware of the required maintenance when cabin defects or dust control issues are identified.

It is recommended that this Standing Dust Committee information bulletin is communicated to all relevant personnel through toolbox prestart meetings, and that a copy is placed on mine noticeboards.

For further information contact:
Lucas Boyne
NSW Standing Dust Committee Chair
lucas.boyne@coalservices.com.au

Coal Services Pty Limited: ABN 98 099 078 234
www.coalservices.com.au
November 2025

NSW Standing Dust Committee
Information bulletin



Review of exposure risk from airborne dust



Continuous miners in intersections, trimming wheeling road corners and breakaways

Observations

Over the last 6 months, the NSW Standing Dust Committee has observed an increase in airborne dust exceedances when continuous miners (CMs) are positioned in intersections, trimming wheeling road corners and during breakaway sequences.

Exceedance investigations identified key contributing factors as follows:

1. Ventilation-related issues

- Reduced ventilation velocity at worker operating positions due to increased cross-sectional area when CMs are positioned in an intersection
- Brattice stopping not installed as per sequence plan
- Ventilation tubes not advanced as per sequence plan

2. Operator positioning issues

- CM operators positioned in areas of elevated airborne dust due to mining sequence and ventilation setup

Recommendations

- Review ventilation and operator positioning controls
 - Review current practices and procedures to ensure effective dust control when mining through intersections, trimming wheeling road corners and cutting breakaways
- Strengthen supervision and verification
 - Ensure ventilation is set up and maintained in line with sequence plans
 - Verify that operators are positioned appropriately based on the mining sequence and ventilation set up

It is recommended that this Standing Dust Committee information bulletin is communicated to all relevant people at your mine and a copy of the bulletin is placed on mine noticeboards.

Additional information

Further information about these observations will be shared at the Coal Services Airborne Contaminant and Health Surveillance Forum scheduled for June 2025.

The forums are free, but registrations are essential. Register via the QR code.

For further information contact:
Lucas Boyne
NSW Standing Dust Committee Chair
lucas.boyne@coalservices.com.au

Coal Services Pty Limited: ABN 98 099 078 234
www.coalservices.com.au

NSW Standing Dust Committee
Information bulletin



Review of exposure risk from diesel particulate matter



Longwall moves

Observations

The new Workplace Exposure Limit (WEL) for diesel particulate matter (DPM) of 0.01 mg/m³ will take effect on 1 December 2026. The NSW Resources Regulator is considering prescribing a limit of 0.05 mg/m³ for all underground mines and open-cut coal mines under the WHS (Mines and Petroleum Sites) Regulations.

Underground longwall moves remain the highest-risk activity for DPM exposure in NSW coal mining.

In 2024, Coal Services collected 154 personal DPM samples during longwall moves at 11 underground NSW coal mines:

- 16.9% of results exceeded the current WEL of 0.1 mg/m³
- 39.6% of results would exceed the proposed WEL of 0.05 mg/m³

These findings highlight the increased likelihood of exceedances under the proposed standard.

Recommendations

To prepare for the proposed WEL reduction, mines should review the adequacy of their DPM controls during longwall moves.

Good practices observed in NSW and Qld underground mines during longwall moves include:

- Well-designed diesel tag boards to support compliance management and review
- Real-time DPM monitors used to assess ventilation effectiveness

Engine Exhaust Testing

- The use of TARPs with pass/fail limits tailored to engine type

DPM filters

- Filters changed by qualified trades, with seals inspected during each replacement
- Filter change intervals based on optimising filter performance

Hire equipment

- DPM emission requirements included in hire equipment introduction to site process

DPM Awareness Training

- Training for workers involved in longwall moves on DPM exposure risks and control

Respiratory Protective Equipment (RPE)

- Designated RPE requirements for areas and tasks during longwall moves

It is recommended that this Standing Dust Committee information bulletin is communicated to all relevant people at your mine and a copy of the bulletin is placed on mine noticeboards.

For further information contact:
Lucas Boyne
NSW Standing Dust Committee Chair
lucas.boyne@coalservices.com.au

Coal Services Pty Limited: ABN 98 099 078 234
www.coalservices.com.au
November 2025

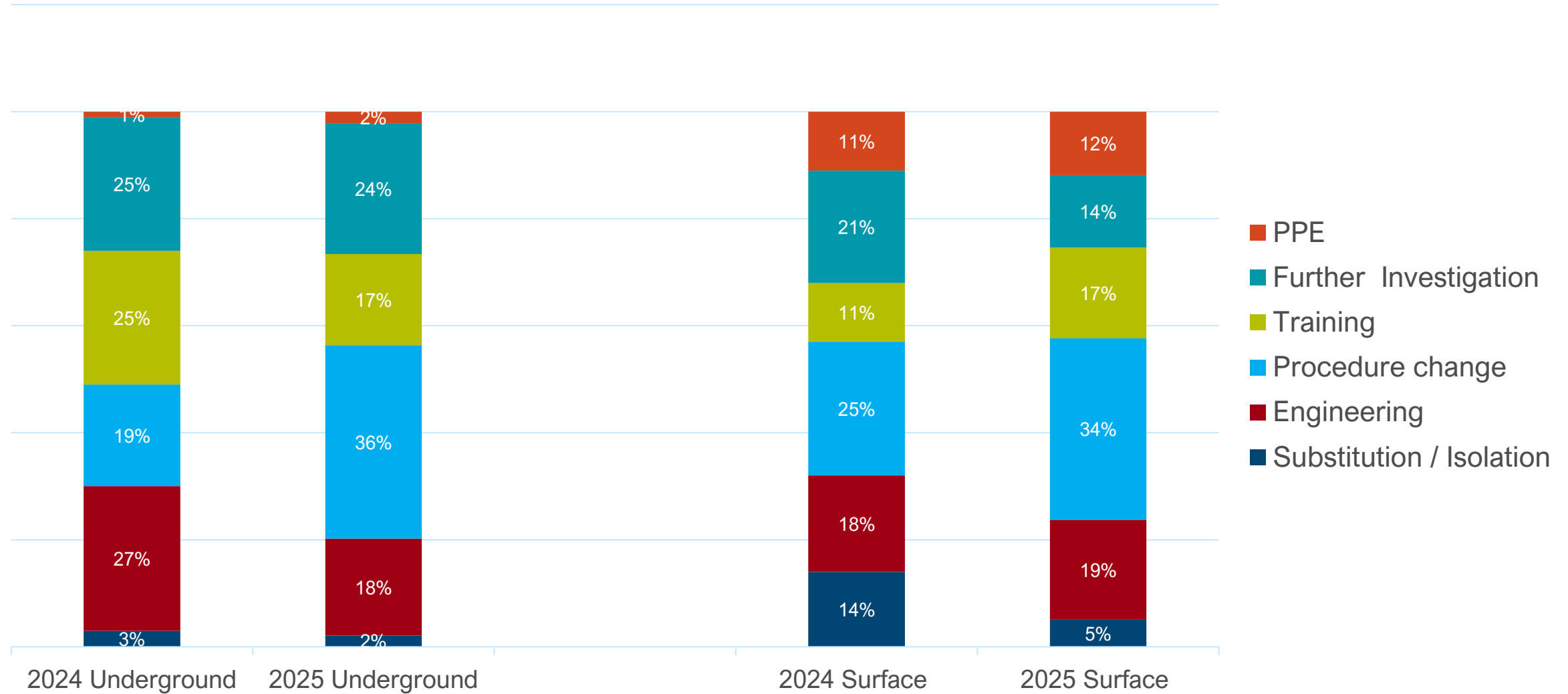


Control initiatives and learnings





2024 / 2025 Dust Exceedance Mine Investigation Actions





Underground Longwall Dust Control

Automation

- Reliability
- Controls required when automation not used

Operator positioning and task rotation

- Real-time dust monitoring
- Assessing new roles – face mapper

Longwall airborne dust TARP

- RCS Risk
- Control degradation tolerance





Underground Continuous Miner Worker Dust Control

Continuous Mining & Bolting

- Intersection and breakaway procedures
- Stand zones and task rotation
- RCS Risk - TARP

Place Change Mining

- Scrubber efficiency and balance with airflow
- Place change procedures and worker training
- Brattice ventilation standard



Surface Worker Dust Control

Mobile Equipment

- AS/ISO 23875 cabin air quality
- Cab cleaning – Vacuum and wet cleaning method

Stone Crushing

- Automation – operation and clearing blockages
- Wash down prior to maintenance

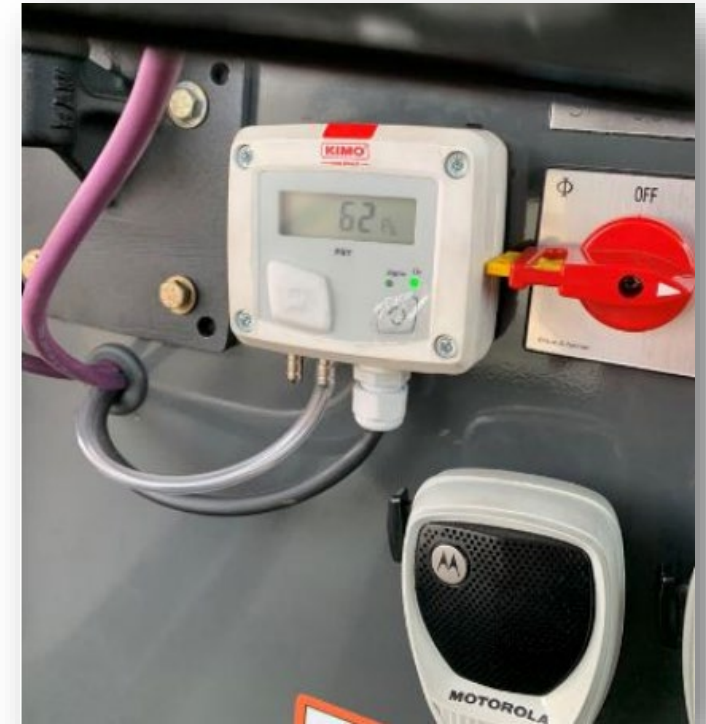


Image source: Recognised Standard (R) 20 Summary Report | Resources Safety & Health Queensland

Surface Worker Dust Control

CHPP / Conveyor Maintenance

- Consider roller review and removal process
- Body position to reduce exposure
- TARP – Weather and RPE

Tyre Fitters

- Maintenance of tyre pad
- Tyre handler cabin cleaning
- Pressure washing cleaning



Image source: Mt Arthur Coal



HYGIENE & LAB SERVICES

Dust Control References and Resources



Coal Services

Hygiene & Lab Services

- [Standing Dust Committee](#)
- [Representation](#)
- [Publications and bulletins](#)
- [Dust Control References and Resources](#)
- [Respirable Crystalline Silica](#)
- [Diesel Particulate Matter \(DPM\)](#)
- [Welding Fume](#)
- [Hexavalent Chromium](#)
- [Basic principles in Occupational Hygiene Course](#)
- [Standing Dust Committee Forums](#)



How can we help?

