

Silica dust in the quarrying sector

2020



Management of dust

This presentation provides information on how the NSW Resources Regulator is approaching:

- the management of respirable and silica dust in the quarry industry
- the effect of the lowering of the national exposure standard for silicon dioxide or silica (SiO_2).



SILICOSIS IS ENTIRELY PREVENTABLE

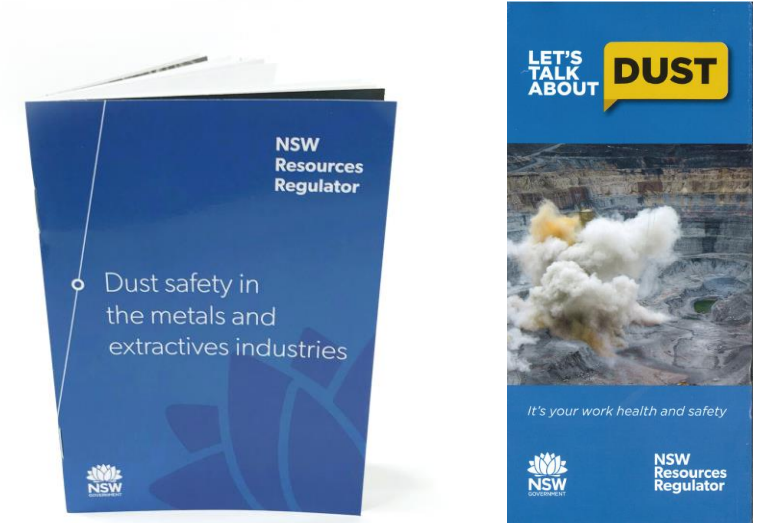


Click them image above to watch the video

Our objectives

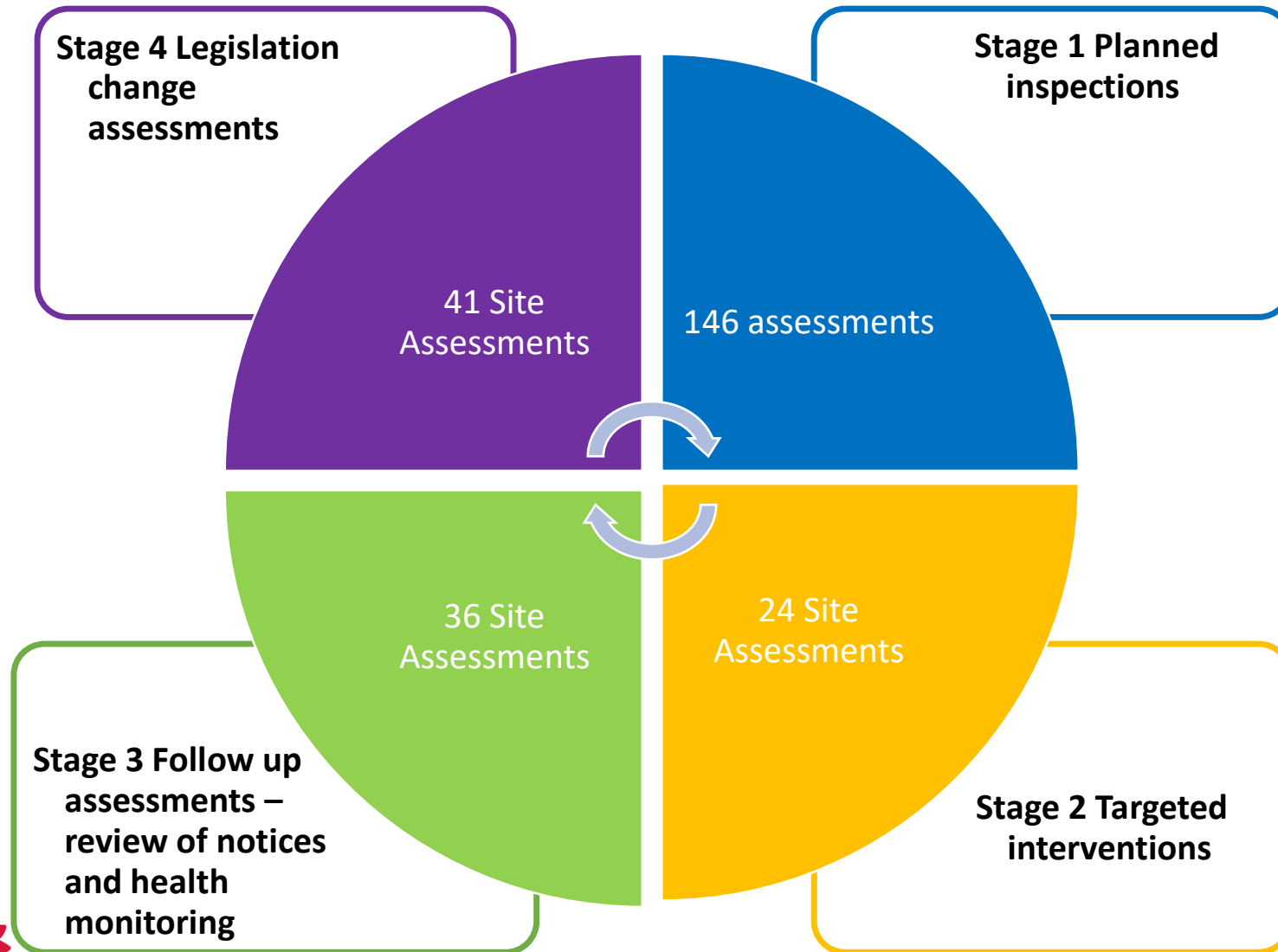
Our objective is to assist the mining industry to comply with the revised exposure standard. To achieve this we will:

- Undertake targeted assessment programs (TAPs) and planned inspections (PIs) for dust and airborne contaminants. The outcomes of these assessments will be reviewed and communicated to industry. **A program to revisit those mines identified as requiring improvement in worker health monitoring, management and control of dust will be implemented.**
- Review the outcomes of these assessment programs to identify mines operating in high silica environments. These mines will undergo further planned inspections to verify that suitable strategies have been implemented to control the risks associated with dust.
- Development of an awareness package covering worker monitoring and reporting requirements and communicate this to mines in the non-coal sector.



