Cut the Dust Conference

Coal Services



Mark Shepherd
Order Compliance and Industry Support Manager
Chairman, NSW Standing Dust Committee

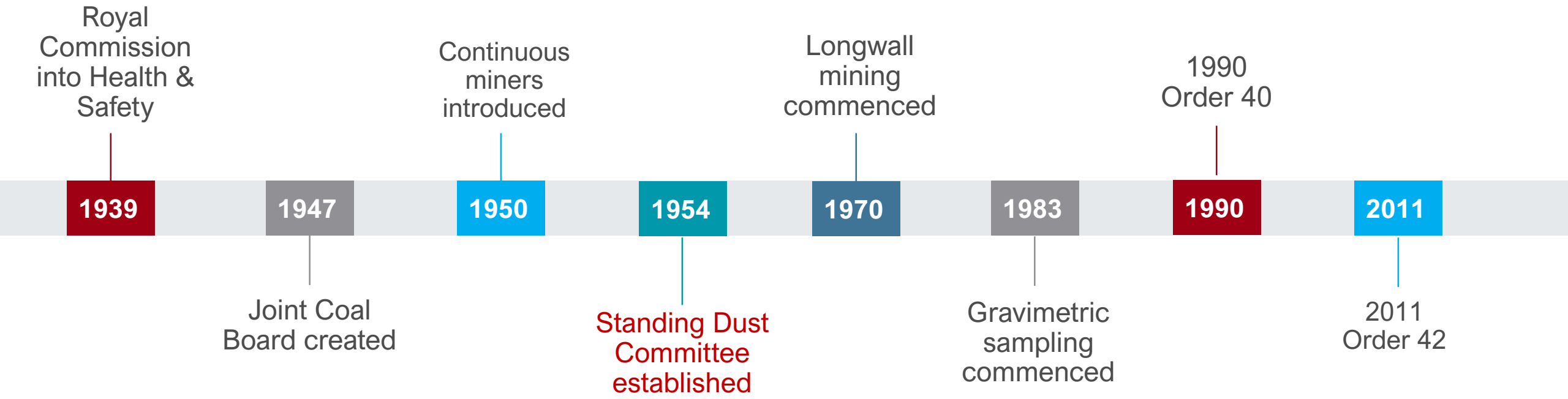
February 2020

Origins and overview of the Standing Dust Committee

Coal Services

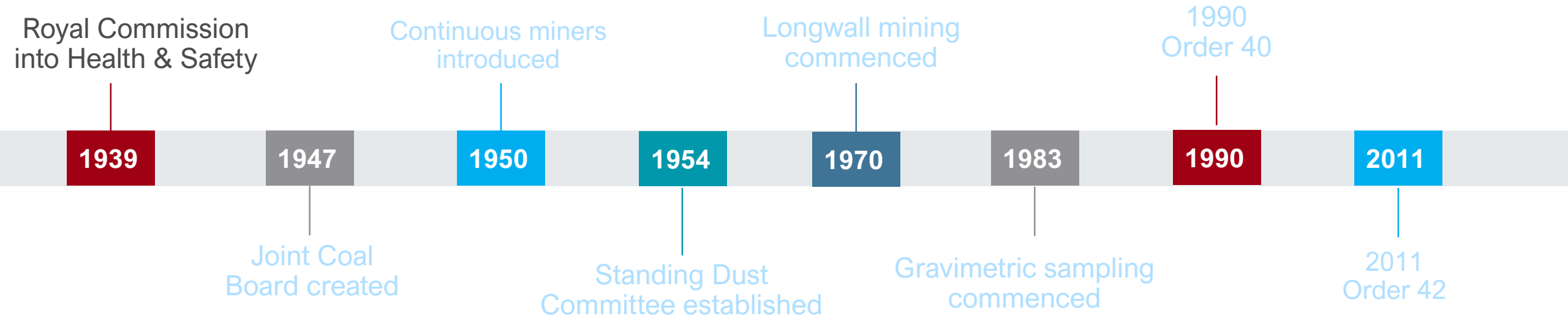
Standing Dust Committee origins and overview

