artibus INNOVATION

SILICA SAFETY PROJECT:

Training Needs Analysis

Project Background

In 2020, the Skills Service Organisation (SSO) Artibus Innovation submitted a proposal in its annual Industry Skills Forecast (ISF) to the Australian Industry Skills Committee (AISC) to develop units of competency relating to workplace hazards around silica awareness, asbestos and mental health.[1] Of the proposals submitted, the AISC approved only the silica awareness project, which included the development of up to six units of competency for the Construction, Plumbing and Service (CPC) Training Package.[2] Artibus

[1] See pages 38-44, Artibus Innovation, 2020, *Construction and Plumbing Services: Industry Skills Forecast 2020,* https://artibus.com.au/wp-content/uploads/2020/07/Construction_Plumbing_Services_ISF-2020.pdf (accessed 12 Jan. 2021).

[2] The silica safety proposal was in part based on a recommendation by the NSW Manufactured Stone Industry Taskforce of April 2019 that identified "inconsistent levels of training and understanding of silica in the multiple industries in which it is a risk and no mandatory training is required." Safework NSW, 2019, *Final Report – Silica Dust*, https://www.parliament.nsw.gov.au/lcdocs/other/12648/Manufactured%20Stone%20Industry%20Taskforce%20Report%20%E2%80%93%20July%202019%20%E2%80%93%20received%2026%20September%202019.pdf (accessed 18 Jan. 2021).

Innovation were then granted an Activity Order with the Department of Education, Training and Employment (DESE) to commence work.[3]

Purpose of this Brief

At the October 2020 meeting of the CPC Industry Reference Committee (IRC) it was determined that a briefing paper encompassing a training needs analysis was needed to inform the process. This paper is part of that effort.

Training Needs Analysis

There are no standalone units of competency in the national training system that explicitly mention "silica" or "silicosis" from a unit title perspective. Comparatively, for other harmful airborne products that cause lung diseases such as asbestos, there are five units. Despite this, awareness about the dangers posed by silica dust exposure have been systematically incorporated into relevant CPC training packages by Technical Advisory Groups and Working Groups in recent years as a simple generalised dot point in the Knowledge Evidence section of recently reviewed packages.[4]

In recent years, there has been a notable rise in silica-related illness and death, particularly evident in Queensland, often typically linked to engineered stone. In recognition of the issue, there has been a rise in jurisdictional and membership-based courses[5] and government-funded awareness campaigns[6] designed to improve educational and training outcomes around harmful crystalline silica exposure. There

[3] The Silica Safety Project, known as "Artibus/TPD/2020-21/001 Activity Order", was approved as new work by the Australian Industry Skills Committee (AISC) in mid-2020.

[4] For example, in the Concreting Training Package in unit *CPCCST2007 - Use stonemasonry tools, plant and equipment* it states that a person must demonstrate knowledge of "● exposure to silica". There are many more examples of the simple inclusion around harmful exposure using similar wording or slight variance (for example, "risks associated with silica dust" or "health risks associated with silica dust exposure") in various CPC units of competency in packages such as Concreting, Demolition, Stonemasonry and Brick and Blocklaying.

[5] Nearly all jurisdictional chapters of Master Builders run courses around silica awareness for their membership base. For example, MBA QLD deliver a 4-hour online Silica Awareness course as do other MBA state and territory chapters.

[6] On the government front, Work Safe Australia, and various jurisdictional chapters of SafeWork have been instrumental in providing public information presentation and campaigns. For example, WorkSafe Victoria provided the Crystalline Silica information session presentation in May 2019 and WorkSafe Tasmania launched public advertising campaigns in January 2020. These are but two examples drawn from many of the campaign efforts designed to keep workers potentially affected by silica exposure safe. On the government front, Work Safe Australia, and various jurisdictional chapters of SafeWork have been instrumental in providing public information presentation and campaigns.

has also been an active market response with other training and educational providers entering the market.[7]

Despite the absence of dedicated units of competency on silica safety in the National Training System, it is worth highlighting that the first nationally accredited course[8]—10830NAT Course in Crystalline Silica Exposure Prevention—was approved by the Australian Skills Quality Authority (ASQA) in November 2019. This course was developed by the Canberra-based Registered Training Organisation (RTO) Creative Safety Initiatives[9] and is now taught across several jurisdictions and is proving popular.

In recent years, Artibus Innovation and the CPC IRC have received petitions to develop nationally consistent training products around silica safety. For instance, in pages 80-81 of the CPC Construction and Plumbing Services Industry Skills Forecast 2020, there is an example of SafeWork NSW writing to Artibus Innovation in October 2019 requesting that units of competency be developed in the following areas:

i. working with silica-containing products
ii. the development of a general awareness course
iii. greater emphasis in the Elements and Performance Criteria of relevant units on silica containing products.[10]

Other ideas suggested have included developing units at different AQF levels around:

i. working with silica-containing products
ii. supervision of people working with silica
iii. conducting air monitoring of worksites affected by silica dust.

