



NOV 2025

Regulator update Coal inspectorate

Occupational Health and Hygiene Forum



Resources
Safety & Health
Queensland

Regulator update: coal inspectorate

 Annual exposure monitoring data – Inhalable dust, Welding Fume, DPM

 Expanding the database to include Noise exposure

 QGN welding fume & RS16 polymeric chemicals

 NO and NO2 monitoring request

 Mobile cabin ventilation and implementing RS20 expectations

 2025-2026 inspection focus

Annual exposure data review



Resources
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Coal Inspectorate

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Review of exposure data for 2024 in Queensland coal mines

Click the links below to review exposure data for coal mines in Queensland for 2024.

Please contact [Eliza Gill](#), Principal Occupational Hygienist, if you have any questions.

Diesel Data Review	Diesel Infographic
Inhalable Dust Review	Inhalable Dust Infographic
Welding Fume Review	Welding Fume Infographic

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Reports issued August 2025

- Full Report
- Infographic summary

Annual data submission, due within the first two months of each calendar year is required.
Email to: AirborneContaminants@rshq.qld.gov.au

Inhalable Dust: 2024 Review Snapshot

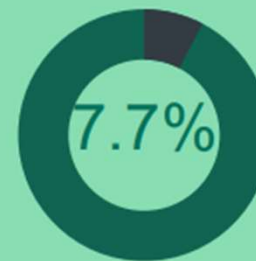


Inhalable dust can irritate the respiratory tract and contribute to chronic obstructive pulmonary disease (COPD).

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Industry Exposure Highlights

- 2 329 exposure samples
- 53 coal mines reported
- Overall exposure to inhalable dust is increasing



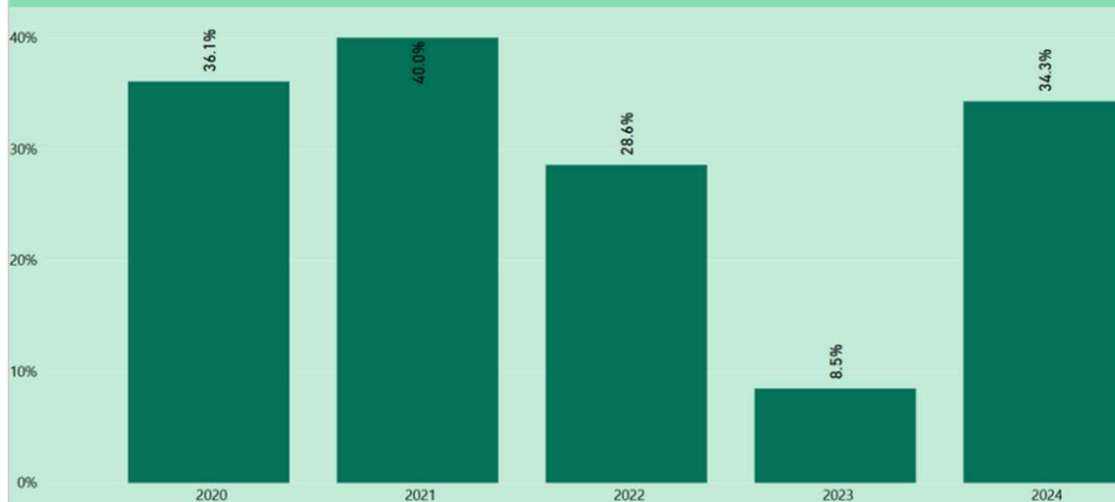
7.7% of underground workers monitored exceeded shift adjusted OEL of 10 mg/m³



1.1% of surface workers monitored exceeded shift adjusted OEL of 10 mg/m³

Exceedance rates have increased in 2024 when compared to 2023. The highest recorded concentration was 123 mg/m³.

Longwall Production Exceedance Rate Increase



There has been a significant increase in exceedances occurring in Longwall Production. One site accounted for nearly half the exceedances

Recommendations for SSEs

- Apply a 10 mg/m³ guideline limit with a 5 mg/m³ trigger action level.
- Review inhalable dust exposure in your Health Risk Assessment (HRA) in consideration of the updated exposure data presented within this report.
- Monitor exposures periodically and update controls to keep dust levels as low as reasonably achievable.
- Investigate and identify opportunities to improve dust controls when personal exposure monitoring results exceed limits.

