



MINERALS COUNCIL OF AUSTRALIA

SUBMISSION TO SAFE WORK AUSTRALIA, PROHIBITION ON THE USE OF ENGINEERED STONE

14 APRIL 2023

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1. BACKGROUND

Managing the risk of silica exposure is an important part of the mining industry's commitment to zero harm. Existing regulations meet this commitment but are rightly reviewed to ensure they are effective.

In June 2022, Safe Work Australia (SWA) commenced a consultation process on Respirable Crystalline Silica (RCS) risks with the release of the Consultation Regulation Impact Statement *Managing the risks of respirable crystalline silica at work* ([CRIS](#))¹. This consultation paper outlined five options to manage the risks of RCS in the workplace. Of these five options, none reflected a prohibition on the use of engineered stone.

In February 2023, the [Commonwealth Government announced](#) that it would take steps to ban certain types of engineered stone, based on unacceptable risks of silica exposure, and provided SWA six months to report on what the ban would look like.² On the same day, the Decision Regulation Impact Statement ([Decision RIS](#))³ was released (in response to the CRIS), with an additional option (option 6), for a prohibition on the use of engineered stone.

Prior to the SWA Decision RIS, In February 2023, the draft [National Silicosis Prevention Strategy \(NSPS\) and the National Action Plan \(NAP\)](#), produced by the Lung Foundation of Australia (LFA) on behalf of the Commonwealth Department of Health and Aging was released for consultation.⁴

The NSPS and NAP provided a differing definition of engineered stone to that used by SWA:

Engineered stone is an artificial product that is defined in relation to the percentage of silica contained in the material, however definitions vary across States and Territories. Engineered stone can contain up to 97 per cent silica.⁵

The Commonwealth government and SWA are now progressing measures to implement a ban in accordance with the Government's announced policy.

In March 2023, SWA released a consultation paper, *Prohibition on the Use of Engineered Stone March 2023*, which contains a number of specific questions. This submission outlines the Mineral Council of Australia's (MCA's) response to those questions.

As exposure to engineered stone is not a safety hazard in the mining industry to the same extent as other industries, the MCA does not express a view on all of the questions. However, silica exposure is a safety hazard in the minerals industry, and this hazard is already heavily regulated. The MCA's priority is therefore to ensure that existing risk management measures regarding silica exposure in the industry are enhanced and complementary to any new safety measures that will be introduced to deal with risks arising from engineered stone.

¹ [SWA Consultation Regulation Impact Statement – Managing the risks of silica in the workplace](#)

² [Ministerial communique](#)

³ [SWA Decision Regulation Impact Statement – Managing the risks of silica in the workplace](#)

⁴ [Draft National Silicosis Prevention Strategy and Accompanying National Action Plan](#)

⁵ Page 59, Draft National Silicosis Prevention Strategy and Accompanying National Action Plan

2. MINERALS INDUSTRY POSITION

Introduction

It is well understood that exposure to RCS has led to many silicosis cases in Australian workers, and that silicosis, and other silica-related diseases, can be prevented by implementing known and effective controls to eliminate or minimise the risk of exposure.

The MCA supports the national model of a risk-based approach to reduce RCS workplace exposures, with engineered stone being subject to its own specified control measures, based on its distinctive high-risk profile.

An effective approach must also be able to distinguish between industries based on their risk level and existing effective control measures.

Scope of applicability to Mining

Silica is found in many naturally occurring minerals. Mining activities can produce RCS as a by-product of certain activities, including, but not limited to:

- drilling into quartz
- site establishment
- rock crushing.

A blanket prohibition on the use of engineered stone, if defined too broadly, would significantly impact the mining industry should the incorrect definition of engineered stone be used (whereby the definition is not the actual *product* being banned, but the silica content of the *material*).

The mining industry is already subject to its own industry specific safety regulations to manage risks associated with RCS. These measures would potentially be disrupted by a broad approach to 'engineered stone' (if defined broadly) which would potentially impose a new regime on the mining sector that is not properly adapted to the sector.

