

Managing respirable crystalline silica risks for stabilisation works

Australian Pavement Recycling and Stabilisation Conference, August 2022

Rohan Davies, Project Director

Traditional Owners Acknowledgement

TMR Artwork storyline Travelling by Gilimbaa.



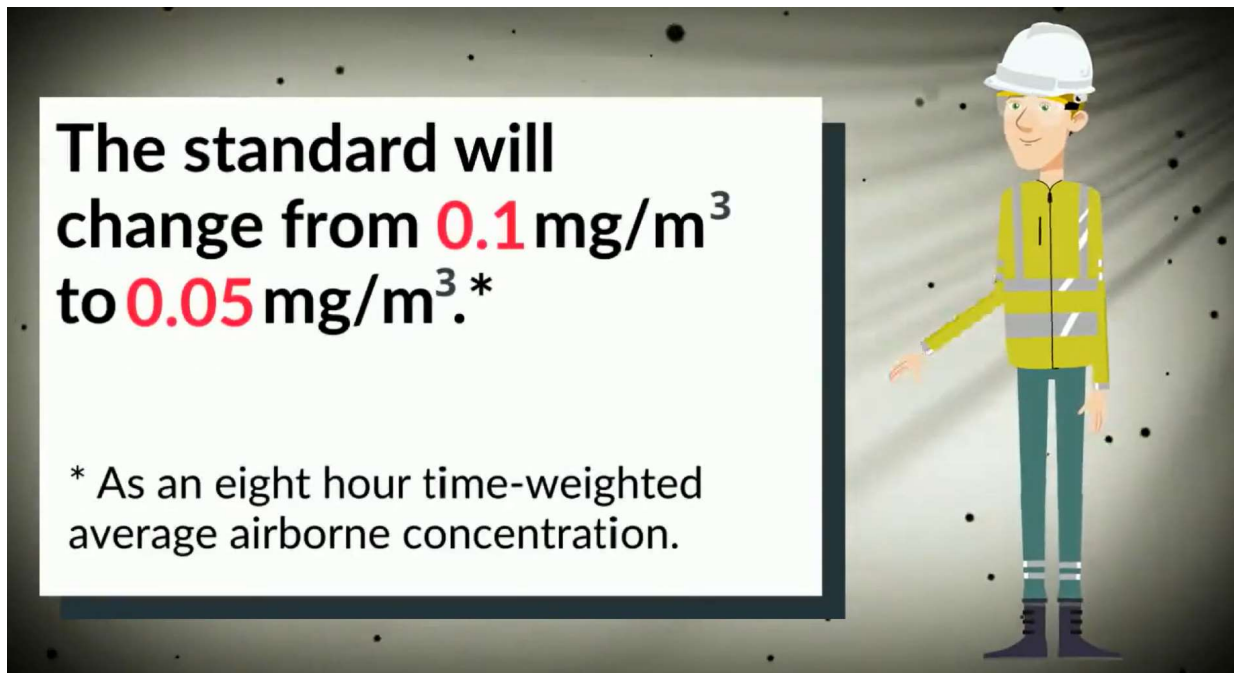
Roadworker safety

We believe that everyone who works at TMR should return home at the end of their work day, in the same condition, if not better than when they arrived.



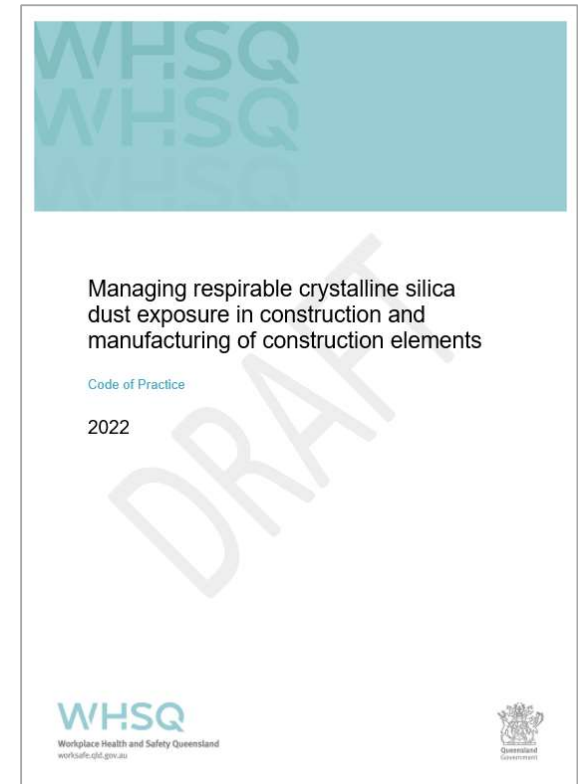
Changing workplace standards

The workplace exposure standard for respirable crystalline silica changed in Queensland in 2020



