NEWCASTLE CUT N DRILL

Silica Dust Management Plan

Ver	Details	Date Issued	Prepared By	Authorised by
1.0	Silica Dust Management Plan for Newcastle Cut N Drill	24th Mar 2024	Howsafe	Ray Robinson Managing Director

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Section 1 INTRODUCTION

Crystalline silica (quartz) is a common mineral that can be found in materials and products such as shale, sandstone, concrete, bricks, pavers and manufactured stone. e.g. stone benchtops.

A health hazard is created when workers cut, crush, drill, polish, saw or grind products that generate dust containing silica. During these processes, very fine particles of crystalline silica can be inhaled and deposited within the lungs. These dust particles can be so small (less than 7 microns) that they are not visible. When these dust particles become so small, they are commonly referred to as respirable particles. They can cause illness or disease including silicosis, chronic bronchitis, emphysema, lung cancer and kidney damage.

It is important to look out for symptoms of exposures, including:

- having a persistent cough for more than a few weeks
- coughing up phlegm with spots of blood in it
- pain in the chest or shoulder that won't go away
- loss of appetite and/or loss of weight
- shortness of breath
- fatigue.

1.1 Review Procedure

The Directors/Managers will review the plan as required. The review schedule is directed in response to organisational and/or legislative changes and requirements. The review will be undertaken in consultation with workers, company representatives and other relevant parties. All relevant persons will be made aware of changes made as a result of the review.

This plan will be reviewed if:

- there are changes in the workplace that may affect the plan
- the plan is not effective
- there are legislative changes that affect the plan
- there is a breach of this plan

This plan is reviewed on a biennial basis.

1.2 References and Applicable Documents

1.2.1 References

- Work Health & Safety Act 2011
- Work Health & Safety Regulation 2017
- First Aid in the workplace code of practice 2020
- Hazardous manual tasks code of practice 2019
- How to manage work health and safety risks code of practice 2019
- Managing electrical risks in the workplace code of practice 2019
- Managing noise and preventing hearing loss at work code of practice 2022
- Managing the risk of falls at workplace code of practice 2019
- Managing the work environment and facilities code of practice 2019
- Managing risks of hazardous chemicals in the workplace code of practice 2022
- Managing the risks of plant in the workplace code of practice 2019
- Work health and safety consultation, co-ordination and co-operation code of practice 2019

1.2.2 Standards and Guidelines

ISO 45001:2018 Occupational Health and Safety Management Systems.
Workplace Exposure Standards for Airborne Contaminants 27 April 2018 *(Safe Work, Australia).*

1.3 Definitions

Crystalline silica-containing materials are any material or thing that contains crystalline silica.

Crystalline silica-contaminated dust or debris means dust or debris that has settled within a workplace and is (or is assumed to be) contaminated with crystalline silica.

Crystalline silica-risk work is any work that may cause a worker or other person to be exposed to crystalline silica. This can include removal of crystalline silica, cleaning, drilling or any other activity causing the disturbance of crystalline silica-containing materials and possible release of crystalline silica dust.

Exposure Standard: Limits of exposure to avoid harm. The Australian exposure standard for airborne crystalline silica is 0.1mg/m3 over an 8-hour day.

Micron: 1 micron = 1/1000 mm.

- *For this plan, no specific references will be made to the terms Health, Safety at Work (HSW), Work Health and Safety (WHS) or Occupational Safety and Health (OSH). (unless referring directly to the Act or Regulation in question) and, will be generally referred to as Occupational Health and Safety (OHS) as per the standard Australian Standard/New Zealand Standard (AS/NZS) International Organisation for Standardisation (ISO) 45001:2018.*

Section 2 RESPIRABLE CRYSTALLINE SILICA POLICY

OBJECTIVE

To establish the means to control the risk of Respirable Crystalline Silica (RCS) exposure and ensure exposure standards are not exceeded.

SCOPE

This policy applies to all workers and contractors who have roles and responsibilities that may lead to exposure to crystalline silica dust.

POLICY

Newcastle Cut N Drill is committed to providing a safe environment for workers (including contractors and workers of contractors), visitors, members of the public and the environment concerning contact with crystalline silica.

The organisation will ensure a systematic approach to managing health and safety risks associated with crystalline silica. Consider the properties of the crystalline silica, physical reactions and health effects, nature of work and materials and products that may contain silica.

Systems will be implemented to manage crystalline silica, including:

- job site assessments for crystalline silica-containing materials.
- worker crystalline silica hazard assessments.
- provision of crystalline silica awareness training.
- selection and implementation of appropriate control measures.
- emergency responses to crystalline silica release.
- record keeping.
- health surveillance and health monitoring where required.
- suitable personal protective equipment (PPE).

