



MAR 2026

Hygiene update OCE forum

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Resources
Safety & Health
Queensland

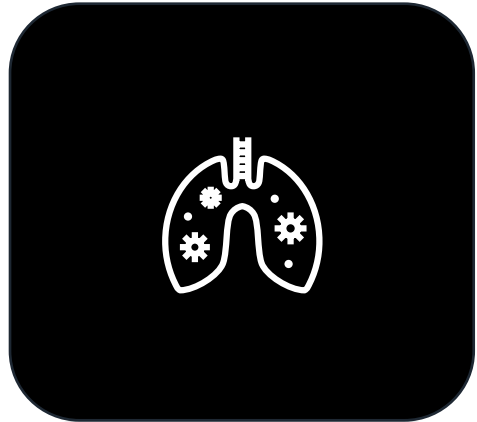
Hygiene update:

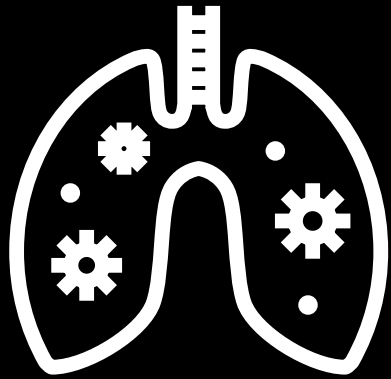
Dust in open cut
Coal mines

Principal Hazard
Management
Plans
(Critical Controls)

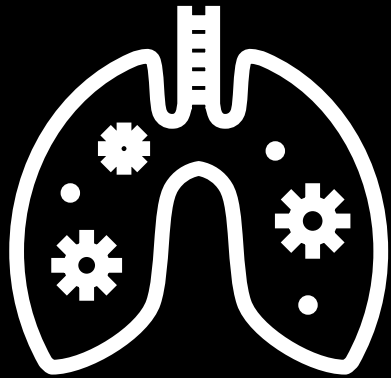
Mobile cabin
ventilation &
RS20
requirements

Other Updates
-Weld Fume
- Dozer WBV





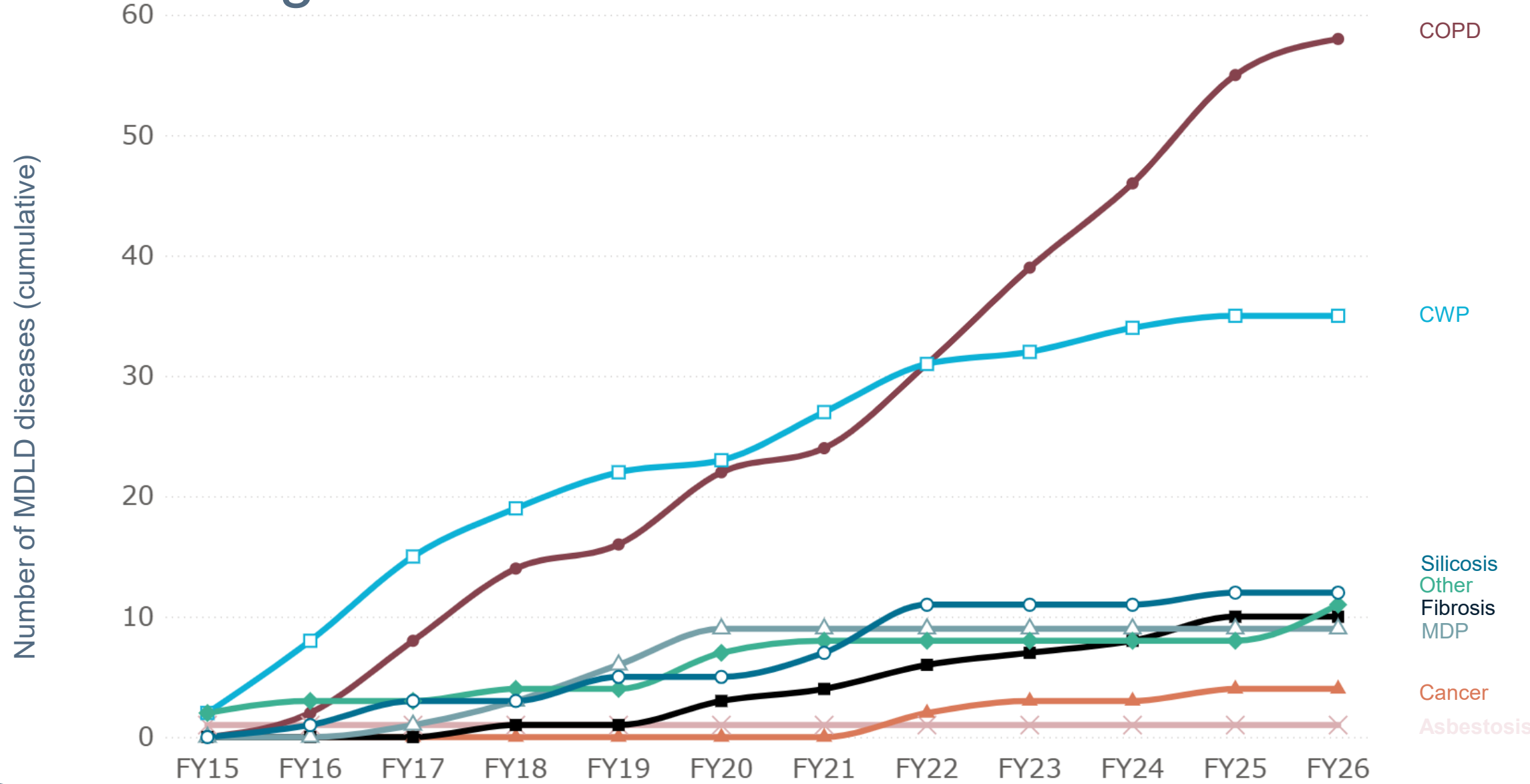
Dust in open cut coal mines



What is the DATA telling us?

