SUBMISSION

Consultation Regulation Impact Statement:

Workplace exposure standards framework under the model Work Health and Safety laws

Instructions

To complete this online submission:

- Download and save this submission document to your computer.
- Use the saved version to enter your responses under each question below. These questions are from the consultation regulation impact statement on the workplace exposure standards framework under the model Work Health and Safety laws.
- Once you have completed your submission, save it and upload it using the upload your submission link on the Engage submission form.

Submissions will be accepted until **11.59 pm AEDT, 13 September 2018**.

Additional documentation

Up to three additional documents can also be uploaded when you submit your response. Relevant documents to upload could include cover letters or reports with data and evidence supporting your views.

Help

If you are experiencing difficulties making your submission online, please contact us at WESconsult@swa.gov.au.

Respondents may choose how their submission is published on the Safe Work Australia website by choosing from the following options:

- submission published
- submission published anonymously
- submission not published

For further information on the publication of submissions on Engage, please refer to the Safe Work Australia Privacy Policy and the Engagement HQ privacy policy.

Please note the following are unlikely to be published:

- submissions containing defamatory material, and
- submissions containing views or information identifying parties involved in hearings or inquests which are currently in progress.

Your details

(Please leave blank if you wish to remain anonymous)

1. Name or organisation

   Queensland Resources Council

   The QRC is the peak representative organisation of the Queensland minerals and energy sector. The QRC's membership encompasses minerals and energy exploration, production and processing companies and associated service companies. The QRC works on behalf of its members to ensure Queensland's resources are developed profitably and competitively, in a socially and environmentally sustainable way. While the survey questions are aimed at individual operators, the QRC has endeavoured to respond on an industry-wide basis.

2. Email used to log into Engage

   [redacted]

Questionnaire

(Consultation RIS questions)

1. Do the estimated rates of compliance with the workplace exposure standards align with your experience? Please explain. **(Section 2 Pages 24-25)**

   The Queensland resources industry is committed to continuous improvement in all areas of health and safety and follows a best practice risk-based approach to managing risks of exposure to the workplace.

   The QRC notes the comment in the RIS that "larger businesses tend to be more aware of regulatory requirements in relation to the workplace exposure standards. Many employ occupational hygienists or have the capacity to engage consultants to undertake this work and ensure compliance." This comment appears a reasonable generalisation, and resources companies would fit this description in addressing airborne contaminant exposure hazards. The RIS further states that "these businesses may also set their own internal workplace exposure standards to align with international best practice and emerging health and toxicological information". This too is consistent, for example with the operation of mining companies, which would typically set a level for reviewing dust controls at half of the applicable exposure level.

   While there were historical exceedances of regulated mine dust exposure levels as a time weighted average, more recent personal dust monitoring results for the Queensland coal mining industry show there has been a dramatic improvement in dust exposures in the last two years. Earlier exceedances in exposure levels appear to have been related to normalisation of the risk from respirable dust rather than a lack of awareness of the WES values as discussed in the RIS. This highlights the importance of proper understanding of the risks associated with airborne contaminants, particularly the risks associated with chronic exposure and latent disease onset. Since the re-identification of coal workers' pneumoconiosis in December 2015 industry awareness has been greatly heightened, and operations have undertaken a process of improving controls around dust exposure. Since 1 January 2017 amendments to the *Coal Mining Safety and Health Regulation 2017* have required all Queensland coal mines to provide quarterly respirable dust data to the Department of Natural Resources, Mines and Energy. The

graphs below show the time weighted average respirable dust monitoring results for the two highest risk similar exposure groups (SEGs) in underground coal mining over this period.

Longwall workers SEG

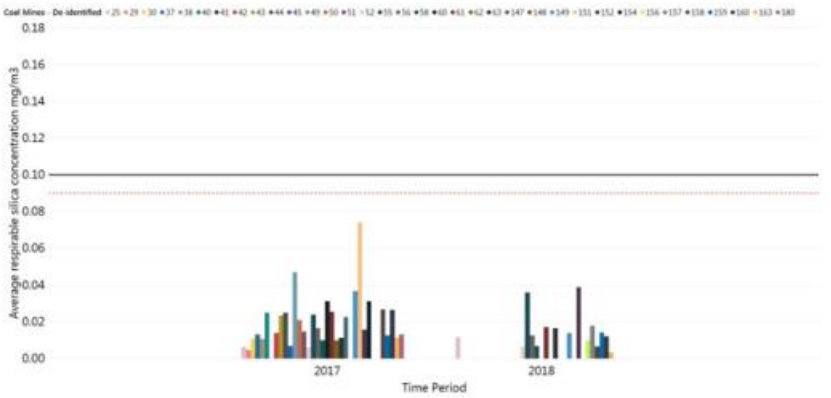


Development workers SEG



These results show that industry is now meeting the occupational exposure level for coal mine dust, and the results for respirable crystalline silica are similar, for example the surface blast crew SEG in open cut mining operations as shown in the graph below; this SEG generally has the highest average exposure in coal mining operations.

