GOOD PRACTICES FOR USE OF A DRILLING RIG

This activity covers drilling operations into rocks or strata containing crystalline silica.

Drilling may be carried out for exploratory or reserve assessment purposes, or as part of the minerals extraction process.

ACCESS

Restrict access to the work area to authorised personnel only.

DESIGN AND EQUIPMENT

- Dust control can be achieved using water fed into the compressed air supply, thereby suppressing the dust. Additives may need to be used for lubrication.
- Ensure that water supplies are adequate and that they are maintained. Take extra precautions during cold weather to protect against freezing.
- The use of a foaming agent for dust suppression is also possible.
- Alternatively, dust control may be achieved by extraction of the dry dust using local exhaust ventilation, connected to a suitable dust extraction system (e.g. a bag filter/cyclone), or by using spray mist dust suppression. Refer to task guidance sheet **2.1.13**.
- Drilling equipment with an integral control cabin or remote control facility with closed doors and windows may be used to isolate personnel from dust sources.
- Control cabins can be fitted with forced air filtration or full air conditioning.

MAINTENANCE

- Ensure equipment used in the task is maintained as advised by the supplier/installer in efficient working order and in good repair.
- Replace consumables (filters etc.) in accordance with the manufacturer's recommendations.
- It is preferable that all maintenance functions that could be done in a workshop be done in a workshop.

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EXAMINATION AND TESTING

- Visually check the equipment at least once per week for signs of damage or, if it is in constant use, check it more frequently. If used infrequently, then check it before each use.
- Obtain information on the design performance of the dust suppression and/or extraction equipment from the supplier. Keep this information to compare with future test results.
- 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 your workplace on a regular basis.
- **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.
- Risk assessment must be carried out to determine whether existing controls are adequate. If necessary, respiratory protective equipment (with the appropriate protection factor) should be provided and worn.
- Provide storage facilities to keep personal protective equipment clean when not in use.
- Replace respiratory protective equipment at intervals recommended by its suppliers.

EMPLOYEE CHECKLIST

- ☐ For wet dust suppression methods, make sure the water supply is working before starting the drilling equipment.
- ☐ For dry dust collection methods, make sure the dust extraction system is switched on and is working.
- ☐ Look for signs of damage, wear or poor operation of any equipment used. If you find any problems, tell your supervisor.
- ☐ 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 while the problem persists.
- ☐ Clean up any control cabin using vacuum or wet cleaning methods.
- ☐ Use, maintain and store any respiratory protective equipment provided in accordance with instructions.
- ☐ 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 dust control during the use of a drilling rig in hard rock quarries.

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 in the workplace.