A vital part of our role as a Specialised Health and Safety Scheme involves assisting employers and workers to comply with relevant workplace laws and regulations. Contact our team for more information.

[View office locations](#)

ENQUIRE

If you are looking for a specific part of the Coal Services organisation, or you're not sure who to contact, get in

General

- [Water Application and Sprays](#) +
- [Conveyor belts and transfers](#) +
- [Respiratory Protective Equipment](#) +

Underground Mining

- [Underground Longwall](#) +
- [Underground Continuous Miner](#) +
- [Underground cement spraying](#) +

Surface Mining

- [Mobile Equipment Cabs](#) +
- [Drilling and Shot Firing](#) +
- [Coal Handling and Processing](#) +

- [Maintenance](#) +

www.coalservices.com.au

Questions?



Break



CS Health



Agenda – Session 2 Overview



1

CS Health Update

2

NSW Coal Industry Health Standards

3

Sleep Disorders in NSW coal mine workers

4

Diabetes in NSW coal mine workers

5

Order 45 – Post implementation

6

Questions

Order 43 Periodic Medical Assessments 2025

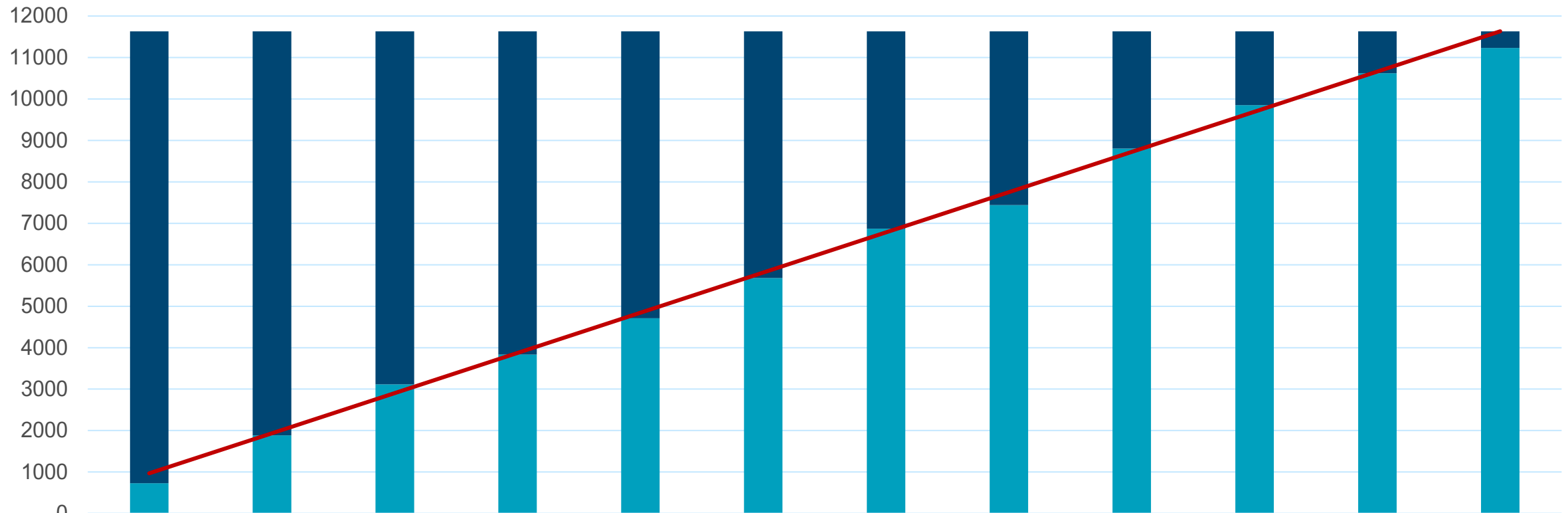


11,632 Order 43 Periodic Medicals due in 2025

11, 228 Medicals Completed

97% completed to date

404 Medicals remain outstanding

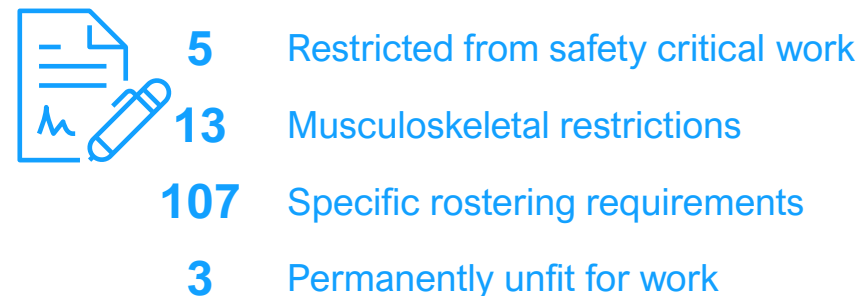
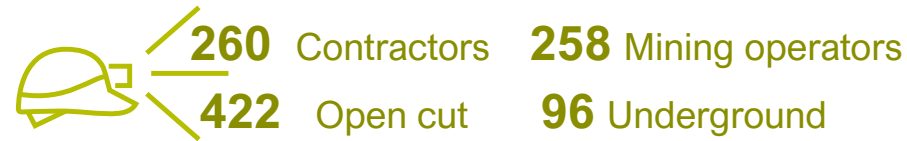
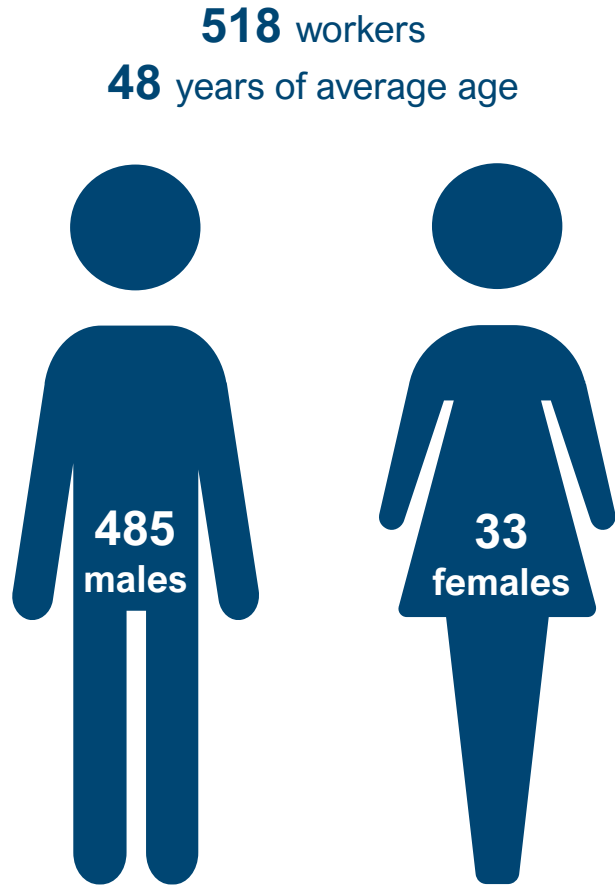


	January	February	March	April	May	June	July	August	September	October	November	December
Outstanding	10903	9746	8516	7798	6920	5954	4764	4192	2827	1780	1013	404
Completed	729	1886	3116	3834	4712	5678	6868	7440	8805	9852	10619	11228
Target	969	1938	2907	3876	4845	5814	6783	7752	8721	9690	10659	11632

*This data is inclusive of Order 43 periodic medicals completed by CS Health and Order 43 External Doctor Network

2025 Medical Determinations: significant medical conditions

1 January 2025 to 31 December 2025



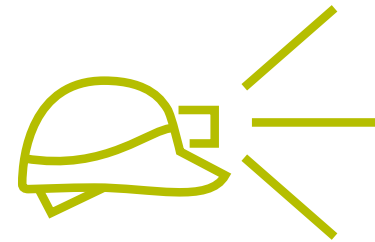
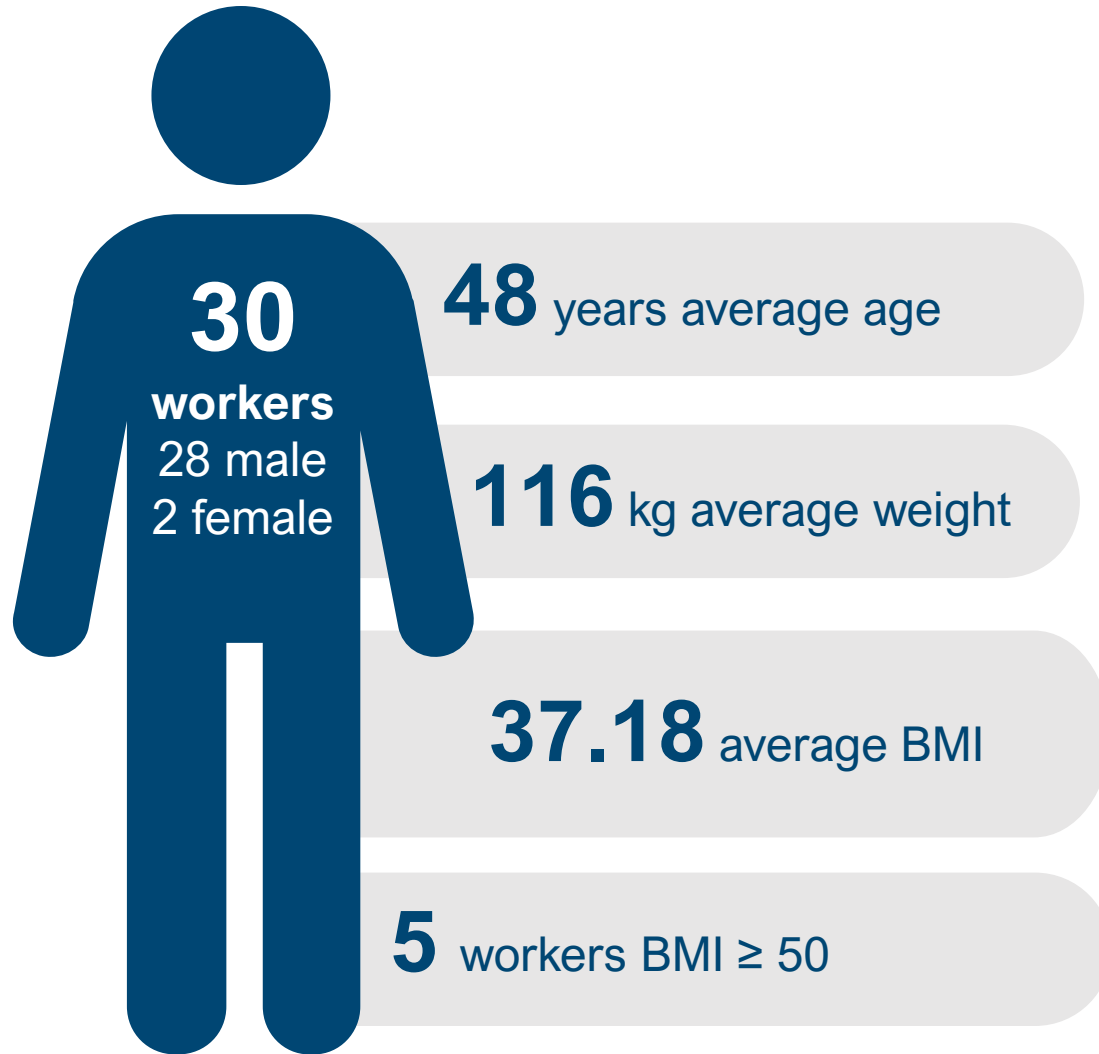
- 25** Musculoskeletal Conditions
- 338** Respiratory Conditions / Investigations
- 17** Hearing
- 2** Psychological / Mental Health
- 22** Vision
- 30** Cardiac Conditions
- 15** Drug and Alcohol / Medications
- 23** Hypertension
- 34** Abnormal Blood Glucose / Diabetes
- 12** Neurological Conditions