Risk controls will be reviewed if there are changes to working practices that:

- may disturb crystalline silica.
- health monitoring results indicate exposure.
- reports of previously unidentified crystalline silica or crystalline silica-containing materials.

RESPONSIBILITIES

We are responsible for ensuring that there are safety systems and mechanisms in place to protect workers exposed to crystalline silica dust or crystalline silica materials.

- ensure an effective, crystalline silica management plan, based on risk assessment, is in place to ensure that all crystalline silica-containing materials are maintained, isolated, or removed safely.
- ensure resources are applied effectively, to address crystalline silica issues and to prevent, as far as is reasonably practicable, exposure to RCS.
- Identifying crystalline silica-containing products and materials at the workplace and recording this in the crystalline silica register.
- assessing the risk of exposure to RCS and eliminating or minimising the risks by implementing control measures.
- reviewing control measures to ensure they are effective.
- making information available to workers about any crystalline silica in the workplace.
- providing crystalline silica awareness training for applicable workers.
- maintain crystalline silica awareness training records.

OHS Managers/Supervisors are responsible for:

- for implementing safe work requirements relating to work with materials containing crystalline silica.
- making frequent and regular inspections of job sites, materials and equipment.
- carrying out the appropriate actions required to ensure the immediate health and safety of all workers and visitors, including excluding areas considered to be hazardous.
- liaising with personnel on crystalline silica-related issues.
- coordinates the implementation of any corrective actions necessary to prevent RCS exposures.
- maintaining incident reports and associated documentation.

Individual workers and others in the workplace have a responsibility to co-operate with their Manager/Supervisor and policies and procedures concerning their tasks relating to crystalline silica exposure, including:

- taking reasonable care for their own and others health and safety.
- not to 'DRY' cut, crush, drill, polish, saw, grind or otherwise create dust with crystalline silica-containing materials unless trained and authorised.
- using the assigned PPE effectively and safely.
- being involved in risk assessment processes and the development of safe work practices.
- immediately report to supervisor any incident involving crystalline silica exposure.
- immediately stop work if suspected crystalline silica exposure hazards are identified during any works and report to supervisor or manager.
- attending training, toolbox talks and Inductions.
- attending monitoring and health surveillance where required.
- incident response procedures.
- reporting any unsafe conditions or acts.
- Use water suppression for all cutting, crushing, drilling, polishing and grinding and any other tasks that could create airborne crystalline silica particles.
- Ensure they are wearing the appropriate PPE that has been supplied.

Signature: **Date:**

Newcastle Cut N Drill

2.1 Respirable Crystalline Silica Procedures

2.1.1 Crystalline Silica Awareness Training

All workers engaged to work with crystalline silica-containing material will be trained to understand the hazards of RCS and how to work with the material while maintaining safe work practices.

All workers that may encounter crystalline silica in the course of their work will receive crystalline silica awareness training to become aware of:

- the types, properties, products and materials that may contain crystalline silica.
- the health risks and toxic effects associated with exposure to RCS.
- how crystalline silica can be inhaled.
- activities which could release crystalline silica dust.
- processes and safe work procedures to be followed to prevent exposure.
- regulations, including requirements for health monitoring.
- control measures to avoid exposure.
- where applicable, the correct use of PPE including respiratory protective equipment (RPE).
- exposure standard and control levels for crystalline silica.

2.1.2 Worker Consultation

All workers will be consulted about hazards and risks relating to crystalline silica.

The consultation will include discussions and feedback on:

- managing risks of crystalline silica exposure in the workplace.
- how changes to processes and procedures that generate RCS will be managed.
- types of controls used when working with crystalline silica.
- resolving health and safety issues.
- the monitoring processes of workers exposed to RCS.
- available information and training for workers.