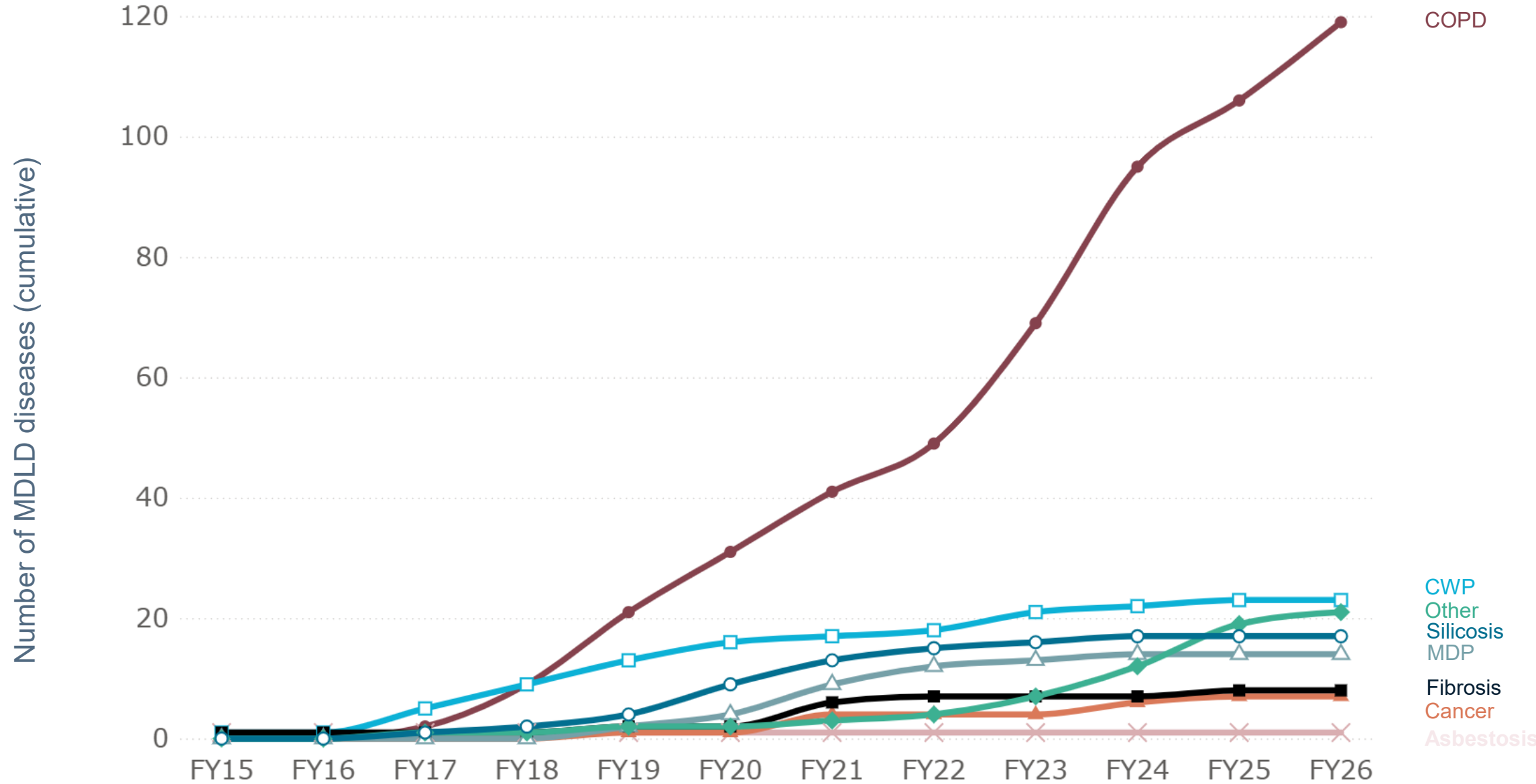
- Health surveillance &
- Monitoring

Current underground coal workers disease trends



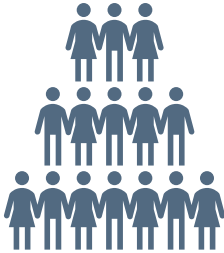
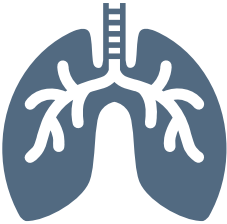
Current as at 31 January 2026