Coal Services



Key events

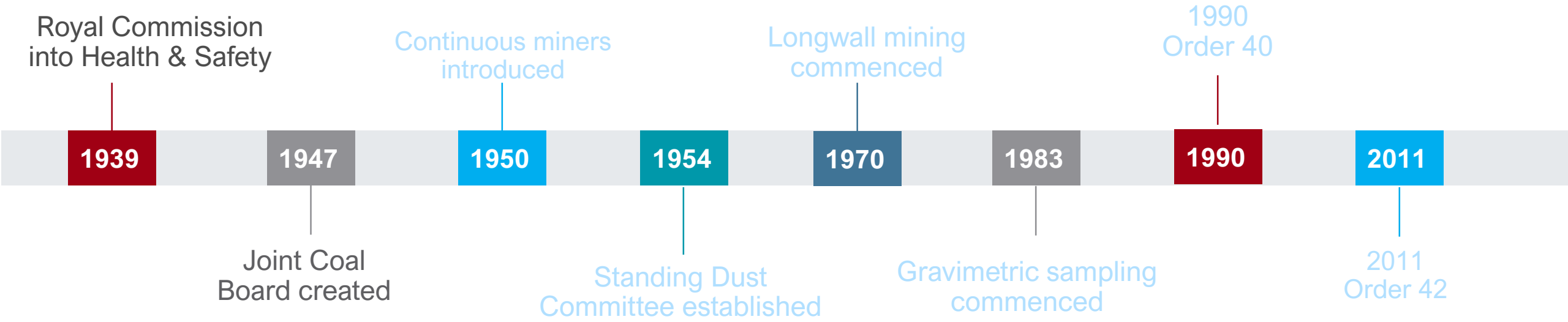
Coal Services



- In the decade leading up to the creation of the Joint Coal Board, the problem of dust-related lung disease amongst coalmine workers attracted widespread public attention
- This resulted in the 1939 Royal Commission into Health and Safety
- The Royal Commission recommended a minimum dust concentration standard in coal mines

Key events

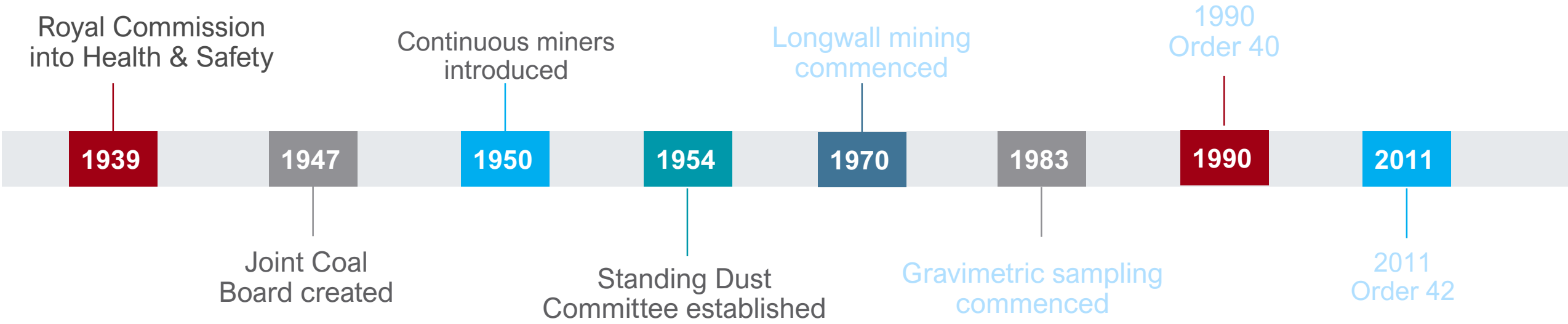
Coal Services



- In 1946, dust-related lung disease was prevalent in the NSW coal mining workforce
- At that time, pneumoconiosis prevalence in the workforce was 16% (all categories) and 4.5% (category two or worse)
- The creation of the Joint Coal Board (JCB) in 1947 provided greater institutional and government commitment to enforcing compliance with this dust standard
- The JCB began to manage dust suppression techniques and practices that had been mandated by amendments to the *Coal Mines Regulation Act*

