GUIDANCE FOR EMPLOYERS ON CONTROLLING EXPOSURE TO RCS IN THE WORKPLACE

GOOD PRACTICES FOR DESIGN OF BUILDINGS

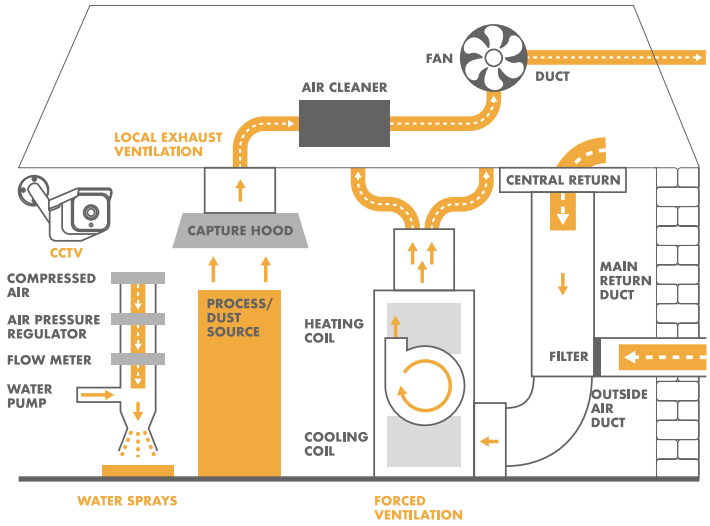
This sheet provides guidance on the design of buildings in which activities are conducted that may cause the generation of respirable crystalline silica dust.

ACCESS

Restrict access to the work area to authorised personnel only.

DESIGN AND EQUIPMENT

- Ensure the building is adequately ventilated, using forced ventilation if necessary. Ensure the ventilation system does not cause settled dust to be stirred up and that contaminated air does not spread to clean areas.
- Dust suppression sprays (sprinklers or fine mist) may be used to prevent the generation of airborne dust from indoor and outdoor traffic routes and from conveyors.
- Emissions from dust extraction systems in buildings into the environment must be in compliance with local environmental rules.
- Use walls and flooring surfaces that are easy to keep clean and that are not slippery when wet and which do not absorb/accumulate dust, e.g. CHEQUER plate/tread plate or diamond plate. Where necessary to prevent dust spreading between levels, use solid floors where possible and cover them with a wear resistant material which is coloured to highlight dust contamination.
- If wet cleaning methods or dust suppression sprays (sprinklers) are to be used, ensure that the flooring is designed to promote good drainage.
- Ensure that electrical systems etc. have adequate protection against the hazards present in the working environment, including water and silica dust.
- Control panels can be protected using a membrane.
- Provide an adequate number of correctly positioned water connection points when using wet cleaning methods.
- Provide an adequate number of vacuum connection points when using a central vacuum cleaning system.



- The provision of control rooms helps to keep operators isolated from sources of respirable crystalline silica dust.
- Control rooms should have their own, clean air supply and they should be sealed and physically separated from dusty areas. To avoid dust contaminated air entering these rooms, it may be necessary to ventilate them using positive pressure systems. Refer to task guidance sheet **2.1.3** on Design of control rooms.
- Equipment with low maintenance requirements should be selected where possible, e.g. the use of machinery equipped with automatic greasing systems will reduce the amount of time spent by maintenance personnel in dusty areas.
- The installation of closed circuit television (CCTV) systems, viewed from a clean control room, may help to reduce the need for plant operators to spend time in dusty areas.

ALL

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MAINTENANCE

- Maintain the building and all equipment provided for dust control as advised by the supplier/installer.

EXAMINATION AND TESTING

- Check the condition of the building and the performance of all dust control equipment at least once per week for signs of damage or reduced efficiency. If it is in constant use, check it more frequently. If used infrequently, then check it before each use.
- Have dust control equipment tested against its performance standard, at least once each year.
- Keep records of inspections for a suitable period of time which complies with national laws (minimum five years).
- Put in place measures to control the risk of bacterial growth within water sources used across site, focusing most on systems where water droplets will be generated.

CLEANING AND HOUSEKEEPING

- Clean floors and other surfaces regularly.
- **DO NOT clean up with a dry brush or using compressed air.**
- Use vacuum or wet cleaning methods.

TRAINING

- Give your employees information on the health effects associated with respirable crystalline silica dust.
- Provide employees with training on: dust exposure prevention; checking controls are working and using them; when and how to use any respiratory protective equipment provided and what to do if something goes wrong. Refer to task guidance sheet **2.3.4** and part 1 of the Good Practice Guide.

SUPERVISION

- Have a system to check that control measures are in place and that they are being followed. Refer to task guidance sheet **2.3.3**.
- Employers should make sure that employees have all the means to perform the checklist given below.

PERSONAL PROTECTIVE EQUIPMENT

- Refer to task guidance sheet **2.1.15** dedicated to Personal Protective Equipment.
- Indicate areas where personal protective equipment (e.g. dust masks) must be worn using appropriate signs.
- Provide storage facilities to keep personal protective equipment clean when not in use.
- Provide adequate supplies of personal protective equipment. Ensure that it is readily obtainable. If necessary, provide boxes of personal protective equipment (e.g. dust masks) at the entrances to buildings. Identify the locations of these supplies using appropriate signs.

EMPLOYEE CHECKLIST

- ☐ Look for signs of damage or wear of building parts. If you find any problems, tell your supervisor.
- ☐ Look for signs of damage, wear or poor operation of any equipment used. If you find any problems, tell your supervisor. Do not carry on working if you think there is a problem.
- ☐ If you think there is a problem with your dust control equipment, ensure additional control measures are taken to reduce exposure to respirable crystalline silica dust while the problem persists.
- ☐ Check and implement the measures of controlling the risk of bacterial growth within water sources used across site, focusing most on systems where water droplets will be generated.

This guidance sheet is aimed at employers to help them comply with the requirements of workplace health and safety legislation, by controlling exposure to respirable crystalline silica. Specifically, this sheet provides advice on the design of buildings in which activities are conducted that may cause the generation of respirable crystalline silica.

Following the key points of this task guidance sheet will help reduce exposure.

Depending on the specific circumstances of each case, it may not be necessary to apply all of the control measures identified in this sheet in order to minimise exposure to respirable crystalline silica. i.e. to apply appropriate protection and prevention measures. This document should also be made available to persons who may be exposed to respirable crystalline silica in the workplace, in order that they may make the best use of the control measures which are implemented.

This sheet forms part of the Good Practices Guide on silica dust prevention, which is aimed specifically at the control of personal exposure to respirable crystalline silica dust in the workplace.