

Biography



Ms Fatheela Brovko is the Chief Research Operations Officer (CROO) at the Mine Health and Safety Council (MHSC), where she leads the Research and Development Unit which includes several health and safety technical and research advisory committees. She plays a key role in advancing the MHSC's strategic mandate to improve health and safety in the South African mining sector, ensuring that research, legislation and regulations are responsive, relevant and aligned to address both current and emerging challenges faced by the mining industry. With over 18 years of experience in the mining industry, she is strongly committed to evidence-based decision-making and to supporting the MHSC's vision of ensuring that every mineworker returns home unharmed every day.



MHSC

Mine Health and Safety Council

From Commitment to Action: The SAMI's 2024 Dust Milestones and Initiatives

Fatheela Brovko

MOSH Dust Conference, July 2025

Every mine worker returning from work unharmed every day. Striving for zero harm in our lifetime.

PRESENTATION OUTLINE



IMPORTANCE OF DUST MANAGEMENT IN SAMI



SAMI'S DUST MILESTONES PROGRESS SINCE 2003



2024 MINE HEALTH AND SAFETY TRIPARTITE SUMMIT DUST MILESTONES AND INITIATIVES



DUST RELATED RESEARCH AND LEGISLATION AT MHSC

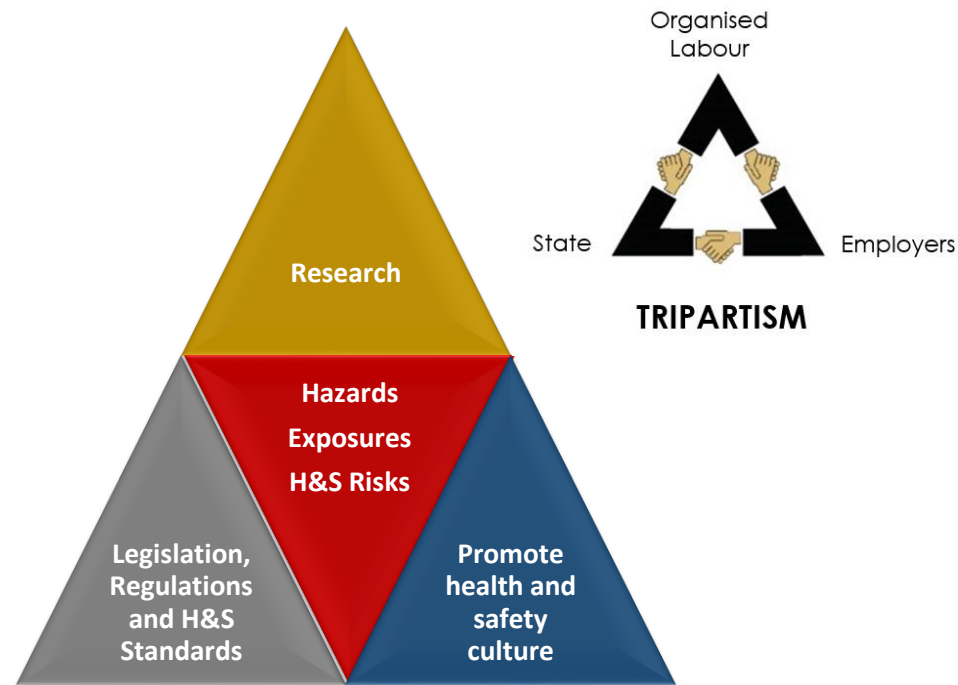
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MHSC MANDATE

Vision: Zero Harm to Mine Employees and Communities Affected by Mining Activities.

Mining Employees

- Zero fatalities
- Elimination of injuries
- Elimination of occupational diseases
- Safety and security of women



Mining Communities

- Reduction in complaints
- Minimise negative impact on communities as a result of mining activities

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MHSC MANDATE

Arrange and co-ordinate a bi-annual mine health and safety tripartite summit



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IMPORTANCE OF DUST MANAGEMENT IN SAMI

To protect health and safety of employees, environmental conservation and improve production and reduce company losses.