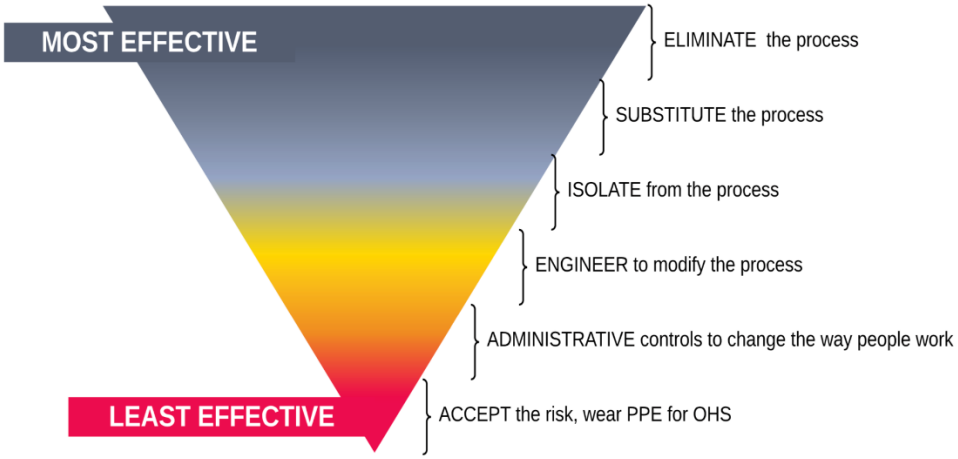
2.1.3 Risk Assessment

Newcastle Cut N Drill management will conduct a risk assessment and identify if the work could likely cause exposure. The risk assessment will include the identified hazards and the control measures to reduce them and be available for all workers to consult.

Identified controls will be communicated to all relevant workers. Everyone at risk must understand:

- the crystalline silica hazards present.
- the methods that will be used to reduce the level of risk.
- what each worker must do to protect their health, including the use of PPE.

When developing controls to regulate the risk of crystalline silica exposure, the following hierarchy of controls will be used where elimination of the risk is not reasonably practicable.



Hierarchy of Controls Flow Chart

Elimination of the risk by removing processes that generate RCS, e.g. change work methods.

Substitution such as using materials with a lower percentage of silica.

Isolation of the hazard – e.g. using designated areas for tasks that generate dust that prevents unauthorised access. Use of enclosures, barriers:

- Ensure the area where crystalline silica risk work is undertaken is clearly identified and confine contamination to that area.
- Keep the area clean and make sure the work method does not allow the spread of crystalline silica-containing dust to other areas or create risks to the health of other workers.

Engineering controls such as exhaust ventilation, vacuum attachments on cutting tools, water suppression.

Administrative controls – Safe work policies and procedures, warning signage, shift design:

- Ensure all workers are trained in crystalline silica awareness and applicable crystalline silica control procedures and methods.

PPE – appropriate respiratory equipment (minimum P2 half-face respirator) and work clothing.

2.1.4 Safe Work Method Statement (SWMS)

Construction work that involves or is likely to involve work in an area that may have a contaminated atmosphere must be undertaken following controls as laid out in an appropriate SWMS.

The SWMS will:

1. Identify the work that involves exposure to the contaminated atmosphere (in this case crystalline silica dust generation).
2. State the hazards relating to the work and risks to health and safety associated with those hazards.
3. Describe the control measures to be implemented.
4. Describe how the control measures will be implemented, monitored and reviewed.

If controls measures are deemed inadequate, all work will stop until additional/more effective controls have been put in place. All workers will undertake further training in any new or existing control measures.

2.1.5 Personal Protective Equipment

Where crystalline silica-risk work is undertaken, all workers must wear RPE and other PPE as necessary. All equipment used when working with crystalline silica should be inspected before starting the work, after any repairs and at least once every seven days when in continuous use.

Note: Using a respirator may impose some physical and psychological stress on workers. On request, workers will be provided with a medical assessment before using a respirator.

- PPE must be a suitable size, fit and reasonably comfortable for a worker to wear and maintained in good working order.
- Disposable coveralls should be used to prevent the contamination of clothing and footwear if applicable. Disposable coveralls need to be of a suitable standard to prevent penetration of crystalline silica dust.
- Respirators ensure:
  - fit as per manufacturers' instructions.

- negative-pressure half-face filter respirator fitted with a Class P1 or P2 filter cartridge, or a Class P1 or P2 disposable respirator to be worn during removal and clean up (check clear of dust before use).
- fits well and seals correctly on a clean-shaven face *(clean-shaven or facial hair that does not interfere with the fitting surfaces or the valve of the respirator).*
- if a beard is worn, ensure powered air-purifying respirators fitted with P2, or P3 filters are worn.
- a written record of fit-tests must be carried out for each worker, including:
  - type of test performed.
  - make, model, style and size of respirator tested.
  - date and result of the test.

- All workers will be provided with a fit-test record after fit-testing:
  - respirators are left on after the task until protective clothing has been removed.
  - disposable dust masks are not to be worn as they do not provide sufficient protection.
- Gloves, if required:
  - single-use gloves are worn.
  - gloves should be disposed of as crystalline silica waste.
- Seal contaminated PPE that is likely to be contaminated before removing it from the process area. Where it can be:
  - disposed of it at a suitable waste treatment facility.
  - laundered and decontaminated or, placed in a sealed container until re-used.