MCA RECOMMENDATIONS

1. All governments, regulators and agencies must adapt the same definition of engineered stone. This definition should be the definition used by SWA and set out in section 4 of this submission.
2. Engineered stone should be segregated from all other silica containing material (SCM), given its distinctive risk profile, and consideration given to this in option 5a of the Decision RIS, which refers to *all* silica containing materials, including engineered stone.
3. More detailed impact assessments of the proposed ban must be undertaken, and further opportunities provided for consultation.
4. Option 5a and Option 6 of the Decision Regulation Impact Statement (Decision RIS) require detailed industry consultation prior to the Decision RIS being finalised.

3. GENERAL COMMENTS

Engineered Stone

The definition of engineered stone provided in the NSPS and the NAP does not align with the SWA definition.⁶ Further, the NSPS and NAP definition is also conflicting and confusing in its own right.

Engineered stone must be clearly defined based on the process and methodology to create a manufactured stone, as opposed to its silica content. There is no reason to depart from the existing definition provided by SWA, which reflects existing practice of regulators and duty holders across a range of industries:⁷

Box 1: Engineered stone

*Engineered stone is an **artificial** product that:*

a) is created by combining and heat curing natural stone materials that contain crystalline silica (such as quartz or stone aggregate) with chemical constituents (such as water, resins or pigments), and

*b) can be manipulated through mechanical processes to manufacture other products (such as kitchen benchtops). **Engineered stone does not include natural stone that has not been combined with other products or heat cured** (for example granite and quartz in their natural state).*

*SWA footnote reference: Engineered stone **does not include** concrete, concrete products, cement products, fibre cement, bricks, blocks, pavers, autoclaved aerated concrete, roof tiles, wall and floor tiles that are ceramic or porcelain, grout, mortar, render and plasterboard*

We also note the SWA definition is supported by other authorities, notably, the Australian Institute of Occupational Hygienists (AIOH), through its established Breathe Freely campaign⁸, and that AIOH the relevant subject matter expert body in this field.

AIOH defines engineered stone as '*ground stone such as crystalline silica and combined with resin*'.

Previous consultation processes

Since 2019, there have been several concurrent and overlapping consultation processes to consider issues relating to silica exposure risks and engineered stone. There have been many missed opportunities for streamlining these approaches and ensuring appropriate engagement with all relevant government agencies and industries. The result has been a number of inconsistent and uncoordinated processes. This was apparent through:

- A hasty approach to the NSPS and the NAP, with minimal consultation time
- The release of the Decision Regulation Impact Statement (Decision RIS) during the NSPS and NAP consultation
- A hasty SWA decision to reduce the workplace exposure standard (WES) from 0.05mg/m³ to 0.025mg/m³ (which also contradicts the Decision RIS)
- The release of the *Prohibition on the use of Engineered Stone* Consultation paper and the NSPS and NAP consultation, prior to the SWA decision to lower the WES, which renders aspects of the consultation moot

⁶ page 59, [National Silicosis Prevention Strategy](#)

⁷ page 6, [Model Code of Practice - Managing the risks of respirable crystalline silica from engineered stone in the workplace](#)

⁸ [Breathe Freely](#) – Silica Dust Working with Engineered Stone August 2019

- Current proposals to ban the importation of engineered stone by the Commonwealth, which have not been identified within the *Prohibition on the use of Engineered Stone* Consultation.

A detailed chronology of the various processes are set out in APPENDIX A – SILICA PROPOSALS AND DECISIONS

4. CONSULTATION QUESTIONS

The SWA consultation paper contains 12 specific questions, of which it has sought responses. The MCA will not provide a response to all of the questions where it is not relevant to the industry or where there is insufficient information or data to provide a response at this stage.

Q1. Do you support a prohibition on the use of engineered stone? Please support your response with reasons and evidence.

The MCA does not support a broad prohibition on the use of engineered stone. There are proven effective control measures, to ensure that workers are not exposed to respirable crystalline silica above the workplace exposure standard. Some of these controls include:

- Continuous flow of water and water suppression systems
- On tool water suppression and or dust extraction
- Dust extraction devices
- Ventilation systems with H class high-efficiency particulate absorbing (HEPA) filters
- P2 filtration or positive airflow respirators.

