CEMENT CONCRETE & AGGREGATES AUSTRALIA

23 June 2017

Committee Secretary
Coal Workers' Pneumoconiosis Select Committee
Parliament House
George Street
Brisbane Qld 4000
Email: cwpsc@parliament.qld.gov.au

CCAA SUBMISSION – COAL WORKERS' PNEUMOCONIOSIS (CWP) FINAL REPORT - FURTHER TERMS OF REFERENCE

Cement, Concrete and Aggregates Australia (CCAA) is the peak industry body representing the $12 billion-a-year heavy construction materials industry in Australia. Our members are involved in the extraction and processing of quarry products, as well as the production and supply of cement, pre-mixed concrete and supplementary materials.

CCAA's members service local, regional and national building, construction and infrastructure markets. Our industry employs approximately 6,000 people statewide.

We welcome the opportunity to provide a submission to the **Coal Workers Pneumoconiosis (CWP) Select Committee – Further Terms of Reference**.

(a) Occupational respirable dust exposure for workers in our industry

The main issue in relation to occupational respirable dust exposure for workers in our industry relates to exposure to Respirable Crystalline Silica (RCS).

RCS exposure may arise from the processing of rock material containing minerals such as quartz. Prolonged exposure of excessive levels of RCS can, in the long term, lead to irreversible lung damage in the form of silicosis.

Some quarry materials contain silica that could give rise to exposure to RCS under certain processing conditions. Not all quarries and not all processes will lead to exposure to RCS.

The level of risk to workers will differ depending on the concentration of silica in the rock source and how the site is designed and operated. RCS is often the airborne contaminant of concern at quarries, but it is important to note that silica is not present in all rock types, and therefore not every quarry may be affected.

Outside the mining and quarrying industry, it should be noted that silica, or silicon dioxide, is extensively encountered in many parts of the construction and industrial sectors as it is a major component in many construction materials such as bricks, tiles and concrete.

Unlike underground coal mines, quarry operations are undertaken in open air where dust is able to naturally disperse. Quarrying requires few workers to operate at the 'face' with the large majority of these workers enclosed in air-conditioned cabins operating heavy mobile equipment. Crushing and

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screening plants are generally operated remotely from a control room; meaning that workers for the majority of their tasks, are separated from dust generated on site.

(b) The legislative and other regulatory arrangements of government and industry which have existed in Queensland to prevent or reduce the harm caused by occupational respirable dust exposure to port, rail, power station, and other workers

State and Australian Government environmental requirements and modern quarrying practices require that dust generation and dust emissions be kept at a minimum.

Quarries in Queensland and other Australian states are controlled by various Government authorities and regulations designed to ensure that quarry dust and other risks to the community and to workers are controlled. The health of workers inside quarries has been controlled by Government regulations for some 90 years in Australia.

Queensland quarries are also required to hold an Environmental Approval issued and administered by the Department of Environment and Heritage Protection. These approvals generally contain fugitive dust generation limits that also contribute to reducing respirable dust generated on site.

(c) Whether these arrangements were adequate, and have been adequately and effectively maintained over time

CCAA's view is that the incidence of RCS in the cement, concrete and quarry industries has reduced in recent decades, and given the general extractive industry improvement in, and understanding of, dust risks and controls, it is expected to remain at low levels. However, if this was found not to be correct, the industry would move to put into place any appropriate measures needed to ensure the health and safety of its workforce.

Current Exposure Standard for RCS

The heavy construction materials industry has over the years, worked hard to minimise exposure to RCS and has been supportive of initiatives to reduce exposure standards to safe levels.

In particular, the quarrying industry recommended and strongly supported the 2004 reduction in the Occupational Exposure Standard for RCS from 0.2 mg/m3 TWA to 0.1 mg/m3 TWA.

Since then, the available data would suggest that the incidence of silicosis has progressively declined to very low levels.

The industry continues to recognise the health impacts of RCS and has supported the current Safe Work Australia Workplace Exposure Standard (WES) of 0.1mg/m3 on an 8hr time weighted average to minimise the incidence of silicosis.

As noted in the Parliamentary Committee report, Safe Work Australia has commenced a review of workplace OELs including respirable silica. Any change to the Queensland OEL must be cognisant of this review.

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CCAA believes that consideration of any changes to the OEL for RCS for quarries should be determined by an evidenced based approach and expert scrutiny to determine whether there is a problem or trend that warrants a change to current legislative and policy settings.