Health

- **Allergic Reactions (eyes, throat, skin, nose)**
- **Respiratory Issues: Acute** respiratory infections, **Chronic Respiratory diseases** (Silicosis, PTB, Silico-TB and CWP are most prevalent OLDs in SAMI)
- **Increase the risk of Cardiovascular effects:** Inflammation that affects heart health, Heart attacks and strokes
- **Associated with some neurological diseases**
- **May affect Fitness to Work and may lead to Medical Incapacity**
- **Death**

Safety

- **Reduced visibility** which can result in accidents
- **Fire and explosion hazard**

Environmental

- **Air and water pollution**

Business

- **Infrastructure damage**
- **Loss of skilled resources**
- **Cost associated with Health Incidents & Accidents**
- **Employee Compensations and Ex-mine worker healthcare**
- **Rise in Class Action Lawsuits**

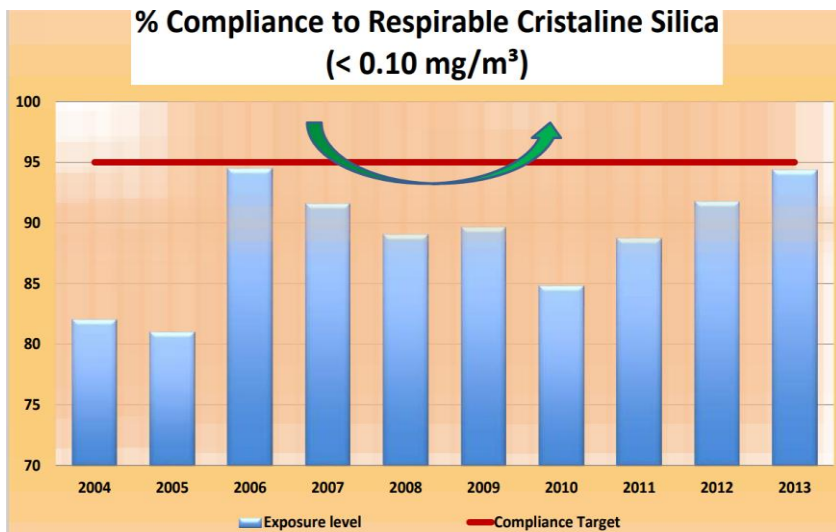
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DUST MILESTONES FROM 2003

2003

By Dec 2008: 95% of measurement results:
<0.1mg/m³ Respirable Crystalline Silica



Milestone not achieved but industry made significant progress by 2013

2014

By Dec 2024: 95% of measurement results:
<0.05mg/m³ Respirable Crystalline Silica
<1.5mg/m³ Platinum and Coal Dust
No new novice cases amongst previously unexposed individuals

Milestone Progress @ 2024

- Platinum Dust – Achieved**
- Silica Dust – Achieved industry-wide; More focus and support to Gold sector**
- Coal Dust – Not achieved but was close**

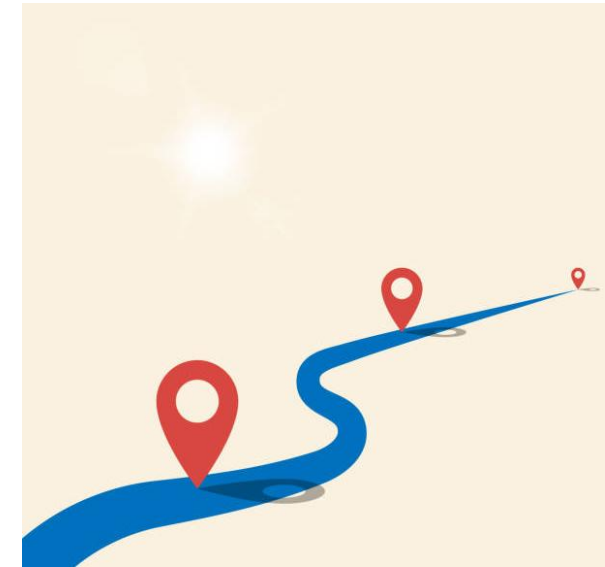
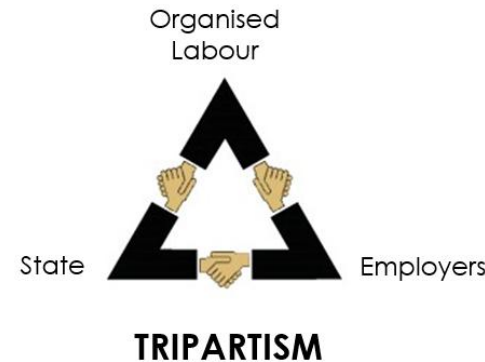
2024