However, it does support enhanced safety measures in relation to engineered stone, as properly defined. These measures should be targeted only to engineered stone and not applied more broadly to other silica containing materials.

Consideration must be given to:

- the mechanical processes that are undertaken with engineered stone
- the frequency of these activities; and
- the maturity of the engineered stone industry.

Given the typically high silica content of engineered stone compounds – in addition to the crystalline silica components - the controls must be more regimented (even mandated) to ensure the risks are adequately controlled.

Q3. If no, do you support a prohibition of engineered stone that contains more than certain percentage of crystalline silica? If yes, at what percentage of crystalline silica should a prohibition be set? Please support your response with reasons and evidence.

There is insufficient evidence to support a ban on engineered stone, regardless of the silica content.

The CRIS, the Decision RIS, and the *Prohibition on the Use of Engineered Stone March 2023* Consultation paper, do not provide any quantifiable or qualitative data to justify this measure.

Q5. How many businesses work with both engineered stone and non-engineered stone products? For these businesses, please provide where possible:

- i) the number of sole traders and small businesses (1-20 employees), medium businesses (21-200 employees), large businesses (>200 employees)**
- ii) the number of workers in these businesses, by business size**
- iii) the average annual revenue, by business size**
- iv) the proportion of their business activity with non-engineered stone products, by business size**
- v) the proportion of their business activity with engineered stone containing 40% or more crystalline silica content, by business size**
- vi) the proportion of their business activity with engineered stone containing less than 40% crystalline silica content.**

The Australian Mining Industry is made up of 264,700 workers, with 88 per cent of mining workers permanent and 96 per cent employed full time.⁹

The mining industry experienced growth across all key data items in 2020-21. Earnings before interest, tax, depreciation, and amortisation (EBITDA) increased 4.1 per cent (\$6.4b), following a 14.6 per cent (\$20.0b) increase in 2019-20. Mining Industry Value Added (IVA) similarly experienced growth, increasing 3.8 per cent (\$7.9b) following a 12.1 per cent (\$22.5b) increase in 2019-20.¹⁰

The Australian minerals industry is a major contributor to investment, high-wage jobs, exports, and government revenues in Australia.

All mining operations will encounter crystalline silica, and many operations will generate RCS. The RCS levels vary greatly, depending on geographical location of the mine, the mine type (open-cut or underground), and the nature of works (exploration, mining, site establishment etc).

The mining industry has mature, tested, and effective control measures and regulations, to ensure worker exposure to RCS is eliminated or minimised. In addition to being more regulated in each state than any other industry in respect to airborne contaminants, the common controls include:

- Substituting materials (such as abrasive blasting agents) that are silica free or have the lowest silica content
- Providing vehicles with enclosed cabs fitted with high efficiency air filters, and or positive air flow
- Ventilation and dust extractions systems
- Water and or wet suppression systems
- On tool dust extraction and suppression
- Respiratory Protective Equipment.

⁹ Australian Bureau of Statistics, [Labour Force, Australia, Detailed](#), February 2022, released 24 March 2022, data cube EQ6

¹⁰ Australian Bureau of Statistics, [Industry Overview and Analysis](#)

Q8. Are the assumptions and scenarios described for Option 6 in the Decision RIS accurate and appropriate? If not, why? Please provide additional information to support the impact analysis.

There is no detail in Option 6 of the Decision RIS that would allow for an appropriate assessment. This option was not included in the CRIS. The assumptions made for Option 6 are all assumptions aligning with options 2, 4, 5a and 5b, and there is no detail that quantifies the financial impact assessment for businesses. The assumptions made using the formula provided do not represent the actual impacts to industries.

Table - Estimated economic impact and breakeven analysis, Options 2, 4, 5a and 5b within the Decision RIS claims there is a \$0 cost to industry to comply with option 2, National awareness and Behaviour change initiatives.¹¹ There has been no consideration given to:

- Labour costs to attend and comply with national awareness initiatives
- Auditing and compliance costs
- Administration costs for reporting and auditing.