There is a clear need to focus on dust diseases in our mining industry.

Meeting our objectives



Information and awareness:

- Review and publish guidance material (i.e. fact sheets, dust booklet)
- Annual Small Mines Roadshows
- Participation in industry seminars (i.e. IQA seminar)
- Participate in other dust related events (i.e. SafeWork NSW Silica Roadshow)
- Develop toolkit (i.e. partner with Mine Safety Advisory Council on the dust toolkit)
- Publication of assessment program outcomes

Our Targeted Intervention Program

Our 2019 assessment process, undertaken at 24 quarries, highlighted:

Opportunities for improvement:

- Some mine operators believe that respiratory protection equipment (RPE) is the only control necessary. Lack of understanding that they are required to control workers' exposure.
- Risk Assessments for dust on sites were typically not completed, did not identify all activities that generated dust, had not been reviewed and/or controls not detailed.
- Not all dust generating activities were identified.
- Workers were not aware of the adverse health effects. No training was provided regarding RPE or the methods to control dust.
- The worker induction process lacked information, training and instruction on the risks to their health from exposure to dust and methods for controlling the hazard.
- The procedure for personal protective equipment (PPE) did not state the mandatory RPE required for tasks and areas where workers were at increased risk.

Good practice:

- Critical controls used to manage the risk of worker exposure to dust were frequently in place (i.e. sealed, air conditioned and/or air filtered pressurised cabins of mobile plant and water sprays).

Reality check - How did you determine what controls to use?

Regularly, we have reviewed risk assessments that have a predetermined outcome:

- No involvement of subject matter experts.
- Reverse engineered risk assessments.
- No evaluation of known controls.
- No involvement of workers.
- “Cut and paste” risk assessments within organisations.



Is the exposure reduced to an acceptable level and, at a minimum, consistently below the exposure standard of $0.05\text{mg}/\text{m}^3$ on an 8 hour TWA for any activity or task that may create an unacceptable RCS exposure?

Is there monitoring and verification in place to ensure the ongoing effectiveness of controls and that exposures are kept to an acceptable level?

Legislative and regulatory requirements

Reporting (dust exceedance) - clause 128 WHS(MPS)R (q) (r)

- Operators of a mine or petroleum site have a legislative and regulatory requirement to notify the Regulator when respirable dust levels in the workplace, and specifically crystalline silica, exceeds the specified levels.

Review of control measures - clause 10 WHS(MPS)R

- A PCBU must review and as necessary revise control measures when an incident referred to in clause 128 occurs.
- A worker is moved from a hazard or assigned to different work in response to a recommendation contained in health monitoring.

Legislative and regulatory requirements

Reporting - clause 118 WHS(MPS)R

- The mine operator of a mine must take all reasonable steps to ensure that a copy of a health monitoring report relating to a worker at the mine is given to the regulator as soon as is reasonably practicable if the report contains:
 - (a) any advice indicating any significant adverse health effect resulting from exposure to a risk associated with mining operations, or
 - (b) a recommendation that the mine operator should move the worker from a hazard or assign the worker to different work.

Our position on the new exposure standard

- In February 2020, the Minister for Better Regulation announced that the new respirable crystalline silica workplace exposure standard of $0.05\text{mg}/\text{m}^3$ will take effect in NSW from July 2020.
- The new exposure standard is prescribed following a revision of the Workplace Exposure Standards for Airborne Contaminants (WESFAC). Mines and petroleum sites will need to report exceedances of the new exposure standard to us from 1 July 2020.
- We recognise that the ability to meet the new standard, in a relatively short time frame, will be a challenge for some mine operators.
- It is the Resources Regulator's position **that a reduction in the exposure standard is appropriate and compliance is achievable through the application of the hierarchy of controls.**



Visit resourcesregulator.nsw.gov.au
to read our position paper.

Our approach on the new exposure standard



Notification of an exceedance

No transitional arrangements for reporting



Investigation of a reported exceedance

Assessment and initial investigation of reported exceedances will not change



Actions arising from an investigation

A moderated approach to compliance and enforcement
Consideration will be given to the magnitude of the exceedance

Our approach to a reported exceedance

A moderated approach to compliance and enforcement:

No Action

- Does not exceed previous standard ($0.1\text{mg}/\text{m}^3$) and mine operator provides evidence of appropriate review of controls.

Possible
compliance
action

- Exceeds previous standard ($0.1\text{mg}/\text{m}^3$) by **up to** 100% and mine operator provides evidence of appropriate review of controls. Compliance action may be taken, subject to specific circumstances, (i.e. improvement notice).

Normal
compliance
action

- Exceeds previous standard ($0.1\text{mg}/\text{m}^3$) by **more than** 100% normal compliance. Enforcement action taken into account subject to specific circumstances and actions taken by mine operator (i.e. range of notices, site follow-up).

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Document control

Published by NSW Resources Regulator

Title: Silica dust in the quarrying sector

First published: November 2020

Authorised by: Chief Inspector

CM9 Reference: DOC20/909491

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