*approx. 18,759 services were completed by CS Health during CY25 (excludes 043PP, SA and FFW/RTW)



2025 Medical Determinations: CVD

1 January 2025 to 31 December 2025

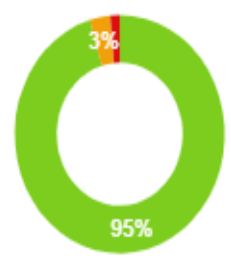


13 Contractors **17** Mining operators
22 Open cut **8** Underground



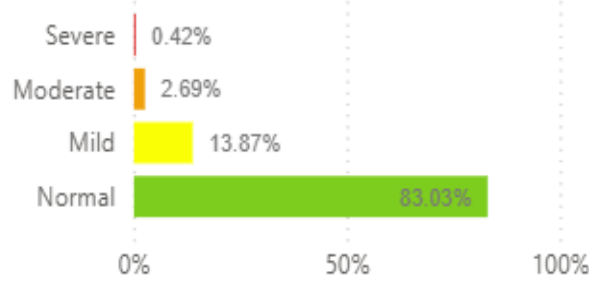
24 Temporarily unfit for work
5 Restricted from safety critical roles
1 Specific rostering restriction

CVD Risk Profile (Old Classification)

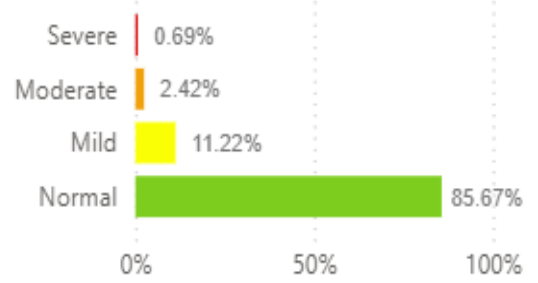


- < 10% - Low ...
- 10-15% - Mo...
- > 15% - High...

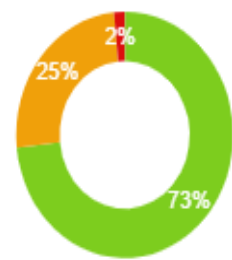
Blood Pressure - Systolic



Blood Pressure - Diastolic

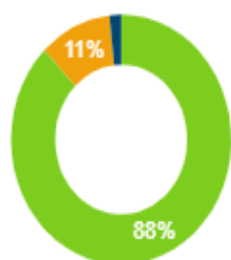


Cholesterol



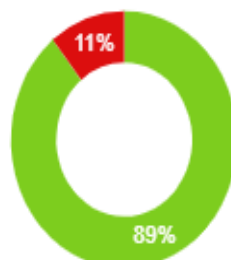
- Normal
- Elevated
- High

CVD Risk Profile



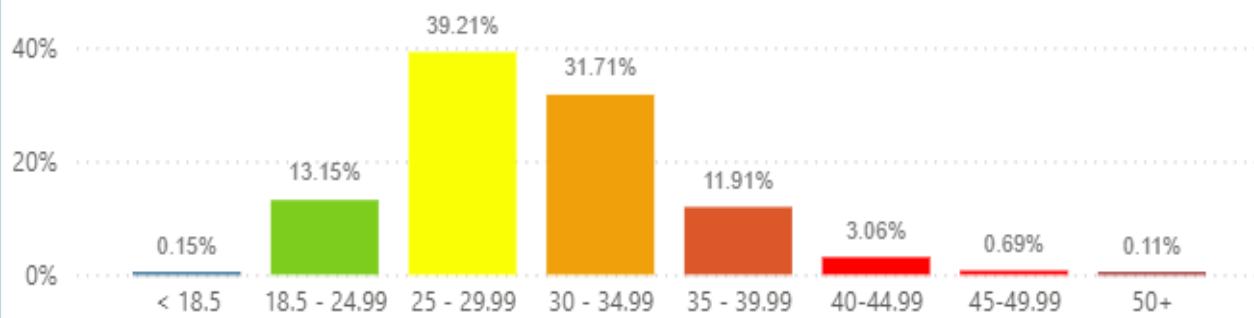
- <5% - Low R...
- 5% to <10% ...
- >= 10% - Hig...

Smokers

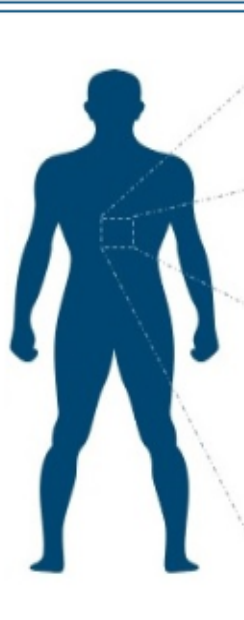
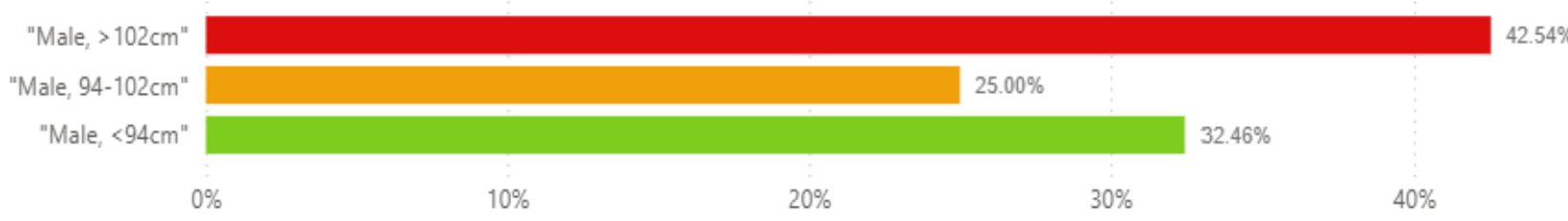
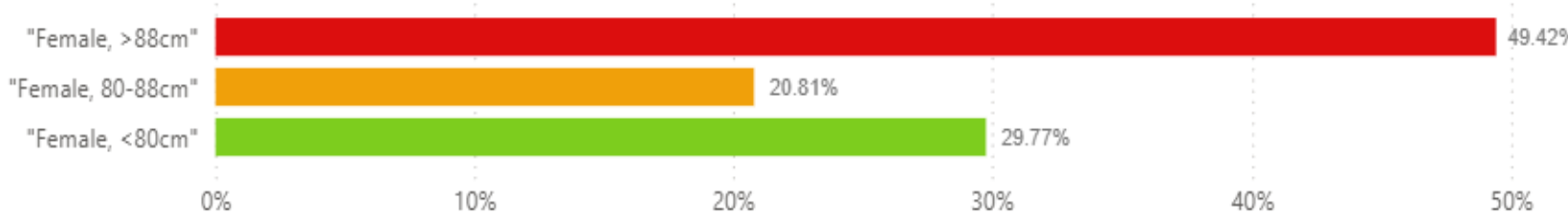


- No
- Yes

BMI Distribution



Risk by Waist Circumference



29828
Workers

Average Weight (kg) **94.98**

Average Height (cm) **177.10**

Average BMI **30.22**

Order 45: Health Assessment Results



Health Assessment Results

Client Name: _____ **Date:** _____

This is a summary of your results from today's health assessment.
The information shown below is confidential and will not be given to anyone without your consent.