2.1.6 Crystalline Silica Incident Management

- Care should be taken by all persons to avoid the uncontrolled creation of dust containing crystalline silica.
- Only workers who have completed crystalline silica training and/or specific crystalline silica work procedure training should engage in clear up or containment work.
- The following procedures should be immediately followed in the case of uncontrolled creation of dust containing crystalline silica.

1. Stop work in an area that is affected. Do not attempt too immediately clean.
2. Exit the area and restrict access to the area or site by closing doors, taping off access points and installing temporary signage to prevent people from entering the immediate area.
3. Prevent any further disturbance of crystalline silica materials in the area.
4. Wearing appropriate PPE and utilising safe work methods, e.g. HEPA vacuum or wet suppression, decontaminate the area.
5. After clean-up works have been completed, conduct a visual clearance inspection to ensure that the crystalline silica dust removal has been completed to a satisfactory standard.
6. Debrief staff – review procedures before returning to work.

2.2 Health Surveillance Procedure

If there is a significant risk to the worker's health because of exposure to a hazardous chemical, Newcastle Cut N Drill will:

- take all steps to implement controls reducing the risk of exposure.
- inform workers and prospective workers about health surveillance requirements.
- ensure health monitoring is carried out by or under the supervision of a registered medical practitioner with experience in health monitoring.
- consult workers regarding the selection of the registered medical practitioner as required.
- pay all expenses relating to health monitoring of Newcastle Cut N Drill workers.
- provide information about a worker to the registered medical practitioner.
- take all reasonable steps to obtain a report from the registered medical practitioner as soon as practicable after the health monitoring is carried out.
- provide the report to all other organisations who must provide health monitoring for the worker.
- retain reports as confidential records for at least thirty (30) years after the creation of the record.

- complete and maintain the ***Health Surveillance Record (30008)***.
- not disclose the report to anyone without the worker's written consent unless required under the current OHS Legislation.

The personal information of individual workers, including medical reports and health surveillance, will remain confidential at all times between the relevant senior manager and the worker.

Section 3 RESPIRABLE CRYSTALLINE SILICA CONTROL

All work involving risk of inhalation of RSC must comply with this policy document, applicable Commonwealth, State/Territory Health and Safety legislation, codes of practice and any provided safe work procedures.
Where there is a defined crystalline silica risk, site-specific crystalline silica management details will be included in the safe systems of work e.g. SWMS and/or SWP.

LABELLING AND SAFETY DATA

Silica containing materials supplied and brought into workplaces must be accompanied by both the SDS and the label *(source from supplier or manufacturer where necessary).*

HOUSE KEEPING

No worker will use the equipment on crystalline silica-containing materials unless the use of the equipment is controlled, e.g. power tools, etc. Any equipment or tool that may create RCS may only be used if it is controlled by it is:

- enclosed.
- designed to capture or suppress crystalline silica dust.
- used in a way to capture or suppress crystalline silica dust safely.

GENERAL CONTROLS

- Wherever practicable, water suppression and/or local exhaust ventilation will be used.
- Signs or barricades must be used to clearly indicate the area where the work is being performed.
- PPE must be worn at all times where a risk of exposure to RCS is likely *(See section 1.3.7 for detailed requirements).*
- Decontamination process developed and decontamination area established.
- Wash hands and face thoroughly before eating, drinking or leaving the workplace.
- Contain and label crystalline silica waste and dispose of it as soon as practicable.
- All crystalline silica removed must be safely transported and disposed of at approved waste disposal site, e.g. authorised landfill site (approvals sought where necessary):
  - crystalline silica dust must NOT be disposed of in domestic garbage bins.
  - crystalline silica dust must not be illegally dumped.

3.1.1 RCS Exposure Control Methods

Task/Equipment Operation	Control Methods
Worker training	• Workers/employees are informed of the risks and health effects associated with the exposure to silica dust. • Identification of silica-containing products through SDS or labels. • How to work operations will expose workers. • Control measures. • Correct use of equipment including selecting, fitting, use and maintenance. • Use of supervision where required (e.g. new starters or new equipment).

