

SUBMISSION

Consultation Regulation Impact Statement:

Managing the risks of respirable crystalline silica at work

Instructions

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- Use the saved version to enter your responses under each question below. These questions are from the [Consultation Regulation Impact Statement on managing the risks of respirable crystalline silica at work](#).
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1. Name or organisation

BHP

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Questionnaire

(Consultation RIS questions)

Statement of the problem (Chapter 2)

2.1 Do you agree with the identified problem? Has the entirety of the problem been identified? Please provide evidence to support your position.

We agree that workplace exposures to Respirable Crystalline Silica (RCS) have led to a substantial increase in the number of cases of silicosis in Australian workers and that silicosis and other silica related diseases, can be prevented by implementing effective controls to eliminate or minimise the generation of and exposure to RCS at work.

The potential risks associated with occupational lung diseases including silicosis are still significant across many industries. Ongoing maturity is required to address factors such as impacts to workers lungs from chronic exposures that may take years to develop (often after a worker has left the industry) and where the capacity for medical professionals in recognising and reporting occupational disease may be limited. In our experience, protecting workers from long latency disease requires worker exposures to be consistently identified and controlled.

It should be noted, however, that not all high-risk industries are at the same level of maturity with respect to prevention and detection of silica related disease. BHP is a part of the mining sector. The mining sector is more so associated with long-term exposure of relatively low levels of respirable dust and silica. It has had in place for many years (e.g. WA/QLD), regulatory requirements relating to exposure monitoring, control and health surveillance for respirable dust and silica. Whilst there is still work to do to continue to drive down exposures across the mining industry, there is a strong foundation to build upon. The mining industry does not typically face the same challenges and risks encountered by the engineered stone industry, which is more so associated with short term exposure to large amounts / high levels of dust and as mentioned in the CRIS, can include micro or small businesses which are unlikely to have comparable internal capability and resources.

2.2 Do you have further information, analysis or data that will help measure the impact of the problem identified?

BHP is a global resources company and we recognise that activities at our operated assets can impact the health of our people, both in the short and long term. For our most material exposures to diesel particulate matter, coal mine dust and silica, we had a five-year target to achieve, by FY2022, a 50 per cent reduction in the number of workers potentially exposed as compared to our 30 June 2017 baseline exposure profile.

This target was achieved across BHP globally, with a 75 per cent reduction in the number of workers potentially exposed to silica at our Australian operated assets. In our experience, in order to achieve sustainable reduction in exposures, significant time, effort and resources are needed for implementation of elimination, substitution, isolation or engineering controls and the associated verification requirements.

In addition, BHP also has high levels of compliance with current regulatory requirements.

Why is Government action needed? (Chapter 3)

3.1 Do you agree with the case for government intervention? Please provide evidence to support your position.

Across all higher risk industries where silica exposures are still significant in the workplace, greater awareness of the risks and how to implement sustainable and effective controls is critical in order to prevent long latency disease and the impact this has on the individual, their family and broader community. Government intervention can be beneficial in providing guidance and minimum risk based requirements, particularly where organisational internal expertise and standards may be lacking.

As an example, in the Queensland Coal Mining sector, significant enhancements have been made to the statutory Coal Mine Workers' Health Scheme to ensure effective monitoring of coal mine workers' respiratory health, including early identification of pneumoconiosis and other lung diseases. In addition, a number of recognised standards have been introduced in order to provide ways of achieving an acceptable level of risk for people working in coal mines including how to monitor, report and control respirable dust and silica. This government intervention (with support and input from experts, industry, unions and others) has led to a greater awareness and understanding of dust /silica related risks and a greater emphasis on controls.

As previously referenced, it is important to note that exposures in the mining industry are much lower than those recorded in the engineered stone industry and there has been no outbreak of accelerated silicosis in the contemporary mining industry and so government intervention should be considerate of the different risk profiles across the different industries.

As referenced on page 26 of the Consultation Regulation Impact Statement, the level of capability, resources and enforcement activity amongst jurisdictions is a critical component of the overall approach and should be assessed (including consultation with government) prior to or at least in conjunction with any additional regulation.

3.2 Do you agree with the objectives of government intervention? Please provide evidence to support your position.

Yes we agree in principle and aligns well with BHP's objectives in keeping people safe and healthy at work. However, we would like to better understand what this looks like at a practical level and ensure any intervention appropriately caters for the different risk profiles across the different industries.

What policy options are being considered? (Chapter 4)

4.1 Do these options address the problem? Please provide evidence to support your position.

The options proposed are all quite logical with the exception of the last two dot points of 5a. Further commentary is included in section 7.

4.2 Are there any other non-regulatory or regulatory options you think should be considered to address the problem?

Non-regulatory option: Generally speaking, in the mining industry, there is a greater maturity in the way safety related fatality risks (e.g. working at heights, confined space, vehicle interactions) are systematically identified and managed. There is an opportunity to apply the same systematic risk management approach to occupational health issues including RCS, highlighting the importance of both preventative controls (substitution, isolation, engineering) and mitigating controls (PPE and health monitoring/surveillance). This could be supported by the development and promotion of additional guidance materials for industry to support the approach. This could be supplemental to Option 2.

Non-regulatory option: Where relevant, greater partnership with Original Equipment Manufacturers and suppliers on the design of equipment (including maintenance requirements) to reduce RCS workplace exposures. This could also be reinforced by regulation that places specific obligations on Original Equipment Manufacturers and suppliers in the design of equipment (including maintenance requirements) to reduce the potential for RCS workplace exposures.

What is the likely impact of each option? (Chapter 6)

6.1 Is the cost modelling methodology appropriate to estimate the costs to industry and governments (Appendix D)? Please provide evidence to support your position.