By Dec 2034: 95% of measurement results:
<0.03mg/m³ Respirable Crystalline Silica
<1mg/m³ Platinum Dust
<1.25mg/m³ Coal Dust
No new novice cases amongst previously unexposed individuals

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2024 MHS SUMMIT ACTION PLAN INITIATIVES

- Roadmap with activities required to achieve the milestone
 - Summit Action Plan – Monitored by MHSC, with MHSC leading some initiatives
- Responsible stakeholders
 - Lead
 - Supporting
- New 2024 proposed initiatives developed



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2024 SUMMIT ACTION PLAN INITIATIVES

Summit Action Plan Initiative	Responsibility
<p>Review and disseminate previous research outcomes related to dust milestones to assist in achieving new milestones. (Past 15 years research)</p>	<p>Lead: MHSC Support: Tripartite</p>
<p>Research and investigation to implement alternative methods or products of current backfilling process to reduce over exposure to RCS in the gold sector. (To be prioritised as a special project)</p>	<p>Lead: MHSC Support: Tripartite</p>
<p>Develop/Review and disseminate educational material on the health effects of mining dust exposure, the importance of control measures available.</p>	<p>Lead: MHSC Support: Tripartite</p>
<p>Identify and benchmark with other countries on initiatives to further reduce dust exposure and OLDs.</p>	<p>Lead: MHSC Support: Tripartite</p>
<p>Host an event on Compensation of Occupational Diseases to workshop the industry on the changes and to empower all affected stakeholders in SAMI.</p>	<p>Lead: MHSC and DOH Support: Tripartite</p>

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2024 MHS SUMMIT ACTION PLAN INITIATIVES

Summit Action Plan Initiative	Responsibility
Develop a system to evaluate the effectiveness of current dust engineering controls to achieve milestones and improve them.	Lead: MHSC and Employers Support: State and Organised Labour
Prioritisation of Implementation of dust leading practices developed by the MOSH Learning Hub.	Lead: Employers Support: MHSC, State and Organised Labour
Screening and early diagnosis of diseases related to milestones, especially of high-risk populations.	Lead: Employers
For TB milestone: Reduce over-exposures to respirable crystalline silica.	Lead: Employers

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MHSC DUST RESEARCH – IN PROGRESS

Develop a Standard Operating Procedure (SOP) that will assist in developing and implementing a standardized monitoring strategy for respirable crystalline silica (RCS) in the SAMI

- High numbers of silicosis cases are still being reported despite legislation that requires mines to implement a Mandatory Code of Practice, to manage workplace exposure to respirable crystalline silica (RCS).
- Gaps in sampling methods on crystalline silica assessment as one potential area that needs investigation.
- Main outcome – SOP to standardize sampling and monitoring of RCS withing the SAMI.
- It is envisaged that having the SOP will be adopted in the airborne pollutants guideline and will assist the industry in reducing RCS exposure.



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MHSC DUST RESEARCH – IN PROGRESS