Blast crew workers SEG



While single exceedances of both respirable crystalline silica and coal dust are being reported, these results show that all mines are now meeting the regulatory requirement that the average

concentration, calculated under AS 2985:2009 equivalent to, for coal dust 3mg/m^3 and for free silica 0.1mg/m3 for an 8-hour period (i.e. shift adjusted).

2. Are there any particular issues that make it difficult for you to comply with the workplace exposure standards? Please provide examples. **(Section 2 Pages 24-25)**

   Coal and metalliferous mines have implemented a range of control measures to meet their statutory requirements, and have assisted the Queensland Department of Natural Resources, Mines and Energy to develop a best practice approach to controlling dust exposure. These requirements are set out in Recognised Standard 15 RS 15: Underground respirable dust control (PDF, 1.9MB) for coal and Guideline 02 QGL02: Guideline for management of respirable crystalline silica in Queensland mineral mines and quarries, Version 2 May 2018 (PDF, 498KB) for minerals mines and quarries.

   As mentioned previously, mines are meeting and generally exceeding current regulatory requirements, however any further reduction in occupational exposure levels will require the development of additional engineering controls to ensure sustainable compliance. It takes time to develop, test and refine such changes, therefore any amendments to regulated dust levels for the mining industry will require an appropriate phase-in period.

3. Are there any other costs to your organisation relating to the workplace exposure standards framework not discussed here? **(Section 2 Pages 26-30)**

   No. While the framework is not directly applicable to the Queensland resources sector (because it is not called up through relevant legislation) the QRC is engaging on the issue because the Standard still represents an important statement regarding safe levels of exposure that must be considered by resources companies under a risk-based legislative framework. The QRC believes it is an important process to deliver appropriate protections to all Queensland workers by ensuring that exposure levels are based on the best available scientific evidence. Having said that it is also important to consider whether a WES value in the form of an allowable atmospheric concentration alone represents the best possible measure of exposure and means of protection in all cases. One example is inorganic lead, where the direct application of an atmospheric WES of 0.05mg/m^3 to the metals mining industry may be overly prescriptive and of less relevance than setting an appropriately precautionary blood level supported by an effective blood monitoring program.

4. If there is not an Australian workplace exposure standard available for a particular chemical, how do you manage the risk of exposure? Please describe. **(Section 2 Pages 29-30)**

   As mentioned above – the exposure standards do not automatically apply to Queensland resources operations. Queensland's risk-based legislative framework for resources safety and health requires resources operators to assess and manage their risks to ensure they are within an acceptable level. For metals and coal mining operations an acceptable level is defined as operations having to be carried out so that the level of risk is within acceptable limits and as low as reasonably achievable. For petroleum and gas producers it is defined as being within acceptable safety limits, having regard to each relevant safety requirement and as low as is reasonably practicable. The three frameworks work in slightly different ways, however for brevity the application of risk-based exposure monitoring and control in metalliferous mines and quarries will be described as an example.

There are obligations relating to safety and health applying to all persons at a mine under the *Mining and Quarrying Safety and Health Act 1999*, and these obligations must be discharged as follows:

- s. 34 states that if a regulation prescribes a way of achieving an acceptable level of risk, the prescribed way must be followed. Where a guideline states a way then obligations can be met only by adopting and following the guideline or adopting and following another way that achieves a level of risk that is equal to or better than the acceptable level.
- s. 35 sets out that an acceptable level of risk can be achieved if there is no regulation or guideline by a person taking reasonable precautions, and exercising proper diligence, to ensure their obligation is discharged.
- s. 39 places an obligation on the site senior executive of a mine to ensure an acceptable level of risk by developing implementing a safety and health management system, appropriate management structures and training as well as regular monitoring and assessment of the working environment.

