



ADOPTION JOURNEY

Continuous Real-time Monitoring



IPFANI THENGA

Ventilation and
occupational hygiene
engineering superintendent

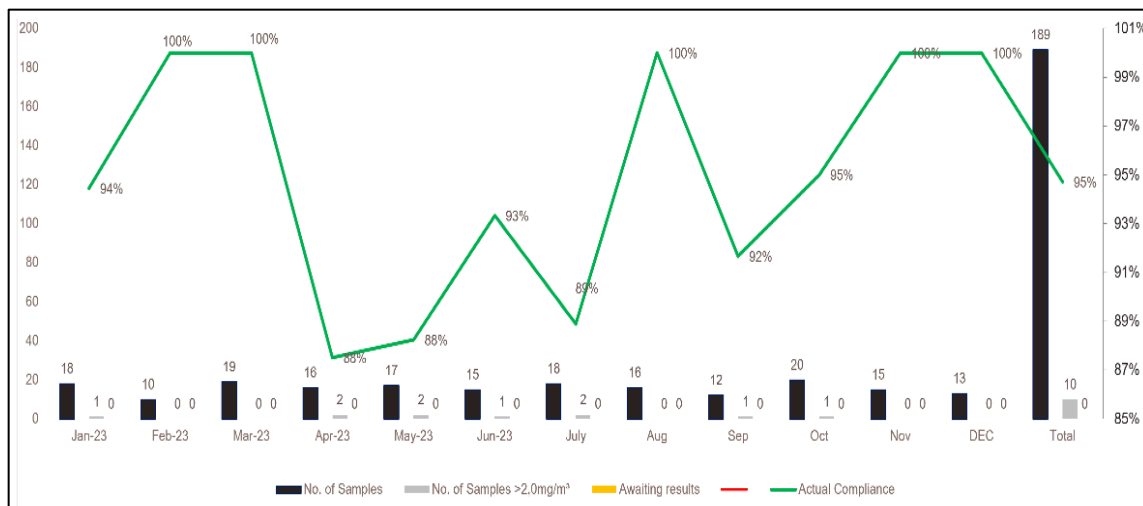


CONTENT

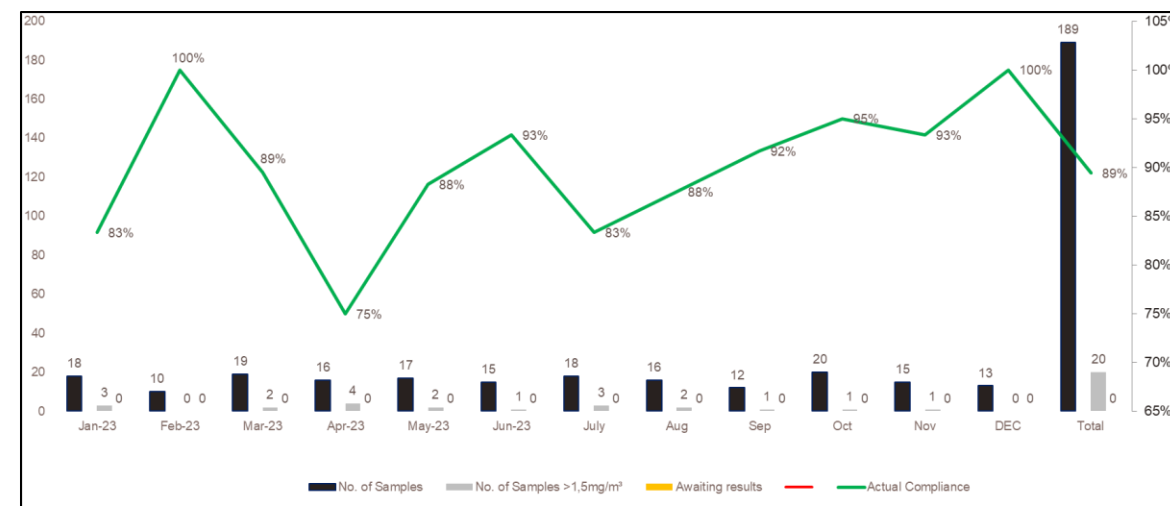
- 1 Background
- 2 Adoption Timeline
- 3 Organisational Stance
- 4 The Approach
- 5 Pay offs & Summary

WHERE WE WERE: DUST COMPLIANCE 2023

2023 Personal dust compliance > 2,0mg/m³



2023 Personal dust compliance > 1,5mg/m³ Milestone readiness

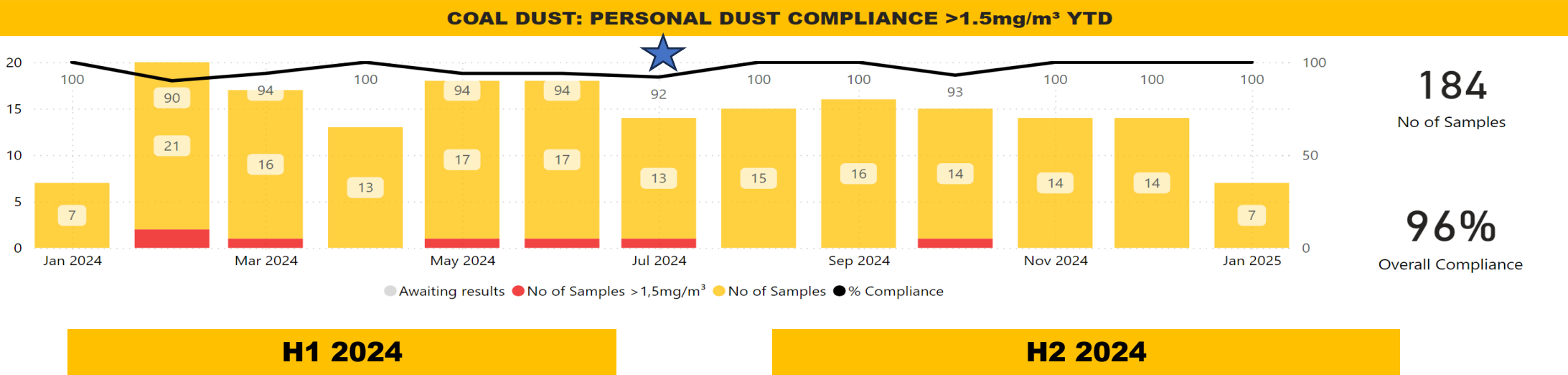


Key takeout: 2023

- ❑ 10 over-exposures > 2.0 mg/m³
- ❑ 20 over-exposures > 1.5 mg/m³

RACE TO 2024 MILESTONE

Summary of progress:



Dust exposure issue:

- ☐ Initiatives to mitigate dust overexposures were deployed.
- ☐ These measures have successfully brought overexposures above 2.0 mg/m³ under control.

Pertinent Issue:

- ☐ We recorded 7 over-exposures above 1.5 mg/m³

Assessment & Path Forward:

- ☐ Insufficient output.
- ☐ The safety of personnel in High Exposure Groups (HEGs) is paramount, and persistent over-exposure puts them at risk for developing severe, life-altering health conditions.
- ☐ Renewed and focused effort is required to achieve full compliance and safeguard.

RACE TO 2024 MILESTONE: NOV REFLECTION POINT

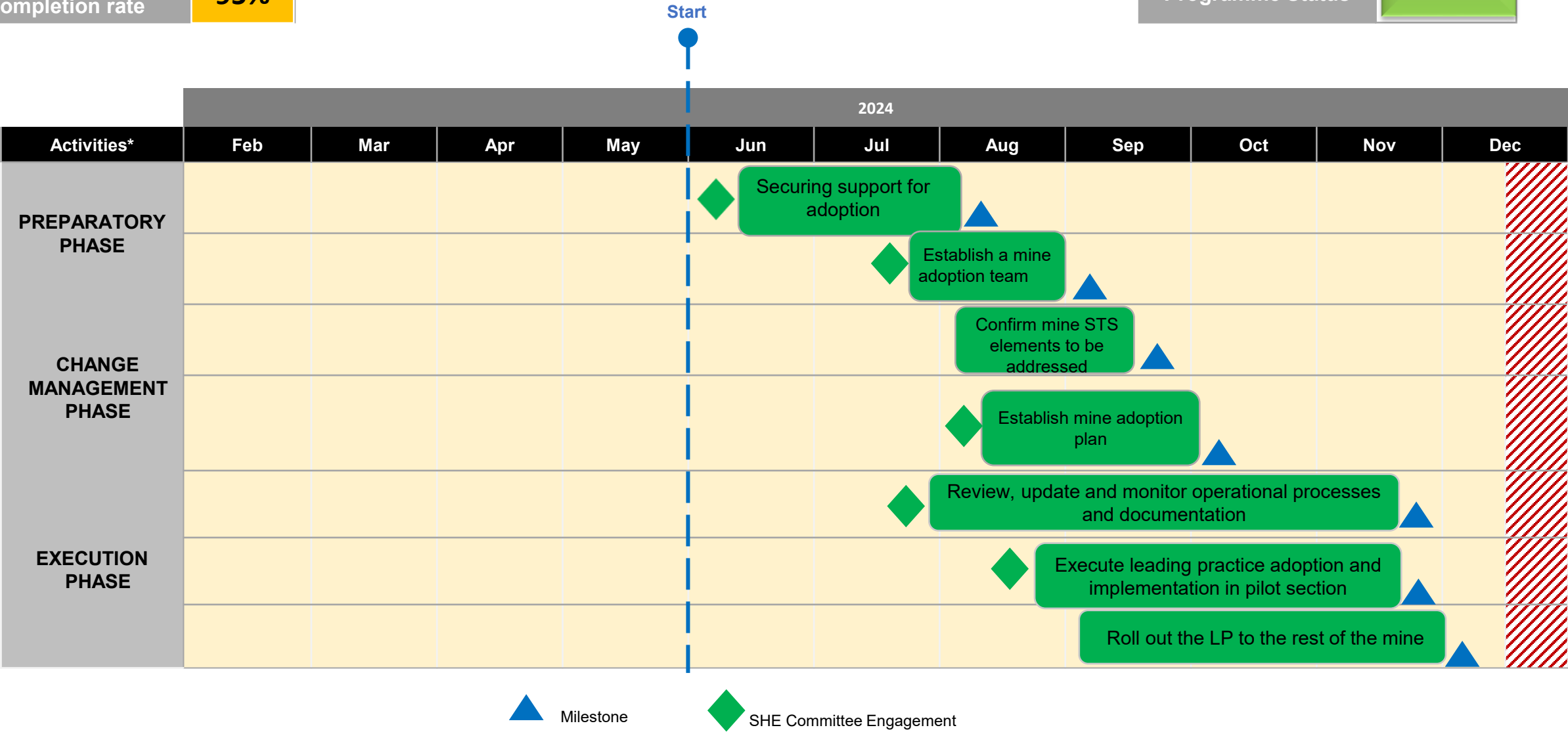


Estimated adoption Completion rate

95%

Programme Status

On Track



DECISION TO ADOPT: ORGANIZATION'S STANCE ON CRTM



From: Innocent Mahlangu
Sent: Tuesday, August 6, 2024 10:12 AM
To: Enslin Jacobs <jacob.enslin@Thungela.com>; Simphiwe Mahlangu <simphiwe.mahlangu@Thungela.com>; Peter Sekano <peter.sekano@Thungela.com>; Jacques Borain <jacques.borain@Thungela.com>
Cc: Karen Kirk <karen.kirk@Thungela.com>; Moses Maredi <moses.maredi@Thungela.com>; Hein Reyneke <hendrik.reyneke@Thungela.com>; Patricia Chabalala <patricia.chabalala@Thungela.com>; Mduduzi Mashinini <Mduduzi.Mashinini@thungela.com>; Sizwe Ntumba <sizwe.ntumba@thungela.com>; Vincent, Greg <gregory.vincent@Thungela.com>; Ernest Ramoroka <ernest.ramoroka@Thungela.com>; Nozipho Dlamini <nozipho.dlamini@Thungela.com>; Albert Nhasengo <albert.nhasengo@thungela.com>; Bart Van de Steen <bart.vandesteen@Thungela.com>
Subject: FW: MOSH Adoption Documentation

Good morning leaders,

Thungela has taken a decision to officially adopt the MOSH Leading Practice on Dust Continuous Real-Time Monitoring (CRTM) static (sections intake dust) and CM.