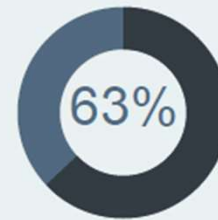
Welding Fume Exposure: 2024 Review Snapshot



Welding fume exposure is a significant **health risk** that can lead to serious respiratory issues, including lung cancer for coal mine workers.

Industry Exposure Highlights

- 324 exposure samples
- 49 coal mines reported
- Occupational exposure limit reduced from 5mg/m³ to 1mg/m³ in 2024



63% of workers monitored exceeded 1mg/m³ OEL



> 90% of Boilermaker_SEG averaged exposure exceeded 1mg/m³

10% of workers over exposed to welding fume were not wearing any respiratory protection at the time.

Recommendations for SSEs

- Update your site's Health Risk Assessment (HRA) to include welding fume and integrate it into the SHMS.
- Review and revise SOPs/SWIs to clearly identify welding fume as a primary hazard and specify effective control measures.
- Do not rely solely on RPE. Prioritise higher-order controls like LEV, reduced-fume welding processes, and low-emission consumables.
- Monitoring is required regardless of RPE use — powered respirators do not replace the need for exposure assessment.
 - Ensure consistent monitoring, especially during major shutdowns and field maintenance involving welding.
- Review and update quality of RPE program to ensure:
 - Regular fit testing for negative pressure respirators.
 - Routine inspection, maintenance, and record-keeping for PAPR and airline systems.
 - Practices should comply with AS/NZS 1715 and AS/NZS 1716.
- Conduct a gap analysis against the Guidance Note for managing welding fume in coal mines, when it is released.

Guidance note published in 2025 covers



Risk assessment



Best practice monitoring

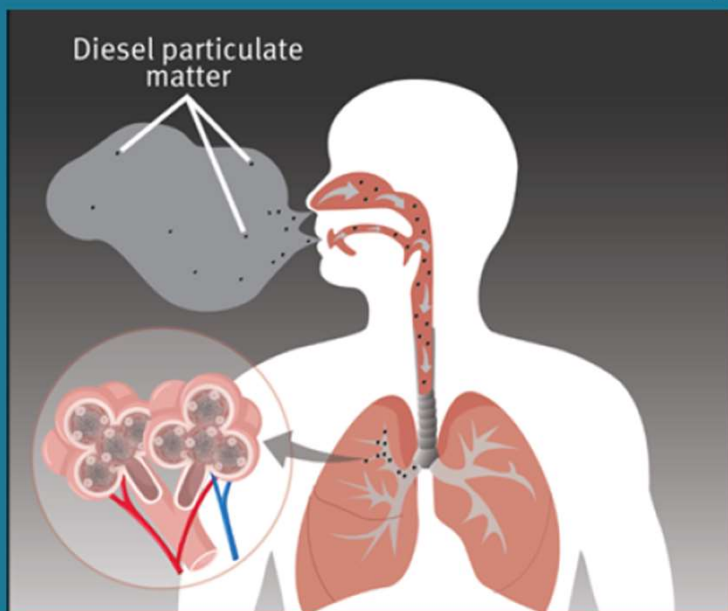


Common welding tasks and controls



Check list for controls (LEV and PAPR)

Diesel Exposure: 2024 Review Snapshot



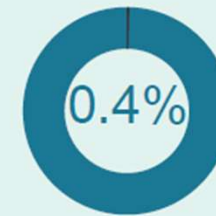
Diesel exhaust is known to cause cancer. For coal mine workers, regular exposure significantly increases the risk of lung cancer and other long-term respiratory diseases.

Industry Exposure Highlights

- 765 exposure samples
- 11 underground coal mines reported
- Guideline exposure limit reduced from 0.1 mg/m³ to 0.05 mg/m³ in 2024



2.5% of workers monitored
exceeded 0.05 mg/m³

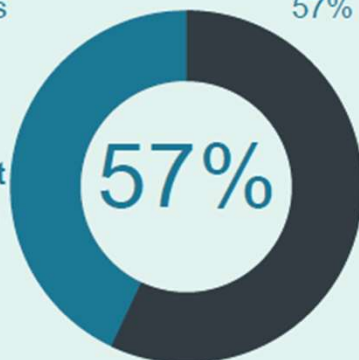


0.4% of workers monitored
exceeded 0.1 mg/m³

Most exceedances now fall between 0.05–0.1 mg/m³, highlighting improved control—but also the need for continued effort to meet the new DPM limit