Weight, Body Mass Index (BMI), Waist Measurement and Cardiovascular (CVD) Risk

Weight			
Your weight (kg):	> 120kg – appropriately weighted equipment required		
BMI			
Your BMI:	Highest risk	≥50 kg/m ²	
	Obese	≥30 to <50 kg/m ²	
	Overweight	25 to 30 kg/m ²	
	Normal range	18.5 to 25 kg/m ²	
Waist measurement			
Your waist circumference (cm):	High risk	Male ≥102cm	Female ≥88cm
	Increased risk	Male 94-102cm	Female 80-88cm
	Low risk	Male <94cm	Female <80cm
Estimated 5-year CVD risk (CVD risk calculator 2023)			
Your CVD risk score:	Highest risk	≥15%	
	High risk	≥10% to <15%	
	Intermediate risk	≥ 5% to <10%	
	Low risk	<5%	

Other health results

Health Assessment	Your result	Normal range
Blood pressure (<140/90mm-Hg)		Y / N
Pulse (irregular/regular)		Y / N
Total Cholesterol (<5.5mmol/L)		Y / N
HDL Cholesterol (>1.0mmol/L)		Y / N
Blood Glucose Level (no glucose in urinalysis or BGL <11)		Y / N
Lung Function (normal/obstructive/restrictive/mixed)		Y / N
Hearing (decline from previous)		Y / N
Vision meets Aust Roads standard (2022) Private: <input type="checkbox"/> Y <input type="checkbox"/> N Commercial: <input type="checkbox"/> Y <input type="checkbox"/> N/A 		

Identified health risk factors (ticked)

Smoking Lack of exercise Alcohol intake Diet
 Poor sleep Mental health Other: _____

Health Assessment Results

To be completed by Medical Officer:
 Your Health Assessment today indicates that you require a follow up review: Yes No

Review type	** Related to occupation **				Review Due
Health Assessment Review Face to face	<input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Health Assessment Review Information Only	<input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
1.		Yes <input type="checkbox"/>	No <input type="checkbox"/>		
2.		Yes <input type="checkbox"/>	No <input type="checkbox"/>		
3.		Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Vision	<input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Audiometry	<input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Spirometry	<input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Complex Lung Function Testing	<input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
HRCT Scan	<input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Other:	<input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Comments:					

** Related to airborne contaminant, hazardous chemical or occupational noise exposure investigation **

Coal Services Approved Medical Practitioner
 Name: _____
 Signature: _____

Do you have questions about your Health Assessment? We're here to help.
 Call 1800 274 633 (press 4) to speak to a CS Health Nurse - Monday to Friday, 8.00 am to 5.00 pm

Ask a CS Health Nurse Campaign



Q1 CY26

Month	Total Calls	Understanding appointment requirements	Understanding health review requirements	Questions regarding clinical testing
January	18	1	17	0
February	48	2	43	3
March	52	5	43	4

YOUR QUESTIONS, ANSWERED QUICKLY

I have just had a medical and have some questions...

What does it mean if I need a medical review?

I have a text saying my medical review is due. What do I need to do?

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For more information scan the QR code or visit www.coalservices.com.au/medical-reviews

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Ask a CS Health Nurse



Posters

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Business card



DO YOU HAVE QUESTIONS ABOUT YOUR MEDICAL?

Front

We're here to help.
Call to speak to a CS Health Nurse.

1800 274 633 (press 4)
Monday to Friday, 8.00am to 5.00pm



For more information visit www.coalservices.com.au/medical-reviews

Back



NSW Coal Industry Health Standards

Standing Health Committee Representation



Coal Services	Mining & Energy Union	Contractors	Resources Regulator
Katrina McKenzie (Chairperson) CS Health	Shane Thompson Northern Region	Belinda Boon Daracon	Emma Aynscough
Emma McNamara (Secretariat) CS Health	Andy Davey South-Western Region	Clinton Smith Mastermyne	
Dr David Meredith CS Health			
	NSW Minerals Council	Independents	Reserve Positions
Chris Catchpole CS Health	Fiona Holman Glencore	Dr Johann Lenffer External Doctor Network	Professor Andrew Ng* Respiratory and Sleep Physician <i>*Expert input to Sleep Health Standard</i>
Ian Hutton Coal Mines Insurance	Vacant	Vacant	Professor Shamasunder Acharya^ Endocrinologist <i>^Expert input to Diabetes Health Standard</i>
Cindy James Coal Services, Order 34			

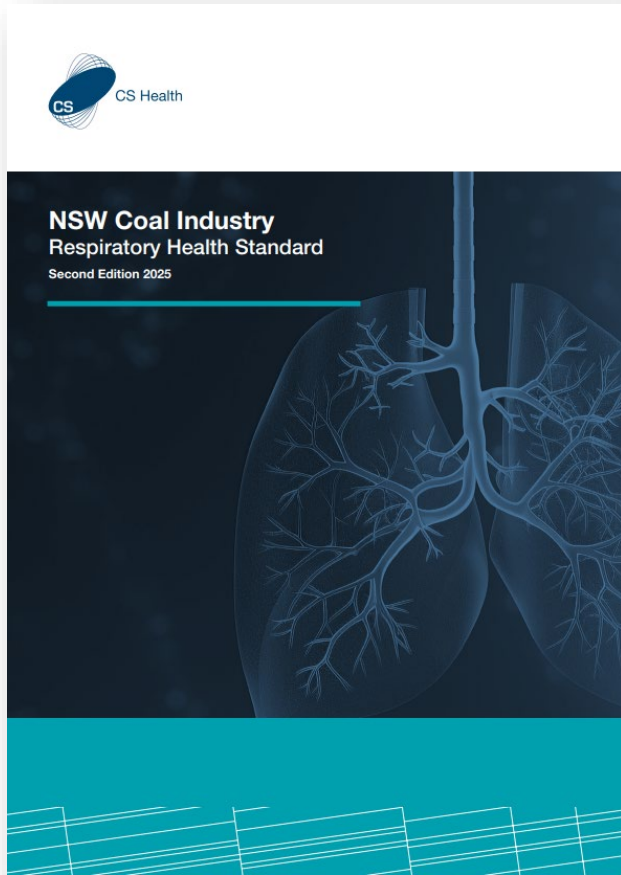


Benefits of Health Standard



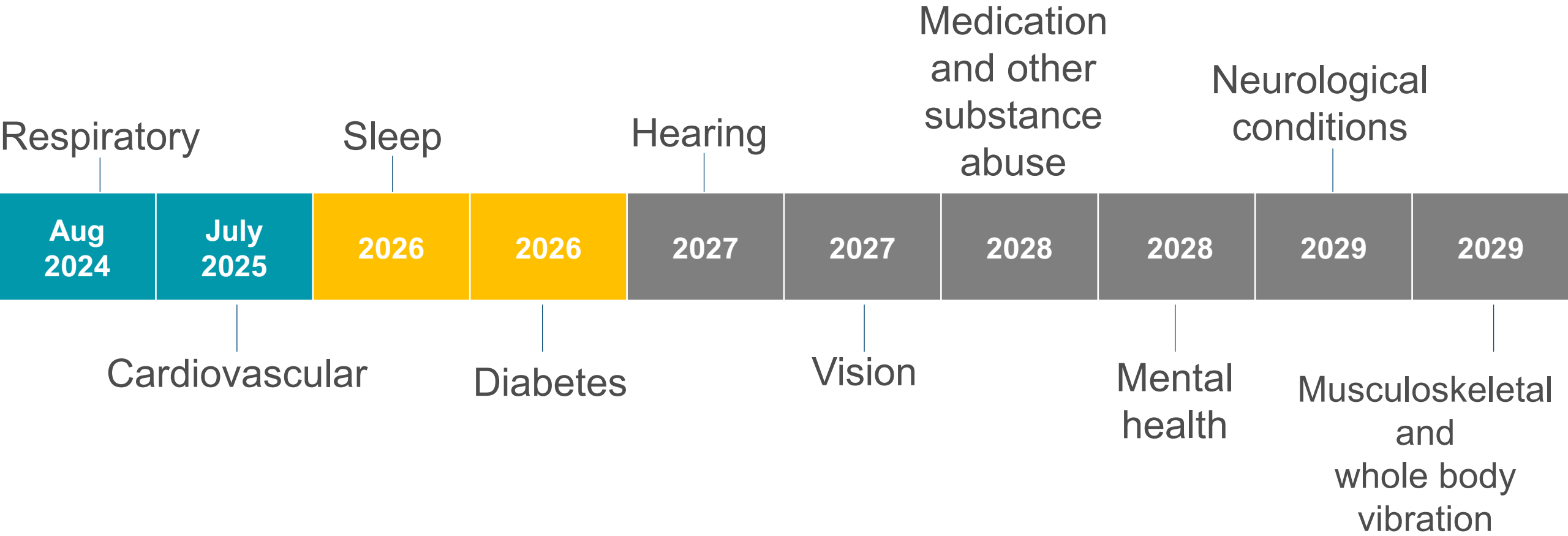
- Standardised decision making from all approved medical practitioners
- Targeted approach- requirements depending on Risk Category
- Reduced health assessment reviews
- Medical risks are identified for GP to manage

NSW Coal Industry Health Standards





NSW Coal Industry Health Standards - Prioritisation



Health Standard development process



- Standard drafted based on clinical knowledge and best-practice guidelines.
- The Standard incorporates risk assessments, task analysis, and existing relevant industry standards.

Design



Review

- SHC development review with SME's clinical input. Testing of standard against case studies.
- Consideration of broader industry consultation needs.
- Determine need for impact analysis.

- Industry consultation beyond SHC, including NSWMC, MEU, and Clinical Governance Committee.

Consultation



- Change management considerations, communication plan and development of supporting assets, with feedback from industry.
- Clinical Governance Committee review and endorsement.

Finalisation



- Standard reviewed by independent expert for feedback and endorsement.
- Finalisation of communication plan and supporting assets.
- Industry preparation for release.

- Standard sent to Board and key industry stakeholders for notification.

Notification



Release



- Standard released to industry with supporting communication, education, and assets.