At this stage, we do not believe that sufficient evidence exists to warrant a lowering of the standard, due to reasons such as:

- The Safework Australia WES was only relatively recently changed in 2005 with the number of cases of silicosis already in decline. Due to the latency characteristics of the disease (ie symptoms may not appear until 10 to 30 years after exposure), not enough time has elapsed to realise the full benefits of this change; and

- Unlike CWP, available data suggests that incidences are of silicosis caused by RCS are decreasing within the current regulatory environment (see pg. 4).

There are also practical difficulties in monitoring lower levels of exposures that need to be taken into account, particularly the statistical confidence of results at very low levels.

DNRM Guideline for Management of Respirable Crystalline Silica

CCAA is committed to working with the Department of Natural Resources and Mines (DNRM) and the Commissioner for Mine Safety and Health to ensure that the regulatory and policy settings for airborne contaminants provide the appropriate protection to workers.

As such, CCAA and its' members have recently provided detailed and industry-specific feedback on the recent draft ***QGL102 – Guideline for Management of Respirable Crystalline Silica in Queensland Mineral Mines and Quarries – Mining and Quarrying Safety and Health Act 1999***.

CCAA believes that this new Guideline will be a critical tool in improving the management of RCS risk in Queensland quarries. The Guideline is important because it:

- Provides clear and concise management procedures for managing RCS risk
- Encourages a risk based approach to the issue
- Clearly sets out the expectations of the regulator in managing risk, but not taking a "one-size-fits" all approach
- Provides a structured approach to assess risks associated with RCS, and uses a hierarchy of control to manage risk, communication (education) of the hazard and controls.

CCAA believes the Guideline will improve consistency in managing RCS risk in the industry but also recognises the good practices already in place in many companies within the industry.

In relation to current work being undertaken by CCAA to determine RCS incidence within the industry, in August 2016, CCAA members were approached to provide data on the number of incidences of silicosis reported in their workplaces over the last 15 years.

The aggregated results from the CCAA survey are provided in Table 1 below. As can be seen by this table there were only three incidences of silicosis reported by CCAA members, in 2003, 2010 and 2014.

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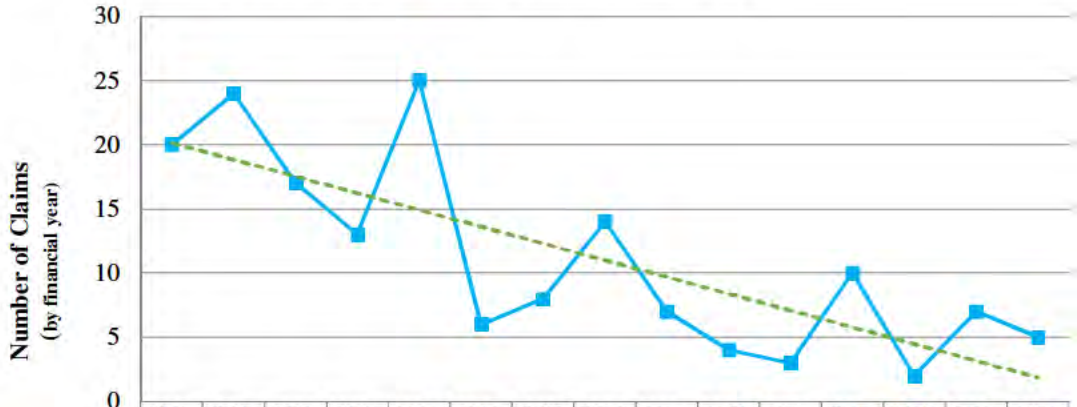
Table 1: CCAA Member Survey – Reported Incidences of Silicosis, 2001 – 2015

	Calendar year (2001 – 2015)														
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Reported silicosis incidences	-	-	1	-	-	-	-	-	-	1	-	-	-	1	-

In addition, an analysis of worker's compensation data held by Safe Work Australia shows that silicosis claims have declined by 75% since 2000-01 and in the most recent completed year the number of claims for silicosis sits at a total of 5 - See Figure 1 below.

Figure 1: Workers Compensation Claims for Silicosis

Source: Safe Work Australia, Australian Worker's Compensation Statistics 2000/01 - 2013/14



	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Silicosis	20	24	17	13	25	6	8	14	7	4	3	10	2	7	5

(d) The roles of government departments and agencies, industry, health professionals and unions in these arrangements

All of these parties play a vital role in reducing occupational respirable dust exposure for Queensland workers, and to take appropriate action when necessary when evidence suggests that the risk is not being adequately managed.