The leading practice aims to prevent worker exposure to dust.

All the three underground operations are well ahead with the adoption of the leading practices from a system installation point of view.

The adoption process focuses on behavioral communication (to address knowledge gaps and misperceptions) and leadership behavior (to facilitate desired behavior). Without the buy-in and support from the affected/impacted employees underground, "top down" implementation of the practice is likely to be short-lived.

Regards,
Innocent

A red circular stamp with the text "THUNGELA COMMS" in black, uppercase letters. The stamp is slightly tilted and has a thick red border.

THUNGELA COMMS

DECISION TO ADOPT: THE TEAM



RISK REVIEW AND ADOPTION DECISION

I, the undersigned have been made aware of the risk review checklist in terms of the following

Leading Practice(s): Real Time Dust Monitoring on Continuous
Miner

I am representing Thungela (Group), Goedgehoop Colliery (Mine)
and based on the findings as per risk review checklist below made the following decision:

Decision: Adopt the Leading Practice *Real Time Dust Monitoring on Continuous Miner*: ☒ Yes / No

Signed: 
Name: ENSLIN JACOBS
Designation: VOME SUPERINTENDENT
Date: 16/08/2024



NAME OF OPERATION APPOINTMENT OF MINE ADOPTION TEAM

In terms of the adoption of Leading Practices methodology as per the Mining Industry Occupational Safety and Health (MOSH) process you are hereby appointed by the manager to be part of the Mine's adoption team for the:

- *Real Time Dust Monitoring on Continuous Miner Leading Practice*

I, the undersigned accept the appointment as member of the Real Time Dust Monitoring on Continuous Miner *Leading Practice*

Name: ENSLIN JACOBS
Designation: VOME Supt
Signed: 
Date: 16/08/2024



APPOINTMENT OF MINE ADOPTION CHAMPION

In terms of the adoption Leading Practices methodology as per the Mine Occupational Safety and Health (MOSH) process you are hereby appointed to be the Mine MOSH Adoption champion for the *Real Time Dust Monitoring on Continuous Miner Leading Practice*

Your role will be:

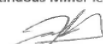
1. Leading the project and championing the leading practice and the adoption process at the mine which is crucial to the success of the adoption process.
2. Commit time to fulfil the role of mine adoption champion, noting that systematic execution of the adoption process and successful adoption of the leading practice should become a key performance criterion in the selected person's performance contract with the mine.

Mine manager

I will provide the relevant resources for sustainable adoption.

Signed: 
Name: H.J. REYNEKE
Designation: N.M.
Date: 16/08/24
Champion

I, the undersigned accept the appointment as the Mine- MOSH Champion for the *Real Time Dust Monitoring on Continuous Miner leading practice adoption*.

Signed: 
Name: ENSLIN JACOBS
Designation: VOME Supt
Date: 16/08/2024

A multidisciplinary team of health, engineering, and operational specialists was appointed to lead the MOSH CRTM initiative (Airborne Pollutants Engineering Controls Leading Practice), ensuring technical rigour and frontline practicality.

DECISION TO ADOPT: THE TEAM



RISK REVIEW AND ADOPTION DECISION

I, the undersigned have been made aware of the risk review checklist in terms of the following

Leading Practice(s): DUST LEADING PRACTICE IN ACHIEVING THE
2024 MILESTONES (ELIMINATE 95% OF ALL EXPOSURE VIOLATIONS)

I am representing THUNGELA (Group), GROENEHOP (Colliery) (Mine)

and based on the findings as per risk review checklist below made the following decision:

Decision: Adopt the Leading Practice *Continuous Real Time Monitoring [CRTM] of Airborne Pollutants Engineering Controls*: Yes / No

Signed: [Signature]

Name: ENSLIN JACOBS

Designation: VOHE Supt

Date: 16/08/2024



NAME OF OPERATION APPOINTMENT OF MINE ADOPTION TEAM

In terms of the adoption of Leading Practices methodology as per the Mining Industry Occupational Safety and Health (MOSH) process you are hereby appointed by the manager to be part of the Mine's adoption team for the:

- *Continuous Real Time Monitoring [CRTM] of Airborne Pollutants Engineering Controls Leading Practice*

I, the undersigned accept the appointment as member of the Real Time Dust Monitoring on Continuous Miner *Leading Practice*

Name: ENSLIN JACOBS

Designation: VOHE Supt

Signed: [Signature]

Date: 16/08/2024



APPOINTMENT OF MINE ADOPTION CHAMPION

In terms of the adoption Leading Practices methodology as per the Mine Occupational Safety and Health (MOSH) process you are hereby appointed to be the Mine MOSH Adoption champion for *Continuous Real Time Monitoring [CRTM] of Airborne Pollutants Engineering Controls Leading Practice*

Your role will be:

1. Leading the project and championing the leading practice and the adoption process at the mine which is crucial to the success of the adoption process.
2. Commit time to fulfil the role of mine adoption champion, noting that systematic execution of the adoption process and successful adoption of the leading practice should become a key performance criterion in the selected person's performance contract with the mine.

Mine manager

I will provide the relevant resources for sustainable adoption.

Signed: [Signature]

Name: H.J. REYNOLDS

Designation: n.p.

Date: 16/08/24

Champion

I, the undersigned accept the appointment as the Mine- MOSH Champion for the *Continuous Real Time Monitoring [CRTM] of Airborne Pollutants Engineering Controls leading practice adoption*.

Signed: [Signature]

Name: ENSLIN JACOBS

Designation: VOHE Supt

Date: 16/08/2024

DECISION TO ADOPT: ORGANIZATION'S STANCE ON CRTM

**VOHE & EMPLOYEE WELLNESS**

90% of exposure measurements results

YTD 100%- Zero overexposure on personal dust sampling

Noise emitted by individual pieces of equipment to be below 104db(A)

YTD 100% - No Machine

90% triple-testing and 100% on ART

90% VCT. 100% ART

- Improved recognition of employees for reporting SHE related issues.
- Intake airway real-time dust monitoring: Phase 1: Install IS dust monitoring units at all section intake airways (Achieved)
- Phase 2: Install in RAW Due date 30 June 2025 (Achieved)
- Custom-made Hearing Protection Devices maintenance and calibration (Achieved)
- Implement noise CRTM in high-risk areas/workshops (Achieved) Due date 30 June 2025



The formal integration of CRTM into our 2025 SHE Plan demonstrated Goedehoop's (Previously owned operation) strategic commitment to health, and the initial results confirm its effectiveness in safeguarding our employees. This initiative was submitted to the Exco team and received full support.

COMMUNICATION & ROLL OUT: FEEDBACK LOOP TO SHE COMMITTEE

H&S COMMITTEE MEETINGS

GOEDEHOOP COLLIERY

DATE02.06.2025

PROJECT TITLE	STANDARDS COMMITTEE: GOEDEHOOP		
TIME & VENUE	GH Main Boardroom & MS Teams: BT / VMR		
DOCUMENT STATUS	AGENDA	MEETING MINUTES	
ATTENDEES	A Sibanyoni, V Mosebele, NC Hlatshwayo, M Ngwenya, M Tshusa, S Matentshe, C Mahalela, I Vilakazi, MK Maredi, I Thenga, M Gwambe, L Modise, J Musile		
APOLOGIES	M Nkuna, B Moalusi		

#	AGENDA ITEMS	RESP	
1	Welcome		
1.1	Welcome & Check in	Bridget	
2	Attendance Register	RESP	
	See Above		
3	Safety Talk		
4	Matters Arising	RESP Due date	
5	DOCUMENTS	PROPOSED ACTION/NOTES RESP DUE DATE Extended date	
1.	Geotechnical Logging Sampling and Testing	- Author not available M Nkuna	
2.	Perform Drain And Rinse Screening Operations	- To be signed I Vilakazi	2025/06/13
3.	Protocol Reaction to GST Technology	- Author not available B Moalusi	New Doc
4.	Sampling Conveyor Belt	- Hold I Vilakazi	2025/06/09 2025/06/30
5.	Sampling Vibration Centrifuge	- To be signed I Vilakazi	2025/06/09
6.	Plant Shutdown Conveyor Inspection	- To be signed I Vilakazi	2025/05/02
7.	Preparing a Sample Using a Jaw Crusher	- Hold I Vilakazi	2025/06/09 2025/06/30

1 | Page

GOEDEHOOP COLLIERY

8.	Preparing sample using reisch mill	- Hold	I Vilakazi	2025/06/09	2025/06/30
9.	Product Sampling	- To be signed	I Vilakazi	2025/06/09	
10.	DMRE Implementation Plan Update		I Thenga	N/A	N/A
11.	Thungela Promulgated Regulation 16 Implementation Plan		I Thenga	N/A	N/A
12.	Thungela Promulgated Regulation 22.9 Implementation Plan				
6	Documents due for Presentation 26 Feb 2025				
	- Train Handling Procedure		Ivin		
	- Metallurgical Accounting Standard		Ivin		
	- Report Sign Off Standard		Mohau		
	- Support Standard & Procedure				
7	Published Documents - All Documents signed off and distributed	Title	RESP	PUBLISH DATE	
8	Approval of Special Instructions			Note	No. of promises
8.1	Special Instructions	All Special instructions once drafted to be presented during the Standards meeting.			
9	Upcoming COP s/SOP s/Policies	PROPOSED ACTION/NOTES	RESP	DUE DATE	No. of promises
10	Completed MOC	PROPOSED ACTION/NOTES	RESP	DUE DATE	No. of promises
11	General	PROPOSED ACTION/NOTES	RESP	DUE DATE	No. of promises
	S standards meeting	All Band 6's to connect on Teams. HOD's, Section Heads, and	Band 6's/Sec Head/ Authors / HOD's	6 Dec 2023	

2 | Page

GOEDEHOOP COLLIERY

	Authors are to attend from the Boardroom.			
The meeting was closed at 15:05	Next meeting 30 June 2025			

3 | Page

GOEDEHOOP COLLIERY
Private Bag X410
Vandysdrif
MPUMALANGA
2245

[OFFICIAL]

thungela

ATTENDANCE REGISTER FOR STANDARDS COMMITTEE MEETING

HELD AT GOEDEHOOP COLLIERY, MAIN BOARDROOM & MS TEAMS

Date: 02/06/2025

Time: 14:30

No.	Name	Designation	Department	Signature
1	V. Masekela	Miner Planning	TSD	
2	NC Hlatshwayo	EMSR	Safety	
3	M. Masekela	SECUR	Safety	
4	M. Masekela	SECUR	Safety	
5	S. Matentshe	Act. FHSE	Safety	
6	C. Mahalela	CSP	Safety	
7	T. Vilakazi	Plant Manager	Metallurgy	
8	M. Masekela	EM	Production	
9	I. Thenga	Vehicle Supd	VHSE-TSD	
10	M. Gwambe	Met Manager	Management	
11	H. Vilakazi	Act. Doc Controller	Safety	
12	L. Modise	HR Manager	Management	
13	J. Musile	Training Manager	Training	
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				

A member of the Thungela Resources Limited group
Anglo Operations Proprietary Limited
Incorporated in the Republic of South Africa. Registration Number: 182100973007
Registered Address: 25 Bath Avenue, Rosebank, 2195, PO Box 1521, Sandown, 2131
info@thungela.com | www.thungela.com

COMMUNICATION & ROLL OUT: Awareness Across Thungela

VOHE Talk Topic

MOSH Leading Practice

[OFFICIAL]

What is the Mining Industry Occupational Safety and Health (MOSH)?

