

# GOOD PRACTICES FOR QUARRY MOBILE EQUIPMENT – EXCAVATION AND HAULAGE

This sheet provides advice on the design and use of mobile equipment in a quarry. Following the key points of this task guidance sheet will prevent personal exposure to the dust released into the air of the cabin during quarry mobile equipment operations, including excavation and haulage. Among others, the equipment included in this task guidance sheet is: lorries, dumpers, wheel loaders, excavators or bulldozers.

## ACCESS

Restrict access to the work area to authorised personnel only.

## DESIGN AND EQUIPMENT

- Ensure the equipment/unit is fit for purpose and that it is well maintained.
- The cabin should be equipped with air conditioning system or fresh air supply.
- An air filter system (High Efficiency Particulate Arrestance – HEPA) should be installed which is designed to withstand a high loading of respirable dust particles.
- In order for the air conditioning system or fresh air supply to provide the greatest protection from dust exposure, the doors and windows of the cabin must be kept closed at all times while the machine is in operation. This will help to maintain the cabin under positive pressure.
- Where possible, the seat cover and other surfaces in the cabin should be designed such that they cannot retain dust and can easily be cleaned.
- Where possible, timing of extraction operations, to coincide with the wetter seasons of the year, will help to reduce airborne dust generation.
- In dry weather, use spray mist dust suppression in order to help reduce airborne dust generation. For example, rippers may be fitted with a mist boom mounted on the ripper/shank mechanism.

## MAINTENANCE

- Maintain the air conditioning system as advised by the supplier, in effective and efficient working order.
- The air conditioning filter should be changed each time it is deemed necessary and at least at intervals advised by the manufacturer.



## EXAMINATION AND TESTING

- Machine drivers must check that the air conditioning system is working within accepted parameters.
- A build up of fine dust on the internal surfaces of the driver's cabin might suggest a problem with the air conditioning system.
- Machine operators should check the condition of the filter (usually located behind the driver's seat or in the glove compartment) as recommended by the manufacturer.
- Any faults with the air conditioning/filtration system must be reported as soon as possible so that remedial action can be taken.
- 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

- The driver should take precautions to avoid bringing in dust or mud.
- The cabin should be cleaned regularly (please refer to task guidance sheet **2.1.1**)
- Preference should be given to the use of vacuum or wet cleaning methods. Avoid using a dry brush when cleaning the internal surfaces of the driver's cabin.

## 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** (Training) 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** (Supervision).
- 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

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| <input type="checkbox"/> Keep the cabin doors and windows closed at all times when the machine is in operation. | <input type="checkbox"/> Keep records of all safety checks on a daily check sheet.  | <input type="checkbox"/> If you think there is a problem with your dust control equipment, ensure the additional measures are taken to reduce exposure to RCS while the problem persists. | <input type="checkbox"/> Use and maintain any respiratory protective equipment provided in accordance with instructions.  |
| <input type="checkbox"/> Monitor the performance of the air conditioning system each time the machine is used.  | <input type="checkbox"/> Look for signs of dust build up on the surfaces of the cabin. This may be a sign that the air filter is in poor condition. | <input type="checkbox"/> Keep interior of the cabin clean.  | <input type="checkbox"/> 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. |
| <input type="checkbox"/> Check the condition of the air filter once a week.                                     |   |   |   |

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.