



SILICA DUST AWARENESS PACKAGE SPEAKERS NOTES

***Air Quality Working Group
Information Package - Part 4 of 12***

December 2018

Silica Dust Awareness – Speakers Notes

The *Air Quality Working Group* have used their collective experience to develop a short awareness package that was produced to raise awareness of the hazards associated with exposure to dusts and silica during tunnel construction in New South Wales. This document provides notes for those that deliver the awareness package to assist with its delivery.

The AQWG membership collectively produced reference material for purposes of communicating information that currently does not exist in the tunnel construction industry's body of knowledge. There are 12 parts to the information package, and each part must be considered in the context of the other. This document represents Part 4 of 12 total parts as listed in **Table 1**. Documented material is considered to benefit the wider tunnelling industry and therefore is freely available on the ATS website.

Table 1 – Complete list of material produced by the AQWG

Part	Document Title	Document Reference
Part 1	NSW Air Quality Working Group Background & Methodology – Silica Dust Exposure and the Tunnelling Industry	Doc No. AQWG_0_0.07
Part 2	Good Practice to Control Silica Dust Exposure During NSW Tunnel Construction	Doc No. AQWG_1_0.08
Part 3	Silica Dust Awareness Package	Doc No. AQWG_2_0.21
Part 4	Silica Dust Awareness Package Speakers Notes	Doc No. AQWG_2a_0.04
Part 5	Design and Procurement - Industry Considerations	Doc No. AQWG_3_0.09
Part 6	Scrubber System - Case Study	Doc No. AQWG_4_0.09
Part 7	Ventilation During Tunnel Construction - Industry Considerations	Doc No. AQWG_5_0.08
Part 8	Portal Misting System - Case Study	Doc No. AQWG_6_0.05
Part 9	Roadheader Cabin Air Filtration - Case Study	Doc No. AQWG_7_0.06
Part 10	Respiratory Protective Equipment - Industry Considerations	Doc No. AQWG_8_0.07
Part 11	Monitoring RCS Exposure - Industry Considerations	Doc No. AQWG_9_0.07
Part 12	Health Monitoring for NSW Tunnel Construction Workers – Industry Considerations	Doc No. AQWG_10_0.14

The awareness package was designed to be able to be delivered as part of a project induction or tool-box talk to raise awareness. Increasingly, workers involved in tunnelling are from outside industries and may have lower levels of knowledge on silica dust than those familiar to the industry. Inductions, training and awareness information will need to be modified and upgraded to suit knowledge gaps that may be present.

Embedded throughout the presentation are quotes from those have worked in the tunnelling industry for considerable time. They have shared their experiences in the hope that others take the issue of silica dust control seriously, as they are either living with the consequences of over-exposure to silica dust or they work amongst many others that have.

Additional information and questions are listed in **Table 2** as relevant to each slide as prompts that you may consider asking to make the presentation more interactive and engaging.

Table 2 – Supporting questions and information

Slide	Relevant Questions / Information
Slide 5 - Dust and silica in tunnelling	<p><i>“Where else would you expect to find silica dust?”</i></p> <p><i>Where are some areas that you have found silica dust to be high?”</i></p>
Slide 7 – Silica exposure can come from anywhere	<p><i>“How might you make sure that you don’t breathe in dust from your clothes?”</i></p> <p><i>Where clothes are laundered on-site, is the laundry cleaned using wet methods (mops) or is dry brush sweeping used that will cause dusts to get in the air?”</i></p>
Slide 11 – Minimise dust generation	<p><i>“What are some other ways that we can reduce generating dust on our site?”</i></p>
Slide 15 – Dried Mud	<p>The graph shows the amount of airborne dust inside a plant cabin. It starts out high once the door is shut, because fine dust particles are pushed into the air from the door jam. It takes 15 minutes for that dust to settle out, which means that every time the plant operator shuts that door, they are exposed to fine dusts for at least 15-minutes.</p> <p>Dust exposure can be reduced by keeping heavy plant cabins clean, including the door jam.</p>
Slide 19 – Clean Shaven	<p>Wearing respiratory protection that relies on a seal around your face, like a dust mask for example, will only work as it is intended if there is no facial hair that interferes with that seal.</p> <p>This slide shows just how small silica dust particles are in relation to facial hair. Being so small, silica dust will take the path of least resistance and can be breathed in around the seal, rather than being captured through the filter on the respirator.</p>
Slide 21 – Measure It	<p>The amount of dust shown relates to the 8-hour Workplace Exposure Standard (TWA) in reference to the size of a 5 cent coin.</p>
Slide 23 – Health Monitoring	<p>Different medical providers might be used for health monitoring, so the only way to keep your records centralised and to track changes over time is for you to keep your records and take them with you each time you do health monitoring.</p>

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