The *Mining and Quarrying Safety and Health Regulation 2017* includes requirements for:

- personal monitoring and recording of exposure levels at appropriate stages or intervals during mining operations (s. 9 and s. 11);
- retention of monitoring records for 30 years, if the hazard has a cumulative or delayed effect (s. 11);
- management of risks with respect to mine layout, design and construction (s. 45)
- written procedures for blasting that include provision for dust generation (s. 70)
- selection and design of plant to incorporate engineering controls to protect plant operator and other persons (s. 100)
- monitoring as per Australian standard AS 3640 for inhalable dust and Australian standard AS 2985 for respirable dust (s. 136)
- the site senior executive to ensure regular analysis of the monitoring results (s. 136)
- health surveillance of a worker and remedial action, if exposure to the hazard may result in adverse health effects (at the employer's expense) (s. 138).

In addition, as mentioned previously *QGL02: Guideline for management of respirable crystalline silica in Queensland mineral mines and quarries* also sets minimum standards for dust control and monitoring in minerals mines and quarries.

5. Are there any other options that could be considered to achieve the government's objectives? Please provide details. **(Section 3 & 4 Pages 31-38)**

The QRC suggests that SWA should consider a combination of options two and three, involving a streamlined methodology to set standards on the basis of the best available scientific information with predominantly advisory non-mandatory occupational exposure standards, and the application of mandatory standards only where the need is demonstrated using clearly defined criteria. Those criteria should be developed through consultation with affected industry and subject matter experts, but in general terms should consider at least the following issues:

a) Severity of likely impacts e.g. carcinogenicity, serious disease, respiratory irritant;

b) Limitations on measurement due to other safety considerations (e.g. availability of explosion protected monitoring equipment for use in coal mines); and

c) Other technical limitations on demonstrating compliance, e.g. limits of detection and variance.

This hybrid option would provide risk-based, outcomes focused and flexible exposure standards applicable to a wide range of operating environments and encourage regulatory efforts on the most important standards. This option would also clarify that advisory standards are a maximum, that they do not indicate a tolerable level of exposure and thus act to incentivise continuous improvement.

6. Are there any practical issues to consider in relation to any of the proposed options? Please provide examples. **(Section 4 Pages 32-38)**

Provided there remains a process for adequate consultation within the review process and resource companies retain the ability to implement other ways of meeting their obligations to manage exposure risks the QRC supports WES levels being set based on the best available scientific evidence in the most efficient way possible.

As mentioned above the practical ability for workplaces to measure exposure and demonstrate compliance, and whether monitoring airborne concentration represents best practice in monitoring exposure needs to be considered.

7. Would making the workplace exposure standards advisory (rather than mandatory) lead to changes in the level of compliance in your industry? Please explain. **(Section 4 Page 37-38)**

The QRC does not believe that this change would make any material difference to the application of the Workplace Exposure Standard to Queensland resources operations. As mentioned previously that Standard is **not** mandated under Queensland resources legislation, yet it remains an important reference point for operations to meet their obligations to keep exposure to airborne contaminants to an acceptable level for those contaminants that are not regulated by Queensland legislation. The Standard therefore does not preclude operations from finding alternative means of achieving an acceptable level of risk for non-regulated contaminants where it is appropriate to do so. The risk-based approach of the Queensland resources legislation, with a small number of mandated chemical exposure standards, may represent a model that is worth considering for broader application. The resources legislation only mandates exposure levels for certain key contaminants in the form of coal dust and silica, which are based on the Standard and apply on a shift adjusted basis to all Queensland mines.

8. Beyond these options, what else could be done to help your business understand and comply with the workplace exposure standards? **(Section 4 Pages 32-38)**

The QRC believes there is a good understanding of workplace exposure standards within the Queensland resources sector. Prior to the re-identification of coal workers' pneumoconiosis in 2015 it was clear that there had been a process of normalising the risk associated with exposure to an "old" hazard in the form of coal mine dust, however since then the exposure to all respiratory hazards has been very much front of mind. The QRC believes that the industry has always been proactive in relation to newer exposure hazards more broadly; under the risk-based framework operators are required to assess any risks from the introduction of new exposures on an ongoing basis. However, in a broader sense it is clearly critical to provide detailed guidance and educational material to facilitate continuous improvement in the development of best practice risk approaches to managing chemical exposure hazards.