The relationship between the Mines Inspectorate and the quarrying industry is an important one, and there is currently a significant amount of dialogue that occurs between the Queensland Mines Inspectorate and the state's quarrying industry. Through this dialogue, the industry and Inspectorate openly share information on risks and trends in quarry safety, and concerns that may be held by either party on likely risk areas. Whilst a firm "regulatory boundary" exists between the Inspectorate and the industry, the Inspectorate is a respected regulatory body on health and safety issues whose inspectors are well-regarded. Also, as the industry respects the advice and approach of the regulator, there a greater inclination to report incidents that may not be mandated to report.

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CCAA believes it is very important to ensure that that any change in regulatory arrangements does not negatively impact on the collaborative relationship between the regulator and the industry. It is critical that the regulator continues a positive relationship with the quarrying industry in being proactive, proportionate and collaborative in how it deals with industry.

(e) The efficacy and efficiency of adopting methodologies and processes for respirable dust measurement and mitigation, including monitoring regimes, engineering measures, personal protective equipment, statutory requirements, and industry policies and practices, including practices in jurisdictions with similar industries

CCAA and its' members are very conscious of the issue of RCS and are following the matter of incidences within industry closely. Member companies are well aware of the potential health effects of excessive exposure to RCS and have sought over a number of decades to reduce and control the level of exposure within industry.

The control of exposures to RCS, as with many other industrial hazards, has continually progressed throughout the latter half of the twentieth century. Within CCAA member companies, dust controls advanced in the early nineties from basic controls and awareness, to a comprehensive management systems approach focusing on prevention of exposure through engineering, changing work technologies, and backed by improved Personal Protection Equipment (PPE) systems where exposures cannot be controlled entirely by engineering or administrative means.

Today, the quarrying industry undertakes a range of management systems, engineering controls, and administrative procedures. These include:

1) **MANAGEMENT SYSTEMS - Typical management systems elements for control of RCS risks include:**

   - Identification of RCS dust hazards.
   - Establishment of an RCS dust action level (typically at half the WES).
   - Regular monitoring of RCS dust exposures.
   - Minimisation of employee exposures by applying control measures increasingly where the Action Level is reached.
   - Provision of training in RCS dust hazards and their control.
   - Provision of protective respirators and supervision of their use.
   - Provision of Health Surveillance (medical monitoring) for employees potentially exposed to RCS at or in excess of the action level in accordance with Government Standards.
   - Requiring contractors potentially exposed to RCS to comply with the program.
   - Provision of resources for materials, equipment, work methods and practices, with the goal of improving control measures.
   - Establishing responsibility and accountability associated with implementing and enforcing the RCS Program.
   - Regular review of the RCS Program

2) **ENGINEERING CONTROLS are the principal methods to minimise exposure and the following approaches are regularly employed by our industry:**

   - Adoption of methods aimed at minimising the generation of dust.
   - Climate-controlled environmental cabs or booths for heavy equipment operators.
   - Dust collectors, drill steel skirts, and water sprays around drilling machines.

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- Enclosed spouts in bagging and other operations where sand, rock, or other dusty materials are located.
- Enclosed hoods and other general or local exhaust ventilation for dust capture at the source.
- Automation of high-exposure jobs to avoid personnel exposure.
- Water, mist, or fog (including foam and wax based) sprays to keep dust from escaping at the source such as roadways, stockpiles, primary crushers, secondary crushers, screens or conveyor ends.
- The use of properly maintained local exhaust ventilation systems and high-pressure vacuums for work area cleaning.
- The prevention of operations, such as dry sweeping or use of compressed air, that increases airborne dust levels and potential exposures to respirable crystalline silica-containing dusts.

3) **ADMINISTRATIVE CONTROLS To support and underpin improved practices, the following are examples of administrative controls used in our industry:**

- Using job and/or employee rotation to minimize exposures in work areas and/or during operations that are known to be dusty and pose higher potential exposures to respirable crystalline silica-containing dusts. This may also include automation of some high exposure tasks.
- Training employees who are exposed to RCS dusts in legislative requirements, specific nature of the operation(s) which could result in exposure, health effects, engineering controls and work practices, housekeeping requirements and understanding product MSDS, labels, or other forms or warning, the purpose, proper selection, fitting, use and limitation of PPE, purpose and description of the medical surveillance program, including information concerning the health effects associated with excessive exposure.