Click or tap here to enter text.

6.2 Are the estimates of the number of businesses covered by each of the regulatory and non-regulatory options accurate? Please provide evidence to support your position.

Click or tap here to enter text.

6.3 Are there other factors that should be considered in the assessment of the effectiveness of each option (Section 6.5)? Please provide evidence to support your position.

Click or tap here to enter text.

6.4 Are the cost and other estimates (including worker wage assumptions) listed in Appendix D accurate and appropriate? If not, please provide additional data to support a more accurate estimate of costs.

Click or tap here to enter text.

6.5 Do you have further information regarding the costs to the public health system for silicosis and silica related diseases?

Click or tap here to enter text.

Discussion of options (Chapter 7)

7.1 Which option or combination of the options presented is most likely to address the identified problem? Please provide evidence to support your position.

Greater awareness campaigns nationally (Option 2) would be beneficial utilising multiple contemporary platforms and should be directed in the first instance on engineered stone but also address other industries like construction and tunnelling.

With respect to additional regulation and from a mining industry perspective, we support in principle additional risk based regulatory requirements relating to silica assessment and control (Options 5a and 5b) with consideration to the comments presented in section 7.2 below.

In addition, we recommend consultation in the development of any regulation, particularly so that considerations for different industries may be factored in. There should also be alignment across the jurisdictions so it is clear what duty holders are expected to do.

7.2 Are there any significant barriers to implementation of the options presented? What are those barriers? Is there a cost associated with them? How could they be overcome?

Options 5a and 5b:

- Risk assessment and control plan
 - BHP agrees with the proposed requirement to undertake a risk assessment and develop and implement a silica risk control plan. This is in line with standard risk management processes.
 - It is important to note that while PPE is the lowest on the hierarchy of controls, it can play an important interim control particularly where technology based solutions are needed but not available. Where PPE is in place as an interim control, it must be supported by appropriate design, operating and verification requirements for it to be effective.
- Air monitoring
 - BHP does not agree with the proposed requirement to provide all results of air monitoring to the WHS regulator within 30 days of receiving reports. This seems particularly onerous with little positive risk benefits.

- If the requirement to provide all air monitoring results to the WHS regulator is implemented, BHP instead recommends providing results on a quarterly basis which aligns with other existing regulator requirements. In two jurisdictions where BHP operates (Qld and WA), the frequency for the provision of air monitoring results is on a quarterly basis (appreciating these industries are not currently subject to the model WHS laws). Monthly reporting requires greater effort due to the time taken to collate results, obtain the necessary internal approvals through to submission of results. It is unclear what the benefit of more frequent reporting would be and the effort to do so could be otherwise used to support the silica risk control plan activities. BHP also strongly recommends the results are analysed routinely by the regulator and trends / insights are provided back to industry, unions, suppliers and other relevant stakeholders to help drive targeted improvements and sharing of good practice.
- Monitoring results will need to be considered in the context of the specific industry and it may not be helpful for example, to compare exposure data from the mining industry (where it is typically low levels of silica dust over an extended period) to the exposure data from the engineered stone industry.
- Health monitoring
 - BHP agrees with reporting of diagnoses that are attributable to occupational exposure to RCS (confirmed by a registered medical practitioner) to the regulator within 30 days of receiving diagnoses. BHP also understand the benefit of reporting the number of people enrolled in health monitoring programs on an annual basis.
 - BHP does not agree with the proposed requirement to provide all results of health monitoring to the WHS regulator within 30 days of receiving reports. This seems particularly onerous with little positive risk benefits.

Other comment

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

BHP agrees with the decision not to include low dose HRCT as a mandatory minimum regulatory requirement for health monitoring, as an option.

Currently HRCT is an optional further investigation where screening by chest x-ray and spirometry detects abnormalities. It has also been used for case finding to identify workers with silicosis in the engineered stone industry, known to be at risk of accelerated silicosis. However, the radiation dose of HRCT (approximately 8mSv) is considered too high for regular screening of workers for silicosis because of the quantifiable risk of causing cancer. It has been estimated that one radiation induced cancer would result from 2080 HRCTs of the chest in 60 year old men. Importantly this risk increases with younger age. The radiation dose of LDCT (low dose CT) is similar to that received by the general public attributable to annual background exposure – approximately 1.5mSv. The radiation dose of uLDCT (ultra-low dose CT) is close to that of a chest x-ray (0.12 – 0.20 and 0.10mSv respectively).

We consider further research is required before determining if LDCT or uLDCT screening for silicosis should be undertaken in the mining industry:

- The risks of radiation induced cancer should be calculated for the workforce being screened, which could exceed 100,000 people, and should consider age and sex specific risks and the frequency of proposed screening.
- The risks of silicosis and lung cancer attributable to RCS, with contemporary exposures in the mining industry should be compared to the risks of radiation induced cancer. It is important to note that exposures in the mining industry are much lower than those recorded in the engineered stone industry and there has been no outbreak of accelerated silicosis in the contemporary mining industry. It is possible that a cumulative exposure threshold (mg/m³-years) could be set below which the risks of silicosis and lung cancer attributable to RCS do not outweigh the risks of radiation induced cancer. This might result in a much smaller sub-population being screened by LDCT or uLDCT.
- The sensitivity of LDCT and uLDCT to detect early silicosis should be evaluated.
- The specificity of LDCT and uLDCT abnormalities for silicosis should be evaluated so “false positives” do not trigger cessation of exposure with potentially adverse implications for employment.
- There should be a commitment by the regulator for this research to be undertaken and reported back to industry if LDCT is introduced. This research should be designed and reported transparently to all of industry with a view to determine its effectiveness within a specified time frame.

Thank you for consideration of this submission.