PPE	• PPE must be a suitable size, fit and reasonably comfortable for a worker to wear and maintained in good working order.
	• Respirators:
	  ○ Negative-pressure half-face filter respirator fitted with a Class P1 or P2 filter cartridge, or Class P1 or P2 disposable respirator (check clear of dust before use).
	  ○ Fits well and seals correctly on the clean-shaven face (clean-shaven or facial hair that does not interfere with the fitting surfaces or the valve of the respirator).
	  ○ If a beard is worn, ensure powered air-purifying respirators fitted with P2, or P3 filters are worn.
	  ○ A written record of fit-tests must be carried out for each worker, including:
	  ▪ Type of test performed.
	  ▪ Make, model, style and size of respirator tested.
	  ▪ Date and result of the test.
	• All workers will be provided with a fit-test record after fit-testing.
	• Respirators are left on after the task has been performed until the air borne particles are no longer present.
	• Disposable dust masks are not to be worn as they do not provide sufficient protection.

Dust suppression and ventilation	• No uncontrolled dry cutting, grinding or polishing of engineered or natural stone products.
	• Equipment and tools are fitted with dust suppression i.e. water spray or local exhaust ventilation (LEV).
	• LEV is used on all cutting or grinding equipment. The LEV should:
	  ○ Be part of the equipment design.
	  ○ Include H or M class dust filters.
	• Dust suppression/capture equipment is always used.
	• LEV is regularly serviced and maintained.

Working indoors or in enclosed areas	• Keep silica exposures low using extra ventilation, i.e. portable exhaust fans and/or other means of mechanical ventilation. • Ensure airflow is not impeded by the movements of workers during work, or by the opening or closing of doors and windows. Position the ventilation to move contaminated air away from the workers' breathing zones.
Cleaning	• Daily thorough cleaning procedures to remove water slurry and settled dust. • Low-pressure water, wet sweeping or an M or H class rated vacuum cleaner with a HEPA filter are used to clean floors, walls and other surfaces. • Dry sweeping is prohibited. • Never use compressed air to clean surfaces or clothing.
General cleaning tasks	• Use wet sweeping/low-pressure hosing or HEPA-filtered vacuuming, to remove dust. • No dry sweeping or dry brushing of material that could lead to exposure to crystalline silica dust. • Do not use compressed air unless used with a dust capture system. • Wet slurry should be placed inside a sealed container/bin awaiting disposal.
Walk-behind saws	• Use saw equipped with integrated water delivery system. • Operate following manufacturer's instructions to minimise dust.
Core saws and drills	• Use saw equipped with integrated water delivery system. • Operate following manufacturer's instructions to minimise dust. • (Indoors) Exhaust/ventilation as needed to minimise the accumulation of airborne dust. • PPE/RPE (P2 minimum).

Handheld power tools	• Maintain, pre-inspect and operate tools as per manufacturers' instructions.
	• Wear eye and respiratory protection - Respirator with at least P1 filtration – fit-tested to the worker if half or full-face mask is used.
	• Wear disposable or washable protective clothing if required.
	• Water suppression:
	  ○ Clean up any slurry produced to prevent the slurry from drying and releasing silica dust into the air.
	• Tools are fitted with LEV:
	  ○ Turn the vacuum off and on regularly to reduce dust buildup on the filter, if it is not self-cleaning.
	  ○ Change vacuum-collection bags at least as often as the manufacturer recommends.
	  ○ Avoid exposure to dust when changing vacuum bags and cleaning or replacing air filters.
	  ○ Use a HEPA-filtered vacuum when cleaning holes.
	• (Indoors) Exhaust/ventilation as needed to minimise the accumulation of airborne dust.
	• PPE/RPE (P2 minimum)

Working in/adjacent to RCS dust-generating area	• Do not enter dust generation area if not required for the task. • All persons in the area to wear PPE/RPE as required.
Clean up process	• Use damp rags to wipe down crystalline silica-contaminated areas and equipment. • Carefully roll or fold any plastic sheeting used to cover any surface within the crystalline silica work area, so as not to spill any dust or debris that has been collected. • If necessary, use damp rags and/or a HEPA vacuum cleaner to clean any remaining visibly contaminated sections of the RCS work area. • If possible, fully dismantle tools and decontaminate using the appropriate method in a controlled environment.
Decontamination	• Use HEPA vacuum cleaner to remove obvious signs of contaminated material. • Wipe coveralls, shoes, eye protection with a damp cloth. • Wipe respirator with a damp cloth – but do not remove. • Remove coveralls, shoes and any other PPE. • Remove respirator. • Workers wash hands and face thoroughly before eating, drinking or leaving the workplace. • Workers must not take dry, dusty/contaminated clothing home.
Contamination of waterways and water catchment	• Dispose of crystalline silica dust in bins provided onsite. • Dispose of empty containers/bags in approved waste containers. • Do not wash out tools or containers where residue can enter waterways or drains.