Current surface coal workers disease trends



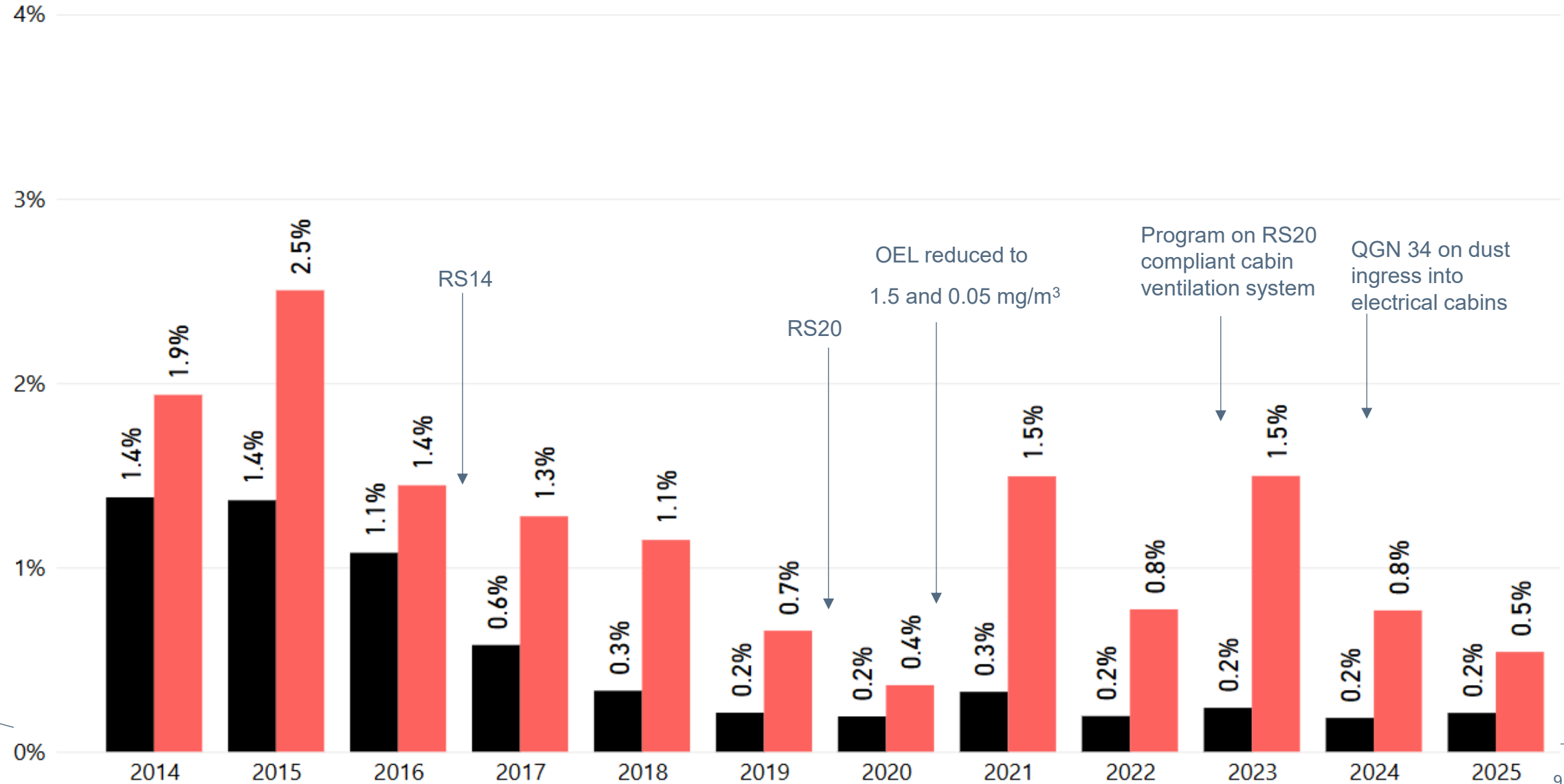
Current as at 31 January 2026

Mine dust lung disease cases also occur at SURFACE COAL mines

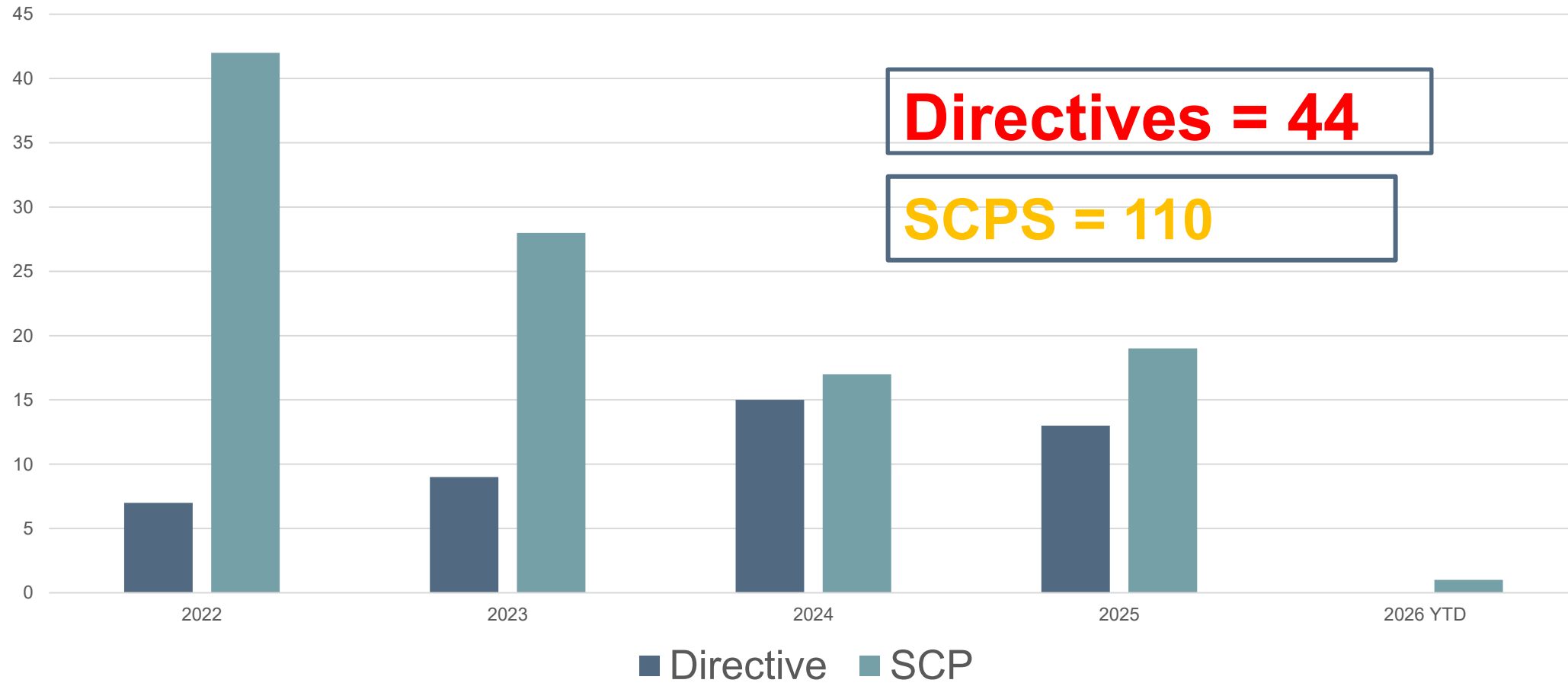
 <p>752 MDLD in total</p>	 <p>531 cases for CMW MDLD</p>	 <p>324 (61%) Surface CMW MDLD</p>
 <p>Pneumoconiosis in surface coal</p>	 <p>CWP in surface coal</p>	 <p>Silicosis or MDP in surface coal</p>

Looking back – percentage of exceedances surface

● Respirable Dust ● Respirable Quartz



Directive/SCP issued relating to dust: Open cut mines

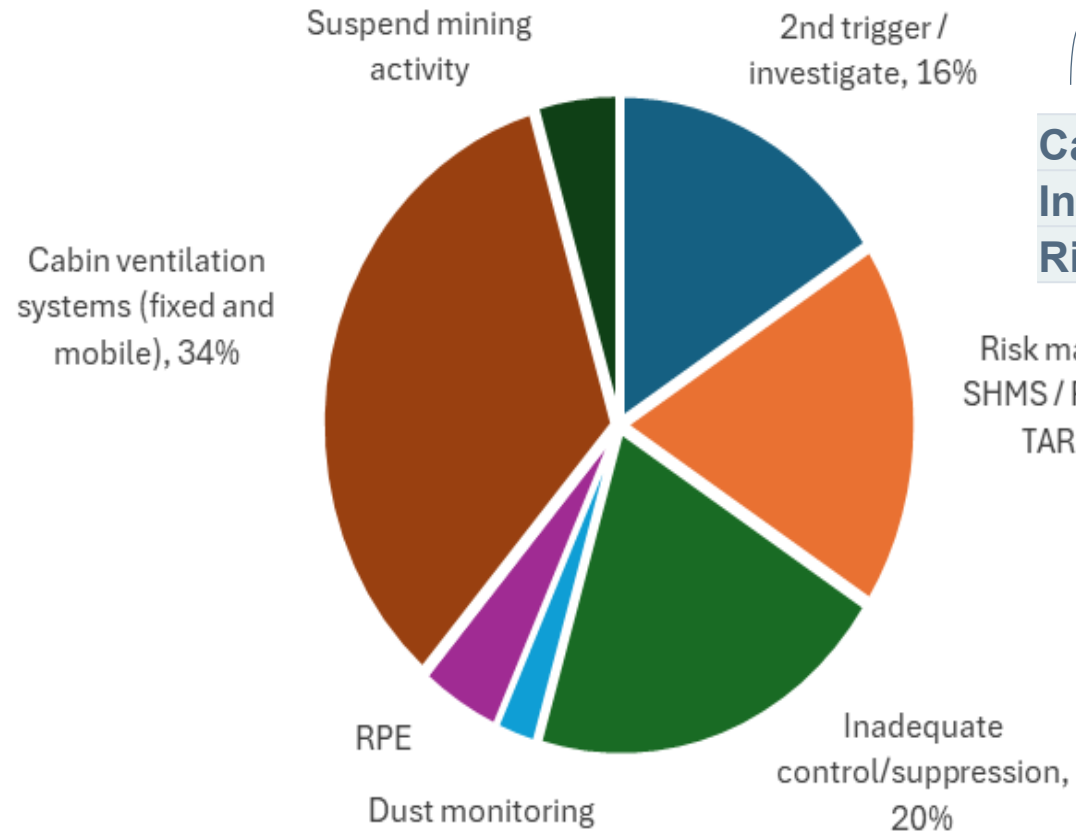


Directives & SCPs reveal where the gaps are for Dust

Subject	Directive	SCP
2 nd trigger exceedance/ investigate	7	1
Risk management SHMS / Procedures / TARPS	8	23
Inadequate control/ suppression	9	35
Dust monitoring	1	3
Respiratory Protective Equipment	2	7
Return To Work	0	1
Training of Coal Mine Workers	0	8
Cabin ventilation systems (fixed and mobile)	15	32
Suspend mining activity	2	0

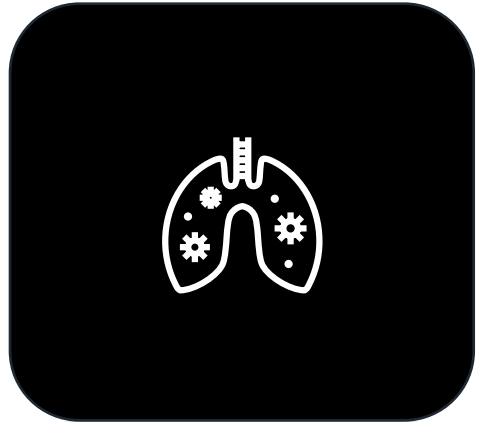
Directives issued

(N=44: 2022-2026 YTD)



> 70%

Cabin ventilation systems (fixed and mobile)	34%
Inadequate control/suppression	20%
Risk management SHMS / Procedures / TARPS	18%





Principal hazard management plans



Principal hazard management plans (& Critical controls)

102A Principal hazard management plan

A **surface mine** must have principal hazard management plans that provide for at the least the following—

- (a) roads or other vehicle operating areas;
- (b) ground or strata failure;
- (c) **airborne dust or any other airborne contaminants;**
- (d) fire or explosion;

