

GOOD PRACTICES FOR PLANNING FOR UNFORESEEABLE HIGH EXPOSURE SITUATIONS

It is important to plan ahead for situations where workers may be exposed, temporarily, to higher than normal levels of airborne respirable crystalline silica. Often the causes of high dust levels cannot be foreseen, since they may be caused by faults or breakdowns of equipment, blockages, breakages and spillages. This task guidance sheet gives advice on how to be prepared for these situations, in order to protect workers by minimising their exposure. Refer also to task guidance sheet **2.1.14** "Maintenance, Service & Repair Activities" for advice on foreseeable (planned) high exposure situations. Refer to task guidance sheet **2.3.5** for advice on working with contractors.

ACCESS

In a high exposure situation, restrict access to essential workers only. **Do not allow unprotected or untrained people to enter.**

DESIGN AND EQUIPMENT

- Provide essential workers with necessary personal protective equipment, including respiratory protective equipment.
- Have a system to report high exposure situations and raise the alarm so that they can be acted upon and brought under control quickly. Decide in advance who needs to be informed.
- Real time monitoring equipment (fixed detectors) can help to raise the alarm if airborne dust levels increase. (See task guidance sheet **2.3.2** on real time dust monitoring).
- The initial response should be to restrict access, in affected areas, to essential and protected workers only. Other people should be advised to vacate the area.
- Safety warning signs should be posted to highlight the restricted area.
- The cause of the high airborne dust levels should be identified and action taken to prevent further release of airborne dust (e.g. shut down faulty equipment).
- When shutting down equipment, the correct isolation and lock-off procedures must be followed, considering also any potential impacts on adjacent areas or processes.
- Provided they are working correctly, leave ventilation systems (including exhaust ventilation) running to help clear the air.
- Carry out risk assessment for the remedial actions and develop a step-by-step procedure.



- Refer to task guidance sheet **2.1.14** for advice on maintenance, service and repair; task guidance sheet **2.1.1** for advice on cleaning.
- Ensure that equipment used in the remedial work is maintained in efficient working order and suitable for the work in hand.
- Have the equipment readily available where it will be needed.
- Ensure effective supervision of the remedial work.
- Have proper equipment and procedures for waste disposal.
- Real time monitoring equipment (portable/hand held) may be helpful to confirm the effectiveness of the remedial actions and to identify when conditions return to normal.
- Consider whether further, temporary, measures are needed to protect workers in the interim period while conditions return to normal.
- Keep full documentation on planning for unforeseeable high exposure situations.

GUIDANCE FOR EMPLOYERS ON CONTROLLING EXPOSURE TO RCS IN THE WORKPLACE

MAINTENANCE

- To reduce the likelihood of unforeseeable high exposure situations, implement planned, preventative maintenance and inspection schemes.
- Ensure that all equipment used in remedial actions is maintained in efficient working order and good repair.

EXAMINATION AND TESTING

- Carry out regular inspections of the workplace and equipment, including the dust control measures, in order to detect any problems as early as possible.
- Check effectiveness of respiratory protective equipment before use (RPE fit testing).
- Ensure local exhaust ventilation and other control measures are effective and regularly tested.
- 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

- **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.
- Maintain or replace respiratory protective equipment at intervals recommended by its suppliers.

EMPLOYEE CHECKLIST

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| ☐ Look for signs of damage, wear or poor operation of any equipment used. If you find any problems, tell your supervisor. | ☐ Do not interfere with ventilation systems – they are provided to protect your working environment. | ☐ Respect any access restrictions that may be applied in the event of a high exposure situation in your workplace. | ☐ Check and implement the measures to control the risk of bacterial growth within water sources used across site, focusing most on systems where water droplets will be generated. |
| ☐ 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. | ☐ Clean up using vacuum or wet cleaning methods. | ☐ Only enter restricted areas when it is essential to do so and when wearing the necessary protective equipment. | |
| | ☐ Use, maintain and store any respiratory protective equipment provided in accordance with instructions. | | |

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.

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.