Key events

Coal Services



- To maintain this focus and provide independent oversight, The Standing Committee on Dust Research and Control was formed in 1954
- This Committee was tasked to drive the strategic monitoring of dust levels and to support research on methods of dust suppression
- Representatives were drawn from all key sectors of the industry

Standing Dust Committee Membership

Coal Services

Original (1954)

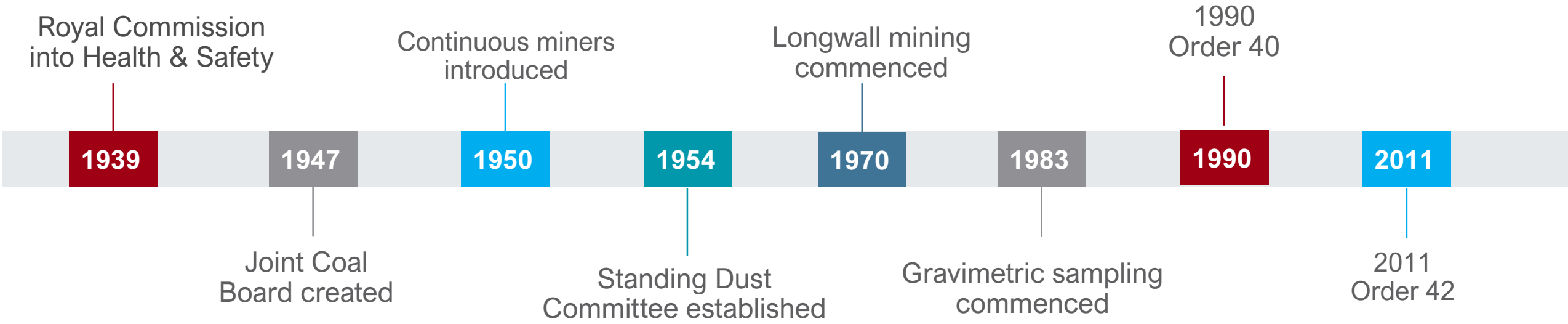
- Joint Coal Board
- Department of Mines
- Colliery Proprietors of NSW
- Miners Federation
- ACIRL/AusIMM

Current (2020)

- Coal Services
- NSW Resources Regulator
- NSW Minerals Council
- CFMMEU
- Mine Managers Australia Association
- Independents

Key events

Coal Services



- This Committee remains in place today and is known as the Airborne Contaminants and Occupational Hygiene Standing Committee or Standing Dust Committee (SDC).

- Reviews every individual dust exceedance on a bi-monthly basis discussing cause (contributing factors), mitigations (review actions/outcomes), RPE compliance and resample observations.

- Updates from the Resources Regulator.
- Current health surveillance status and any insights
- Diesel particulate matter

