



Mining & Quarrying
OCCUPATIONAL HEALTH &
SAFETY COMMITTEE

MAQOHSC

WINTER NEWSLETTER

Protecting Workers from Occupational Dust Related Diseases

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WINTER 2021



Presiding Member's letter

Welcome to the MAQOHSC Winter 2021 Newsletter.

As newly appointed Presiding Member of the Committee, I would like to thank Martin O'Malley for his many years of service and his contribution to MAQOHSC; his insights will be missed. The Committee wish him well in his retirement.

The Committee and staff have had a detailed review of the Strategic Plan in light of the current social and economic environment that we find ourselves in and we have developed a new plan which has a focus on Silicosis with the following pillars:

- Education
- Prevention
- Research.

These strategic pillars will be at the core of the Committee's activities and thus ensuring that we can work towards a workplace which is free from Silicosis and dust borne diseases principally within the Mining and Quarrying sector.

I look forward to providing more information in our upcoming newsletters and encourage all stakeholders to visit the MAQOHSC website to keep up to date with the latest safety and information alerts so that you can provide a safer workplace.

Yours sincerely

Charlie Condo
Presiding Member MAQOHSC



Health Surveillance 2021

As South Australia manages its way through the impacts and challenges of living with COVID 19, the Mining and Quarrying Occupational Health and Safety Committee (MAQOHSC) continues to reinforce its ongoing commitment and support to the South Australian mining and quarrying industry, mine and quarry operators and supporting contractors, and the many thousands of workers directly and indirectly employed in the mining and quarrying sector.

With a rotation of Committee members and Presiding Member, brings new visions to MAQOHSC and a strategic objective of Silicosis Free Workplaces, and directly aligns with the government's strategy for respirable crystalline silica exposure awareness and reduction.

To support the strategic objective, the Committee has developed a three pillar support strategy in the areas of education, prevention and research

through the promotion and supporting of programs and practices, designed to protect of workers from Silicosis and other occupational dust related diseases.

Influencing factors have been the reduction in the respirable crystalline silica workplace exposure standard from 0.1mg/m³ to 0.05mg/m³ as of 1st July 2020 by Safe Work Australia, and analysis and findings of the MAQOHSC 2016 - 2018 Health Surveillance - dust monitoring program.

The objective of the 2016 - 2018 dust monitoring program, was to determine whether workers were being exposed to respirable dust and respirable crystalline silica dust concentrations that may lead to an adverse risk to health. The program findings identified a number of concerns in relation to workers respirable crystalline silica (RCS) dust exposure levels, and dust risk controls measures.

A total of 1182 respirable dust samples were collected from 118 selected South Australian mines and quarries between December 2016 and April 2018.

Data analysis identified the following:

Of the 1182 respirable dust samples:

- 745 (63%) were personal respirable dust samples; and

- 437 (37%) were static samples.
 - Of the 745 personal respirable dust samples collected:
 - 84 (11%) respirable dust samples exceeded the AIOH Trigger Value for respirable dust (1.0mg/m³ over an 8hr TWA)
 - 79 (11%) exceeded the workplace exposure standard (WES) for respirable crystalline silica (0.1mg/m³ over an 8hr TWA)
- Note – old exposure standard.**



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The top 5 personal exposures exceedances in respirable dust and respirable crystalline silica dust vs minerals were as follows:

Top 5 personal respirable dust AIOH Trigger value exceedances by SEG:	Top 5 minerals associated with personal respirable dust exceedances:
<ul style="list-style-type: none"> Crusher operators Maintenance workers Quarryman Dump truck operators Loader drivers 	<ul style="list-style-type: none"> Dolomite Limestone Marble Metal Ores Quartzite
Top 5 personal respirable crystalline silica WES exceedances by SEG:	Top 5 minerals associated with personal RCS exceedances:
<ul style="list-style-type: none"> Crusher operators Loader operators Maintenance workers Quarryman Dump truck operators 	<ul style="list-style-type: none"> Dolomite Metal Ores Quartzite Slate Sandstone

Observations made during the course of the 2016-2018 programs identified:

- Crusher operators and quarryman “generally” received their dust exposures from spending a good proportion of time in and around the crushing plant when in operation.
- Maintenance workers received their dust exposures from working in and around operating crushing plants, as well as during plant shutdown for repairs or scheduled maintenance.
- Dump truck and loader operators received their dust exposures from unsealed cabins (windows / doors open, poor door seals etc.), filtration and air conditioning systems not being maintained, and airborne dust raised on haul and access roads.
- Of the 56 sites visited in the 2018 program, just under half (46%) had no engineering dust control measures operating on the day of the monitoring.