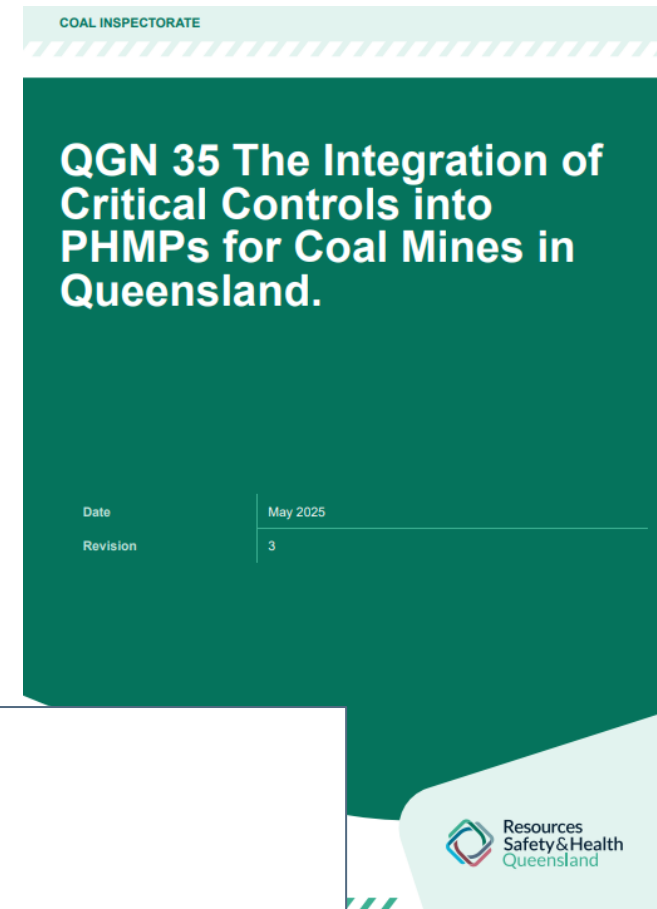
63 Principal hazard management plan

- (1) A principal hazard management plan must—
 - (a) identify, analyse and assess risk associated with principal hazards; and
 - (b) include standard operating procedures and other measures to control risk; and
 - (c) **include critical controls.**
- (2) The site senior executive must give a copy of the principal hazard management plan to a person that employs persons at the coal mine whose work is affected by the plan's requirements.

Acceptable level of risk (~ critical controls)

30 How is an acceptable level of risk achieved

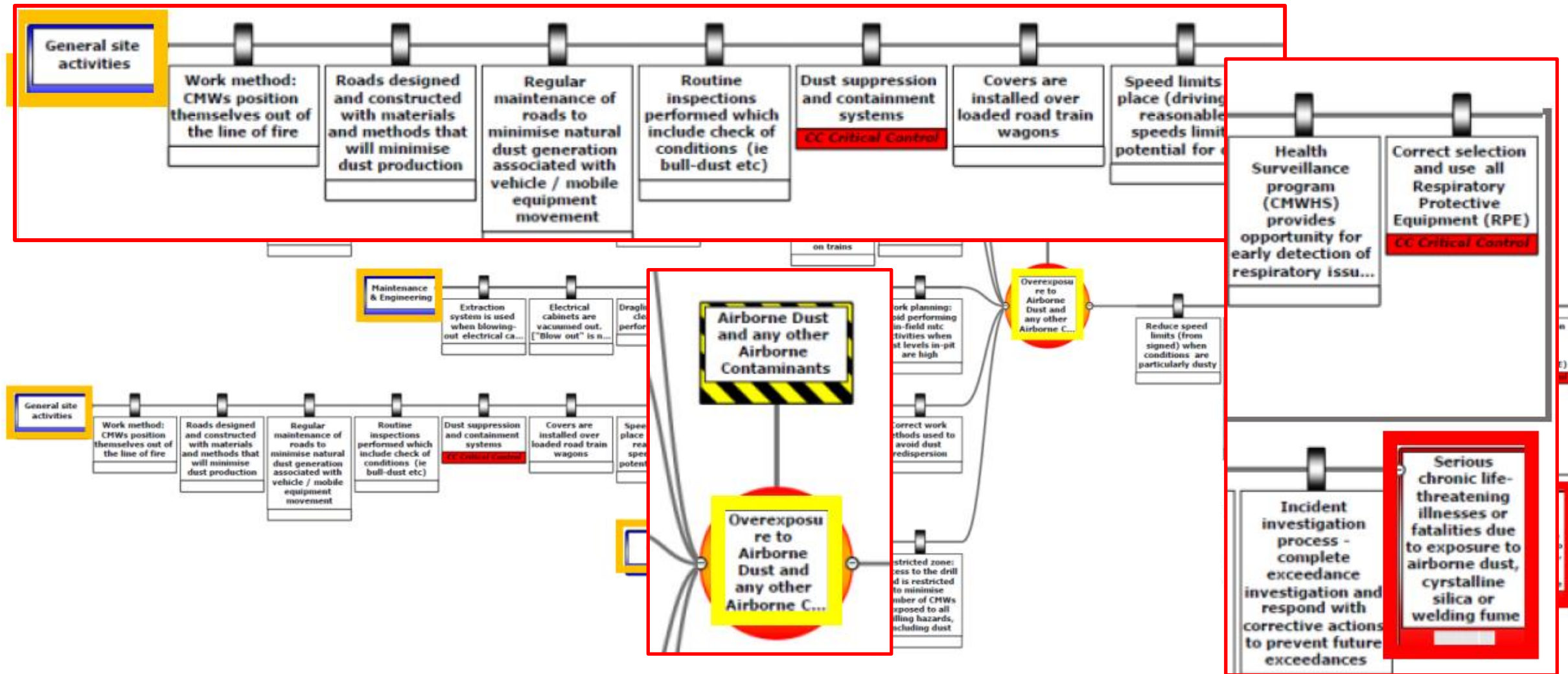
- (1) To achieve an acceptable level of risk, this Act requires that management and operating systems must be put in place for each coal mine.
- (2) This Act provides that the systems must incorporate risk management elements and practices appropriate for each coal mine to—
 - (a) identify, analyse, and assess risk; and
 - (b) avoid or remove unacceptable risk; and
 - (c) monitor levels of risk and the adverse consequences of retained residual risk; and
 - (d) provide for critical controls; and
 - (e) investigate and analyse the causes of serious accidents and high potential incidents with a view to preventing their recurrence; and
 - (f) review the effectiveness of risk control measures, and take appropriate corrective and preventive action; and
 - (g) **critical control means a risk control measure for a coal mine—**
 - (a) that is critical to—
 - (i) prevent a material unwanted event at the coal mine; or
 - (ii) mitigate the consequences of a material unwanted event at the coal mine; and
 - (b) the absence or failure of which would significantly increase risk despite the existence of other risk control measures.
- (3) Also registered



Principal hazard management plans

- What contaminants are included in your mine's PHMP
for airborne dust or any other airborne contaminants ?
- **Respirable coal dust, Respirable crystalline silica** (prescribed)
- Inhalable dust, Welding fume ?
- Flammable and Toxic gases ?
- These identified through Health Risk Assessment (HRA) & Broad Brush (BBRA) conducted at the mine ?
- What is the 'material unwanted event' we are trying to prevent?
 - Over exposure of CMWs (above Occ Exposure Limits) ?