Coal Services website



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Order 45

- Order 45 information and resources
- Risk categories
- Chest imaging
- Health assessment reviews
- Ask a CS Health Nurse
- Order 45 FAQs
- Approved Medical Practitioners Directory
- Providers: accreditation and training
- Clinical and Service Standard
- History of health surveillance

Workplace Health Services

- Medicals
- Drug and alcohol screening
- Hearing and PPE Fit Tests
- Immunisation

Allied Health Services

- Rehabilitation
- Functional capacity evaluations
- Task analysis and workplace assessments
- Treatment services
- Toolbox talks
- Healthy lifestyle programs

Industry Forums

Industry Forum sessions and dates

Industry Health Standards

- Cardiovascular Health Standard
- Respiratory Health Standard

Industry Health Topics

- Alcohol and drugs
- Respiratory (lung) health
- Industrial deafness
- Cardiovascular health
- Maintaining a healthy weight
- Diabetes
- Mental health
- Sleep and fatigue management

Standing Health Committee

- About
- Representation



Protect your heart: CS Health's latest campaign to raise awareness of cardiovascular health

Featured Links

- Learn more about cardiovascular health
- Learn more about Order 45
- How to access your medical information
- Medical bookings information, service guide and policy
- Contact CS Health

2026 Health Assessment Service Provision



Service Provision:

- **12,080** health assessments due this year
- In Q1 CY26, **4,620** Order 45 health assessments were completed

Appointment availability:

- Health Assessment reviews required with Order 45
- Process Excellence Project aimed to increase appointment efficiency and scheduling

Medical Determination data:

- **CY26 Q1 124 (2.54%)** health conditions → restriction
- An additional **16 (0.32%)** cardiovascular risk factors → restrictions
- **2 (0.04%)** of these workers had a Body Mass Index (BMI) >50



Sleep Disorders and Diabetes in NSW Coal Mine Workers

Session Overview



1 Sleep Disorders

2 Obstructive Sleep Apnoea

3 Sleep Disorders in NSW coal mine workers

4 Sleep Disorders and Order 45 Health Assessments

5 Diabetes



Sleep Disorders

Sleep disorders

Insomnia

anxiety, caffeine,
exercise, illness

Sleep-related breathing disorders

obstructive sleep apnoea

Central disorders of hypersomnolence

narcolepsy



Categories and examples

Circadian rhythm sleep-wake disorders

shift work, jet lag

Sleep-related movement disorders

teeth grinding, restless legs

Parasomnias

sleepwalking



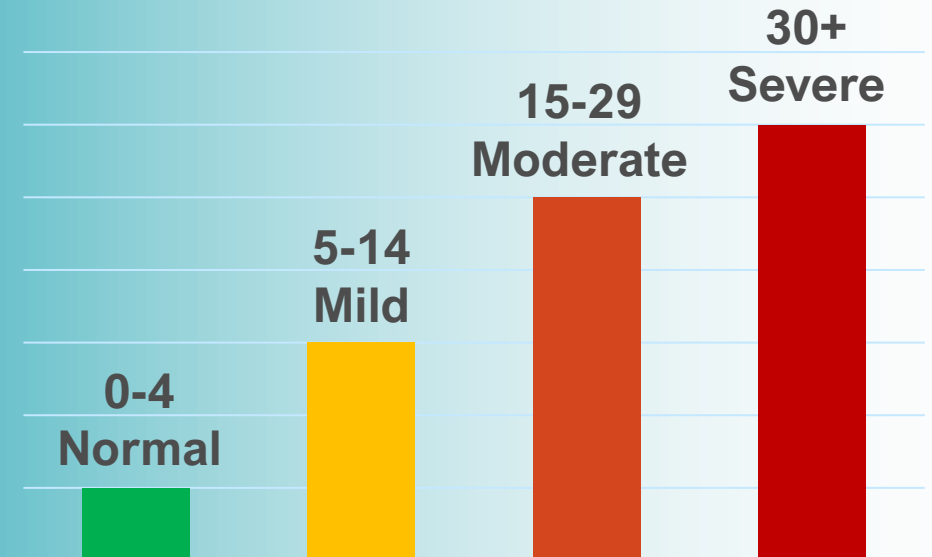
Obstructive Sleep Apnoea

Obstructive sleep apnoea (OSA)

Clinical features

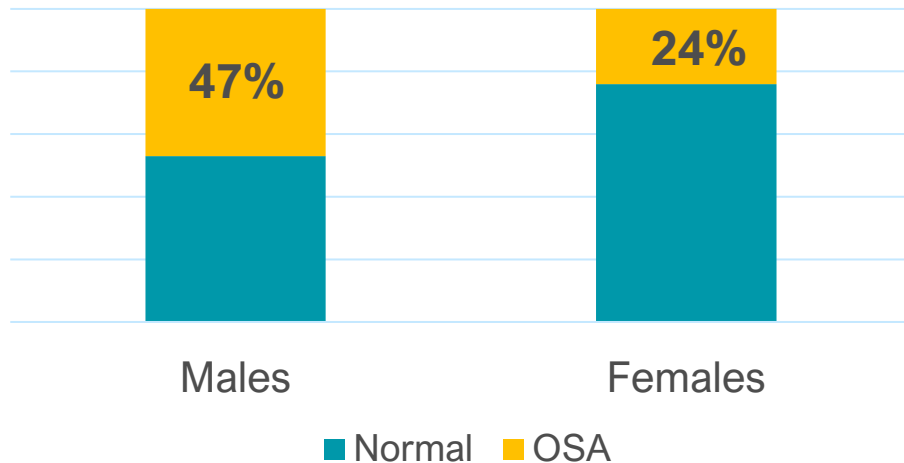
- Repetitive collapse of the upper airway
- Obstructed breathing, complete and partial
- Respiratory effort-related arousals
- Excessive tiredness
- Morning headaches
- Snoring and choking during sleep

Severity of OSA
AHI* events per hour of sleep
*apnoea hypoapnoea index



Obstructive sleep apnoea

OSA prevalence in Australia (45 – 65 years, clinically significant)



Sleep studies

- Type 1: sleep lab
- Type 2: same measurements (at home)
- Type 3: 3 or 4 channels
- Type 4: 1 or 2 channels



OSA risk factors



- Male
- Age 50 +
- Obesity
- Hypertension
- Diabetes
- Heart disease
- Large neck, crowded throat
- Nasal congestion
- Loud snoring
- Witnessed apnoeic episodes

OSA risk

OSA affects:

- vigilance
- concentration
- memory
- mood and
- increases CVD risk

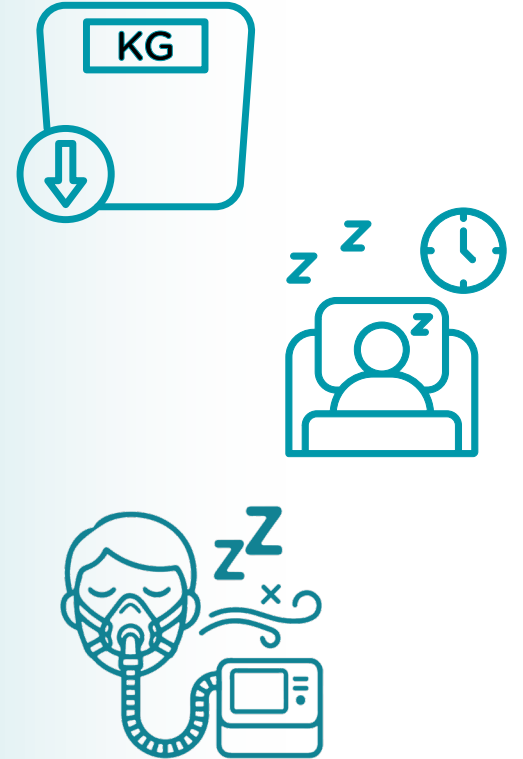


**Crash risk = 2 to 7 times
that of people without OSA**

Risk normalises with effective treatment

OSA treatment

- Weight loss
- Sleep hygiene
- Continuous positive airway pressure (CPAP)
- Mandibular advancement splint
- ENT surgery





Sleep Disorders with NSW Coal Mine Workers – Industry Profile

NSW coal industry profile



CS Health periodic data 1 July 2022 to 30 June 2025 (28,336 workers)

Risk factors	No. of workers	Outcome/action
Males	25,716	STOP-Bang score = 1
Males \geq 50 years old	6,493	STOP-Bang score = 2
Males \geq 50 years old with BMI \geq 35kg/m ²	1,082	STOP-Bang score = 3
Males \geq 50 years old with hypertension	2,475	STOP-Bang score = 3
Males \geq 50 years old, BMI \geq 35kg/m ² with hypertension	596	STOP-Bang score = 4
Females \geq 50 years old, BMI \geq 35kg/m ² with hypertension	25	STOP-Bang score = 3
BMI \geq 40kg/m ²	1,114	Triggers sleep study referral
Diabetes, BMI \geq 35kg/m ²	254	Triggers sleep study referral



Sleep Disorders and Order 45 Health Assessments

OSA investigation triggers

STOP-Bang Questionnaire

- **S**noring
- **T**ired
- **O**bserved apnoeas
- **P**ressure: elevated blood pressure
- **B**MI: ≥ 35
- **A**ge: ≥ 50
- **N**eck circumference: $\geq 40\text{cm}$
- **G**ender: male



OSA investigation triggers

High risk clinical findings

- BMI $\geq 40\text{kg/m}^2$
- BMI $\geq 35\text{kg/m}^2$ and diabetes or treatment resistant hypertension

Reported excessive sleepiness

- Self report
- Fitness-for-work assessment triggered by a documented fatigue related event



OSA monitoring

CPAP compliance report

- Days used
- Time used
- AHI

MAS

- Temperature
- Sleep study

Sleep physician





Diabetes

Diabetes Mellitus

- Diabetes is characterised by elevated blood glucose levels, which, if unmanaged, could lead to severe complications, including premature death
- Around 1.5 million Australians have type 2 diabetes
- NSW Health estimates around 11% of the population has type 2 diabetes, and 30% of those are yet to be diagnosed.



Types of Diabetes



Type 1 Diabetes: often develops in childhood; however, it can occur at any age. Caused by the immune system's destruction of insulin-producing cells of the pancreas (10%)