The CEOs of major mining companies in the South African Mining Industry (SAMI) in 2003 agreed to collaboratively work towards the achievement of “zero harm”.

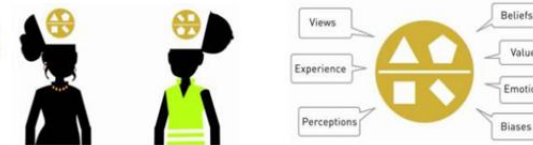


They agreed to the development of an **occupational health and safety culture framework** as a basis for improving Occupational Health and Safety Culture in the SAMI, and the establishment of a Learning Hub to **promote learning** in the mining industry (MOSH Leading Practice Adoption System).

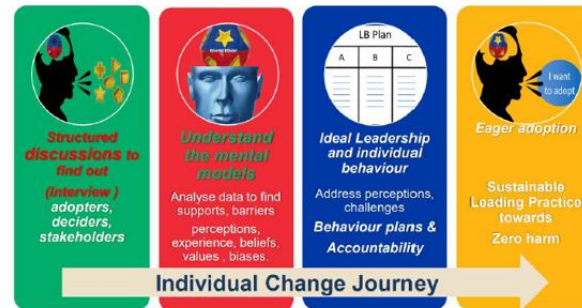
Why MOSH Leading Practice Adoption System?

MOSH Leading Practice Adoption System is used to facilitate the **identification of leading practices** and their **widespread adoption** by many different mining companies across an entire SAMI, through the industry's direct involvement.

The Adoption system focuses on the “**People**” issues that help to overcome resistance to adoption.

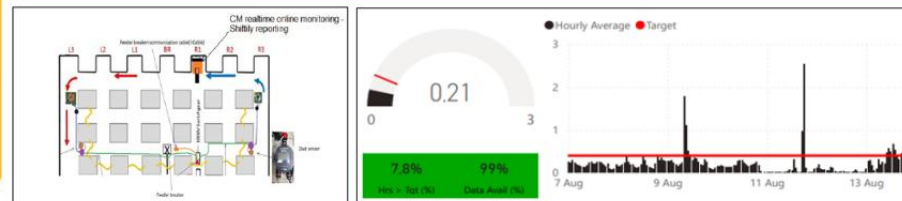


Behavioural Approach



Thungela underground operations have adopted the following MOSH Leading Practices to combat overexposures to respirable Coal and Crystalline Silica Dust:

1. Continuous Real-Time Monitoring (CRTM) Dust – Section Intake Airway
2. CRTM Dust – Continuous Miner (CM) Onboard



Our comprehensive awareness campaign and updated induction program clearly communicate the mine's unwavering position: controlling dust is our highest health priority. This initiative is a direct call to action for every employee to understand, uphold, and verify critical controls as an essential part of their daily responsibilities.

COMMUNICATION & ROLL OUT: Awareness Across Thungela

GOEDEHOOP BEATS THE DUST- Initiatives

UG Ventilation Optimization

Major Leakages in the ventilation system were identified and an action plan was developed to address these areas

Introduction of CRTM

Portable handheld Monitors

Intake dust Monitors



Quality over exposure/High Dust investigation resulted from the time stamp feature on the device



District quantities increased, Mine Air utilization index(AUI) Increased from 55% to 75 %, AUI Currently at 82%

Dust suppression Systems

Foam system at transfer points

Intake spray part of the initial exam checklist

Road maintenance and watering down plan



Culture Change

Weekly Dust meetings

Introduction of the dust TARP(Trigger Action Response Plan)

Inclusion of CRTM during Employee Induction



Drilling Practice

Conversion to wet drilling



ADOPTED LEADING PRACTICES : CRTM- Dust

CRTM on CM



Real-time dust monitors have been installed on the Continuous Miner, providing immediate feedback on dust levels to the operator and enabling proactive adjustments to controls during the

INTAKE DUST MONITOR(IS)



Handheld DUST MONITOR



Handheld dust monitors provide immediate, on-the-spot alerts to personnel performing high-risk tasks, enabling them to react instantly by adjusting controls or pausing work until conditions are safe. This empowers our workforce with real-time data to actively manage their own exposure

GOVERNANCE : REVIEW MINE OH RISK ASSESSMENT

IBRA Occupational Hygiene- Goedehoop Colliery

	Operation	Step in Operation/Location, from process map	Exposure levels 90th percentile	OEL	HEG Classification	Nature of Airborne	Applicable SDS	Pollutant Code	Sources Of dust	Number of Persons Exposed	Occupations exposed	Pattern of Exposure	Frequency of Exposure	Health Hazard	Route of Exposure	Frequency of Monitoring	Current Controls	Likelihood	Consequence	Risk Rank
1	Goedehoop Colliery North	Heg 3: Continuous miner Prime 2	0,662	1.5mg/m ³	C	Dust	N/A	151	Section related equipment : LHD, Shuttle car, Roofbolter, CM, Feeder breaker	21	CM Operator, Shuttle Car Operator, Roofbolt Operator, LHD Operator, Facoboss, Filter, Electrician	Continuous	Daily	Coal Dust (Respirable Particles)	Inhalation	CRTM & Personal exposure sampling as per the schedule	Engineering Controls: CM dust suppression system, Conveyor transfer point sprays, R/Bolt dust suction system, Intake fogger sprays, Tractor road treatment with binding agent Administrative controls: Reduced exposure time - only exposed when working in sections. PPE: FFP2 disposable respirators are available for use by employees.	3	4	16
2	Goedehoop Colliery North	Heg 4: Continuous miner Prime 2	0,647	1.5mg/m ³	C	Dust		151	Section related equipment : LHD, Shuttle car, Roofbolter, CM, Feeder breaker	18	Facoboss, LHD Operator, Facoboss, Filter, Electrician	Continuous	Daily	Coal Dust (Respirable Particles)	Inhalation/ Ingestion	CRTM	Engineering Controls: CM dust suppression system, Conveyor transfer point sprays, R/Bolt dust suction system, Intake fogger sprays, Tractor road treatment with binding agent Administrative controls: Reduced exposure time - only exposed when working in sections. PPE: FFP2 disposable respirators are available for use by employees.	3	4	16
3	Goedehoop Colliery North	Heg 5: Continuous miner Section 3	1,069	1.5mg/m ³	A	Dust		151	Section related equipment : LHD, Shuttle car, Roofbolter, CM, Feeder breaker	30	CM Operator, Shuttle Car Operator, Roofbolt Operator, LHD Operator, Facoboss, Filter, Electrician	Continuous	Daily	Coal Dust (Respirable Particles)	Inhalation	CRTM	Engineering Controls: CM dust suppression system, Conveyor transfer point sprays, R/Bolt dust suction system, Intake fogger sprays, Tractor road treatment with binding agent Administrative controls: Reduced exposure time - only exposed when working in sections. PPE: FFP2 disposable respirators are available for use by employees.	5	4	20

All site governance documents, procedures, and risk assessments have been systematically updated to formally embed the Critical Control Management (CRTM) framework, fully integrating it into the mine's standardised operating practices and risk governance.

GOVERNANCE: ALIGNMENT WITH COPs & SOPs

DocuSign Envelope ID: 2C26B929-B05F-4EA5-94E8-35BDAE245990

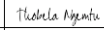
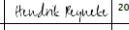
thungela

[OFFICIAL]

GOEDEHOOP ENVIRONMENTAL MONITORING SYSTEM
COP MANUAL

IMPLEMENTATION DATE	NEXT REVIEW DATE
2022/09/12	2025/09/12
DOC NO	VERSION NUMBER
GOE-VOH-SD-0417	01

ENVIRONMENTAL MONITORING
SYSTEM COP MANUAL

AUTHORISATIONS	NAME	POSITION	SIGNATURE	DATE
AUTHOR	Jacobs, Enslin	VOHE Superintendent		2022/09/14
REVIEWED BY	Ngentu, Thobela	Full-time Health & Safety Rep		2022/09/14
APPROVED BY	Kirk, Karen	TSD Manager		2022/09/14
APPROVED BY	Peens, Rudi	Act. Engineering Manager		2022/09/14
APPROVED BY	Reyneke, Hendrik	Mining Manager		2022/09/14
APPROVED BY	Moremi, Eugene	General Manager		2022/09/14

Refer to the THUNGELA Document Management System for the latest version of the document. Copyright resides with the company.
Printed copies of this document are Uncontrolled and deemed valid only on the day of printing

Page 1 of 91
Print Date: 13/09/2022

DocuSign Envelope ID: 2C26B929-B05F-4EA5-94E8-35BDAE245990

thungela

GOEDEHOOP ENVIRONMENTAL MONITORING SYSTEM
COP MANUAL

IMPLEMENTATION DATE	NEXT REVIEW DATE
2022/09/12	2025/09/12
DOC NO	VERSION NUMBER
GOE-VOH-SD-0417	01

5.4 Sensors

The primary function of the sensors is to measure the environmental conditions and alarm if any hazardous condition arises.

The sensors shall comply with the requirements as defined by the VOHE standard for environmental monitoring for each sensor type and location. Only sensors that have been approved as per the Approved EMS Supplier List shall be installed on any THUNGELA managed operation.

Any new sensor that has not been tested on the system or has no history of been successfully used in the system shall undergo an evaluation phase and approved by the Principal C&I Engineer and Principal VOHE Engineer before it can be introduced as an accepted sensor as defined in section 5.10.

Sensors fall into two distinct types, namely those that have on-board processing of data and those that do not. The two categories are then referred to as intelligent and non-intelligent sensors.

5.4.1 All Sensors

All sensors shall:

- Be fit for purpose and have a track record of accurate, repeatable and reliable operation.
- Be able to withstand the harsh environment found underground and operate accurately and reliably in conditions of extreme:
 - Humidity
 - Dust**
 - Temperature
- Be able to withstand the re-handling associated with underground operations.
- Have a maximum reaction time of one second response to measurement of target gas/condition.
- Have a minimum accuracy of 10% of the required operating range as defined by VOHE
- Be intrinsically safe according to the IS (exia) standard when installed in hazardous areas. Should **non-IS** (exia) sensors be installed in the **non-hazardous** areas there shall be a clear effective visual distinction between IS (exia) sensors and the non-IS (exia) sensors.
- Have a minimum operating distance of 1000m on copper cable between the Gateway or the Logic Controller.
- Have configurable parameter set points for triggers and delays for alarm processing.

5.4.2 Intelligent Sensors

Intelligent Sensors are defined as sensors with alarm processing on-board. In addition to the above sensor requirements all Intelligent Sensors shall:

- Have on-board alarm processing as defined in section 5.6.1
- Have a built-in audio/visual indication for alarm alerts.
- Have a potential free contact for back tripping.

In addition to the above sensor requirements all Intelligent Sensors should:

- Be able to store sensor data when the link to surface is interrupted for a minimum period of 24 hours.