9. What impact, if any, would the proposed name change from ‘workplace exposure standard’ to ‘workplace exposure limit’ have on your organisation? **(Section 4 Page 38)**

The QRC is unsure whether this would make any material difference, particularly to the Queensland resources industry. However, we do note that such wording might be regarded as more compatible with a risk-based approach. “Standard” could suggest that it is acceptable to be at or around the nominated level, whereas under the risk-based approach ensuring exposures remain under the regulated limit is not “enough”. Resources operations are obliged to achieve a level of exposure that is as low as reasonably achievable, which drives continuous improvement.

10. Please provide details of the types of costs that are incurred by your organisation when a WES value is updated. For example, do you update any policies or procedures to reflect changes in the WES value? **(Section 5 Page 39-40)**

As an industry representative body, the QRC is unaware of the level of cost associated with meeting such changes.

11. Survey respondents indicated that, on average, a quarter of their control costs are directly attributable to the current workplace exposure standards framework. Is this consistent with your experience? Please provide details. **(Section 5 Pages 39-40)**

As an industry representative body, the QRC is unaware of the proportion of control cost attributable to the exposure standards framework. While it could be argued that the cost to the Queensland resources industry is “nil” because the standard does not directly apply, this argument does not seem valid. It is more likely that the costs of meeting obligations for the resources sector would be higher if the framework did not exist. Without the exposure standards resources companies would be required to undertake much more research to apply appropriately protective exposure levels and associated controls under their safety and health management systems.

12. Are there any other significant regulatory costs that you incur because of the workplace exposure standards that have not been included in the consultation RIS? **(Section 5 Pages 39-40)**

The QRC has not been advised by any of its members of any additional regulatory costs attributable to workplace exposure standards.

13. Do you think awareness of the workplace exposure standards will improve if they are updated more frequently? Please explain. **(Section 5 Pages 40-46)**

Yes, provided there is a process to ensure that industry is aware of the review; however, there is always a risk of information overload and consultation fatigue.

14. What impact would more frequent updating of the workplace exposure standards have on your organisation? In your response, please consider the possible addition of the chemicals listed in Appendix C. **(Section 5 Pages 40-46)**

As the peak representative organisation of the Queensland minerals and energy sector the QRC endeavours to be engaged in all review processes with the potential to affect our members. Holding more frequent reviews would therefore increase the QRC’s costs, however

such an increase is unlikely to be great enough to be of material significance and should be more than offset by ensuring our members are aware of the best available scientific evidence for setting safe exposure levels.

15. To understand and implement option 2, what would this cost your business or organisation? **(Section 5 Pages 40-46)**

See previous response.

16. What benefits would option 2 provide for your business or organisation, and community? **(Section 5 Pages 40-46)**

More frequent and scheduled reviews would ensure our members can easily make themselves aware of the best scientific evidence for safe exposure levels when managing the risks of their workers' exposure to airborne contaminants. It should also drive the development of detailed guidance or other educational material by SWA when a heightened risk from a chemical exposure hazard is identified by a review, and this material would then be available to resource companies.

17. To understand and implement option 3, what would this cost your business or organisation? **(Section 5 Pages 46-52)**

The QRC believes there is unlikely to be significant differences in cost to Queensland resources companies if option 2 or 3 is adopted, or if the suggested hybrid option is adopted.

18. What benefits would option 3 provide for your business or organisation, and community? **(Section 5 Pages 46-52)**

The QRC believes there is unlikely to be significant differences in benefits to Queensland resources companies if option 2, 3 or the suggested hybrid option is adopted.

19. If workplace exposure standards were advisory (rather than mandatory), would your business continue to seek information or guidance from a WHS regulator? **(Section 5 Pages 46-52)**

The QRC does not believe that this change would make any material difference to the way in which Queensland resources operations meet their obligations to ensure an acceptable level of risk from exposure to airborne contaminants. As mentioned previously the current standard is not mandatory under Queensland resources operations, yet it remains an important reference point for operations to meet their obligations. Because it is non-mandatory it does not preclude operations from finding alternative means of achieving an acceptable level of risk where it is appropriate to do so. Many Queensland resources companies typically seek guidance from the Resources Safety Regulator in dealing with these hazards. For example, the mining industry and the regulator have worked closely together to manage the risk of exposure to respirable mine dust since the re-identification of coal workers' pneumoconiosis.

20. For each option are there any other costs, benefits, and/or unintended impacts which have not been considered in this consultation RIS? Please provide details.

The QRC is not aware of any other costs, benefits, and/or unintended impacts which have not been considered in this consultation RIS.

21. Do you have anything further you would like to add as part of this process?

No