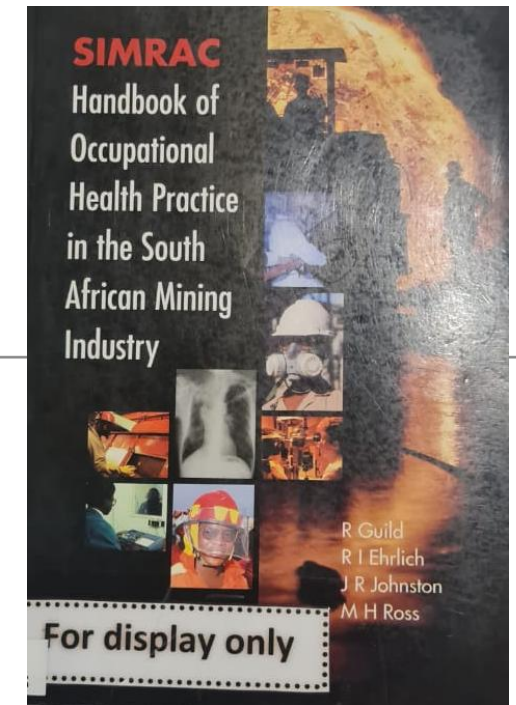


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MHSC RESEARCH – IN PROGRESS

Review of the 2001 SIMRAC handbook for occupational health in the SAMI

- Version outdated and being updated with recent guidelines, research outcomes, regulations and forms over the past 25 years.
- Second review completed, being edited now.



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NEW MHSC DUST RESEARCH

Opportunities for improving dust control measures on roof bolters and continuous miners in underground coal mines.

-Aimed at improving current control measures to protect roof bolters and other occupations at the working face.

Assess and quantify dust contributing sources at intake airways in South African gold and coalmines. "Review of SIMRAC GAP 802"

- To investigate other sources of dust in intake airways that employees are exposed to, to and from their working places and also those employees who work in intake airways

Identifying the existing real-time occupational hygiene stressors monitoring technologies in the South African mining industry to develop or review the current regulatory framework/mechanisms

- To identify existing monitoring technologies to ensure standardisation where possible on the minimum requirements of these technologies and to develop a legal framework.

A comparative performance assessment of water-based dust suppression spray systems used within the SAMI for both underground and mining surface operations.

- To compare performance of water-based suppression systems underground and surface and make recommendations for suitability and improved effectiveness.

Investigate the reduction of the respirable crystalline silica (RCS) exposure risk associated with the use of backfill in underground gold mines for support.

- To investigate risks associated with backfill use in gold mines and make proposals for alternatives or improvement as part of silica dust control.

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MHSC RESEARCH TOPIC SUBMISSIONS

[Stakeholder Input to the
MHSC 2027/2028 Annual
Mining Occupational
Health & Safety](#)

**Stakeholder Input to the MHSC 2027/2028
Annual Mining Occupational Health & Safety**

Jul 21, 2025

Deadline: 30 September 2025 For clarity seeking question please contact sngobeni@mhsc.org.za

MHSC 2027/2028 ANNUAL MHS RESEARCH PROGRAMME: EVIDENCE-BASED RESEARCH MOTIVATION
1. Research question to be addressed Health and/Safety problem to be researched
2. Background/motivation for the research question
3. Expected outcomes of the research
4. Proposed Study Mines/Sites
5. Name and contact details of the originator of the project
Name:
Phone:
Email address:

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MHSC DUST LEGISLATION

Completed legislation:

- MHS A Schedule 22.9.2a - **Revised OELs for Airborne Pollutants** – Gazette date: 28 March 2025
- **Quality Assurance Guideline for Occupational Hygiene and Mine Ventilation Measurements** – Gazette date – 02 August 2024
- **Guidance Note on Non-Communicable Diseases and Mental Health Disorders** - Gazette date: 18 July 2025
 - To be workshopped on **15 August 2025** at MHSC Health Dissemination workshop.

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Thank you

[RSVP HERE](#)



DATE: 15 AUGUST 2025
TIME: 08:00 – 16:00
VENUE: GAUTENG (TBC)
ONLINE PLATFORM: MS TEAMS

RSVP: click [HERE](#) by no later than 08 August 2025

The aim of the HYBRID workshop:

To enhance the understanding of recent health legislation developed/reviewed by the MHSC.
To empower role players with knowledge necessary to make informed decisions to protect the health and safety of mineworkers in the South African Mining Industry.

What information to expect:

- ❖ Key changes: Fire Prevention Guideline
- ❖ New Lamproom Guideline
- ❖ New Guidance note on Non-Communicable Diseases and Mental Health Disorders
- ❖ Key changes: Chapter 16 of the MHSA
- ❖ Key changes: DMPR 231 (Health Incidence Reporting Form)
- ❖ Key changes: DMPR 164 form for TB and HIV Reporting
- ❖ Updates from the NDOH on the USAID funding freeze, MOUs and collaboration opportunities on TB and HIV response

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