Refer to the THUNGELA Document Management System for the latest version of the document. Copyright resides with the company.
Printed copies of this document are Uncontrolled and deemed valid only on the day of printing

Page 22 of 91
Print Date: 13/09/2022

DocuSign Envelope ID: 2C26B929-B05F-4EA5-94E8-35BDAE245990

thungela

GOEDEHOOP ENVIRONMENTAL MONITORING SYSTEM
COP MANUAL

IMPLEMENTATION DATE	NEXT REVIEW DATE
2022/09/12	2025/09/12
DOC NO	VERSION NUMBER
GOE-VOH-SD-0417	01

5.9.5.6 Export

The reports after having been viewed on the browser should have the capability of being exported so as to move a copy of the information for storage into another format, namely:

- CSV
- Microsoft Excel®
- PDF

5.9.6 Security

All changes to the system shall be strictly controlled. There can be different levels of password to enable changes, namely:

- Operators level of password, view only access.
- The technicians level of password with a capability of limited configuration changes, and
- The administrator level of password which will cover the highest level of password.

5.10 EMS Approval

Only approved EMS sensors, equipment and software shall be used on THUNGELA managed operations.

Any new EMS sensors, equipment or software that has not been tested on the system or has no history of been successfully used in the system shall need to undergo an evaluation phase and approved by the Principal C&I Engineer and Principal VOHE Engineer before it can be introduced into any THUNGELA managed operation.

The evaluation phase and approval process shall include:

- Documented scope for the trial approved by site Engineering Manager, C&I Superintendent, VOHE Superintendent, Principal C&I Engineer and Principal VOHE Engineer.
- Duration of any trial shall be a minimum period of one month for testing and evaluating the accuracy, repeatability and reliability.
- Supplier assessment of site environmental conditions (humidity, **dust**, temperature) and written confirmation from the supplier that the proposed sensors will work in the site environmental conditions.
- Closeout report to be submitted to the site Engineering Manager, C&I Superintendent, VOHE Superintendent, for approval.
- Signoff by Engineering Manager, C&I Superintendent, VOHE Superintendent, Principal C&I Engineer and Principal VOHE Engineer that the specific sensor(s) can be added to the approved Supplier list

5.11 Suppliers

Only approved suppliers may be used. If a supplier is not on the Approved EMS Supplier List then the motivation and approval procedure as per section 5.10 shall be followed. Suppliers should:

- Be certified: ISO, QA & QC
- Be Established as market leader
- Have training facilities
- Have support structure or SLA in place
- Have technical support
- Keep stock of critical spares

Refer to the THUNGELA Document Management System for the latest version of the document. Copyright resides with the company.
Printed copies of this document are Uncontrolled and deemed valid only on the day of printing

Page 29 of 91
Print Date: 13/09/2022

DocuSign Envelope ID: 2C26B929-B05F-4EA5-94E8-35BDAE245990

thungela

GOEDEHOOP ENVIRONMENTAL MONITORING SYSTEM
COP MANUAL

IMPLEMENTATION DATE	NEXT REVIEW DATE
2022/09/12	2025/09/12
DOC NO	VERSION NUMBER
GOE-VOH-SD-0417	01

#	Action	Responsible
8.7 Planned Maintenance Schedule		
20	- Perform planned maintenance on a scheduled basis on all sensors at least quarterly. This will include checking for B&U build up, any physical damage to housing or instrument and the general condition of the sensor. - Sensors installed in areas where more activity takes place such as production sections or harsh environmental conditions (moisture / dust) are to be scheduled for maintenance more often as required.	Technician
21	EMS: Determine if the sensor can be fixed. For CO sensors, one may replace the CO cell. EMS: Methane and velocity sensors cannot be adjusted and need to be returned to the OEM. EMS: Beacon (smoke) sensors may NOT BE OPENED therefore needs to be returned to the OEM. Ningi: Replace all sensor / unit and return fault sensor / unit to OEM.	Technician
22	If the sensor cannot be fixed, refer the sensor to OEM for further action.	Technician
23	- If the sensor can be fixed, perform unplanned maintenance on sensors as required. Unplanned maintenance refers to maintenance due to malfunctioning equipment. Ningi units to be replaced if faulty and returned to OEM.	Technician
24	- Log the evidence and results of the sensor calibration and maintenance on a quarterly basis. - The Ningi system will automatically log the test as a test on the SCADA system. - VOHE will sign a copy of the evidence of the sensor calibration and maintenance quarterly for information purposes. - For the Ningi system the test will be sent out with the daily report when done. - File the evidence of the calibration and maintenance on a quarterly basis. - For the Ningi system electronic copies will be filed on the system automatically. - Input / Output "Evidence Of Gas Test"	Technician

Refer to the THUNGELA Document Management System for the latest version of the document. Copyright resides with the company.
Printed copies of this document are Uncontrolled and deemed valid only on the day of printing

Page 68 of 91
Print Date: 13/09/2022

ENVIRONMENTAL
MONITORING SYSTEM
COP

GOVERNANCE: ALIGNMENT WITH COPs & SOPs



GOEDEHOOP MANDATORY CODE OF PRACTICE FOR A QUALITY ASSURANCE PROGRAMME FOR A SYSTEM OF OCCUPATIONAL HYGIENE AND VENTILATION ENGINEERING MEASUREMENTS

IMPLEMENTATION DATE 2024/11/01	NEXT REVIEW DATE: 2027/11/01
DOC NO: GOE-VOH-COP-3886	VERSION NUMBER: 00

GOEDEHOOP MANDATORY CODE OF PRACTICE FOR A QUALITY ASSURANCE PROGRAMME FOR A SYSTEM OF OCCUPATIONAL HYGIENE AND VENTILATION ENGINEERING MEASUREMENTS

AUTHORISATIONS	NAME	POSITION	SIGNATURE	DATE
AUTHOR	Jacobs, Enslin	VOHE Superintendent		31/10/2024
REVIEWED BY	Hlatshwayo, Ntombifuthi	Full Time Health and Safety Rep		31/10/2024
REVIEWED BY	Madonya, Elias	Act TSD Manager		31/10/2024
REVIEWED BY	Reynke, Hendrik	Mining Manager		31/10/2024
REVIEWED BY	Maredi, Moses	Engineering Manager		31/10/2024
APPROVED BY	Mphahlele, Tinashe	General Manager		31/10/2024

DATE EFFECTIVE	01/11/2024
PREVIOUS REVISION DATE	New MCOP
MINE CODE	1439

The COP was drawn up in accordance with Guideline Reference Number DMRE 16/3/24-B8 issued by the Chief Inspector of Mines (CIOM).

Refer to the Thungela Document Management System for the latest version of the document. Copyright resides with the company. Printed copies of this document are Uncontrolled and deemed valid only on the day of printing.

Page 1 of 126



GOEDEHOOP MANDATORY CODE OF PRACTICE FOR A QUALITY ASSURANCE PROGRAMME FOR A SYSTEM OF OCCUPATIONAL HYGIENE AND VENTILATION ENGINEERING MEASUREMENTS

IMPLEMENTATION DATE 2024/11/01	NEXT REVIEW DATE: 2027/11/01
DOC NO: GOE-VOH-COP-3886	VERSION NUMBER: 00

Table 4: Occupational health hazards that prevail at the mines and associated control measures.

Sources of Hazards (Mining activity and Mechanization)	Occupational Health Hazards	Control Measures
Dust is created by cutting, feeder breaking, coal conveying, transporting, belt transfer points, scraping, tipping, drilling, blasting, crushing, mechanical loading, barring, sweeping and coal processing process.	Airborne Pollutants: coal dust, crystalline silica dust, particulate matter (DPM), welding fumes, stone dust, inhalable particles not otherwise classified (PNOC), volatile organic compounds (VOC), carbon monoxide (CO) and methane (CH4) gas.	Airborne pollutants exposure control follows the hierarchy of controls principle; the following control measures are used to prevent exposure: Prevent dust at source; Wet dust suppression system on the travelling roads, conveyor belt transfer points, feeder breaker, section intake airway and CM. Use of dust suppression agent on travelling roads; Roofbolter dust box/bag; Dilution by ventilation; Filtration and scrubber systems; Removal of people (section stone dust application); Respiratory protective equipment (RPE) program; Respiratory zoning; Continuous real-time monitoring (CRTM) and trigger action response plan (TARP); Wet drilling; Foam system on conveyor belt transfer points; Controls interlock (fail-safe mechanism) e.g., section airflow velocity sensor, blocked scrubber (Amps), CM booster pressure and water flowrate sensor monitoring; Cabin integrity bomb test; Compliance to cutting sequence; Procurement detail specifications; Low Sulphur fuel; Restriction of the number of diesel-powered engine machines based on airflow availability; Training and awareness
Cutting, feeder breaking, coal conveying, transporting, belt transfer points, scraping, tipping, drilling, blasting, crushing, mechanical, sweeping and coal processing process.	Noise	Hearing conservation program e.g., awareness and training, noise zoning; Hearing protection devices (HPD) selection (disposable, reusable, earmuffs and custom made) and maintenance program; Machine and equipment maintenance; Exhaust mufflers; Vibration dampening equipment; Equipment silencing; Noise source isolation; Procurement detail specifications; Cabin integrity bomb test; Training and awareness
Outdoor areas/work, laboratory furnaces	Thermal Stress (Heat)	Provide drinking water; Providing shade; Airconditioning; Ventilation; Brimmed hats; Sunscreen; Reduce exposure time; Sun block cream; Training and awareness

Refer to the Thungela Document Management System for the latest version of the document. Copyright resides with the company. Printed copies of this document are Uncontrolled and deemed valid only on the day of printing.

Page 13 of 126



GOEDEHOOP MANDATORY CODE OF PRACTICE FOR A QUALITY ASSURANCE PROGRAMME FOR A SYSTEM OF OCCUPATIONAL HYGIENE AND VENTILATION ENGINEERING MEASUREMENTS

IMPLEMENTATION DATE 2024/11/01	NEXT REVIEW DATE: 2027/11/01
DOC NO: GOE-VOH-COP-3886	VERSION NUMBER: 00

- a) Good existing controls;
b) Weak controls that should be improved; and
c) Causes or consequences where new controls should be identified.

When considering what makes a control effective, the following factors are considered:

- The type of control (as per the hierarchy of controls); and
- Control quality

The Control Type and Control Quality offers choices for control reliability, availability, and survivability.

The control reliability – i.e. whether the control is applied as planned; Its availability – i.e. whether the control works as planned; and its survivability – i.e. whether the control will be compromised during an event.

Based on the CER analysis, required improvements are defined to the existing controls as well as any new controls that are needed to manage the risk of the unwanted events to 'as low as reasonably practicable' (ALARP).

Identified or selected critical controls for PUEs are verified (management oversight) through the critical control monitoring specifications developed under the IBRA Bowtie Analysis (BTA). Accountabilities, monitoring, and auditing requirements for Critical Controls are defined using the Template for Monitoring Specifications (TR-SHE-CS.012.TMP.1).

Occupational health hazards controls are included in the engineering maintenance strategy and work management, there are maintenance job cards for occupational health hazards engineering controls. Necessary hearing and respiratory PPE approvals such as RPE homologation as per SANS 10338 and HPD performance specification as per SANS 1451 are checked endorsed by the mine appointed Occupational Hygienist (12.1 Appointee). The required maintenance of such PPE is conducted as per OEM recommendation.

