

Chapter 13

Hazards

October 1996

Confined spaces

RoSPA firmly welcomes the HSC's proposals for new regulations, an Approved Code of Practice and additional guidance to replace existing and inadequate safety law on work in confined spaces. RoSPA fully agrees with the Commission's analysis of confined space hazards and the need to create a clear and uniform set of requirements to prevent death and serious injury due to uncontrolled exposure to these hazards.

However, the following points need careful consideration:

- **THE DEFINITION OF A CONFINED SPACE** given in the proposals seeks to combine the physical configuration of a working space (namely its partial or total enclosure) with a combination of hazards known to pose serious risks (asphyxiation, engulfment, drowning, fire and explosion, heat stroke). The aim of this is, presumably, to concentrate on avoidance of serious and acute outcomes.

While accepting that reliance will be placed on other legislation to deal with hazards such as electricity, noise, ionising radiations, machinery and so on, the key duties in the proposed regulations (namely: to avoid confined space working; and where it is unavoidable, to provide safe systems of work and emergency arrangements) should also apply, as appropriate, where there are significant risks from these other sources.

For example, atmospheres may be safe but the configuration of a confined space could lead to entrapment in machinery – which, in turn would require prompt emergency action without putting others at risk in the process.

RoSPA would prefer to see a more inclusive definition. Alternatively, the ACoP could make clear that other general health and safety requirements such as ensuring safe access and egress may be relevant in circumstances which do not fall within scope of the proposed definition of a confined space and that, in such circumstances, assessment of risks may indicate the need to introduce measures equivalent to those required by the regulations.

- **RISK ASSESSMENT.** The emphasis given to risk assessment as the starting point in deciding on the level of response to be made to duties in the proposed regulations is welcome. However, care must be taken to avoid giving the impression that generic assessments will always be acceptable for the same or similar levels of operation. Conditions in confined space working can often change due to unforeseen circumstances.
- **DUTY TO PREVENT ENTRY.** The primary duty to avoid entry is welcomed. However, judging whether or not alternative methods are 'reasonably practicable' will prove difficult without clear guidance for particular operations. The development of

remote techniques for many kinds of confined space work should receive practical encouragement and funding support from the HSC/E. A database of techniques should be developed to assist employers in finding solutions which will enable them to comply with this primary duty.

Where necessary, the regulations should require the presence of suitable physical or organisational measures to prevent unauthorised entry – for example by non employees.

- **IDENTIFICATION.** There should be a stronger requirement on employers to clearly identify hazardous confined spaces – for example at points of entry. Often accidents occur because people enter confined spaces (often unauthorised) unaware of potential dangers. The development of a European hazard warning symbol plus pictogram for confined spaces would be helpful.
- **COOPERATION.** The need for cooperation between all relevant parties in confined space working cannot be emphasised enough. The ACoP should give clear examples of ways in which failure to allocate responsibility and exchange information can lead to hazardous situations.
- **TESTING.** More cross reference in the ACoP to preferred methods of testing for various kinds of contamination should be considered. Whenever testing is carried out, results should be kept for a minimum specified period.
- **ISOLATION.** It is essential that there be clear advice on effective isolation procedures.
- **WRITTEN SCHEMES.** There should be a clear assertion that a written scheme and Permit to Work systems will normally always be required unless absence of significant risk is clearly assured by the specific features of the work.
- **COMPETENCE.** While the ACoP clearly emphasises the importance of adequate levels of competence for managers, supervisors and staff actually carrying out confined space work, what constitutes ‘competence’ is not clearly defined. Greater coverage of this is required in guidance.
- **RESCUE.** The level of response to the duties in the regulations to provide emergency, rescue and resuscitation services is to be determined by the results of assessments. This will vary between relatively simple rescue equipment and procedures to sophisticated provision linked to prior notification of the emergency services. Again, clear guidance will be required to help determine the appropriate level of provision in specific circumstances. Such guidance will also need to focus on issues such as the level of competence required of rescue personnel, their training and the need for periodic drills and rehearsals.
- **THE COST BENEFIT ASSESSMENT (CBA).** The analyses, data and assumptions underlying the CBA have not been made clear. The figures quoted seem highly tentative. Has allowance been made, for example, for the productivity benefits that are likely to be associated with greater use of remote techniques which obviate the need for confined space working?

February 1997**Health and safety and working time**

The essential features of the Directive have been well publicised: no employee to be compelled to work an average of more than 48 hours per week, minimum daily and weekly rest hours to be observed and at least 4 weeks holiday entitlement per year (although there are many exemptions from all these requirements). The DTI and not the HSE are taking the lead in consulting on how to implement the Directive.