Consultation and Candidates

Artibus Innovation opened calls to join the working group in late November. Consultation was in the form of an online questionnaire that ran from late November 2020 to January 2021. Participants were also given the option of submitting feedback online via Zoom or by telephone. The questionnaire was promoted through the Project Page for Silica, the Artibus Innovation monthly newsletter, social media channels

[7] A simple keyword search on "silica courses Australia" in Google will demonstrate the extent to which the market has responded to perceived gaps in training.
[8] The main difference between a government-funded training package and an accredited course is that the individuals or organisations who develop accredited courses retain copyright for them and details for course owners are published on training.gov.au.
[9] The Australian Skills Quality Authority (ASQA) assesses nationally accredited courses according to the Standards for VET Accredited Courses 2012.
[10] Artibus Innovation, 2020, *Construction and Plumbing Services: Industry Skills Forecast 2020,* https://artibus.com.au/wp-content/uploads/2020/07/Construction_Plumbing_Services_ISF-2020.pdf (accessed 12 Jan. 2021).

(LinkedIn, Twitter), and word of mouth was encouraged. The online questionnaire also included a function where respondents could nominate a peer.[11]

In total, nineteen people expressed formal interest in participating in the Silica Safety working group.

While most responses were from national bodies (4), there was jurisdictional representation from ACT (4), NSW (3), VIC (2), WA (2), SA (2) and QLD (2). There was no representation made from Tasmanian and the Northern Territory despite attempts made by Artibus Innovation to engage potential participants from these jurisdictions.

Consultation Method

Through a training needs analysis questionnaire, prospective members of the Silica Safety Working Group were asked to outline their experience and expertise in silica safety awareness.

Nominees were invited to provide feedback on the following topics:

- skills gaps
- 'at risk' trades
- existing training on silica.

Key Findings

Key findings from the questionnaire and phone interviews and are clustered into three thematic areas:

i. skills gaps
ii. 'at risk' trades
iii. existing training on silica.

1. SKILLS GAPS

Several major recurring themes around skills gaps were identified by respondents. These are:

- silica awareness to include safety data sheets
- knowledge of the role of WHS legislation
- health and air monitoring on worksites
- risk management and identification at worksites

[11] There were two incidences of this occurring. In both instances, Artibus Innovation staff then forwarded the invitation to prospective members to join via email.

- establishing a combination of practicable and effective control measures (PPE fit testing, wet cutting, dust capture)
- one respondent suggested that silica safety awareness must be seen as a hazard in normal construction sites and as one to be managed in closed workspaces where the concentration levels are typically higher
- hazards associated with bricklaying (this is particularly problematic in jurisdictions where there is an emphasis on residential and commercial properties built in brick such as WA).

2. 'AT RISK' TRADES

There was a general body of opinion that silica safety exposure should be a standard and sector-wide requirement for the building and construction industry given that anyone entering a worksite is potentially 'at risk' of exposure.[12]

Another idea expressed was that while all trades are potentially exposed, there exists a scale with those most 'at risk' including the building and construction trades working closest with products containing the highest levels of crystalline silica (e.g., stonemasons and other trades working with manufactured and natural stone).

There was also a view that silica awareness training should span the various responsibility levels from trades, to supervisors and managers.

An even more holistic view forwarded was that minimising exposure spans the entire supply chain (from manufacturing, installation and supervision thereof) and from the so-called 'cradle to the grave' view of the construction process (from manufacturing, supplying, installation, to demolition).

Awareness of silica exposure was thought to be low at the apprenticeship level and with other trades such plumbers and electricians also being 'at risk' given the frequency they cut into or alter products containing silica in routine work.

The following trade specialisations were cited most frequently by respondents:

- construction
- demolition
- stonemasonry
- brick and block laying
- landscaping
- tilers

[12] One idea proposed to maximise the impact of silica safety awareness at the front end of the training arc is to make it a new requirement of the revised White Card.

● carpenters and joiners ● cabinet makers ● concreting and remediation work ● labourers ● machine operators ● tunnelling and foundry work ● supervisors and managers

3. EXISTING TRAINING ON SILICA

One respondent commented that while there are many excellent courses on silica awareness the national situation is piecemeal.

The following table lists the training and courses available on silica safety that participants were aware of.

10830NAT Course in Crystalline Silica Exposure Prevention (accredited)
Various jurisdictional MBA silica awareness courses in ACT, VIC, NSW, QLD, SA, TAS (unaccredited)
HIA Silica Awareness workshop
Greencap Silica Awareness and Monitoring (unaccredited)
Cancer Council Apprentice Hazard Education
Basic Principals of Occupational Hygiene (Manager Level)

Table 1. Existing Training and Courses on Silica

Conclusion

Based on participant feedback there was overwhelming support to develop standalone units of competency on silica safety for the national training system.

In view of this Artibus Innovation suggested that the IRC consider the skilling gap in terms of their being standalone units of competency to ensure consistent national training system on silica safety.