Technology for continuous real-time monitoring (CRTM) of the ineffectiveness of the controls is embraced by Goedeheop Colliery. Environmental monitoring system (EMS) is implemented with CRTM sensors for monitoring dust, airflow, methane, carbon monoxide, smoke, and barometric pressure. Majority of these sensors have a built-in visual and/or audible alarm to empower employees in a workplace to apply section 23 of the MSHA. Any new monitoring system shall undergo an evaluation and approved by the Principal C&I Engineer and Principal VOHE Engineer before it can be introduced as an accepted monitoring system as per THUNGELA ENVIRONMENTAL MONITORING SYSTEM COP MANUAL (TR-TECH.COP.002).

Weekly internal EMS audits are conducted underground by VOHE personnel to check the control effectiveness as per THUNGELA INTERNAL VOHE ENVIRONMENTAL MONITORING SYSTEM AUDIT REPORT (TR-TECH.CG.241). External assurance audits are conducted every two months by the independent service provider, THUNGELA AUDIT ENVIRONMENTAL MONITORING SYSTEMS PROCEDURE (TR-TECH.CG.155). Monthly internal EMS audits are conducted on surface by VOHE personnel to check the control effectiveness and external assurance audits are conducted every six months by the independent service provider, THUNGELA AUDIT ENVIRONMENTAL MONITORING SYSTEMS ON SURFACE PROCEDURE (TR-TECH.CG.086).

Refer to the Thungela Document Management System for the latest version of the document. Copyright resides with the company. Printed copies of this document are Uncontrolled and deemed valid only on the day of printing.

Page 30 of 126



GOEDEHOOP MANDATORY CODE OF PRACTICE FOR A QUALITY ASSURANCE PROGRAMME FOR A SYSTEM OF OCCUPATIONAL HYGIENE AND VENTILATION ENGINEERING MEASUREMENTS

IMPLEMENTATION DATE 2024/11/01	NEXT REVIEW DATE: 2027/11/01
DOC NO: GOE-VOH-COP-3886	VERSION NUMBER: 00

CRTM will be investigated to monitor effectiveness of the new and current controls for the identified significant occupational health risks and hazards to which employees are or may be exposed to. Implementation of CRTM in workplaces with significant risks and hazards will take into consideration the following:

- Train personnel about CRTM operation, calibration, testing and maintenance.
- Establish CRTM criteria/standard and TARP for exceedances above limits and withdrawal of employees (MHSA Section 23) through a risk assessment.
- CRTM sensor built-in visual and audible alarms.
- Develop and implement a procedure or Trigger Action Response Plan (TARP) on how to respond to CRTM alerts.
- Implement a communication plan to keep all relevant stakeholders informed about CRTM results/data, incidents, and occupational hygiene program improvements. Employees, responsible supervisors, and employer must be alerted when limits are exceeded.
- CRTM to be linked to the existing environmental monitoring system (EMS) and interfaced with the supervisory control data acquisition (SCADA).
- Comprehensive CRTM data, incidents, and responses records keeping.

Assurance activities, including internal reviews and self-assessment activities, will be completed as planned in the assurance audit calendar, audit planning documentation and audit reports records will be retained as evidence of implementation.

7.4 Other Relevant Information

When conducting occupational health and safety hazard identification and risk assessment, all accessible, obtained and considered relevant information such as research literature, accident investigation reports and statistics, original equipment manufacturer (OEM) specifications and recommendations, DMPR instructions, VOHE audits and inspection reports, scientific studies and tests outcome, approvals, design, and performance criteria for all relevant equipment will be documented and made available. The supporting documents will be saved in an electronic folder where the risk assessment in question is saved.

7.5 Review of the Code of Practice

This COP will be reviewed every three years, the COP review frequency is in line with the three-year frequency of the risk assessment review as outlined in the THUNGELA OPERATIONAL RISK MANAGEMENT (ORM) STANDARD (TR-SHE.CG.012). In addition to the periodic review as required by Section 11(4) of the MSHA, this COP will be reviewed and updated after audit findings, regulatory standards, guidance and/or instructions, changes to relevant national or international standards, medical surveillance outcome, MSHA Section 11.5 investigation outcome incident relating to the topics covered in the COP, or significant changes are introduced to procedures, mining and ventilation layouts, mining methods, plant or equipment and material which may have an impact on the health and safety of the worker or person is introduced.

Refer to the Thungela Document Management System for the latest version of the document. Copyright resides with the company. Printed copies of this document are Uncontrolled and deemed valid only on the day of printing.

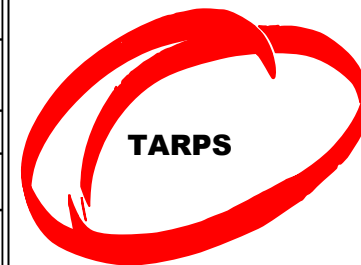
Page 31 of 126

QUALITY ASSURANCE
MCOP

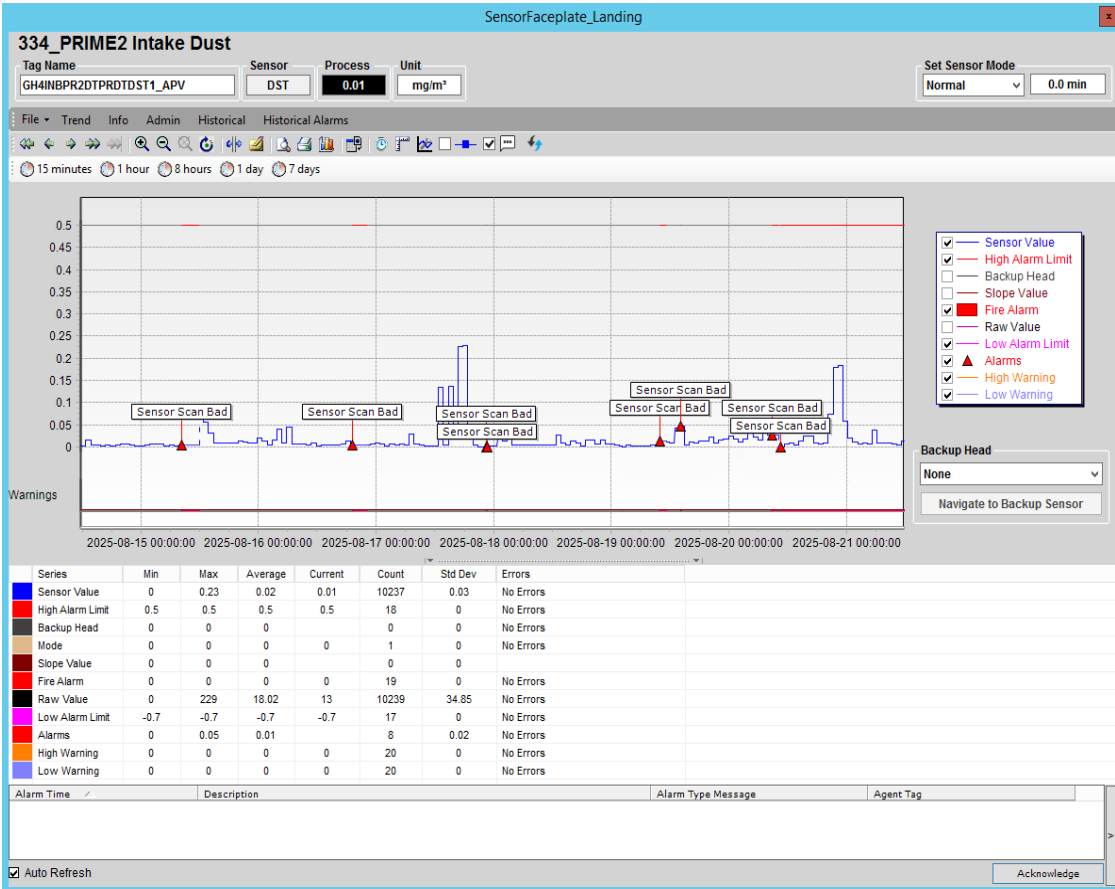
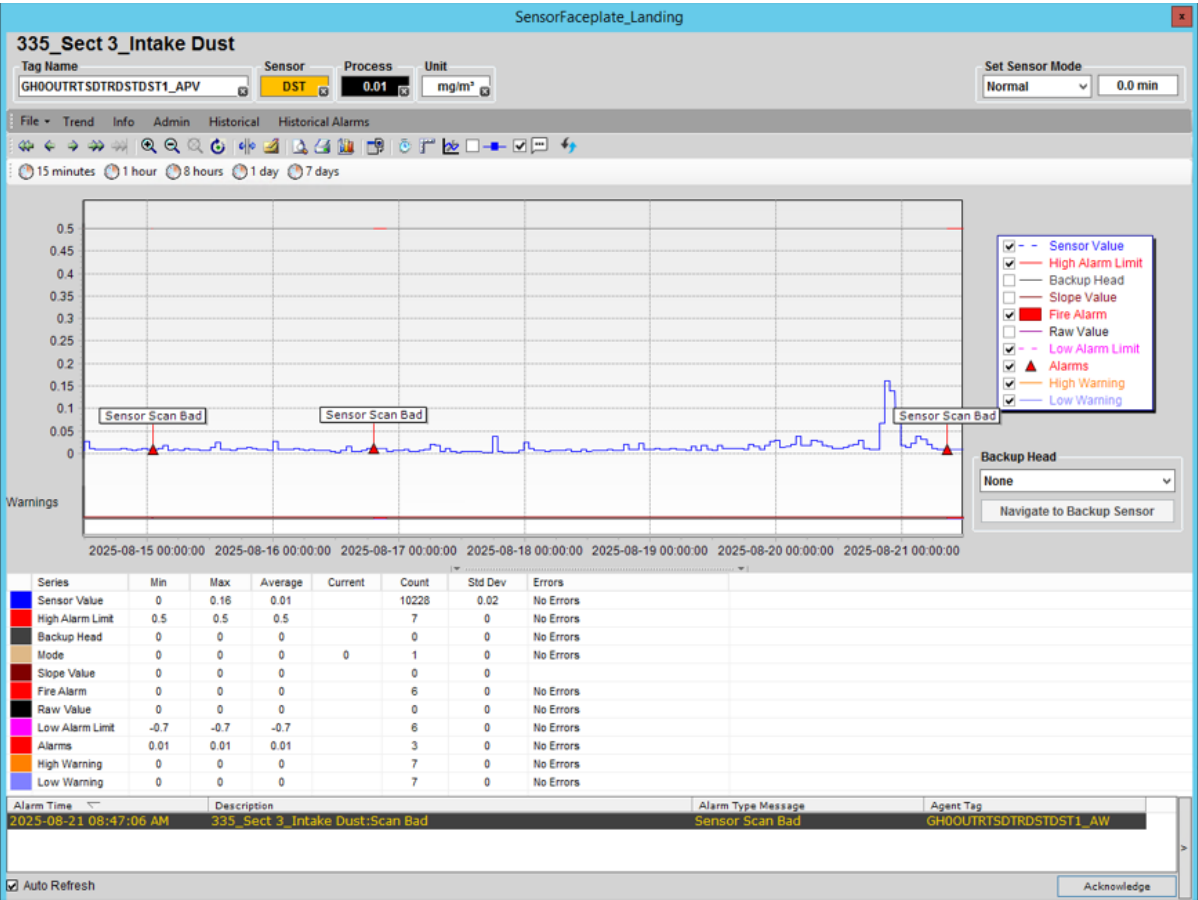
GOVERNANCE: ALIGNMENT WITH COPs & SOPs