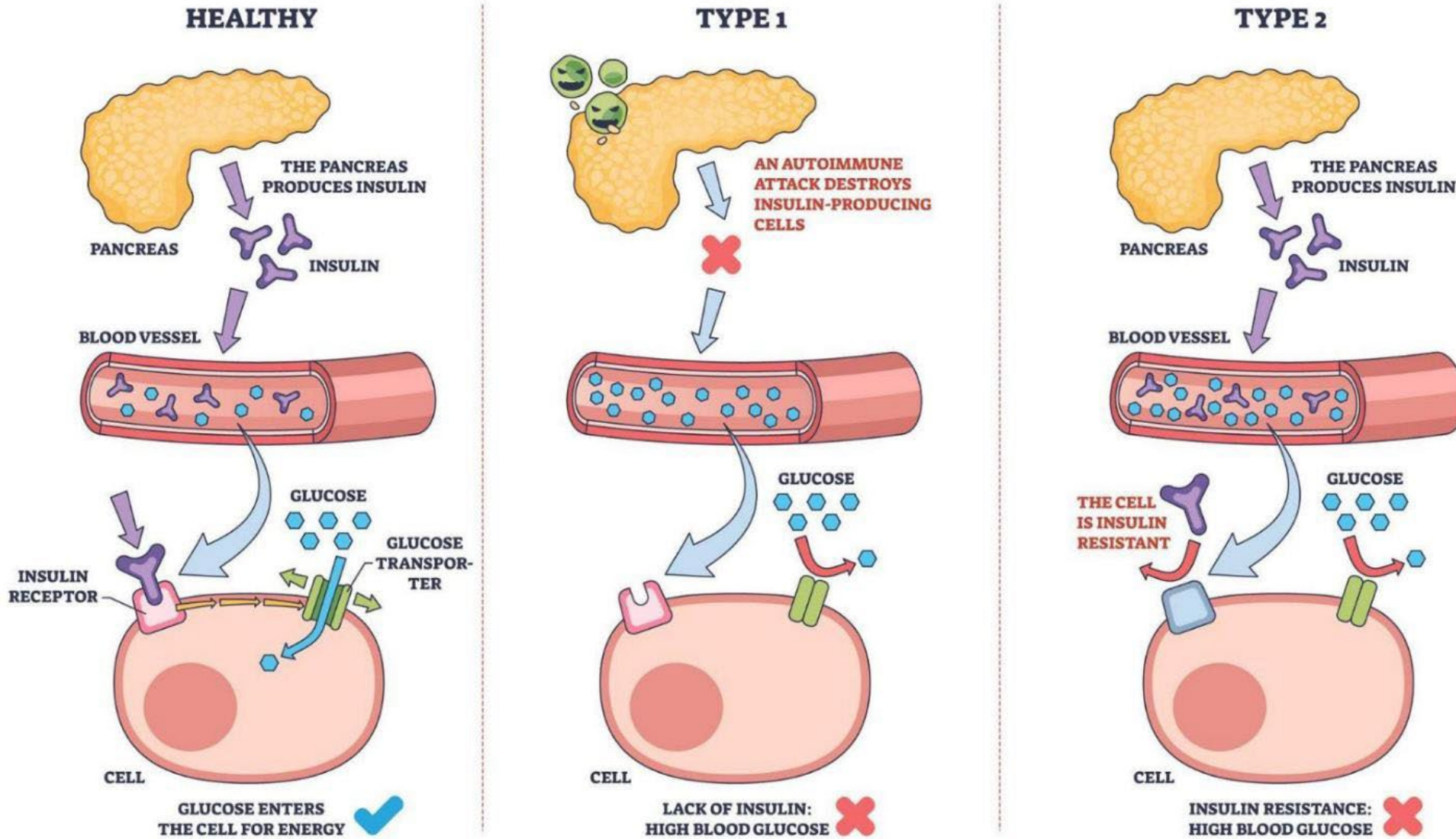
Type 2 Diabetes: accounts for 85% of all cases, characterised by a strong association with age, obesity, family history and ethnicity

Type 3c Diabetes: is due to recurrent pancreatitis or other pancreatic conditions

Gestational Diabetes: when diabetes occurs only during pregnancy

➤ Other genetic forms of diabetes (strong family history, present at birth)

Diabetes explained



Symptoms



- Often asymptomatic until blood glucose is significantly elevated
- High glucose: thirst, passing a lot of urine, fungal infections (thrush), tiredness, vision disturbance, weight loss
- Low glucose - related to treatment of diabetes with insulin and some oral medications
 - o tremors, hunger, sweating, palpitations, lack of concentration, disorientation, blackouts, seizures and coma/death
- Damage to other organs – heart, eyes, kidneys, nerves

Order 45 Health Assessment Screening



1. Random blood glucose level by finger prick or blood test
 2. Urinalysis
 3. Medical history
- Abnormal results referred to the treating GP for further testing
 - Screening tests include fasting blood glucose and or HbA1c
 - Oral glucose tolerance test requires at least 2 hours in the lab

Diagnosis of Prediabetes & Type 2 Diabetes

(Australia RACGP Criteria)



Test	Normal	Prediabetes (High Risk)	Type 2 Diabetes
Fasting Glucose	< 6.1 mmol/L	6.1 – 6.9 mmol/L	≥ 7.0 mmol/L
Random Glucose	< 7.8 mmol/L	7.8 – 11.0 mmol/L	≥ 11.1 mmol/L
HbA1c	< 6.0%	6.0 – 6.4%	≥ 6.5%

Implications for workplace



Acute:

- Very high levels of glucose can lead to a sudden decompensation
- Low glucose levels can cause loss of concentration, mood changes, coma, seizure and death

Chronic:

- Premature vascular disease – heart attacks, strokes
- Vision problems
- Loss of peripheral nerve function
- Kidney disease
- Liver disease
- Psycho-social impact

Treatment implications



Insulin:

- Higher risk of hypoglycaemia
- Will require blood glucose monitoring in the workplace
- Increasing use of continuous glucose monitors and insulin pumps
- Most will be under specialist care


Non-insulin:

- Many different available medications, most with a low risk of hypoglycaemia
- Most won't require blood glucose in the workplace
- Most under GP care



*Coal Services Health Monitoring Requirements for
Coal Mine Workers Order No. 45*

Coal Services Health Monitoring Requirements for Coal Mine Workers Order No. 45 (Order 45)



Government Gazette
of the State of
New South Wales
Number 441 - Other
Friday, 24 October 2025

The New South Wales Government Gazette is the permanent public record of official NSW Government notices. It can also contain local council, non-government and other notices.

Each notice in the Government Gazette has a unique reference number that appears in parentheses at the end of each page of the notice and can be used as a reference for that notice. For example, [NSWGG-2024-10-1].

The Gazette is compiled by the Parliamentary Counsel's Office and published on the NSW Government Gazette website (www.gazette.nsw.gov.au) under the authority of the NSW Government. The website contains a permanent archive of past Gazettes.

To submit a notice for gazettal, visit the website.

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NSW Government Gazette No 441 of 24 October 2025

Government Notices

**COAL SERVICES HEALTH MONITORING REQUIREMENTS FOR
COAL MINE WORKERS ORDER No. 45
under the
COAL INDUSTRY ACT 2001 (NSW)**

Coal Services Pty Limited (A.C.N 099 078 234), an approved company under the *Coal Industry Act 2001 (NSW)* ("the Act"), with the approval of the Hon. Courtney Houssos, MLC, Minister for Natural Resources, and in pursuance of section 13 of the Act, makes the following Order.

Dated this 22nd day of October 2025

Kylie Ah Wong Chair Coal Services Pty Limited	Angela Hunter Managing Director/CEO Coal Services Pty Limited
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Approved by the Hon. Courtney Houssos, MLC, Minister for Natural Resources, on this 14th day of October 2025

The Hon. Courtney Houssos, MLC
Minister for Natural Resources

**COAL SERVICES HEALTH MONITORING REQUIREMENTS FOR
COAL MINE WORKERS ORDER NO. 45
under the
COAL INDUSTRY ACT 2001 (NSW)**

- 1. Name of Order**
This Order is the Coal Services Health Monitoring Requirements for Coal Mine Workers Order No. 45.
- 2. Commencement**
This Order commences on 1 January 2026.
- 3. Revocation**
The Coal Services Health Monitoring Requirements for Coal Mine Workers Order No. 43 published in the NSW Government Gazette No. 48 on 4 May 2018 at pages 2776-2781, including any associated schedules made or published on or after that date is revoked.

[NSWGG-2025-441-4] NSW Government Gazette 24 October 2025

Coal Services Website



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Order 45

- Order 45 information and resources
- Risk categories
- Chest imaging
- Health assessment reviews
- Ask a CS Health Nurse
- Order 45 FAQs
- Approved Medical Practitioners Directory
- Providers: accreditation and training
- Clinical and Service Standard
- History of health surveillance

Workplace Health Services

- Medicals
- Drug and alcohol screening
- Hearing and PPE Fit Tests
- Immunisation

Allied Health Services

- Rehabilitation
- Functional capacity evaluations
- Task analysis and workplace assessments
- Treatment services
- Toolbox talks
- Healthy lifestyle programs

Industry Forums

- Industry Forum sessions and dates

Industry Health Standards

- Cardiovascular Health Standard
- Respiratory Health Standard

Industry Health Topics

- Alcohol and drugs
- Respiratory (lung) health
- Industrial deafness
- Cardiovascular health
- Maintaining a healthy weight
- Diabetes
- Mental health
- Sleep and fatigue management