Example Bowtie analysis to identify dust critical controls:



Critical Controls for Dust: An open cut example

Critical Controls	
1 Dust suppression and containment systems	✓ Dust suppression and containment systems are installed and maintained to minimise and / or contain dust
2 Operator cabin dust control system	✓ Equipment operator cabins are designed, installed and maintained to prevent the entry of airborne dust particles
3 Ventilation and dust extraction system	✓ Ventilation and extraction systems are installed, maintained and functioning to remove airborne dust / contaminants
4 Respiratory Protection Equipment (RPE)	✓ CMWs are adequately protected from airborne dust / contaminants through the proper selection, fit and use of RPE

Critical control ‘performance standard’

- Example: Mobile cabin ventilation (OCE’s Role)

2. Operator cabin dust control installed and operating as intended

Principal Hazard	Airborne Contaminants	
Risk Owner (Role)	HSEC Manager	
Critical Control	Operator cabin dust control system.	
Critical Control Owner (Role)	Truck Shovel Superintendent	
Control Purpose	To ensure equipment operator cabins are designed, installed and maintained to prevent the ingress of respirable airborne dust particles.	
Specifications - description of good/ideal control performance; this should be a functional description of what performance is required - by human action(s)/behaviour(s), and/or by physical objects/devices.		
Human Behaviour(s)		Physical Object(s)
1. Operator cabin dust control system designed and installed correctly.		1. Operator cabin dust control system.
2. Operator inspects cabin dust control system and acts to report/rectify defects.		2. Operator cabin dust control system inspection instruction.
3. Maintenance worker completes inspection/testing on cabin dust control systems and rectifies issues.		3. Cabin dust control system maintenance strategies in place.
Erosion Factors - Factors that could cause the control to fail or lessen in its effectiveness over time.		
Human Behaviour(s)		Physical Object(s)
1. Poor design/installation cabin dust control system.		1. Operator cabin dust control system not fit for purpose.
2. Operator lacks understanding of cabin filtration system limits and fails to recognise indicators of unserviceability, reducing the effectiveness of exposure control over time.		2. Cabin dust control systems inspection instructions not provided.
3. Inadequate maintenance inspection/testing of operator cabin dust control system or issues/defects not rectified.		3. Maintenance strategies not established / implemented, or identified defects are not appropriately actioned.
Control Support Activities - Activities which are not a control themselves but are crucial in ensuring the control can sustainably operate as specified.		
Human Behaviour(s)		Physical Object(s)
1. Inspections completed by competent, authorised operators.		1. Training package / authorisation.
2. Maintenance inspection/testing completed by competent maintainers as planned.		2. BiStrainer learning management system.
Verification Requirements		
Completed by	Complete the following	Frequency
Control Owner	Task compliance Review all FRCOs completed in the last 3 months. 1. Were FRCOs conducted in accordance with expected standard (notes/photos/ corrective actions included)? 2. Were identified actions from FRCOs completed within the required timeframes? 3. Were FRCOs completed across the range of controls to adequately cover the risk in the period? 4. Were all scheduled FRCOs for the review period completed on time? 5. Are FRCO verifications adequately distributed across all the different work locations? If no, complete FRCO in location not covered.	Quarterly

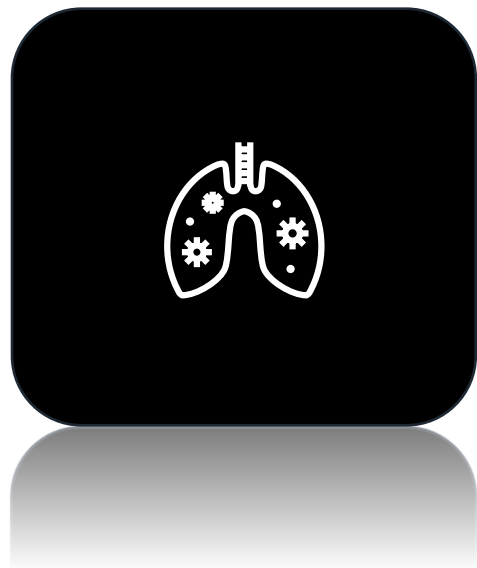
- High level details of the Critical Control – Risk Owner, Control Owner, control name and purpose

- Specifications for good/ideal control performance in relation to Human Behaviour and Physical Objects

- Erosion factors that could cause the control to fail or lessen effectiveness

- Control Support Activities

- Verification Requirements



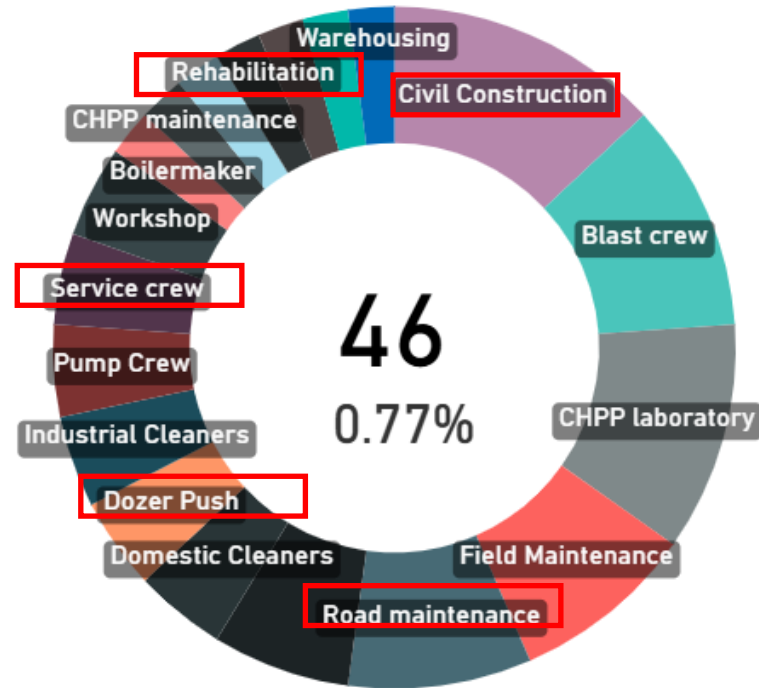


Mobile cabin ventilation & RS20 requirements

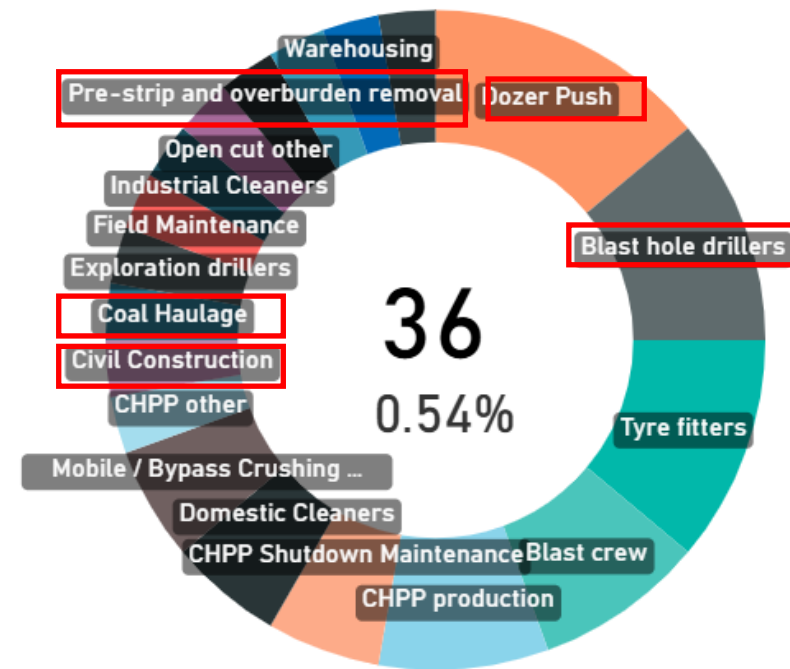
Where exceedances are occurring in open cuts

Respirable crystalline silica (RCS) – HME in Cabins

2024 (HME ~ 50 %)



2025 (HME ~ 30 %)





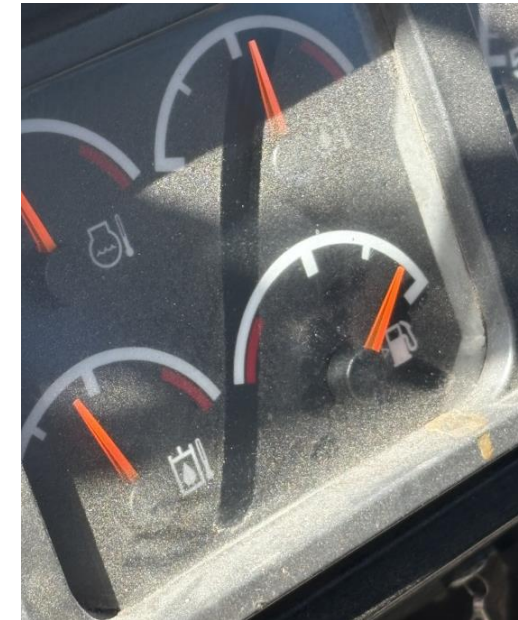
- Continuing to see gaps in the roll out of effective cabin ventilation systems - Many mine sites have started but progress has stalled or the install is incomplete.