The above activities would be a requirement to comply with the option, as it is detailed in the CRIS.¹² Option 2 is detailed as:

...national awareness and behaviour change initiatives focussed on duty holders in the construction, manufacturing, tunnelling, quarrying, demolition and mining industries and compliance with the model WHS laws...investigating incentives and disincentives to compliance and trialling different approaches amongst various industries and sectors.

We also note that the methodology behind \$0 cost assumption has been omitted from Appendix C: Cost modelling key assumptions and methodology.¹³

The blanket averaging of a wage is not suitable to determine a financial impact assessment, particularly for an Industry such as mining, which has an average hourly rate that is double (or higher) to other industries. The average hourly wage used is \$46.24. The average hourly rate in mining is \$74.62.¹⁴

There has been no consideration given to many financial factors and impacts for options 4, 5a and 5b, for example:

- Litigation and contractual fees for contracts already executed
- Economic loss in the residential sector or for general consumers of Engineered Stone
- Retraining of redundant workers
- Compensation for loss of business income or business collapse
- Compensation for new equipment purchases used to control RCS, that would be redundant in the event of business collapse.

The options also propose redeployment for redundant workers through upskilling into a Certificate III, with no consideration given to:

- Availability of employment in remote locations
- Literacy, language, and numeracy requirements to meet Certificate III prerequisites.
- Costs to accommodate for learners with English as a second language.

¹¹ Page 6-7, [SWA Decision Regulation Impact Statement](#)

¹² Page 29-30, [SWA Consultation Regulation Impact Statement](#)

¹³ Table 41, page 96, [SWA Decision Regulation Impact Statement](#)

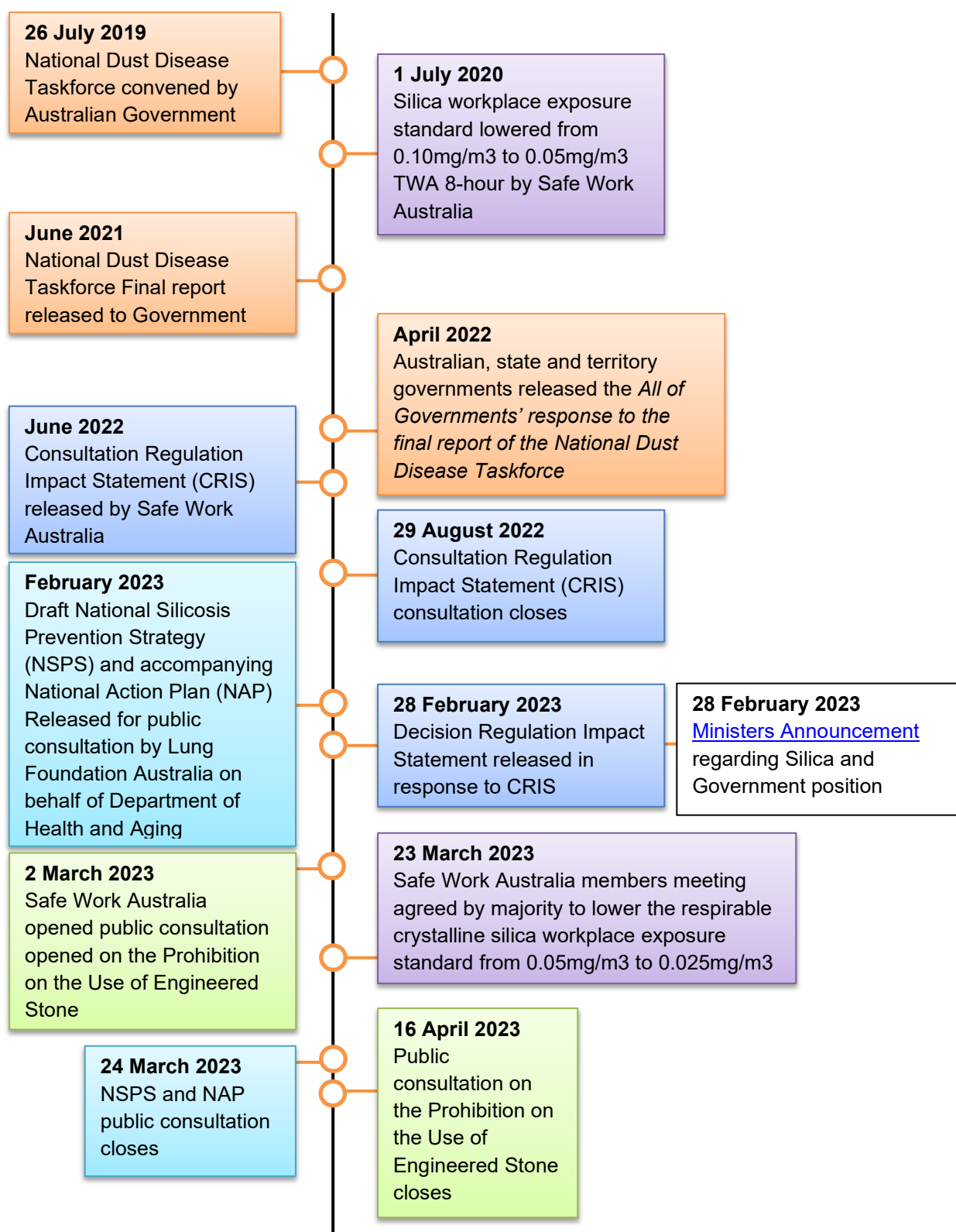
¹⁴ [Australian Bureau of Statistics Average Weekly Cash Earnings by Industry](#)