Standing Health Committee

- About
- Representation

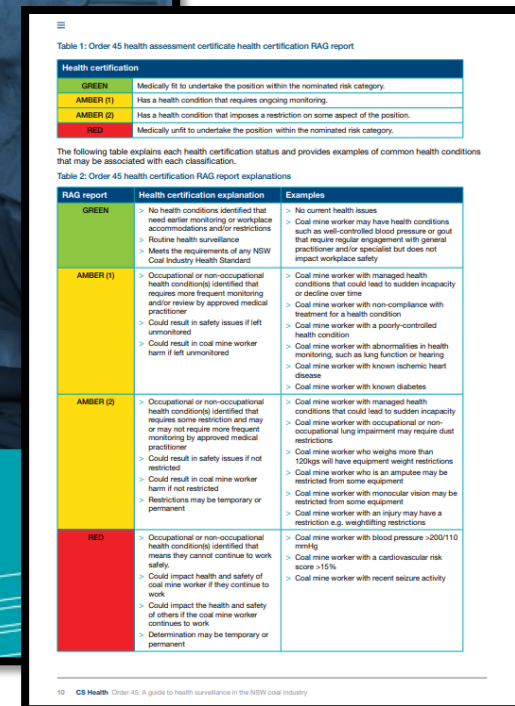
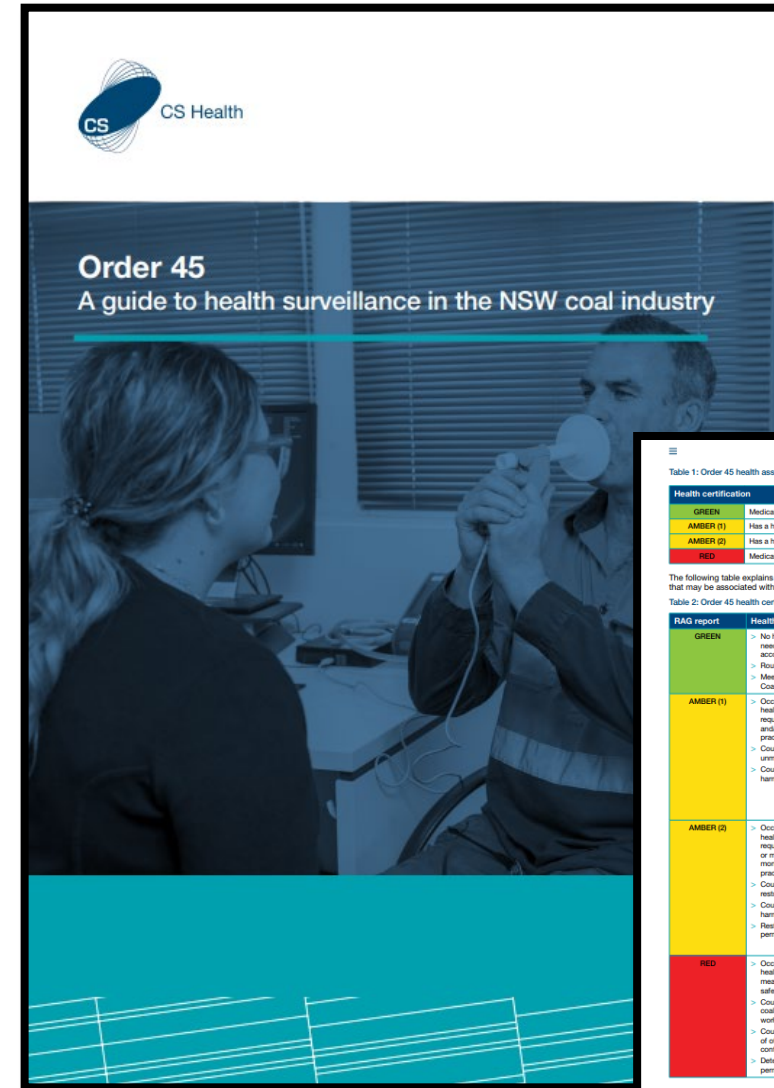
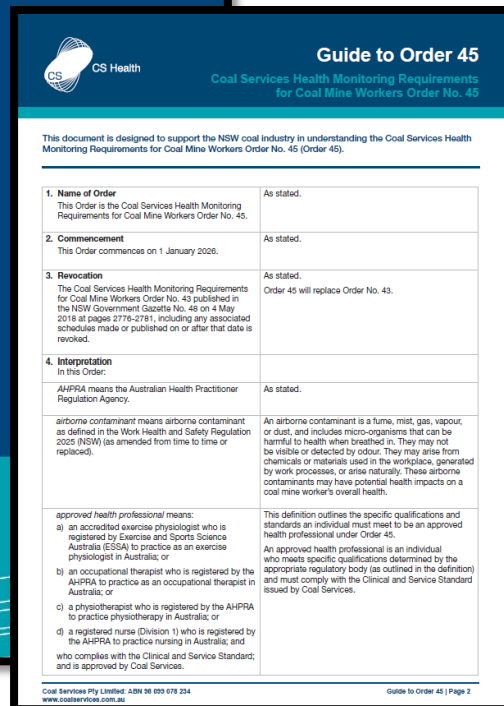
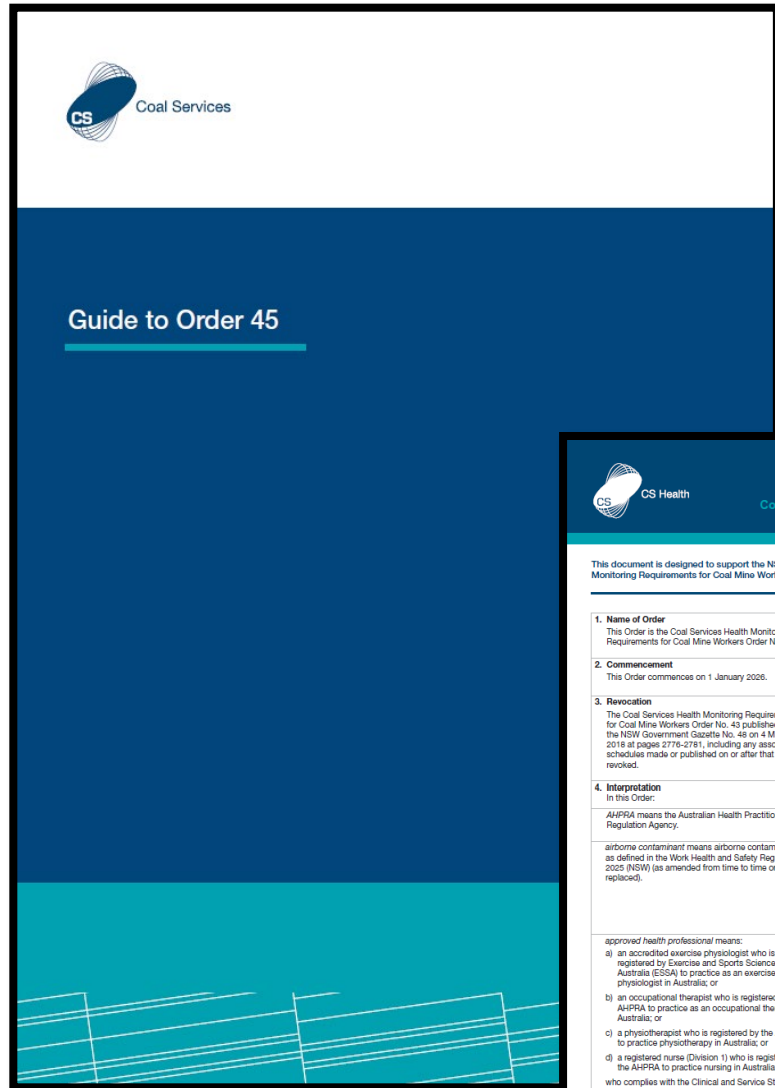


Protect your heart: CS Health's latest campaign to raise awareness of cardiovascular health

Featured Links

- Learn more about cardiovascular health
- Learn more about Order 45
- How to access your medical information
- Medical bookings information, service guide and policy
- Contact CS Health

Coal Services Health Monitoring Requirements for Coal Mine Workers Order No. 45 (Order 45)





Order 45 Post Implementation Considerations

Order 45 Post Implementation Considerations



Coal Mine Worker
Definition

Risk Categories

Order 45 Chest Imaging

Health Assessment
Reviews



Coal Mine Worker Definition



Order 45 coal mine worker definition



- Definition is based on current or previous history of **airborne contaminants, hazardous chemicals, and occupational noise exposure**, not just work location
- Excludes office/non-operational workers with **no exposure** currently or historically
- Workers who do not meet the definition of a coal mine worker do **not** need a health assessment

Key impacts

- Unnecessary Order 45 health assessment appointments
- Triggers unnecessary Order 45 health assessment reviews



Risk Categories



Order 45 Risk Categories



Risk categories are used to determine the level of risk for a coal mine worker ***based on the tasks performed by them.***

It is the associated risk to themselves and others, in the event of a sudden medical incapacity.



Category A Safety Critical

A medical emergency will put others at risk of a serious injury.



Category B Safety Sensitive

A medical emergency will put the worker at risk.



Category C Non-Safety Sensitive

The work environment will not contribute to a worker's medical emergency.

Images are examples only



Change in Risk Categories



If the incorrect* risk category has been assigned to a Health Assessment the following process applies:

- The health assessment must be less than 3 months old
- A face-to-face health assessment review appointment is required (CS Health or EDN)
 - Clinical findings and reassessment of CVD risk
 - Any new health assessment reviews and referrals are provided (if required)
 - Any existing health assessment review requirements continue
 - Health assessment review certificate - *“Health Assessment review completed due to a change in risk category”*
- Transitional arrangement until the end of June 2026

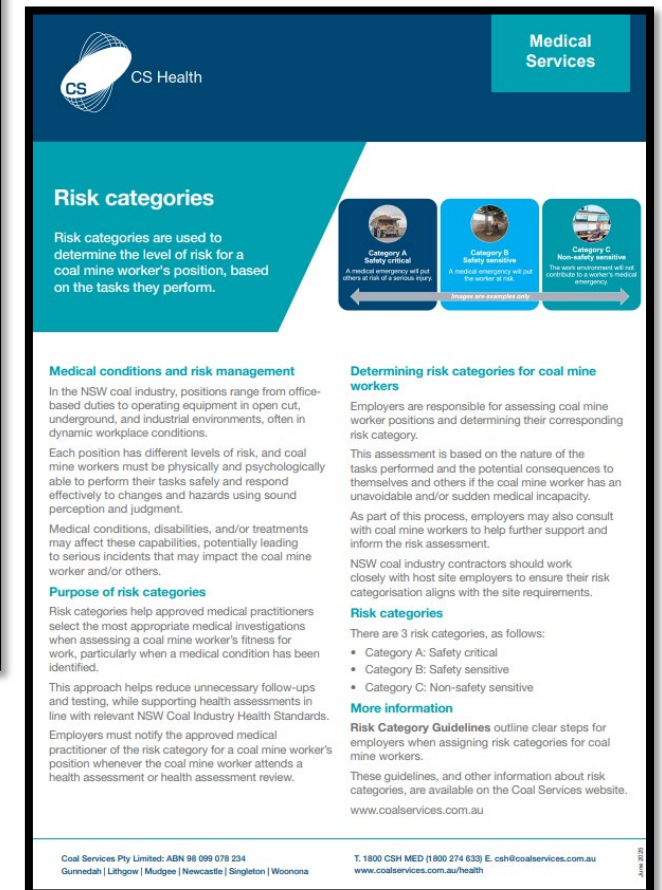
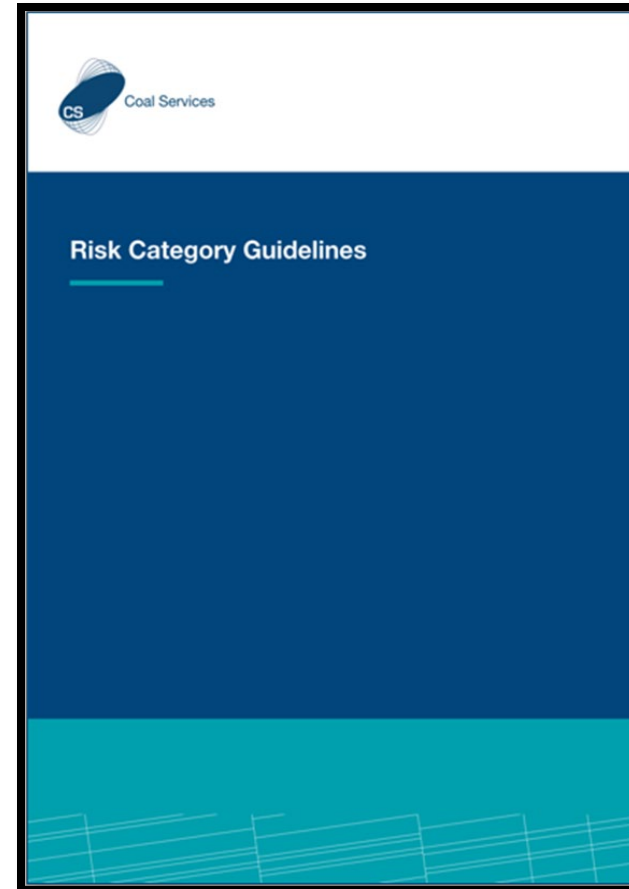
**This is only required if a higher risk category is needed*

Risk categories - supporting materials



Risk Category Guidelines

- Appendix A – risk categorisation template
- Risk categories fact sheet
- Explainer video
- Webinar recording
- FAQs



Order 45 Risk Categories webinars



Risk categories for coal mine workers

In accordance with the Coal Services Health Monitoring Requirements for Coal Mine Workers Order 45 (Order 45), an employer must ensure that a coal mine worker has, or has had, a health assessment for a risk category that is the same or higher than the risk category for the work to be performed.

