Editorial

The Sunset of Exposure Limits—and the Dawn of Something Better?

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Britain has a system for deriving exposure limits which is as sophisticated as any in the world, not only in terms of the care taken with the technical side, but also because the system tries to incorporate social balance even in the technical decisions, and because the exposure limits are fully integrated with a general scheme of chemical regulation (Ogden and Topping, 1997). This issue begins with an account of the apparent failure of the system (Topping et al., 1998). The failure is not of technical quality, but of usefulness in achieving control by most chemical users. Despite the vast amount of publicity and excellent guidance produced by the Health and Safety Executive (HSE) over the past ten years, two-thirds of chemical users were unaware of the relevant legislation. When questioned about exposure limits, only 20% of chemical users (40% of heavy users) mentioned the need to keep exposure below them. Only five of the 1000 chemical users questioned (0.5%) could explain the different duties associated with the two types of exposure limit.

The 1000 chemical users interviewed represent a 16% response rate from an original contact group of 6200. This response rate has greatly surprised epidemiologists, but in market research such a response is apparently acceptable and the reasons for believing that the results are representative are set out in Topping et al.'s paper. In any case, one would expect that people with a good knowledge of the law would be more willing to be interviewed, so the poor knowledge shown is all the more disturbing.

These findings are the spring-board for the subsequent papers in this issue, which are based on a session at the 1998 conference of the British Occupational Hygiene Society (BOHS). They build on another finding of the survey, that chemical users rely mainly on information from suppliers, not on the carefully-crafted system of legislation and guidance put out by the regulators. The papers describe how HSE and a tripartite working party of the Advisory Committee on Toxic Substances have therefore developed a system of banding chemicals according to toxicity and likelihood of exposure. The intention is that employers will use information from suppliers to select from guidance on a limited number of control systems, which the small chemical user should be able to use as readily as the big ones. It is greatly to the credit of HSE and the Working Party that they have sought peer review and publication of the technical bases of the new scheme. We are pleased to be able to bring the proposals before a wider audience of occupational health, safety and environmental professionals through publication in the Annals (Russell et al., 1998; Maidment, 1998; and Brooke, 1998). The papers are accompanied by one on the Chemical Industries Association scheme which preceded the new one (Guest, 1998), and trades union experience on the problems of information flow (Hudspith and Hay, 1998), which are so clearly illustrated by Topping et al.'s survey.

We have also included in this issue some correspondence on enforcement criteria for exposure limits in the US (Hewett, 1998; Rappaport et al., 1998). This is not part of the same set of papers, but it has of course the same interest in exposure limits and their use, but in a very different enforcement regime.

The papers must raise questions over the use of exposure limits in other countries, and whether the European Union, for example, would be better to move in the banding-control direction rather than developing further its system of exposure limits under the Chemical Agents Directive. However, the question must also be asked as to whether the British difficulty reflects the national approach to the use of professionals in health and safety. As legislation has placed responsibilities for health and safety firmly on employers, including small, technically-unsophisticated employers, British regulators have understandably tried to give them the tools to meet their responsibilities without going to the expense of employing technical experts where these can be
avoided. Since the Health and Safety at Work etc Act 1974, the emphasis has been to define ‘competent person’ in terms of the skills necessary for the job rather than to underwrite any particular professional qualification.

Similarly, exposure limits in Britain used to follow the ACGIH line that they ‘should not be used by anyone untrained in the discipline of industrial hygiene’ (ACGIH, 1997), but in Britain there has been a long-term trend away from this. Part of this, the guidance accompanying the British exposure limits publication was re-written last year, ‘to make it more accessible to non-specialists’ (HSE, 1997a). HSE’s well-respected monitoring guidance EH42 has been similarly rewritten for employers rather than occupational hygienists (HSE, 1997b). It could be argued that ignorance of the technical niceties of exposure limits amongst employers reflects these trends to write things in simple terms and to dispense with the specialist.

It would be interesting to know whether the same things would apply in other countries which have taken a different approach to the professional. In the Netherlands, for example, companies which employ more than 15 people must have their risk assessment under the EU framework directive approved by a certified occupational health and safety service, which must include a certified occupational hygienist (Burdorf, 1997). The British findings would not be expected to be relevant to such a situation. As far as the United States is concerned, the discussion in the correspondence in this issue (Hewett, 1998; Rapaport, 1998) illustrates the greater concern of the professional public and the courts with technical details of compliance with exposure limits. What would a survey like Topping et al.’s find there?

This does not of course mean that the British approach is wrong. Perhaps it is the most cost-effective way of controlling occupational ill-health. The Topping et al. survey showed that many employers at present make a poor choice of control, but perhaps the better-targeted scheme outlined in these papers will correct this. As far as chemicals are concerned, perhaps the main future role for hygienists is with the more strategic partnership discussed by HSE’s Director-General at the BOHS Conference (Bacon, 1998). Returning to the narrow issue of exposure limits, Russell et al. emphasise that ‘there is clearly no intention to undermine the role of OELs in determining the adequacy of workplace controls’. However, given the expense and time required to establish exposure limits, it is hard to believe that they will retain their place in Britain when official guidance enables the employer to move straight from supplier information to control option without ever having heard of an exposure limit. It seems inevitable that limits will be restricted to substances for which no supply information can be available. The papers in this issue are clearly very important, but their long-term effects are hard to predict.

REFERENCES