The standard will change from **0.1 mg/m³** to **0.05 mg/m³**.*

* As an eight hour time-weighted average airborne concentration.



WHSQ
WHSQ


Managing respirable crystalline silica dust exposure in construction and manufacturing of construction elements

Code of Practice

2022

DRAFT

WHSQ
Workplace Health and Safety Queensland
worksafe.qld.gov.au



SOURCE: [Workplace Health and Safety Queensland – Reduction in workplace exposure standard for respirable crystalline silica](#)

Work activities undertaken by TMR



The variation in work activities, plant and equipment, and the duration of dust generating tasks made it difficult to meaningfully assess the level of risk.

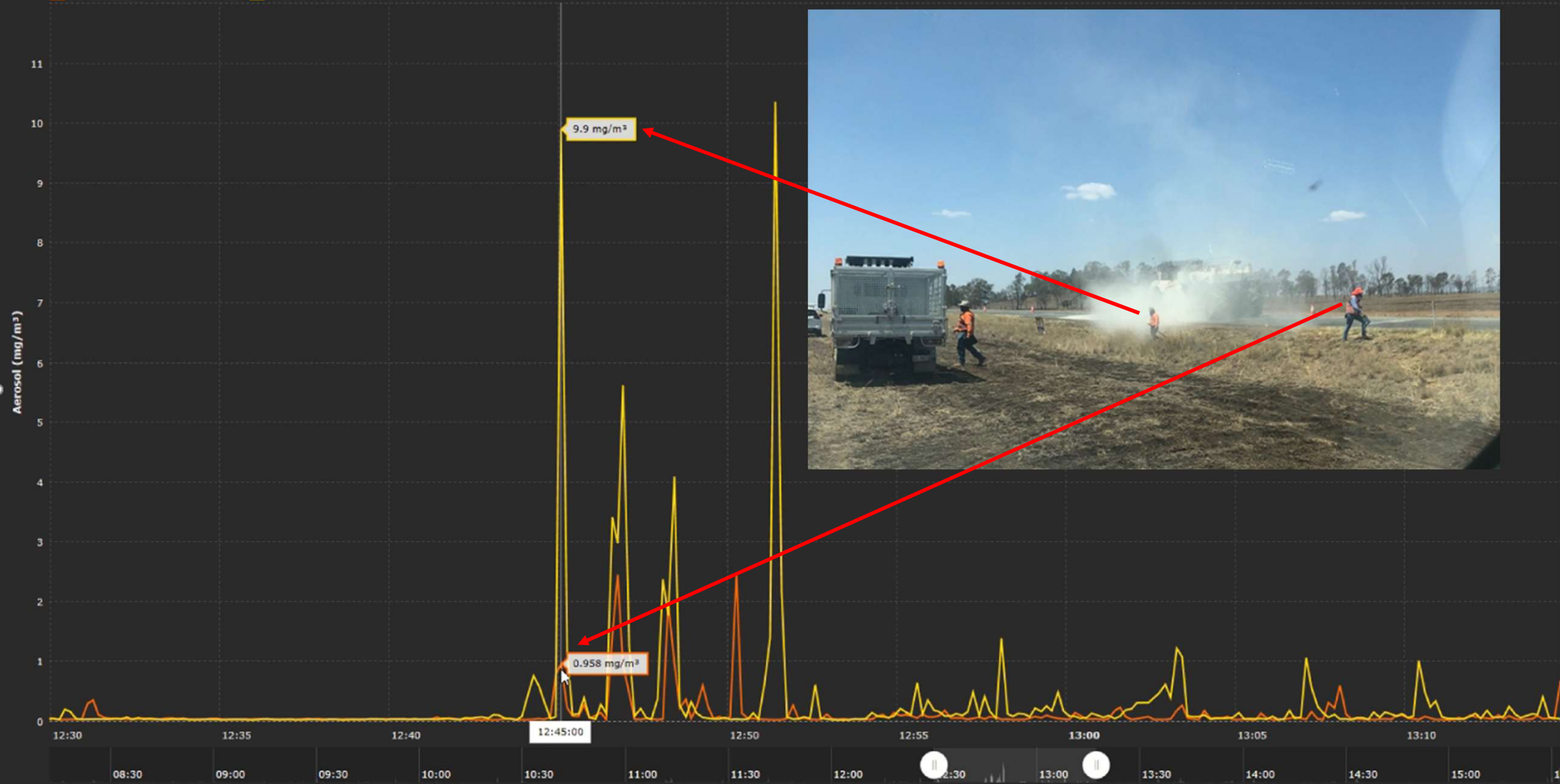
Work activities undertaken by TMR



RCS exposure during stabilisation



Angle - 5300 - 20191120 0.958 Mick - 5349 - 20191120 9.896



Work activities undertaken by TMR

The *Respirable Crystalline Silica Control Standard* provides activity-level instruction on controls and the use of respiratory protective equipment.

Department of Transport and Main Roads					
RoadTek					
Equipment / task	Engineering and work practice control methods	Work environment	Required respiratory protection equipment based on task duration		
			Task duration less than or equal to 4 hours/shift	Task duration greater than 4 hours/shift	
1. Handheld power saws for cutting non-asbestos fibre-cement board					
2. Road and floor saw					