SEGs where exposures are occurring

43% are other SEGs including:
Development
Production
Secondary Support
Gas Drainage U/G
Outbye
Construction



57% are **Longwall Moves**

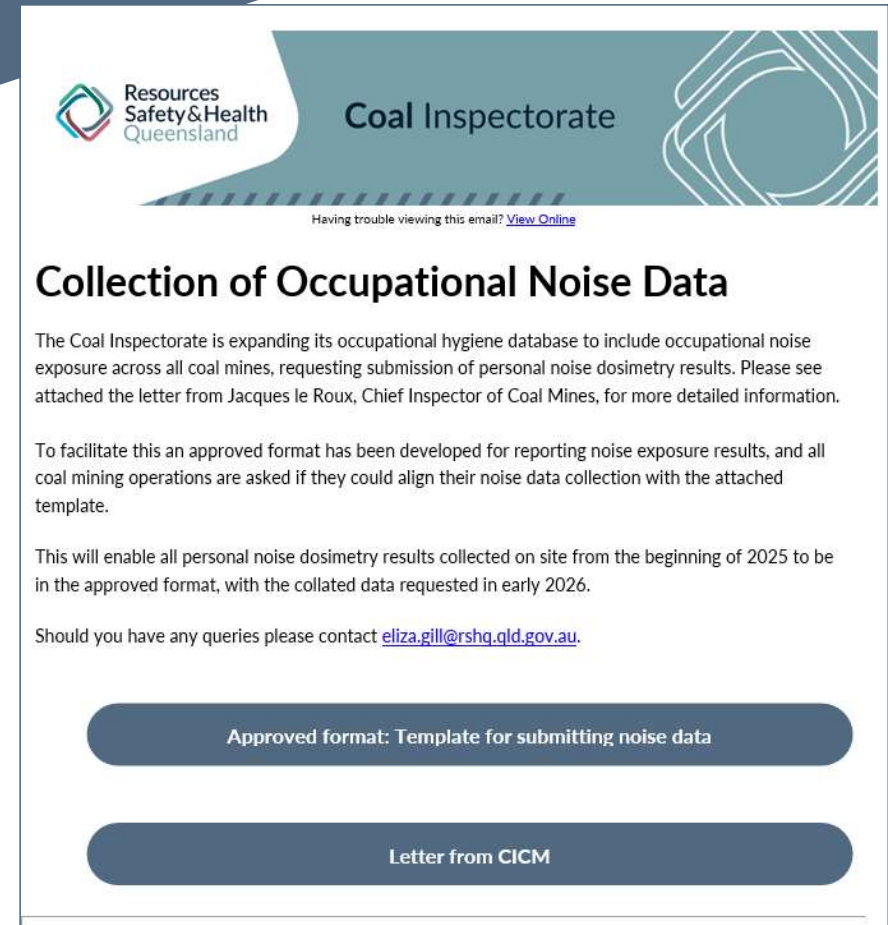
Recommendations for SSEs

- Apply the 0.05 mg/m³ shift adjusted guideline limit to all samples.
- Investigate any exceedances. eg. using investigation approach outlined in RS14.
- Review DPM exposure data and update controls as needed, to ensure exposure risk is within limits and as low as reasonably achievable (ALARA).
- Ensure DPM is fully integrated into your SHMS and consider your Principal hazard Management Plans.
- Review the current personal monitoring program

Expanding the database to include Noise with audits to follow

Request to submit annual data

- Ensure your site is collecting noise data in the supplied format for 2025
- First submission will be requested in early 2026 for
 - 2025 noise data (fields mandatory ie: LCpeak.)
 - 5 years historical noise data (2020 – 2024) (some fields not mandatory ie. Lcpeak)
- Scheduled to align with annual monitoring data request
 - Inhalable dust, Welding Fume, DPM, Noise.





QGN: Welding fume management

Public consultation closed

Final review before release end 2025.

Takeaways

- Outlines criteria for monitoring welding fume exposure.
- Includes more specific SEGs .
- Latest information on control options .

Expectations

- Conduct a gap analysis on QGN with your SHMS.
- Consult with shutdown maintenance coordinators/ planners to plan monitoring.
- Identify additional welding SEGs on your site and consult with hygiene providers .
- Review & implement fume control options for your site .

RS16: Polymeric Chemicals

Final drafting next week (Nov 18) before release for public consultation.