The proposed regulations in options 4, 5a, 5b and 6 are very heavily focused on compliance, with little consideration given to the impost of adhering to existing state regulations and the model WHS laws (where the model WHS laws apply). Mining is heavily regulated, and the proposed options would create an environment of duplication for the sake of compliance, with no added safety benefit, or the overall enhancement of knowledge.

The following list is a sample of just some of the existing state regulations that detail air and health monitoring requirements:

- [Schedule 14 WHS Regulations \(Cwth\)](#)
- [Subdivision 2, S55 Work Health and Safety \(Mines\) Regulation 2014 \(NSW\)](#)
- [S89 Coal Mining Safety and Health Regulation \(QLD\)](#)
- [AS2985-2009 Workplace atmospheres - Method for sampling and gravimetric determination of respirable dust](#)
- [S368 Work Health and Safety \(Mines\) Regulations 2022 \(WA\)](#)
- [s49-50, s368-378 of the Tasmania Work Health and Safety Regulations 2022](#)
- [Coal Mine Workers Health Scheme QLD.](#)

5. APPENDIX A – SILICA PROPOSALS AND DECISIONS



6. GLOSSARY

ACRONYM	DEFINITION	DESCRIPTION
AIOH	Australian Institute of Occupational Hygienists	<i>The peak organisation representing professionals working in occupational hygiene</i>
LFA	Lung Foundation of Australia	<i>National not-for-profit organisation facilitating and conducting research into lung diseases in Australia</i>
MCA	Minerals Council of Australia	<i>The MCA is the leading advocate for Australia's minerals industry</i>
NAP	National Action Plan	<i>The targets and outcomes developed to support the national Silicosis Prevention Strategy</i>
NSP	National Silicosis Profile	<i>A proposed strategy developed in accordance with international guidelines</i>
NSPS	National Silicosis Prevention Strategy	<i>Developed by the Lung Foundation of Australia as per the national Dust Disease Taskforce recommendations</i>
RCS	Respirable Crystalline Silica	<i>Silica materials that have been mechanically altered to generate microscopic particles</i>
SCM	Silica Containing Material	<i>Any product that contains any silica content</i>
SWA	Safe Work Australia	<i>National Work Health and Safety Coordinating Authority</i>
WES	Workplace Exposure Standard	<i>The highest limit of a substance a worker can be exposed to without adverse health affects</i>