2.1 Cutting concrete and asphalt	<ul style="list-style-type: none"> Use a drill equipped with a commercially available on tool dust extraction system. Operate and maintain the drill in accordance with the manufacturer's instructions to minimise dust particles. The dust collector must provide the air flow recommended by the tool manufacturer and have a filter with a 99.9 per cent or greater filtration efficiency (M or H class) and a self-cleaning mechanism. Use a M or H class vacuum when cleaning holes. 	Any work environment	None	None	
2.2 Loop cutting					
2.2 Expansion joints					
2.2 Concrete groves					
4. Dowel drilling rigs for concrete					
4.1 Drilling dowels	<ul style="list-style-type: none"> Use a shroud around drill bit with a dust extraction system. The dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with a 99.9 per cent or greater filtration efficiency (M or H class) and a self-cleaning mechanism. Use a M or H class vacuum when cleaning holes. 	For tasks performed outdoors only	P2	P2	
4.2 Vehicle-mounted drilling rigs for rock and concrete					
4.2.1 Drilling concrete, asphalt and stone	Water dust suppression method	Use a dust extraction system with a close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector.	Any work environment	None	None
4.2.2 Core drilling		Operate from within an enclosed cab and use water for dust suppression on the drill bit.	Any work environment	None	None
4.2.3 Material testing/sampling					

In-situ stabilisation work undertaken by industry

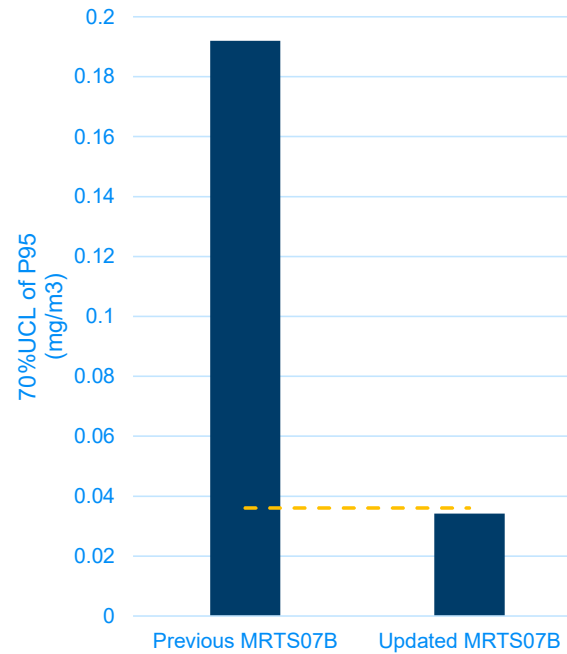


In-situ stabilisation work undertaken by industry

Previous standard



Revised standard





Thank you and stay connected



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Department of Transport and Main Roads



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