- Directives and SCPs are being issued.

- Key Areas for improvement include:
 - ✓ Fresh air pressuriser not installed onto Cabin
 - ✓ HEPA filters not installed on the fresh air intake pressuriser
 - ✓ HEPA filters not installed on the recirculating vent inside cab
 - ✓ Cab not pressurisation to 20 - 50 Pa
 - ✓ Not monitoring to verify In-Cab pressure.

Loader – Engine grade filters (not HEPA)

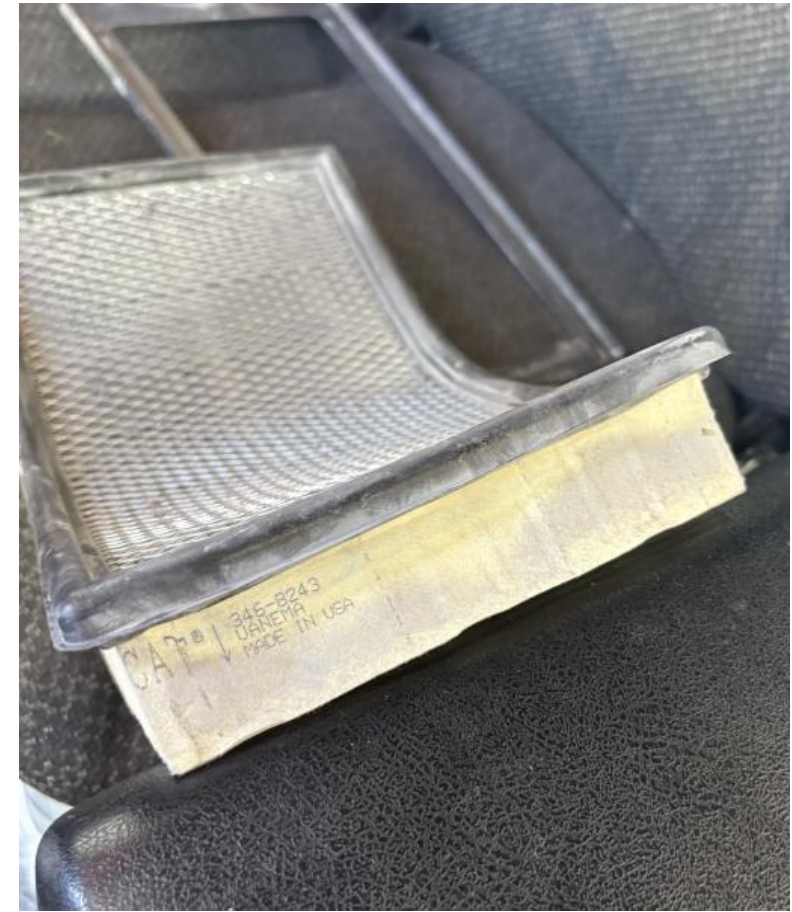
- By-pass leakage directed into inside cabin



Dozer – HEPA intake/ Engine grade



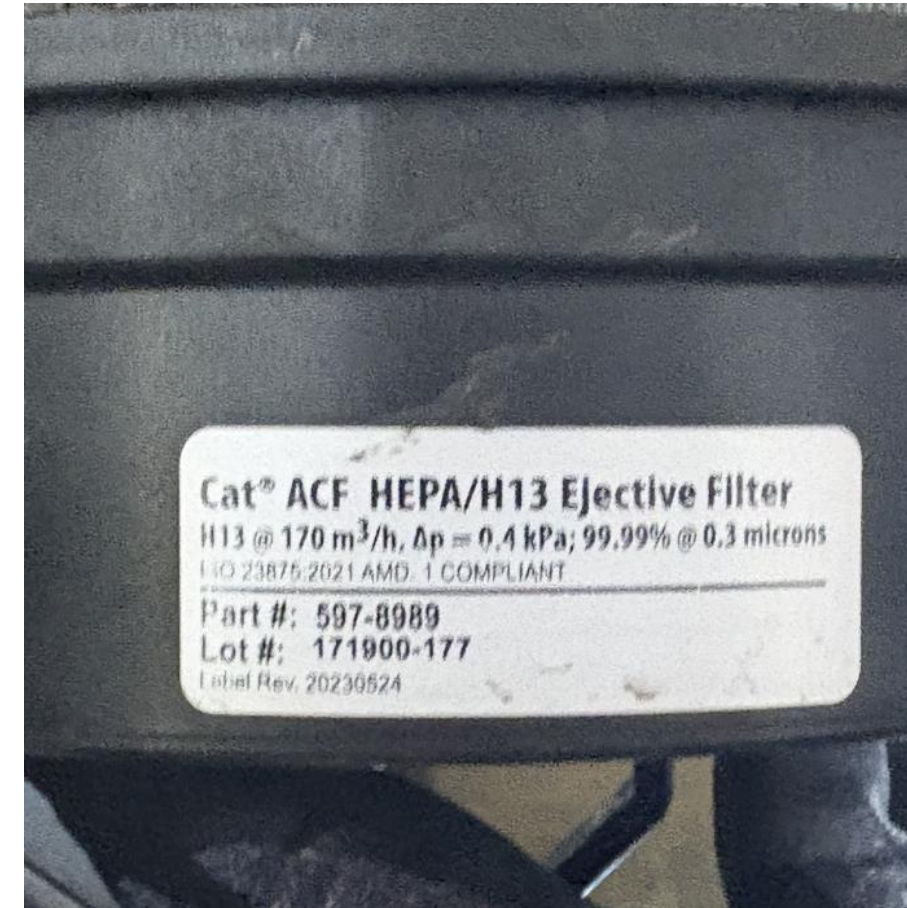
Dozer – HEPA intake/ Engine grade Recirc vent ???



Rear Dump – HEPA intake/ Engine grade Recirc vent – dust leakage into cabin



Rear Dump - HEPA intake/ Engine grade Recirc vent – pressure monitoring - dust leakage into cabin



Filter Class to be clearly shown on external label



Inspection process – clearly documented

VEMP inspection sheet

14 Machines with Ground Engaging Tools (Dozer, Loader, Drill, Excavator, Skid Steer)			
	Pass	Fail	NA
14.1 Fitted with a filter system which supplies pre-cleaned and filtered air to the cabin that passes through a high efficiency particulate air (HEPA) filter of minimum Class of H13 (Breathsafe system or similar)			
14.2 Cab pressure is maintained to a minimum 20 Pascals (20Pa) and fitted with a device to warn the operator if pressure drops below 20Pa.			