Argument as to whether the Directive really is health and safety legislation or social legislation 'via the back door' seems set to continue for some time but it is worth remembering that working hours were among the first things to be regulated in the early part of the 19th century when women and children were quite literally being worked to death.

Those who might be tempted to argue that working time is no longer part of the mainstream health and safety agenda need to be reminded about the implications of the wide ranging duty of care owed by employers to employees under Section 2 of the *Health and Safety at Work (HSW) Act*.

An HSE leaflet on hours of work (currently out of print) suggests that it would be a breach of duty if an employer were to require employees to work such long hours that their health was adversely affected or that they became so fatigued that they were unable to ensure their own or others safety.

In some areas this last principle is already enshrined in specific pieces of safety law. These include the *Railway (Safety Critical Work) Regulations 1994* (introduced in response to recommendations of the enquiry into the Clapham rail disaster) and regulations relating to the hours of drivers of LGVs and PSVs.

In all industry sectors however, employers' general duties under the *HSW Act* mean that they should consider whether or not the hours which they require their staff to work may adversely affect safety and health and that, in doing so, they should take into account the existing state of health of individual employees. In practice this should be part of the routine process of risk assessment under the *Management Regulations* which enables employers to demonstrate that all the relevant variables have been weighed up and that health and safety measures are adequate.

HSE's recent guidance on stress (HS(G)116) for example, points to staff working increasingly long hours but for diminishing returns as one possible stressor, although other factors which are likely to be just as (if not more) significant include work pressures, unrealistic deadlines and, very significantly, employee uncertainty about management expectations.

The problem with making health and safety decisions about working time (in the short, medium and longer term) is that there are no hard and fast rules that can be applied. Some people become fatigued much faster than others. Also, those who do physically demanding jobs or jobs which involve exposure to extremes of heat or cold may require both longer and more frequent rest than jobs carried out under less changing conditions.

Besides the question of optimum length of working periods there are important 'body clock' issues to be considered. It is well established, for example, that we are all more prone to sleep and sleepiness at certain times of day – typically about 5.30 to 6.30 am and 3.00 to 4.00 pm – and this can have quite significant implications when it comes to planning the work schedules of those in whose jobs alertness is critical to safety decision making.

People's sleep patterns can adapt to change, as in the case of those who work permanent night shifts, although the literature on the possible harmful effects of shiftwork and nightwork is very complex and ultimately inconclusive. There should probably be more concern however about the health and safety effects of rotating shifts (particularly one which rotate anticlockwise) as well as concern about the risks arising from sleepiness among shift workers who drive to and from their place of work.

With so many dimensions to consider and in the absence of detailed guidance, how do employers know where they stand?

The answer has to be the application in the first instance of some basic common sense. For example, if a significant extension to working hours is considered, those involved need to review the risk assessment(s) for the work involved to see if there are any resulting health and safety implications. Where there are restrictions on working hours (statutory or otherwise) already in place for safety reasons then employees concerned should not be permitted to work if they have been working before the start of their shift (for example, 'moonlighting'). Where employers set their own restrictions on hours, for example jobs where fatigue could impair safety significant decision making, they need to make provision for emergencies so that such rules are not broken whenever abnormal situations arise (sickness, peaks in demand etc).

Looked at in this way, it is quite clear that working time is indeed both a safety and a health issue. While European law now lays down certain maxima, an assessment based approach will continue to be required to ensure that the general duties of HSW Act are being fulfilled in particular circumstances. Whatever measures are introduced by the DTI to implement the Directive, it seems clear that new HSE guidance should also be produced as soon as possible to deal with these important issues.

March 2002

Workplace transport safety

In January a special conference was held at Church House, Westminster, to launch the HSC's discussion document on *Preventing Workplace Transport Accidents* (DDE18) (accessible on the web at www.hse.gov.uk/disdocs/dde18.htm).

Announcing the initiative, health and safety minister, Dr Alan Whitehead MP said that the aim was to stimulate a nationwide debate on steps that can be taken to reduce the appalling level of accidents still occurring with site vehicles. HSC chair Bill Callaghan added that, in 2000/01, 99 people were killed and 2,490 sustained major injuries in workplace transport accidents (WTAs). At least a further 5,857 were injured seriously enough to be off work for at least three days.

The importance of this discussion exercise is that success in getting WTA casualties down will be an acid test for the HSC's whole *Revitalising Health and Safety* (RHS) strategy. If the HSC cannot secure performance improvement on this issue, there will be little real prospect of reaching the national headline RHS target of a ten per cent reduction in fatal and major injuries by 2010.