Hazard	Trigger Action Response Plan for Coal Dust			
	Normal	Level 1 Response	Level 2 Response	Level 3 Response
Coal Dust	NORMAL	ALERT	HIGH ALERT / RECTIFY	EVACUATE / WITHDRAW TO SAFETY
Hazardous Areas - All underground areas - Intake dust sensor	When average dust measurement is below 0.3 mg/m ³ a green light will be displayed at the intake dust sensor.	When average dust measurement exceeds 0.3 mg/m ³ over a period of an hour an orange light will flash at the intake dust sensor.	When average dust measurement reaches 0.5 mg/m ³ a red warning light will flash at the intake dust sensor.	When average dust measurement exceeds 0.5 mg/m ³ for an hour a red warning light will burn continuously at the intake dust sensor.
Roles	Trigger Actions			
All Persons with portable real time dust monitor (PDR)	1. Carry out work in line with standard procedures and work instructions.	1. Investigate the cause and source of the elevated dust levels. 2. Report dust detection to the Face Boss / Supervisor on actions taken to rectify the control.	1. Investigate the cause and source of the elevated dust levels. 2. Report dust detection to the Face Boss / Supervisor on actions taken to rectify the control.	1. Stop work, isolate the equipment creating the dust, and repair the failed control. 2. Report to Face Boss / Supervisor.
Operator	1. Carry out work in line with standard procedures and work instructions.	1. Investigate the cause and source of the elevated dust levels. 2. Rectify the failed control to prevent dust levels from elevating out of control.	1. Stop work, isolate the equipment creating the dust, and repair the failed control. 2. Report to Face Boss / Supervisor.	1. Stop work, isolate the equipment creating the dust, and repair the failed control. 2. Report to Face Boss / Supervisor.
Control Room Operator	1. Continue routine monitoring.	1. On receipt of EMS alarm contact Face Boss / Supervisor to investigate origin for alarm. 2. Record alarm condition into log book. 3. If no reply from Face Boss / Supervisor within 30 minutes, stop the belt and report to the Mine Overseer. 4. If alarm persist for 30 minutes, report condition to the Section Manager.	1. On receipt of EMS alarm stop belt and contact Face Boss / Supervisor to investigate origin for alarm. 2. Record alarm condition into log book. 3. If no reply from Face Boss / Supervisor within 30 minutes, stop the belt and report to the Mine Overseer. 4. If alarm persist for 30 minutes, report condition to the Section Manager.	1. On receipt of EMS alarm stop belt and contact Face Boss / Supervisor to investigate origin for alarm. 2. Record alarm condition into log book. 3. If no reply from Face Boss / Supervisor within 30 minutes, stop the belt and report to the Mine Overseer. 4. If alarm persist for 30 minutes, report condition to the Section Manager. 5. Act on instructions from officials.
Face Boss	1. Carry out work in line with standard procedures and work instructions.	1. Test for dust using D4 at the suspected origin. 2. Apply dust clearance procedure to rectify the failed dust control. 3. Inform Shift Overseer. 4. Inform Control Room Operator. 5. Log in Fireman's Report.	1. Test for dust using D4 at the suspected origin. 2. Apply dust clearance procedure to rectify the failed dust control. 3. Inform Shift Overseer. 4. Inform Control Room Operator. 5. Inform Shift Overseer and Control Room Operator. 6. Repair faulty dust control. 7. Log in Fireman's Report.	1. Test for dust using D4 at the suspected origin. 2. Apply dust clearance procedure to rectify the failed dust control. 3. Inform Shift Overseer. 4. Inform Control Room Operator. 5. Inform Shift Overseer and Control Room Operator. 6. Repair faulty dust control. 7. Log in Fireman's Report.
Shift Overseer	1. Continue routine duties.	1. Over inspect that the dust is cleared. 2. Report to control room his findings. 3. Record findings in Log Book at end of shift.	1. Over inspect that the dust is cleared. 2. Report to control room his findings. 3. Record findings in Log Book at end of shift. 4. Report to Mine Overseer.	1. Over inspect that the dust is cleared. 2. Report findings to control room and Mine Overseer. 3. Countersign the Fireman's Report. 4. Record findings in Log Book at end of shift. 5. Sign the register in Control Room.
Mine Overseer	1. Continue routine duties.	1. Inspect Shift Overseer Log Book and countersign entry. 2. Notify VOHE. 3. Notify Technician if EMS repairs are required. 4. Visit the area on the following day and over inspect the actions taken by the Shift Overseer.	1. Inspect Shift Overseer Log Book and countersign entry. 2. Notify VOHE. 3. Notify Technician if EMS repairs are required. 4. Visit the area over inspect the actions taken by the Shift Overseer.	1. Inspect Shift Overseer Log Book and countersign entry. 2. Notify VOHE. 3. Notify Technician if EMS repairs are required. 4. Visit the area over inspect the actions taken by the Shift Overseer.
VOHE Officer	1. Continue routine duties. 2. Inspect trends on EMS. 3. Inspect Control Room Log Book.	1. Investigate dust control failure. 2. Record findings and recommendations to Section Manager.	1. Investigate dust control failure. 2. Record findings and recommendations to Section Manager.	1. Investigate dust control failure. 2. Record findings and recommendations to Section Manager.
Section Manager	1. Continue routine duties.	1. Follow up on actions and instructions.	1. Follow up on actions and instructions. 2. Notify condition to the Mining Manager.	1. Follow up on actions and instructions. 2. Notify condition to the Mining Manager.
Mining Manager		1. Consult with Section Manager and VOHE on trends. 2. Notify General Manager.	1. Consult with Section Manager and VOHE on trends. 2. Notify General Manager.	1. Consult with Section Manager and VOHE on trends. 2. Notify General Manager.
General Manager		1. Consult with Section Manager and VOHE on trends.	1. Consult with Section Manager and VOHE on trends.	1. Consult with Section Manager and VOHE on trends.

Hazard	Trigger Action Response Plan for Coal Dust			
	Normal	Level 1 Response	Level 2 Response	Level 3 Response
Coal Dust	NORMAL	ALERT	HIGH ALERT / RECTIFY	EVACUATE / WITHDRAW TO SAFETY
Hazardous Areas - All underground areas - CM dust sensor	When average dust measurement is below 3 mg/m ³ a green light will be displayed on the monitor.	When average dust measurement exceeds 3 mg/m ³ over a period of an hour an orange light will flash on the monitor.	When average dust measurement reaches 4 mg/m ³ a red warning light will flash on the monitor.	When average dust measurement exceeds 5 mg/m ³ for an hour a red warning light will burn continuously on the monitor.
Roles	Trigger Actions			
All Persons with portable real time dust monitor (PDR)	1. Carry out work in line with standard procedures and work instructions.	1. Investigate the cause and source of the elevated dust levels. 2. Report dust detection to the Face Boss / Supervisor on actions taken to rectify the control.	1. Investigate the cause and source of the elevated dust levels. 2. Report dust detection to the Face Boss / Supervisor on actions taken to rectify the control.	1. Stop work, isolate the equipment creating the dust, and repair the failed control. 2. Report to Face Boss / Supervisor.
Operator (On-board Monitoring)	1. Carry out work in line with standard procedures and work instructions.	1. Investigate reasons for alarm (3.0 mg/m ³) and report to the Face Boss the actions taken.	1. Following dust alarm (4.0 mg/m ³), stop work, isolate equipment creating the dust, and repair failed control. 2. Report to Face Boss.	1. Following dust alarm (5.0 mg/m ³), stop work, isolate equipment creating the dust, and repair failed control. 2. Report to Face Boss.
Control Room Operator	1. Continue routine monitoring.	1. On receipt of EMS alarm contact Face Boss / Supervisor to investigate origin for alarm. 2. Record alarm condition into log book. 3. If no reply from Face Boss / Supervisor within 30 minutes, report to the Mine Overseer. 4. If alarm persist for 30 minutes, report condition to the Section Manager.	1. On receipt of EMS alarm contact Face Boss / Supervisor to investigate origin for alarm. 2. Record alarm condition into log book. 3. If no reply from Face Boss / Supervisor within 30 minutes, report condition to the Mine Overseer. 4. If alarm persist for 30 minutes, report condition to the Section Manager.	1. On receipt of EMS alarm stop belt and contact Face Boss / Supervisor to investigate origin for alarm. 2. Record alarm condition into log book. 3. If no reply from Face Boss / Supervisor within 30 minutes, stop the belt and report to the Mine Overseer. 4. If alarm persist for 30 minutes, report condition to the Section Manager. 5. Act on instructions from officials.
Face Boss	1. Carry out work in line with standard procedures and work instructions.	1. Test for dust using D4 at the suspected origin. 2. Investigate reason for elevated dust reading. 3. Inform operator to rectify the failed control to prevent dust exceedance from escalating. 4. Log in Fireman's Report.	1. Test for dust using D4 at the suspected origin. 2. Apply dust clearance procedure to rectify the failed dust control. 3. Repair faulty dust control. 4. Log in Fireman's Report.	1. Test for dust using D4 at the suspected origin. 2. Apply dust clearance procedure to rectify the failed dust control stop work. 3. Repair faulty dust control. 4. Inform Control Room Operator. 5. Log in Fireman's Report.
Shift Overseer	1. Continue routine duties.	1. Over inspect that the dust is cleared. 2. Report to control room his findings. 3. Record findings in Log Book at end of shift.	1. Over inspect that the dust is cleared. 2. Report to control room his findings. 3. Record findings in Log Book at end of shift. 4. Report to Mine Overseer.	1. Over inspect that the dust is cleared. 2. Report findings to control room and Mine Overseer. 3. Countersign the Fireman's Report. 4. Record findings in Log Book at end of shift. 5. Sign the register in Control Room.
Mine Overseer	1. Continue routine duties.	1. Inspect Shift Overseer Log Book and countersign entry. 2. Notify VOHE. 3. Notify Technician if EMS repairs are required.	1. Inspect Shift Overseer Log Book and countersign entry. 2. Notify VOHE. 3. Notify Technician if EMS repairs are required.	1. Visit the area and over inspect the actions taken by the Shift Overseer have improved the conditions. 2. Notify VOHE. 3. Notify Technician if EMS repairs are required. 4. Inspect Shift Overseer Log Book and countersign entry.
VOHE Officer	1. Continue routine duties. 2. Inspect trends on EMS. 3. Inspect Control Room Log Book.	1. Investigate dust control failure. 2. Record findings and recommendations to Section Manager.	1. Investigate dust control failure. 2. Record findings and recommendations to Section Manager.	1. Investigate dust control failure. 2. Record findings and recommendations to Section Manager.
Section Manager	1. Continue routine duties.	1. Follow up on actions and instructions.	1. Follow up on actions and instructions. 2. Notify condition to the Mining Manager.	1. Follow up on actions and instructions. 2. Notify condition to the Mining Manager.
Mining Manager		1. Consult with Section Manager and VOHE on trends.	1. Consult with Section Manager and VOHE on trends.	1. Consult with Section Manager and VOHE on trends. 2. Notify General Manager.
General Manager		1. Consult with Section Manager and VOHE on trends.	1. Consult with Section Manager and VOHE on trends.	1. Consult with Section Manager and VOHE on trends.