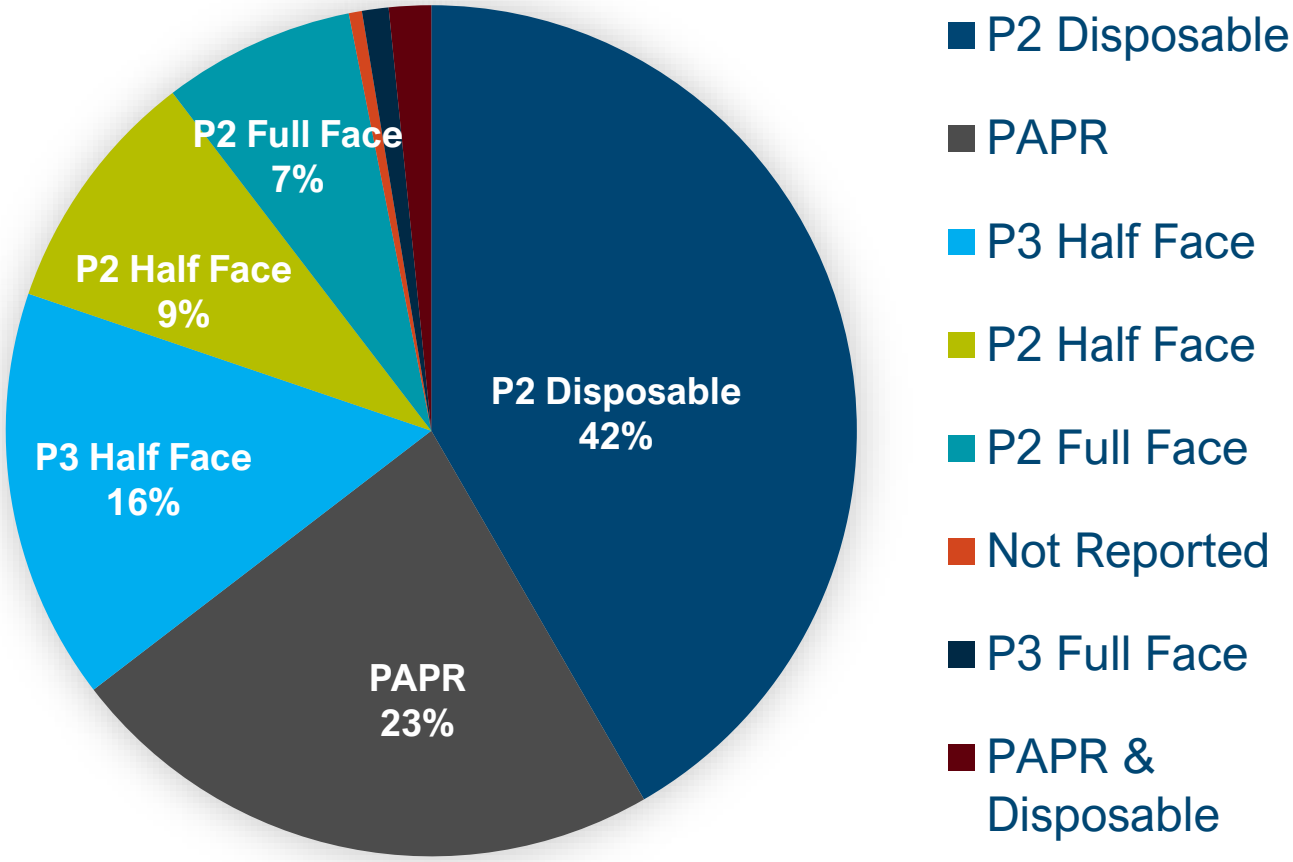
Longwall Tasks	Average Respirable Quartz	
	0.1 mg/m³ WES	0.05 mg/m³ WES
Operate Shearer	47%	94%
Operate Supports	35%	70%
Fitter	33%	66%
Deputy	30%	60%
Electrician	25%	50%
Maingate	25%	50%