VEMP Procedure

4.2.4 Cabin/Cab

- The interior of the cabin must not have any loose components or sagging hood linings
- Enclosed cabin must be pressurised and sealed to prevent dust from entering
- All operational controls and gauges in the cabin are operational, secure and legible
- The speedometer must be operational where fitted
- All control pedal rubbers are fitted, not worn and secure
- Ensure air conditioning is operational in enclosed cabin
- Ensure enclosed cabins are not cleaned with compressed air

Vehicles fitted with Ground Engaging tools including but not limited to, Dozers, Loaders, Drills Excavators, Skid Steers must be fitted with the following

- a filter system which supplies pre-cleaned and filtered air to the cabin that passes through a high efficiency particulate air (HEPA) filter of minimum Class of H13 (Breathsafe system or similar)
- Cab pressure is maintained to a minimum 20 Pascals (20Pa) and fitted with a device to warn the operator if pressure drops below 20Pa.



Inspection process - Maintenance

INSPECTION		
PRESSURISED CAB		
CHECK	1	2
Inspect blower motor and fan for damage.		
SEALS & INTEGRITY		
Inspect cabin and ensure all cover panels are in place and any holes sealed with grommets, sealer, etc.		
Use leak detector to check for any other leaks. Seal as required.		
Inspect BreatheSafe unit for mounting integrity and damage.		
Clean the cab with a vacuum (do not use a brush or compressed air).		
Clean out the ambient pressure tube (Pipe A). Ensure it is re-installed correctly.		
HEPA Fresh Air Filter: inspect for dust load or damage. Vacuum out housing before replacing the filter.		
HEPA Return Air Filter: inspect filter for dust or damage. Vacuum out floor area and surrounds.		

Performing Plant Inspections

INSPECTION PRESSURISED CAB

CHECK	1	2	3	4	Initials
After filter replacement, press the RESET CURRENT RUNTIME and enter the site access pin to reset the new filters to 0 hours. This will ensure that the operators are only notified once the filter service interval hours have been reached for the new filters.					

1 Cabin Pressure 20 Pa

CO₂ Level 200 ppm

Temperature 20 °C

BreatheSafe

3 Enter Pin

7597 CLEAR 0 ENTER

5 Service Runtime Hours Settings

CURRENT RUNTIME 700 SET SERVICE INTERVAL 1000 RESET CURRENT RUNTIME

BreatheSafe

Settings

4

R No.

Defect Comments

Inspection process – Operator checks

COMPLETE BEFORE OPERATING
Equipment Pre-Start and Inspection

Equipment ID: 002 Machine SMU: 40783.4 End SMU hours: 177
 Inspected By: M. Delfin Date: 1/7/7

Item	✓ = Checked and Compliant			X = Defect			Do not operate. Notify Supervisor.
	✓	X	NA	✓	X	NA	
Steering				7			
Service Brake				8			13
Warning System				9			14
Fire Extinguisher				10			15
Operator Seat				11			16
BreathSafe Operability				12			
Fuel Leaks				22			
Water Leaks				23			27
Major Oil Leaks				24			28
Main Access				25			29
Gauges				26			30
Minor Oil Leak				34			37
Wipers/Washers				35			38
Fuel Level				36			
Valve caps are only required for Nitrogen filled tyres							

Notes/Defects:

CHECK
RUNNING CHECKS
 Start the engine to turn on the pressuriser. Ensure all windows and doors are closed correctly. Initiate the System Test – Set Max fan speed. Record pressure below.





Press Settings. Press "System Check - Set Max" box. Record/photograph the cabin pressure result (Max Fan Speed).

Cabin pressure at max fan speed: _____ Pa

SPEC
 INPRESS TL with Auto Pressure Control (5400 RPM) the cabin pressure requirement is 250 Pa (New HEPA Filter).
 INPRESS TL Single Speed Pressuriser Motor (4000 RPM) the cabin pressure requirement is 150 Pa (New HEPA Filter).

If the above pressure is not achieved leave the unit on full speed and investigate for external leaks outside the cabin: e.g. A/C outlets, drains, window & door seals, locks & hinges etc. Use leak detector to assist & seal any leaks.

Continue the sealing and testing procedure as above until a SPEC is achieved.

Please clean the cabin regularly - Use a HEPA-type vacuum and do not use a brush or compressed air.

Troubleshooting - If the display indicates below 50 pascals or low-pressure alarm is activated, please check the following:

Double-check door(s) are fully closed. Double-check window(s) are fully closed.

Double-check for any signs of damage: door, windows seals or missing panels.

If the display indicates below 25 pascals, please check the following:

Monitor the % initial output to BreathSafe cabin pressure display (i.e., 100 % means fresh air filter is completely clear/checked for a significant cabin pressure leak that the pressuriser unit cannot overcome).

Please note: Positive pressure above 25 pascals (50 Z3375 minimum) is adequate until the next available service.

Make sure the fan is not running at 100% to achieve 50Pa. If this is the case, then there is a sealing issue. Investigate and get the fan running below 50%.

Check operation of the Turbo Pre-Cleaner and ensure the spinning rotor is in good working order.

OCE - What to check for Mobile cabin ventilation RS20

**Pressurised
Cabins
(20-50 Pa)**

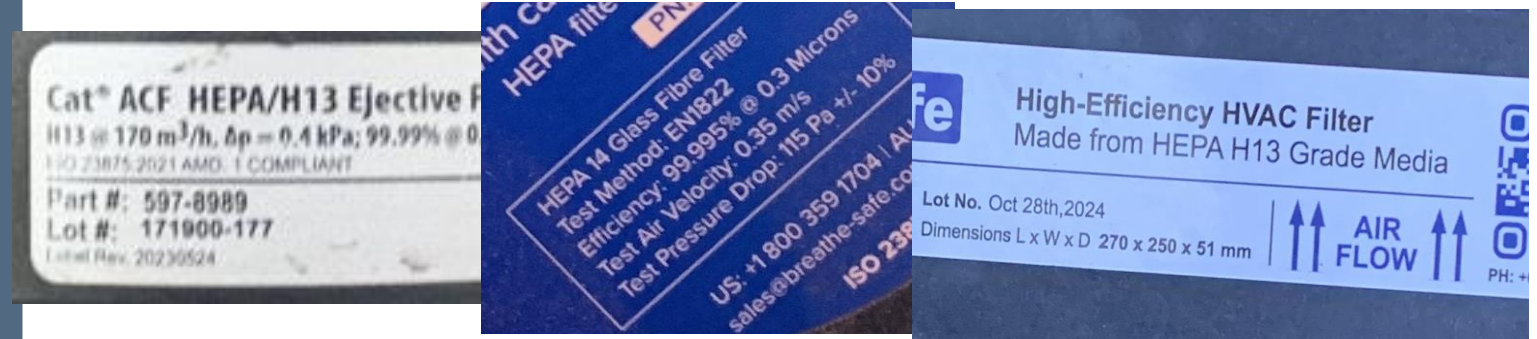


**In cab
pressure
monitoring
system**



OCE - What to check for Mobile cabin ventilation RS20

**HEPA grade
filters labelled –
Fresh air intake
& recirculating**



**Pre-start
inspection
checklist**

COMPLETE BEFORE OPERATING
Equipment Pre-Start and Inspection Sheet

Equipment ID: 002 Machine SMU: 40783.4
Inspected By: M. Belfin Date: 1/7/24 End SMU hours: 40794

Item	Status			Action
	✓	X	NA	
Operator Seat				
BreathSafe Operability				

Legend:
✓ = Checked and Compliant
X = Defect
Do not operate. Notify Supervisor.
Operate only after co-ordination with Supervisor or maintenance

PHMPs - What Role do you play as an OCE ?