The HSC are seeking views on what can be done to tackle WTA risks in three areas: improving risk management; improving communication, particularly with drivers; and technical measures. There is a particular focus on tackling accidents while reversing and raising standards of training for drivers of dedicated site vehicles such as FLT's.

RoSPA strongly welcomes the idea of a wide-ranging debate on the WTA problem and the fact that HSC accept that they do not have all the answers. However RoSPA feels that the initiative would be more successful if it were also linked to measures for preventing work related road traffic accidents as recommended in the recent report of the Government's independent Work Related Road Safety Group.

At present, because the way enforcement responsibilities are split between road and work safety law, the HSE and local authority inspectors only enforce transport risks on work premises or at cordoned off sites on the highway. What RoSPA has said is that, from an employer's perspective, when managing the risks presented by vehicles used in the course of work activities, the pavement is a false dividing line.

RoSPA accepts that HSC/E have yet to decide on how they are going to respond to the WRRSTG's recommendations about closer enforcement liaison with other road safety enforcers. Nevertheless it is clear that many workplace traffic accidents already addressed by HSE happen on road at sites such as road works or during vehicle recovery operations and that at-work drivers travelling via road have to address safety at site access and exit points etc. The underlying methodology for preventing WTAs, namely 'safe vehicle', 'safe vehicle movement' or 'safe journey' and 'safe driver' apply both on road and on site. Many of the underlying risk issues are the same, namely 'speed', 'fatigue', 'stress', 'work pressure', 'lack of management control', 'driver competence' etc.

One of the things that could be examined is the idea of creating closer linkages between WT safety arrangements and the 'O' (Operator) licensing regime for

commercial vehicles. Traffic Commissioners, for example, could be asked to consider WT risk assessments for 'operating centres' or possibly withdrawing 'O' licences from operators with substandard site transport safety arrangements.

The focus in the discussion document is very much on practical measures. Important as these are, RoSPA feels that the strategy must address underlying as well as immediate causes of WTAs. For example, of the 99 fatalities in 2000/2001, in how many cases were there major, underlying weaknesses in the employer's H&S management system?

Again, where lack of suitable training for drivers may have contributed to fatal accidents involving specialist site vehicles for example, in how many such cases was the cause of such an omission a general lack of attention by the employer to all aspects of health and safety? If the answer is 'the majority of cases', then, simply disseminating more information and guidance on precautions will not reduce the exposure of people to unacceptable transport risks.

It would have been useful if some anonymised case studies of typical site vehicle accidents had been presented in the discussion document with analyses of immediate and underlying causes. This would have helped contributors to make suggestions on steps that might be taken to tackle both immediate and underlying causes of WTAs. In fact, in contrast to the 80s and early 90s when HSE produced a great deal of 'black spot', accident case study material, there is now a real dearth of this sort of information.

RoSPA feels there must be robust and certificated training requirements and standards for all drivers of specialist site vehicles. There must also be a review of the effectiveness of FLT training to see which approaches to training are most effective and how training contributes to reducing the incidence of slips, mistakes and violations by drivers.

It is also vitally important that senior and line managers are trained. Where vehicle movements exceed certain agreed risk parameters, RoSPA would like to see a clearer duty to create controlled WT areas under the of competent supervisors.

This sort of requirement could be included in a new Approved Code of Practice for such areas giving priority to the adoption of controls at the top of the hierarchy of preferred options for risk control, particularly separation of people from vehicles and one way systems.

The discussion document highlights the need for effective risk assessment as the key to identifying and implementing safe systems of work. While the generality of the duty in the Management Regulations to assess a risk should not in any way be diminished, a WT ACoP could usefully set out a more explicit series of considerations which would need to be addressed in WT risk assessments.

RoSPA would also favour the idea of a safety case for site transport operations being included in all applications for local authority planning permission for new or altered sites. It would be absurd if one part of a local authority had to condemn as

unacceptable a new sit layout approved by another part of the same authority, namely the planning department.

Finally, better intelligence is required on accidents involving site transport accidents, including non-injury accidents with serious potential to cause harm. At present requirements in RIDDOR for notifying dangerous occurrences relating to site transport operations are limited to: incidents involving overturning etc of FLT's; freight containers; train collisions; overturning, damage release of dangerous substances, and fire involving road tankers and tank containers conveying dangerous substances. A more realistic schedule of transport related dangerous occurrences might be considered, including serious near-misses during reversing.