Takeaways (for exposure)

- Operational zone boundary changes
- Biological & atmospheric monitoring
- Health surveillance captured in Res-Health
- Heat management for impermeable clothing
- Additional microchamber head space test

Expectations

- Review & provide feedback on draft
- When gazetted conduct a gap analysis

 WARNING	Polymeric Application
POLYMERIC CHEMICAL OPERATIONAL CONTROL ZONE Contact ERZC before entering	Date: 25 March 2025
	Shift: Night shift
	ERZC: M Burnett
	Supervisor: F Gordon
	Type: Cavity fill
	Location: Chock 111 - 114.
	Additional hazard information and PPE Requirements
	TARPS: Level 2 Heat TARP active. Level 2 strata TARP active.
	Hazards: Fluid lines under pressure. Corrosive substances.
	PPE: As per SOP if working in ZOO.
	Other: Report to paramedic at end of shift if participating in biological monitoring.

Requesting NO and NO₂ monitoring data

Workplace exposure limits for nitrogen oxides (NO & NO₂), 10x fold reduction proposed by Safe Work Australia, may have significant implications for underground coal mines.

Initiative presented at DPM forum (23 July) and CSMHAC (26 August)

Information requested:

Monitoring period: 17 October to 31 January 2025.

Sampling periods: Minimum 30 shifts.

Work locations: Development Panel, Longwall Panel and Place change/Bord & Pillar operations.

Sampling points: Tag Board, Last cut through, and Return.

Ventilation quantity in each sampling location.

Measurements required: NO, NO₂, CO concentrations using calibrated personal gas detectors (PGDs).



Report data using template supplied, by 28 February 2026

Sample # (Take 1 sample each day for 30 days)	Date	Day shift / night shift	Diesel tag board Location	Total # of machines	Mines Machine Identity	Model of each machine	KW of Engine power	Time at TAG Board (00:00 hrs)	Vent Quantity at TAG Board (m3/s)	NO at Tag board (ppm)	NO2 at Tag board (ppm)	CO at Tag board (ppm)	Last open cut through	Time at Last Open cut through (00:00 hrs)	a t
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Requesting NO and NO₂ monitoring data

Mining Area (Circle)		Development Panel Longwall Panel Place Change/BP		Sample Date		____/____/____		
Mining operation		Production shift Maintenance Shift				(D/S or N/S)		
Personal Gas Detector <ul style="list-style-type: none"> Model: Serial: Calibration date (last): 				Samples to be collected in a position: <ul style="list-style-type: none"> Center of roadway at height approx. 1.2m At least 20m away from nearest diesel machine At least 20m away from discharge from ventilation fan/ tube/ ducting 				
List Diesel Machines on Tag Board below		Sample Location		Sample readings				Notes
Mines Machine Identity Eg. LD001, LD003	Model of each machine Eg. Torque Titan	Mine Area	Mine Location	Sample Time (00:00 hrs)	Vent quantity (m ³ /s)	NO (ppm)	NO ₂ (ppm)	CO (ppm)
		TAG BOARD						
		FACE (last open cut through)						
		RETURN						



RS20: Dust control in surface mines

Continuing to see gaps in the roll out of this on sites.

Directives and SCPs being issued.

Areas for improvement include:

- HME cabin ventilation standards – pressurisation (20 or 50 Pa), HEPA filtration (fresh intake & recirc), pressure monitoring.
- Respiratory protection program
- Exceedance investigation process (RS14)
- Education on dust awareness

Future Focus Areas for Inspectorate

Heat	Gap analysis against QGN 32 completed & SHMS updated. Implementation of Heat TARP effective.
Dust - Surface mines (RS 20)	Dust controls specified in RS20 are being applied, monitored and maintained effectively in practice. HME mobile cab ventilation standards documented and installation complete.
Dust – U/G mines	Dust controls specified in RS15 are being applied, monitored and maintained effectively. Dust control TARPs effective and respond when conditions change.
Welding Fume	Gap analysis against QGN Weld Fume. Exposure monitoring of relevant SEGs. Implementation of higher order control options in addition to RPE (PAPR).
HRA, PHMPs	PHMPs for dust & airborne contaminants aligned with CMSHR s 102A and QGN 35 Critical controls, performance standards & trigger levels.



Questions?

Thank You



Coronado for hosting the venue and catering



Thank You



Two forums planned for 2026



Send through your requests for Topics and Locations using the Feedback form

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Please provide feedback





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