Additionally, as part of the 2018 dust monitoring program, respirator fit testing and personal noise exposures were also undertaken.

A total of 264 PortaCount respirator fit tests were conducted, of which 120 workers or 45.5%, failed achieve the required respiratory protection fit factor due to one or more of the following:

- Respirator was not flexible to mould to the workers facial features; or
- Respirator was the wrong size for the face; or
- Worker had facial hair / growth that interfered with the respirator seal on the face.

Of a 190 personal noise exposures measured:

- 83 (43.7%) exceeded the exposure standard of 85 dB(A).
- 34 (17.9%) exceeded the peak noise exposure standard of 140 dB(C).

WHS Legislation

The South Australian work health and safety regulations 2012, requires a person conducting business or undertaking (PCBU) including a mine operators, to ensure that:

- No person at a workplace is exposed to a substance or mixture in an airborne concentration that exceeds an exposure standard, and

- Air monitoring is carried out to determine the airborne concentration of a substance or mixture at the workplace if:
 - The person is not certain whether or not the substance or mixture exceeds the relevant exposure standard; or
 - Monitoring is necessary to determine whether there is a risk to health.
- A worker must not be exposed to noise levels at the workplace that exceeds the exposure standard for noise.

Compliance with the workplace exposure standards can only be determined by conducting air and noise monitoring, and the results can be used to determine /show compliance with the workplace exposure standards.

2021 Dust Monitoring Program

The Committee’s 2021 Health Surveillance - dust monitoring program, demonstrates a continued focus to engage, consult and provide support to the mining and quarrying industry in the prevention of silicosis and other dust related lung diseases.

The scope of this year’s program will focus on small to medium mine and quarrying operations in their management of risk associated with respirable dust and respirable crystalline silica in the workplace.

The elements of program include:

- Review of the previous dust monitoring results and recommendations (where previously conducted),
- Review of existing site dust mitigation strategies,
- Identify sources of dust generation and worker exposure,
- Conduct personal and static monitoring which includes site observations,
- Provided and review dust monitoring results, conclusions and recommendations to improve dust management strategies to prevent workers from being exposed to an airborne concentration of a substance or mixture above an exposure standard.

Additional supporting programs include:

- Respiratory protective equipment assessment (where supplied),
- Personal noise assessment,
- Industry education sessions on occupational dust exposure and management.

MAQOHSC is also currently conducting a respirable crystalline silica awareness campaign with small to medium mine and quarries operations to raise the awareness and understanding on the health risks associated with exposure to respirable crystalline silica, and the systems and strategies to manage the risks to workers health.

If you are a small to medium mining or quarrying operation and you would like to register your interest to be a part of our 2021 Dust Monitoring program or the RCS awareness campaign, please contact our staff on (08) 8204 9842 or email us at: maqohsc@sa.gov.au

All types of respiratory protective equipment must comply with Australian Standard AS/NZS 1715:2009 – selection.

This guideline will outline other Australian standards that are applicable in selecting various types of respiratory protective equipment. Personal Protective Equipment (PPE) is the lowest order risk control. Always consider other forms of controls first; this should be documented in your Risk Assessment or Standard Operating Procedure.

Download the **Respiratory PPE - Selection and Use Guide** and other **FREE Resources**

www.maqohsc.sa.gov.au/workplace-safety-resources



CLEAN AIR. CLEAR LUNGS.



Not all workplace hazards are visible

Do you know what you're breathing in at work?

Not all workplace hazards are visible. Dusts, gases, fumes and vapours are often invisible, but breathing them in can damage the lungs and cause serious diseases like silicosis, lung cancer, emphysema and chronic pulmonary obstructive disease.

A new Safe Work Australia campaign aims to raise awareness of occupational lung diseases and provide persons conducting a business or undertaking (PCBUs) with information on how to manage these risks at work.

The Clean Air. Clear Lungs. campaign aims to increase awareness of occupational lung diseases and help businesses to understand what they must do to meet their work health and safety duties and keep workers safe.