(f) Other matters the committee determines are relevant to occupational respirable coal or silica dust exposure.

Initiatives in addressing other safety concerns in the broader heavy construction materials industry

We believe our industry has a positive track record of working with its members to identify and act on safety risks, and to promote innovations to improve safety in the industry. For example:

- Regular forums are held between the Mines Inspectorate and the Industry to address safety issues. For example, for the past 15 years, an annual "***Quarrying Safety and Health" seminar*** has been jointly held between CCAA, the Institute of Quarrying Australia and the Mines Inspectorate focused on sharing safety concerns in the industry with operators, senior managers, suppliers and government agencies. Approximately 250-300 representatives attend the event every year. The most recent seminar was held 16 June at the 15th Annual Quarrying Safety and Health Seminar, and included a session on Occupational Hygiene – A Dust Management Case Study which described the practical steps taken on a Brisbane quarry site to improve the hygiene of employees and contractors by reducing exposure to airborne dust.
- To reduce the unacceptable safety risks that can be involved in delivery of concrete to on-site pumps, CCAA developed a comprehensive guideline and supporting checklist – ***CCAA Concrete Pump Delivery Guidelines***. As well, CCAA has

developed a Best Practiced Guideline for Agitator Design to improve safety outcomes and worked closely with members in the area of agitator rollover prevention including facilitating industry seminars to highlight the issue, and the development of an e-Learning course to address this serious matter.

- CCAA also holds its' ***Annual Innovation Awards*** which recognise innovation in environmental management, health and safety performance and exceptional community leadership. The awards also demonstrate the commitment of the heavy construction materials industry to continually improve its performance in these areas, to a range of stakeholders, including government, industry peers and the broader community. In holding these awards, CCAA is promoting the innovative thinking and leadership demonstrated by our members so as to inspire others to deliver improved performance within their businesses and across the industry. Since 2011 in Queensland, some 200 nominations have been put forward by member companies to share good practices.

Comments on Report's Recommendations

CCAA would also like to comment on some recommendations in relation to the Report of the Committee that was released on 29 May. Whilst most of the recommendations relate to the regulation of Coal Safety in Queensland, several of the recommendations will impact on how quarry safety and health will be regulated in Queensland.

We believe it is critical that these specific issues are considered in any institutional or legislative reform. For example:

- **Recommendation 2** states that the "Mine Safety and Health Authority should be governed by a board of directors, chaired by the Commissioner for Mine Safety and Health, and including representation of:
  - coal mine operators
  - metalliferous mine operators
  - unions
  - resources transportation and ports, and
  - persons independent of the mining industry (including resources transportation and ports). "

  If quarries continued to be regulated by the Mines Inspectorate (as it is now under the ***Mining and Quarrying Safety and Health Act 1999***) then it is vital that the representation outlined above also includes representation from the ***quarrying sector***, a $12 billion per year sector whose operations are quite distinct from other parts of the mining industry.

- **Recommendation 5** states that "The Mine Safety and Health Authority should be established in Mackay, ensuring the Commissioner, senior management, the Mines Inspectorate, and the Coal Workers' Health Scheme and mobile units are all based in central Queensland". If this were to occur, it would be critical from our industry's perspective that the current close dialogue between industry and government in the quarrying industry be continued. The quarrying sector is located throughout the state, and more concentrated near metropolitan areas (where the demand for local construction materials is greater)

- **Recommendation 61** states that "The CMSHAC and similar committees established under the Mining Safety and Health Acts should be abolished and their statutory functions

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transferred to the board of the Mine Safety and Health Authority". Currently the quarrying industry has specific representation on the Mining Safety and Health Advisory Committee and it is highly critical that such representation be continued.

Next steps

CCAA believes that it is imperative that the specific nature of the heavy construction industry should also be taken into account in any future Government proposals in relation to RCS and the quarrying industry. In any reforms that are being considered in light of the report, it is crucial that any changes be evidenced based, collaborative, and take into account feedback and input from the quarrying industry and other key stakeholders.

CCAA thanks you again for the opportunity to comment on the Coal Workers' Pneumoconiosis Final Report – Further Terms of Reference. To further discuss any of the issues raised in the submission, please contact me on

Yours sincerely

Aaron Johnstone
CCAA State Director - Queensland