Information for employers

The Coal Services Risk Category Guidelines have been developed to assist employers in assessing the risk category for coal mine workers. These guidelines provide a process that considers the tasks performed by a coal mine worker and the potential risk to themselves and others in the event of an unavoidable or sudden medical incapacity.

Webinars have been scheduled to introduce the risk categories and guide employers through the Risk Category Guidelines.

Webinar date:	Time:
Thursday 19 February 2026	8.00am to 10.00am
Tuesday, 31 March 2026	8.00am to 10.00am
Friday, 24 April 2026	8.00am to 10.00am
Tuesday, 12 May 2026	8.00am to 10.00am
Wednesday, 10 June 2026	8.00am to 10.00am

The webinar will cover the following topics:

- the purpose and benefits of risk categories
- an overview of the 3 risk categories
- an introduction to the Risk Category Guidelines
- considerations for determining risk categories for coal mine worker positions.

For more information contact
E: events@coalservices.com.au

Bookings can be made at:
<https://www.sticktickets.com.au/coalserviceevents>
or scan the QR code.





Order 45 Chest Imaging

Order 45 Chest Imaging Requirements

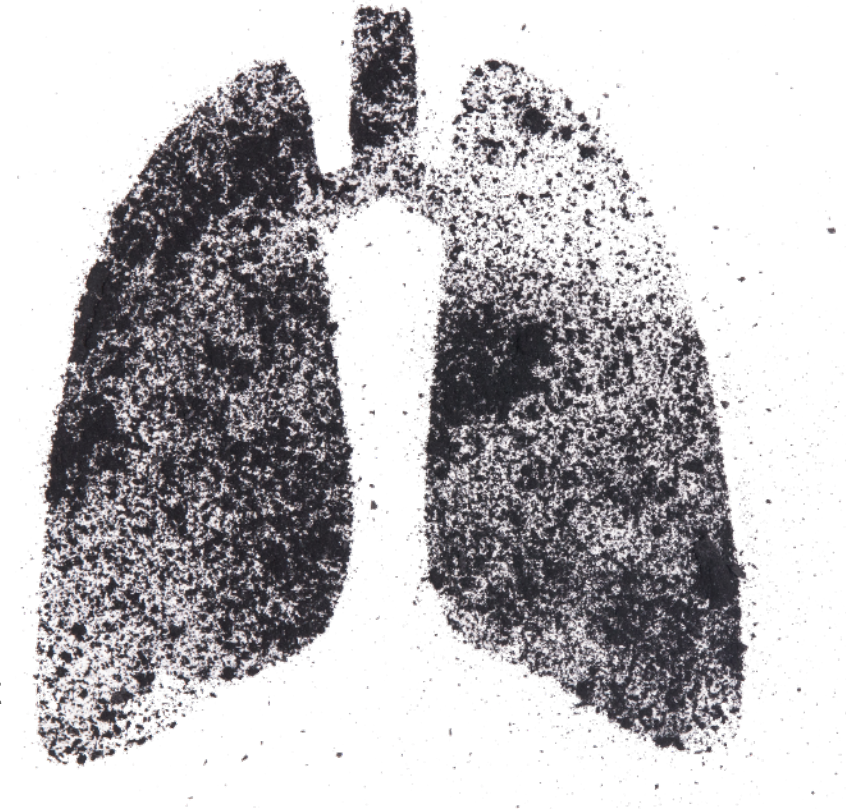
The chest imaging must be aligned to the Order 45 health assessment

ILO Chest X-Ray

- Simple, non-invasive test
- Produces a 2D image of the chest
- Takes 15 and 30 minutes
- Image captured whilst standing

HRCT

- Simple, non-invasive test
- Produces a much clearer and detailed image of the chest, including the lungs and heart
- Takes 15 and 30 minutes
- Image captured whilst lying on a bench that slides into the machine





Understanding Order 45 – chest imaging radiation dose



Source of exposure	Exposure (per year)
Order 45 ILO chest x-ray (one picture)	0.02 mSv
Standard chest x-ray (two pictures)	0.06 mSv
One return flight from Melbourne to London per year	0.11 mSv
Total natural radiation in Australia	1.5 mSv
High resolution computed tomography (HRCT) chest	5 mSv

mSv = millisievert: A millisievert is a unit used to measure effective radiation dose — essentially how much radiation the body absorbs and the potential biological effect of that exposure.

<10mSv = no direct evidence of effects on human health



Order 45 Health Assessment Reviews



Why do we have health assessment reviews?

Look for conditions that can cause sudden incapacity or impair capacity over time

Seek information that they are adequately managed

Recommend more frequent monitoring when necessary



Common Triggers for a Health Assessment Reviews

- Spirometry (Lung Function)
- Audiometry (Hearing)
- Cardiovascular disease
- Obstructive sleep apnoea (OSA)
- Diabetes



Order 45: Health assessment reviews



- Health assessment reviews are a new requirement in the Order
- Time and payment provisions are included when the health assessment review investigation is related to **airborne contaminants, hazardous chemicals, and occupational noise exposure**
- A health assessment review may be a one-off or occur at defined intervals, depending on the condition
- Non-completion of a health assessment reviews = health assessment certificate expiry
- Duty of care referrals – coal mine workers are not required to report the outcome of these types of referrals to the approved medical practitioner (i.e. they do not need to provide further information or results).

Order 45: Health assessment reviews



- Provides information for employers on health assessment reviews
 - Information on time and payment provisions
 - Health assessment review appointment timeframes

Order 45: Health Assessment Certificate



**Order 45
Health Assessment Certificate**

This health assessment has been conducted as per the Coal Service Health Monitoring Requirements for Coal Mine Workers Order 45.

Confidential: The information contained in this document is confidential and intended for the coal mine worker or nominated employer representative. Should you wish to discuss this health assessment, please contact CS Health.

CS Health

Order 45 Health Assessment Certificate

CS Health reference number	
Full name	
Date of birth	
Position	
Risk category	Choose an item.
Similar exposure group	
Date of health assessment	
Approved medical practitioner	
Last chest imaging date	

Health Certification

GREEN Medically fit to undertake the position within the nominated risk category.

AMBER (1) Has a health condition that requires ongoing monitoring.

AMBER (2) Has a health condition that imposes a restriction on some aspect of the position.

RED Medically unfit to undertake the position within the nominated risk category.

Coal mine worker required to wear: Corrective lenses Yes No
Hearing aids Yes No

Coal mine worker can commence or continue to carry out the work? Yes No

Page 2 of 4

CS Health

Remedial measures recommended? Yes No

Comments

Any test results indicating a disease, illness or injury as a result of carrying out the work? Yes No

Comments

Health counselling provided? Yes No

Comments

Health assessment review

Review type	Related to airborne contaminant, hazardous chemical or occupational noise exposure investigation?	Review time
Choose an item.	Yes <input type="checkbox"/> No <input type="checkbox"/>	Choose an item.
Choose an item.	Yes <input type="checkbox"/> No <input type="checkbox"/>	Choose an item.
Choose an item.	Yes <input type="checkbox"/> No <input type="checkbox"/>	Choose an item.
Choose an item.	Yes <input type="checkbox"/> No <input type="checkbox"/>	Choose an item.
Choose an item.	Yes <input type="checkbox"/> No <input type="checkbox"/>	Choose an item.
Choose an item.	Yes <input type="checkbox"/> No <input type="checkbox"/>	Choose an item.

Page 3 of 4

CS Health

Health assessment review comments

Employer actions

Is the employer recommended to take any action? Yes No

Actions:
Choose an item.
Comments:

Approved medical practitioner signature:

Name:	
AMP** number:	
Date:	

Electronic signature of me, [insert full name], affixed by me, or at my direction, on [insert date].

** Coal Services approved medical practitioner number

A health assessment review is a conditional clearance for the review period detailed on the health assessment certificate. If the health assessment review is not completed within the timeframe, the health assessment certificate will expire.

Page 4 of 4



Order 45: Health Assessment Certificate Review Types



Health assessment review					
Review type	Related to airborne contaminant, hazardous chemical or occupational noise exposure investigation?		Review time		
Choose an item. ▼	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Choose an item.
Choose an item.	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Choose an item.
Health assessment review - face to face	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Choose an item.
Health assessment review - information only	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Choose an item.
Vision	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Choose an item.
Audiometry	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Choose an item.
Spirometry	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Choose an item.
Complex Lung Function Test	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Choose an item.
Other (refer to comments for details)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Choose an item.
Choose an item.	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Choose an item.



Order 45 Post-Implementation Review

Order 45 Post Implementation Review



Post Implementation Review – 2027

- Assess effectiveness and confirms whether Order 45 is achieving the intended outcomes
- Identifies improvements and highlights any gaps, inefficiencies, and unintended consequences
- Informs future updates using data and insights to refine processes and procedures
- Strengthen confidence by demonstrating transparency, accountability and our commitment to continuous improvement

Documentation review

- Coal Services Clinical and Service Standard
- Coal Services Risk Category Guidelines
- Order 45: A guide to health surveillance in the NSW coal industry

Questions?



CS Health