<25% WES	25-50% WES	51 – 100% WES	> 100% WES

Coal Services

2019 Longwall Respirable Quartz

RPE use for Quartz Results >50% WES

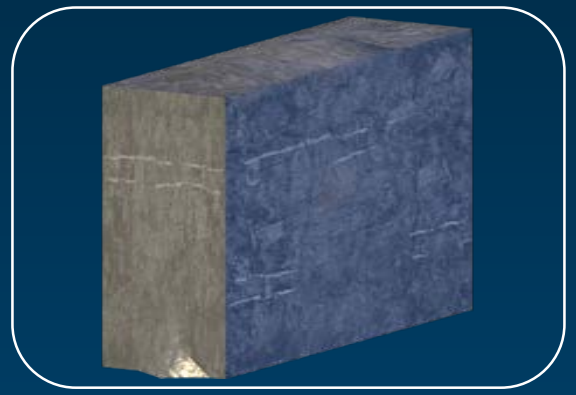


Coal Services

2019 Longwall Respirable Quartz

Longwall – 2019 Airborne Dust Exceedance Contributing Factors

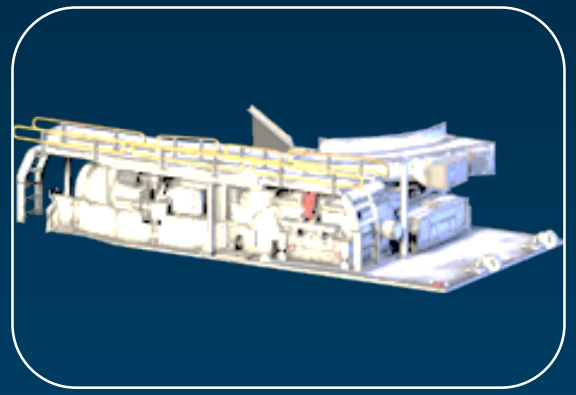
Coal Services



72%

Cutting Stone

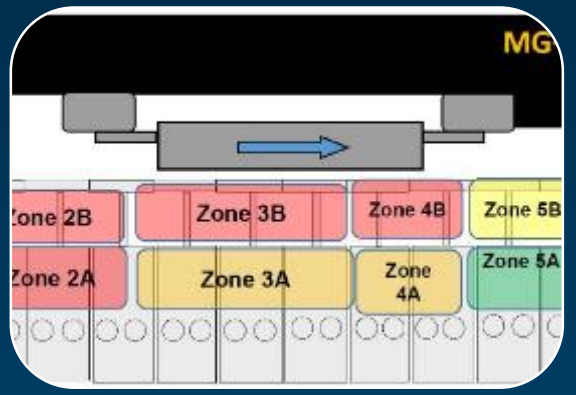
▲



53%

Dust generated at BSL/AFC/Crusher

▲



36%

Operator Positioning

▼

28%

Poor Spray/Suppression Maintenance

▼

Key learnings from dust exceedance investigation reviews and good practice observations

Coal Services

1 Consider what may harm by disease, not just injury.

Coal Services

Operating procedures need to be revised to consider dust exposure.

Start any procedure review at the original risk assessment to determine if health risks, not just safety risks were identified for the task.

When conducting risk assessments, do we consider what may harm through disease, like we consider what may harm through injury?

Follow the hierarchy of control principles to manage the risk of dust exposure as we do to manage the risk of injury.

2 Dust control is most effective when applied at the source

Coal Services

When applying engineering controls, focus your efforts at the source.

Once dust is airborne it is much more difficult to control

In a single working environment, dust can be generated from multiple sources.

Real time monitors can be extremely effective.

3 Have a control plan for changing conditions

Coal Services

Everyone needs to be clear on what we need to do differently to control risk in changing conditions – this includes all crews.

Develop Trigger Action Response Plans (TARPs) as guide for condition change.

Mining conditions are very rarely ‘business as usual’ – conditions are continually changing.

If conditions change, and you’re not sure what needs to be done – Stop and ask.

4 Decide on what checks are required to ensure controls are working as intended.

Coal Services

It shouldn't take an exceedance to review the effectiveness of controls.

We should not rely on monitoring data alone to measure control effectiveness.

Operational check lists can verify the health of your controls – every shift.

There needs to be a sustained effort with this – don't let the standards drop away.

Inspect, maintain and monitor – have a dedicated plan with allocated ownership.

5 Respiratory protection is important.

Coal Services

Develop a structured guide on when it should be used

This structured guide should form part of an overall respiratory protection program

Areas or tasks of risk – take the decision out of the workers hands

Use supporting evidence to implement change

RPE does not replace eliminating the hazard, but it does reduce the risk

6 Leadership is key

Coal Services

The standards we are prepared to accept need to be demonstrated by leaders and supervisors within the group.

‘The way we do things around here’

Deputies, UM’s, OCE’s and any supervisors – the standards you are prepared to accept are the standards you are teaching our current and next generation of workers.

Visible leadership drives that sustained effort that is required to be a ‘high standards’ workplace.

7 Complacency is the enemy

Coal Services

Avoid ‘normalising’ the dust. If you ignore it – you accept it.

If it’s dustier than usual, there’s probably a very good reason.

If it’s dustier than usual don’t ignore it – investigate it.

The health impacts of dust exposure are not immediate.

This latency period is fertile ground for growing complacency.

Coal Services