ADOPTED LEADING PRACTICES : CRTM- Dust

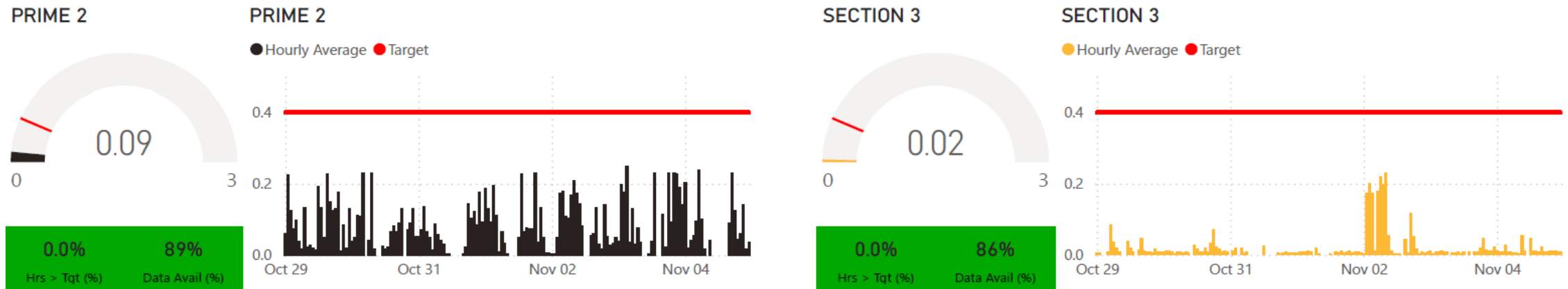


Live data provides immediate, visible tracking of all Critical Control performance data monitored at the control room 24/7

ADOPTED LEADING PRACTICES: Live Dashboard (Continued....)

Week44 2025

Goedehoop Intake Dust Monitoring (mg/m³)



Live dashboards empower leadership and crews with real-time insight to make proactive decisions and swiftly address any lapses in dust controls.

ADOPTED LEADING PRACTICES: LIVE DASHBOARD (CONTINUED....)

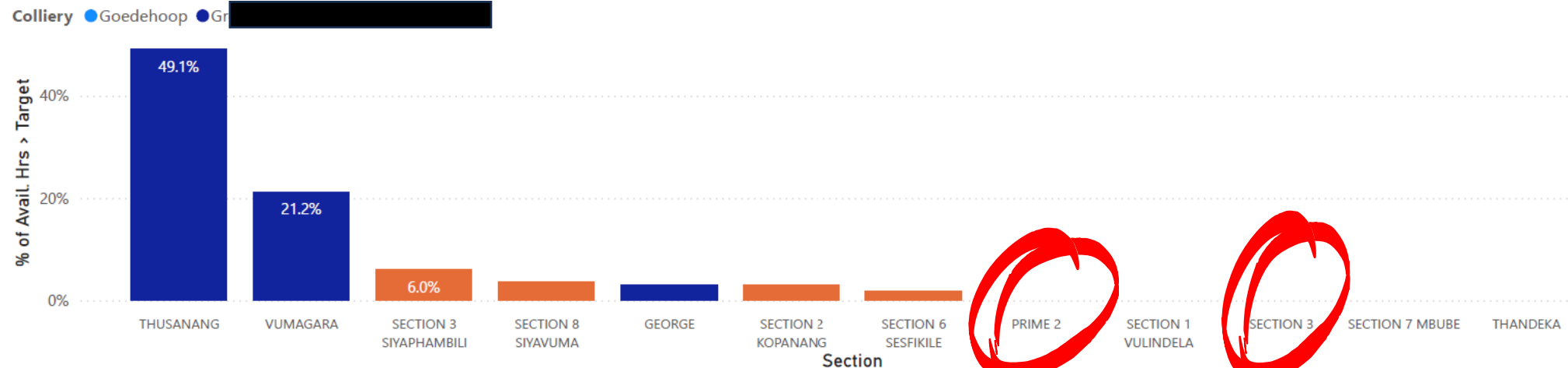
Week44 2025

Weekly Intake Dust Monitoring: Sections exceeding Target

Colliery	Section	*Hrs > 0.4mg/m3	*%Hrs Exceeding Target
Goedehoop	PRIME 2	0	0.0%
Goedehoop	SECTION 3	0	0.0%

*Numbers represent count of hours for the production week where the average reading for the hour exceeded 0.4mg/m3 and as a percentage, of available hours with data (% of total available hours).

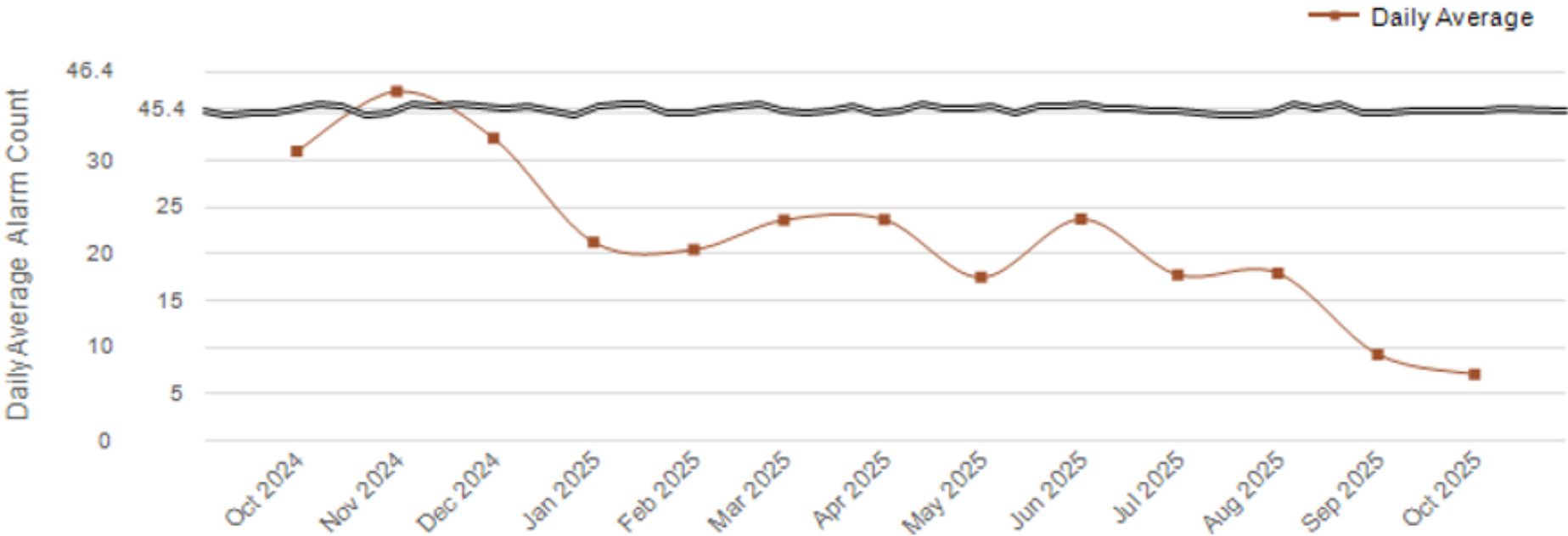
Section Dust: % Available Hours Exceeding Target



ADOPTED LEADING PRACTICES: Environmental Monitoring System (EMS)

	MEASURE		CURRENT		PREVIOUS	
	UNIT	TARGET	ACTUAL	STATUS	ACTUAL	TREND
Average Alarm Rate	Alarms / hour	< 6	0.3	●	0.4	➡
Average Incident Count	Alarms / day	< 40	7	●	10	➡
Average Acknowledge	Time	< 00:10:00	00:00:16	●	00:00:14	➡
Availability	%	98	99.80%	●	99.61%	➡

Previous 12 Month Trend



COMMUNICATION: FEEDBACK LOOP TO EMPLOYEES (CONTINUED...)



Goedehoop Colliery
Daily SHE Bulletin
Thursday, September 11, 2025



Today's SHE tips from the people / Likeletso tlhokomeliso ka basebetsi / Iziluleko zabasebenzi (GH)

Safety	Isolation and lockout is compulsory prior to working on equipment.
Health	Drink more water to stay hydrated and alert throughout the day.
Environment	

September 2025: Arbor Month

Accident Free Days	Section	LTI Free Days
99	Goedehoop Complex	99
	Central Workshops	555
	Plant	3398
	Simunye Shaft	99
	Surface Services	3271

EKHAYA BONUS		
3rd Quarter Bonus	R 2,200	R 2,200
3rd Quarter LTI's	4	R 2,200
3rd Quarter Fatal's	0	R 0

01/09/2025; Closing Collieries: While the electrician was switching on a 400v breaker in the substation, the breaker flashed and she sustained burns to the top of her right hand.

Weekly Safety Message

" Care and Respect " - We show humanity to all; through our commitment to make a positive impact where we can.

SHE STATISTICS

Progressive FFPS	3724
Estimated date to achieve 4000 FFPS	23-Aug-25
Working Days to go to 4000 FFPS	-19
Date of last Fatal Accident	23-Jun-21
Date of last Lost Time Injury	5-Mar-25
Lost Time Injury Frequency Rate (LTIFR)	0.00
Total Injury Frequency Rate (TIFR)(End of July)	0.00
Total Rec Frequency Rate (TRCFR) (End of Sep)	0.00

GH Total Safety Stats Year to Date

	Q2	Q1	Q2	Q3	Q4	Total
FAC	0	0	0	0	0	0
MTC	0	0	0	0	0	0
LTI	0	2	1	0	0	3
Fatals	0	0	0	0	0	0
HPH	0	0	0	0	0	0

WELLNESS
Core Busn Partners

VCT ytd	97%	80%
% on ART	100%	100%
Average BMI	0%	0%

Date	Time	Name	Occupation	Dept / Section	Section Head	Description / Cause of injury /	Nature of injury/ Incident	Severity

Daily ROM

AREA	TARGET	ACTUAL
Simunye Shaft	5,792	7,010 ✓

Production Bonus Trends as of 09-Sept-25

Shaft	Name	Target	MTD Actual	Daily Tons Required
Simunye	Prime 2	85,776	30,106	3711
	3 Imvubu	53,243	19,845	2227
	9 Isikhonyane			0
	13 Sizimisele			0

Production Bonus Trends as of 09-Sept-25

Shaft	Name	Target	MTD Actual	Daily Tons Required
Plant	FTP	284,741	95,024	14695

Plants

	Target	Actual
Feed to Plant	13,782	9,628
Daily Saleable	8,493	5,783

Message From - Safety Team

Good day GH

Thank you so much for another scratch free day. Safety is something that find its effectiveness in the day to day focus that we apply. Please continue to do the right thing and to watch out for one another. We do need everyone, every day, to keep on being safe.

Have safe and productive day.

LET'S TALK: ENVIRONMENTAL NEWS

Happy Arbor Month!

This Arbor month let's honor the earth that supports our work and our lives. As mine workers, we understand the value of the land beneath us, let's also celebrate the trees above that bring life, shade, and a greener future. Plant as many trees as you can and let this month be a reminder that even as we extract from the earth, we can also give back to it.

VOHE - MHSC DUST MILESTONES

PROPOSED MILESTONES

- By December 2024, 95% of all exposure measurement results will be below the milestone level for respirable crystalline silica dust of 0.03mg/m³ [these results are individual readings and not average results, and the milestone will be reviewed in 2029 (after 5 years)].
- By December 2024, 95% of all exposure measurement results will be below the milestone level for respirable coal dust of 1.25mg/m³ [these results are individual readings and not average results, and the milestone will be reviewed in 2029 (after 5 years)].

Always remember: Dust controls to be in place and operational at ALL times. If your working area is demarcated as a respirator zone, wear your respirator at ALL times!