Participate in PHMP Risk Assessments

- Contribute to discussion on practical application of Critical Controls

Critical control observations and verification during inspections – site specific

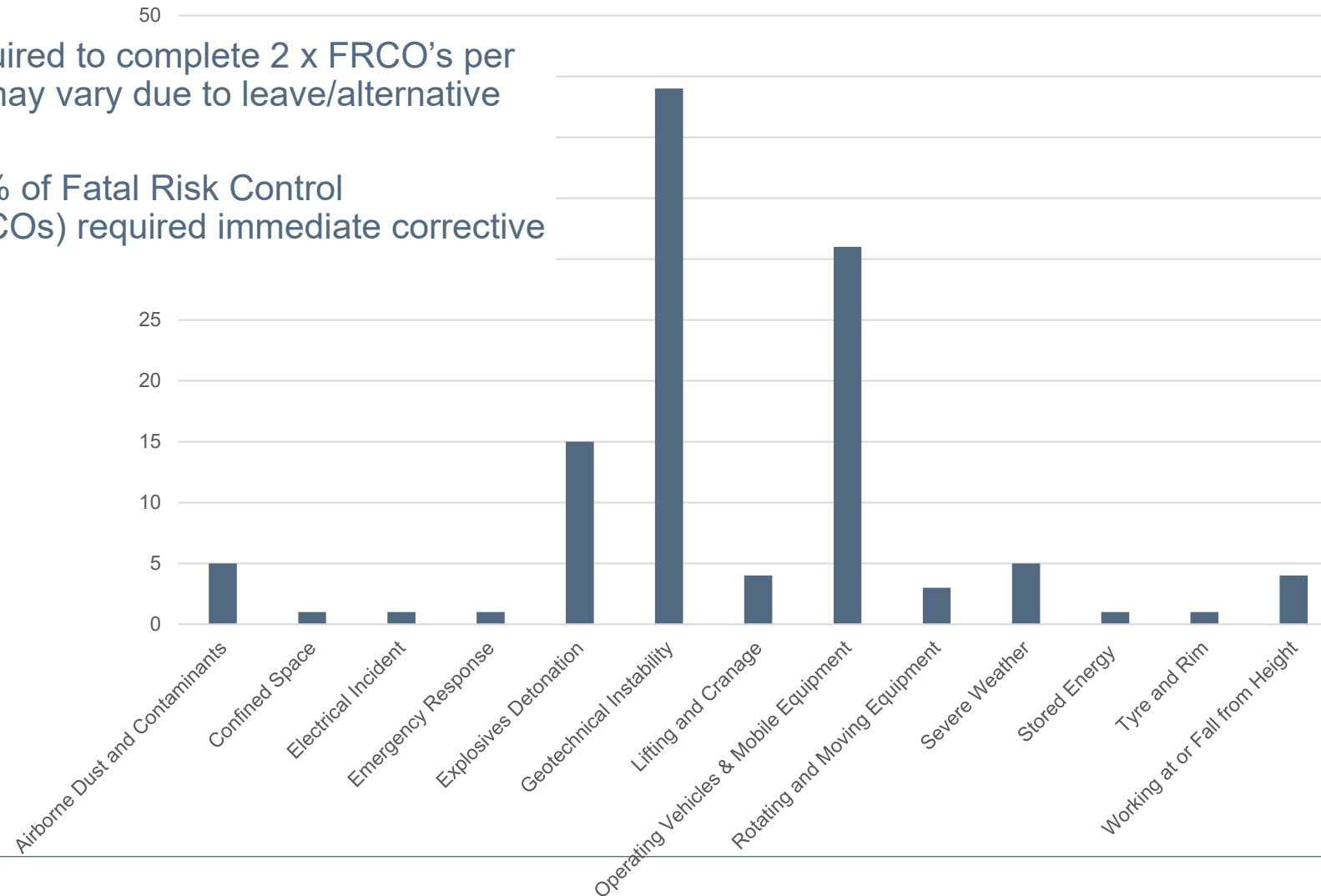
- Mobile cabin ventilation
- Road watering
- Drill and blast pad watering
- Respiratory protection

Example: Fatal Risk Control Observations (FRCO) Completed by Principal/Fatal Hazard



6 x OCE's are required to complete 2 x FRCO's per month. Numbers may vary due to leave/alternative duties.

Approximately 25% of Fatal Risk Control Observations (FRCOs) required immediate corrective actions in 2025.



Example: FRCO – Airborne Dust and Contaminants: Operator Cabin Dust Control System



Title: FRCO of cabin dust controls on selected dozer push dozers (DZ482, DZ482, DZ484 and DZ574)

Summary: Inspection of the cabin pressurization systems on DZ482, DZ483, DZ484 and DZ574.

During the inspection I had a conversation with each operator to identify their knowledge of the systems as well as fault finding (testing operational effectiveness).

Immediate Actions:

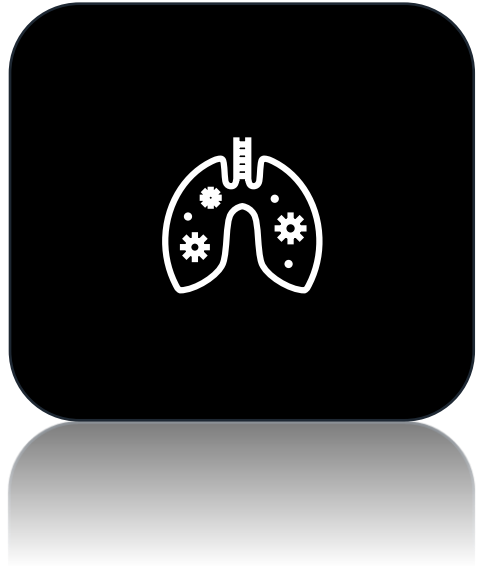
DZ574 was tagged out of service due to nonfunctioning breathesafe system

Up to date prestart book given to operator of DZ574.

Gaps:

It was Identified that operators have not received training or familiarization with the system. (Operators unaware how to identify faults) – Action was generated by Risk Owner to conduct familiarization training for breathesafe systems with all dozer push crews

Some prestart books currently in circulation do not identify the cabin pressurization system as a category 1 fault.





Other updates

- Weld Fume
- Dozer WBV

Welding fume Guidance note released (Dec 2025)

Queensland Guidance Note QGN36

Managing welding fume in coal mines

Date	December 2025
Revision	1.0

- Targeted exposure monitoring on boiler makers doing high risk exposure activities.
- List of practical & effective fume control options to choose from.
- Respiratory protection requirements clearly described.

Hastings Deering released a statement on WBV in D11

Supplier advisory notice: Hastings Deering Whole Body Vibration on D11 track type tractors

It has been brought to our attention that some Coal Mine Sites have had issues with Whole Body Vibration on D11 Track Type Tractors. We have worked with those customers to find the cause and have partnered with Caterpillar to learn how to minimize that Vibration experienced by the Operators.

Friday 23 January 2026

Hastings Deering has advised RSHQ's have had issues with Whole Body Vibration

09/18/2025

Procedure to Measure and Shim Idler Height and Evenly Distribute Bogie Pad Loads for Best Ride, Performance, and Durability on Certain D11, D11N, D11R, and D11T Track-Type Tractors {4159, 7217} (M0181326)



Resources Safety & Health Queensland

Coal Inspectorate

Supplier advisory notice:
Hastings Deering Whole Body Vibration on
D11 track type tractors

9/25/2025

Checklist for Resolving Machine Ride, Vibration, or Grade Issues {4150, 7000} (M0172489-02)

We ask anyone that has any questions to contact their local Cat dealer and reference the aforementioned Special Instructions and Service Magazine.

Yours faithfully,

Nick Yates
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Questions?



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