As part of the campaign, Safe Work Australia has developed a suite of practical resources, including:

- information sheets for high risk industries on identifying hazards, managing risks, and monitoring and reviewing controls
- practical checklists
- case studies
- animations, infographics and posters
- information translated into languages other than English.

To find out more about occupational lung diseases and how you can help to improve awareness, download the **Clean Air. Clear Lungs.** resources at swa.gov.au/clearlungs.



Safety Alerts

17 July 2021

MinEx – NSW Summary – Vehicle rolled away during hot seat changeover

The operator of a dump truck parked on a dump to allow hot seat changeover. The operator was unable to activate the primary access ladder to exit the truck. After several attempts, the operator restarted the truck, exited via the emergency ladder and then activated the ground level e-stop and isolation switch. The truck then rolled forward approximately 50 metres, contacted a windrow and rolled back approximately 17 metres before stopping. The truck was not parked in a fundamentally stable manner.

16 July 2021

MinEx – Fatality Alert – Miner engulfed by raw material

Mine Fatality – 7 June 2021

A miner entered the top of a primary feed hopper to break up and remove a large rock. Raw material that remained on the sides of the hopper sloughed off and engulfed the miner.

15 July 2021

MinEx – Importance of wearing the correct eye PPE

Three separate incidents have recently occurred onboard UK marine aggregate dredgers where individuals undertaking routine tasks on board received debris in their eyes. Two of these incidents were the result of undertaking activities where the risk assessment should have flagged up the need to wear the correct eye PPE. One was grinding and the other washing down the deck. In both cases, safety glasses were being worn when more appropriately goggles should have been required.

14 July 2021

MinEx – Fatality caused by explosion of corroded fire extinguisher

A person discharged a corroded handheld cartridge-type, dry chemical powder fire extinguisher which had been condemned during an annual third-party inspection. When the internal carbon dioxide cylinder was activated to energize the fire extinguisher, the unit ruptured at the corroded base, exploded, and struck the IP causing critical head injuries.

14 July 2021

MinEx – Arm crushed between outrigger leg and safety cage

UK Bulletin 103 -Crushed Arm Hutte 204 Incident

After moving and setting up the Hutte 204 rig the operator and the IP were having a conversation about changing a component. Both parties were standing next to the rig. The rig operator wanted to adjust the outrigger position. The operator activated the remote control to make the adjustment however the outrigger moved in the opposite direction to that expected.

12 July 2021

MinEx – NZ Safety Alert – Quarry fatality from rock fall

Our hearts and thoughts are with the family, friends and workmates of a quarry worker fatally injured at a small farm quarry. Details have not yet been released and we need to respect those involved by not speculating on the circumstances. What we do know is that a rock fell onto an excavator fatally injuring the operator. Falls are a major cause of fatalities in the extractives sector, both in New Zealand and internationally. Of the now nine fatalities in the extractives sector since 2011, six of them were a result of falls.

16 June 2021

Fatality at Silver Lake underground mine

Silver Lake Resources underground operations at an Eastern Goldfields mine in WA has been suspended after the death of a contractor on Thursday morning (10 June 2021).

Silver Lake Resources Limited issued a statement advising that a MacMahon Mining Services contractor at its Daisy Complex mine at Mount Monger has passed away. An investigation into the circumstances of the contractor's passing is under way and the Western Australia Department of Mines, Industry Regulation and Safety has been notified. Underground operations at the Daisy Complex mine have been temporarily suspended in accordance with normal statutory requirements.

16 June 2021

Australasian Mine Safety Journal – Latest News

ICMM publishes 2020 safety performance data of members

The International Council on Mining and Metals has released a report that benchmarks the 2020 safety performance of its members. ICMM company members recorded 44 occupational fatalities in 2020.

For further Safety Alerts and to read more about each alert visit www.maqohsc.sa.gov.au/newsletters

Upcoming Events

Copper to the World Conference 2021

Adelaide Convention Centre

31 August 2021

The Institute of Quarrying Australia SA Branch (IQA)

AGM Dinner Meeting August 2021

CCAA Innovation Awards 2021

Hilton Adelaide

1 October 2021

The Institute of Quarrying Australia SA Branch (IQA)

Dinner Meeting November 2021



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