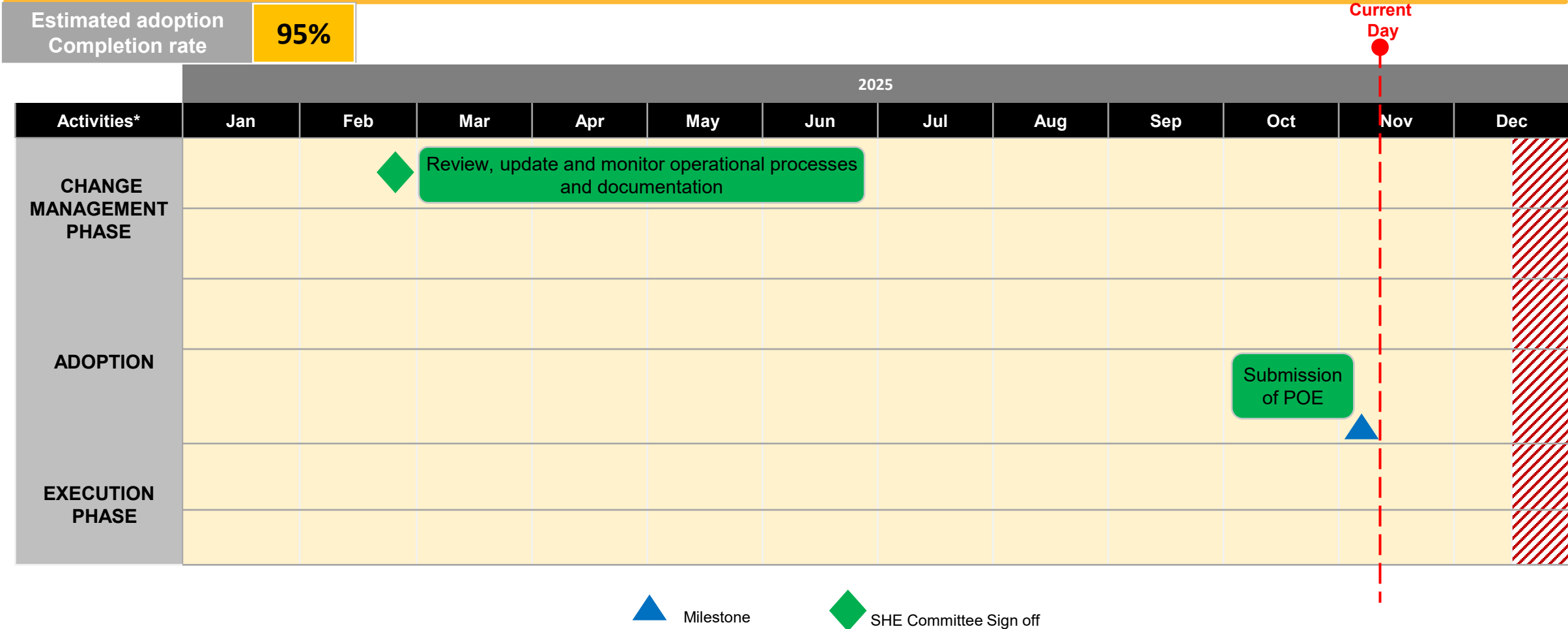
Daily safety billets are distributed to all crews, covering key occupational health topics and prominently featuring a daily tracker for dust compliance performance. This ensures constant visibility, maintains leadership accountability, and keeps dust control at the forefront of daily operations.

Mine Compliance

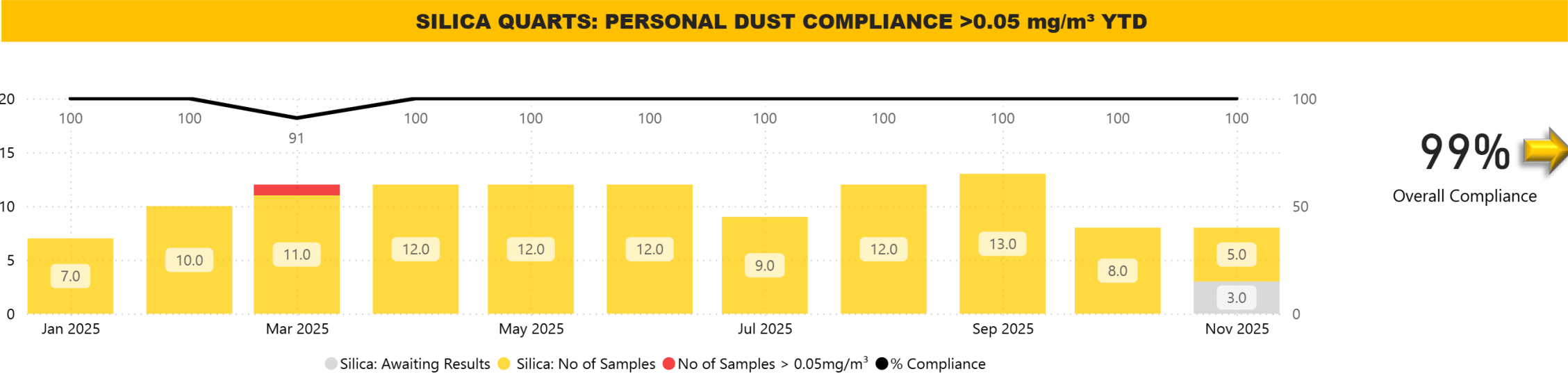
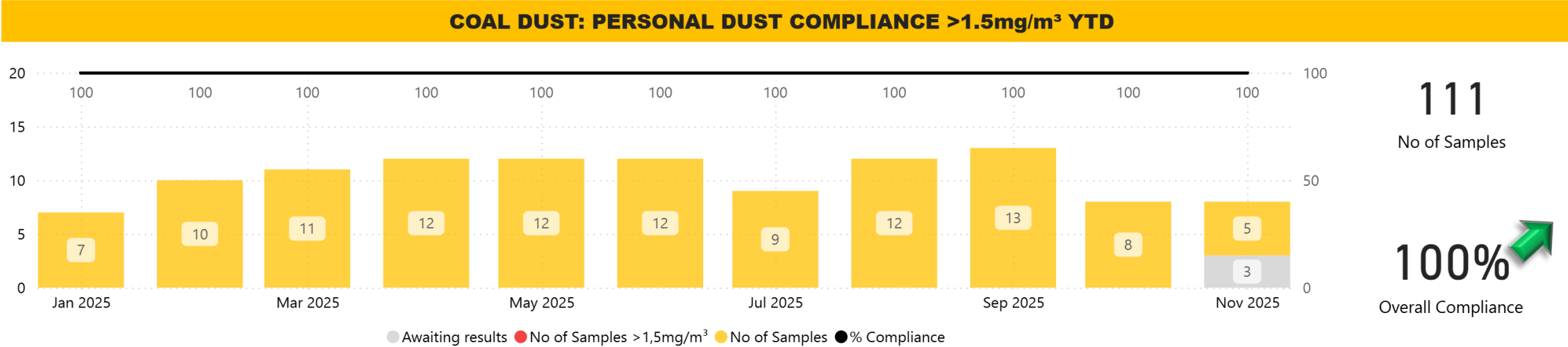


S.L.A.M !

SUBMISSION OF POE: NOV 2025

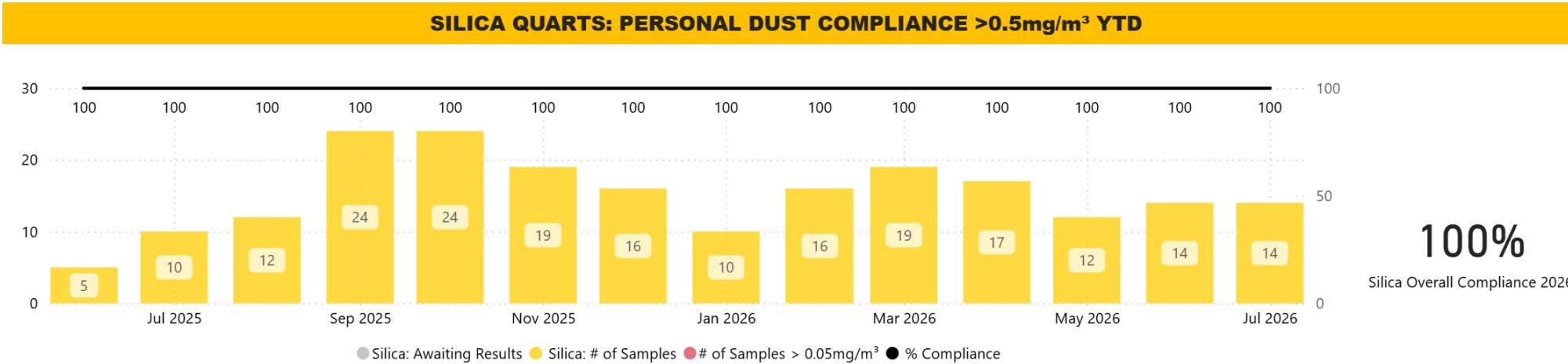
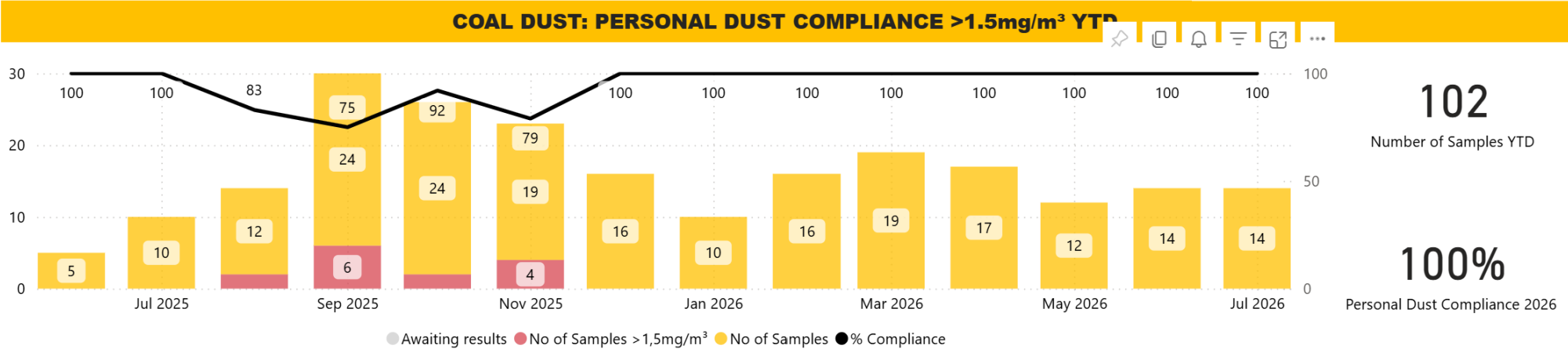


Personal dust compliance – 2025



Key Barriers to address	Key Benefits
❑ Stakeholder Buy-in ❑ High Initial and Operational Costs ❑ Continuous real-time dust monitoring (CRDM): ✓ Harsh Underground Environmental Conditions ✓ Accuracy and Reliability of Measurements ✓ Calibration and Maintenance Requirements ✓ Communication and Data Transmission Problems ✓ Power Supply Limitations ✓ Dust Overloading and Sensor Saturation ✓ Positioning and Representativeness ✓ Data Management and Interpretation	❑ Real-time monitoring empowers employees by providing immediate access to information about the environment in which they work. ❑ Frontline employees are enabled to make informed decisions quickly through access to real-time data. ❑ The availability of real-time data forms a strong foundation for future technological and operational development. ❑ Promoting data accessibility at the frontline enhances employee engagement, accountability, and ownership. ❑ Time-stamped data provides an accurate record of events and conditions as they occur. ❑ Detailed, time-based records enable more effective and precise investigations. The ability to analyze events at a microscopic level supports richer learning and deeper understanding of operational performance. ❑ Real-time insights help identify trends, risks, and opportunities sooner, enabling proactive interventions. Improved visibility of workplace conditions contributes to safer, more efficient, and more productive operations.

Continued rollout: Mine B Take over



THANK YOU

