



**NSW  
Resources  
Regulator**

POSITION PAPER

# REVISION TO SILICA EXPOSURE STANDARD

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## Introduction

On 21 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 1 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 the NSW Resources Regulator from 1 July 2020.

The NSW Government will also make silicosis a notifiable disease, creating a Silicosis Health Register. This will allow the Regulator and SafeWork NSW to track and investigate workplaces where workers have been diagnosed with the disease.

We recognise that the ability to meet the new standard, in a relatively short time frame, will be a challenge to some mine operators. However, in consideration of the insidious nature of silicosis and other respirable dust diseases, it is our position that a reduction in the exposure standard is appropriate and compliance is achievable through the application of the hierarchy of controls.

This position paper details our regulatory approach during the period July - December 2020 to assist the NSW mining industry in managing the transition to compliance with the new exposure standard.

It is important to note that under NSW WHS laws, mine operators must minimise exposure to respirable crystalline silica dust, to **as low as reasonably practicable**, and no greater than the prescribed maximum limit.

Where operators can reasonably achieve levels below the prescribed maximum, that is the limit to which they need to operate.

## Notification of an exceedance

### No transitional arrangements for reporting

Clause 128(5)(r) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 requires a mine operator to notify the Regulator in the event of detection of an atmospheric concentration of crystalline silica that exceeds the exposure standard specified in the *Workplace Exposure Standards for Airborne Contaminants*. As of 1 July 2020, mine operators will be required to report when concentrations are detected that exceed  $0.05\text{mg}/\text{m}^3$ .

## Investigation of a reported exceedance

### Assessment and initial investigation of reported exceedances will not change

All reported exceedances are assessed by the Resources Regulator's Central Assessment Unit. The extent of the assessment, and any subsequent investigations or compliance and enforcement activity is determined by considering the following:

1. time-lapse between when sampling occurred, and when the exceedance was reported
2. magnitude of the exceedance
3. review of historical data for the site (history of recurrence)
4. comprehensiveness of the review of control measures undertaken by the mine operator
5. evidence provided to demonstrate:
  - a. a tangible response by the mine operator in terms of modifying existing controls, or implementing new controls
  - b. genuine consideration has been given to the application of the hierarchy of controls when modifying or implementing new controls.

## Actions arising from an investigation

### A moderated approach to compliance and enforcement

In consideration of the magnitude of the reduction in the exposure standard, we will adopt a measured, proportionate response to notifications of crystalline silica exceedances. This will include the provision of advice and information to mine operators who report an exceedance.

During this period, while our investigative approach will not change, when determining further regulatory action, specific consideration will be given to the magnitude of the exceedance, and the actions by the mine operator to prevent a reoccurrence.

1. Where the reported concentration does not exceed the previous exposure standard ( $0.1\text{mg}/\text{m}^3$ ) and the mine operator provides evidence to demonstrate an appropriate review of control measures was completed, no further regulatory action will be taken. However, we may provide advice and information on possible actions to prevent a recurrence.
2. Where the reported concentration exceeds the previous exposure standard ( $0.1\text{mg}/\text{m}^3$ ) by up to 100%, and the mine operator provides evidence to demonstrate an appropriate review of the control measures was completed, compliance action (i.e. issuing of improvement notices) may be taken, subject to the specific circumstances of the exceedance and the actions taken by the mine operator to prevent a recurrence.

3. Where the reported concentration exceeds the previous exposure standard ( $0.1\text{mg}/\text{m}^3$ ) by more than 100%, normal compliance and enforcement considerations will apply, taking into account the specific circumstances of the exceedance and the actions taken by the mine operator to prevent a recurrence.

## What is an appropriate review of control measures?

It is up to the mine operator to demonstrate that any exceedance has been managed appropriately. Evidence of this would include (but not be limited to):

- a review of all controls identified in risk assessments and procedures was undertaken to establish precisely which controls failed
- actions taken to address the reasons why the controls failed
- records to demonstrate consultation with workers
- where new controls are identified, that proper consideration has been given to the implementation of high-order controls (elimination; substitution; isolation; engineering controls) over administrative controls and Respiratory Protective Equipment (RPE)
- information to demonstrate that processes have been implemented to verify the effectiveness of controls on an ongoing basis
- where high-order controls are identified but not implemented, the justification for not doing so
- where high-order controls are identified but cannot be implemented immediately subject to expenditure constraints, the estimated timeframe to implement the controls, and what interim controls have been put in place
- updated work procedures and training documentation.

## What if it is determined that a review of control measures is inadequate?

Notwithstanding the advice in scenarios 1 and 2 above, if a mine operator cannot reasonably demonstrate they have undertaken a review of control measures, we will consider escalating regulatory action.

Consideration will be given to the capacity of a mine operator to perform a review. We will provide advice and guidance, if required, on completing a review of control measures.

If a mine operator opts to only implement a low order mitigating control (i.e. respiratory protective equipment (RPE)) without any consideration to the implementation of higher order controls, we will

consider escalation. The use of RPE alone will not prevent an exceedance, and it is dependent on other administrative controls to be effective in mitigating risk.

## Other activities

### Priority Project – airborne contaminants

The management of airborne contaminants has been a key focus area over recent years. The implementation of the revised exposure standards for respirable dust, as well as an exposure standard for diesel exhaust emissions, means that airborne contaminants will continue to be a priority between July and December 2020. Our airborne contaminants project will be multi-faceted, incorporating site assessment and engagement with industry through a variety of mediums.

### Planned inspection programs

We will undertake an assessment program across all mining sectors, focussing on the management of respirable dust. This will have both educational and regulatory components.

Inspectors will provide resource materials to mine sites, assisting workers and supervisors to better understand their obligations and the health impacts of dust.

Inspectors will also be undertaking spot sampling to highlight potential high-risk areas on mine sites and assessing the implementation of controls used to protect workers from respirable dust risks.

### Industry engagement

We will be particularly active in engaging with industry during this period. This will include:

- a multimedia campaign informing industry stakeholders of the change to the exposure standard, and providing guidance material on how to manage the health risks associated with respirable dust
- industry roadshows, focussing on the extractives sector
- presentations at industry forums and seminars
- publication of fact sheets and other guidance material
- regular correspondence to mine operators, reminding them of the change in exposure standards and the need to review and modify systems and processes to achieve compliance.

### Sampling and monitoring assistance

The Mine Safety Technology Centre, a business unit of the Resources Regulator, has the capability to undertake personal dust sampling. This is offered on a fee-for-service basis.

The Resources Regulator is actively examining providing sampling during this period at no cost, or on a subsidised or cost-recovery basis, to assist operators of small quarries to assess potential high exposure areas or activities at their sites. The provision of such a service will be subject to meeting eligibility criteria which will be addressed in future communications. It should also be noted this service is resource constrained and any low or no cost option would not extend beyond December 2020.

## In conclusion

The NSW Resources Regulator is committed to ensuring that the NSW mining industry understands its obligations and our expectations. We accept that compliance with the revised exposure standards will present a significant challenge to some mine operators in the short term, and that achieving compliance may take some time, based on requirements to upgrade or modify equipment.

However, improving conditions relating to the health and safety of workers and reducing the potential risk of all airborne contaminants is an absolute necessity and we expect that all mine operators are actively working to reduce exposure, not only to below the prescribed maximum, but to as low as reasonably practicable.

We will moderate our approach to compliance in recognition of this and provide additional support and guidance to industry and workers. Moderation will not be applied where mine operators cannot demonstrate they have made a genuine attempt to address the causes of an exceedance to protect workers.