FACE THE FACTS:

Falling from quarry faces is on the increase

All my life I have worked on a face - why change things now?

From the earliest records in the last century until the 1950s, the biggest cause of fatal accidents was falls and falling from quarry faces. In the sixties this changed with the introduction of mechanisation and the reduction in the number of face workers. The accidents caused at the face almost disappeared, and vehicles became the major cause of accidents.

Figure 1

However, in the last few years the number of people falling from faces has again started to rise, with at least two killed and several seriously injured.

Who is affected?

Any person who works on or near the edges of face tops has the potential to fall. Typically the driller, shotfirer and person carrying out the daily inspection. Don't forget the other people who may be working on the face top - the surveyors, profilers, explosives engineers, explosives truck personnel, planners, geologists, geotechnical engineers, fencers, and even HSE inspectors.

What must be done?

A risk assessment needs to be carried out to establish safe working procedures for any person likely to be in a position where they may fall from an open quarry face.

What about roadways?

Good edge protection in the form of material heaped to at least 1.5 m or half the diameter of the largest vehicle will not only protect vehicles from falling from edges but also act as a barrier to pedestrians. Remember, as a rule of thumb, if you can see over the edge protection on a road it is probably not high enough to protect the vehicles on it.

How can you protect working faces?

Carry out a site-specific risk assessment which covers the following points:

1 Minimise the number of personnel working on the face.
2 Provide good supervision.
3 Determine a distance from the face beyond which it is safe to work with no additional protection.
4 Consider how you will demarcate this area.
5 Consider how people within this demarcated area can work safely.
6 Consider the geology and stability of the face, the ground conditions, weather, lighting, equipment being used, the need to adjust burdens, marking hole positions, and profiling.

What systems are available?

Harness and lanyard

This is the simplest system, with the worker wearing a harness or safety belt as appropriate, attached to an anchored lanyard. If work is taking place close to the rotating parts of a drill rig, the lanyard has to be fastened in such a way that it cannot get entangled. Figure 1 shows a shotfirer wearing a harness with a lanyard attached to the explosives truck.

Harness and running line

This system gives more freedom to the users. The line is attached to specially placed anchored poles and the harness is able to move between the poles. The running line also acts as a barrier for people behind it to prevent them going into the unsafe area. Anyone going beyond the barrier has to be fastened to the line (see Figure 2).

Barriers

For barriers to be effective they have to be stable and not overturn when people fall against them. Trials with crash barriers and 'A' frames have not in the past been totally effective. A recent development is the erection of an effective barrier fitted into holes drilled by the drill rig which is shown in Figure 3.

Barriers of stone heaped along the face edge can also provide adequate protection to prevent people from entering the danger area.

Whatever system is used, it has to be effective and suitable for your site.

Figure 2

Figure 3

New publications from HSE Books

Confined spaces

New goal-setting Regulations to reduce the high risks associated with work in confined spaces will come into force on 28 January 1998. The Confined Spaces Regulations will require employers to:

- avoid entry to confined spaces, for example by doing the work from the outside:
- follow a safe system of work if entry to a confined space is unavoidable; and
- put in place adequate emergency arrangements before work starts, which will also safeguard rescuers.

A supporting Approved Code of Practice and Guidance has been published (*Safe work in confined spaces* L101 ISBN 0 7176 1405 0 £7.50), along with a free leaflet (*Work in confined spaces* INDG258).

Hand-arm vibration

Vibration solutions: Practical ways to reduce the risk of hand-arm vibration injury HSG170 ISBN 0 7176 0954 5 £13.75.

These publications are available from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 6FS. Tel: 01787 881165 Fax: 01787 313995.