Extending the Carcinogens Directive to mutagens and wood dusts

Even before the First Amendment to Directive 90/394/EEC on the protection of workers from the risks related to exposure to carcinogens at work was on the books, the Council had asked the Commission for a proposal for a second amendment to include mutagens and wood dust, and consolidate other laws like the asbestos and vinyl chloride monomer Directives.

The first amendment[1] - Directive 97/42/EEC - was adopted by the Council on 27 June 1997 and will apply from June 2000. Apart from defining carcinogens more clearly, its main advance is to set an exposure limit of 1 ppm[2] for benzene. Less welcome is the exception allowing exposure limits of 3 ppm until the year 2003.

There are three key aspects to the Commission's second draft amendment submitted to the Luxembourg Advisory Committee in November:

1. Including mutagens, to extend the wider protective measures of Directive 90/394/EEC to workers in contact with such substances. The key principles are substitution of mutagens, the use of closed systems, and additional health surveillance;
2. Clarifying how the Directive's provisions might be applied to wood dust and other substances with similar carcinogenic potential, and whether a limit value should be set for wood dust in Annex III;
3. The possibility of consolidating other Directives on carcinogens at the workplace - like the Asbestos Directive (Directive 91/382/EEC) and Vinyl Chloride Monomer Directive (Directive 78/610/EEC) into this Directive.

Including mutagens

The SCOEL - the Scientific Committee which advises DGV on occupational exposure limits - specified that the only eligible substances are those which meet the criteria set out in Annex VI to Directive 67/548/EEC for classification as mutagens:
- in Category 1 (substances known to be mutagenic to man); and
- in Category 2 (substances that should be regarded as if they are mutagenic to man);
- labelled with the symbol T (toxic) and the risk phrase 46 (may cause heritable genetic damage).

Both categories include substances which can cause mutations in the germ cells of the reproductive organs. Category 3 substances - substances which cause concern for man owing to possible mutagenic effects (symbol Xn [harmful] and risk phrase 40 [possible risks of irreversible effects] - "only" cause the "induction of genetically relevant events in somatic cells". This means that the more extensive protective measures are only considered necessary for substances that cause damage which is heritable by future generations.

Changes to somatic cells, on the other hand, are not heritable as the damage is limited to one generation and disappears when the "mutation carriers" die off.

We argue that substances in all three categories are equally relevant as regards carcinogenic potential, as it is generally accepted that mutations in DNA, chromosomes or genomes are involved in tumour initiation.

Cancer-inducing wood dusts

The situation as to the carcinogenicity of wood dusts is more complex. The Scientific Committee and Advisory Committee need to look at whether:

- some processes which can release wood dusts should be included in Annex I of Directive 90/394/EEC; and
- occupational exposure limits for certain types of wood dust should be included in Annex III.

The treatment of wood dusts varies widely throughout the EU, both as regards carcinogenicity, definition (hard or soft wood) and the setting of exposure limits. Using the argument that wood dust, or at least, particular types of wood dust, has proved non-carcinogenic in animal experiments, the wood processing industry has been (successfully) fighting a Europe-wide classification for years. The clear evidence of the carcinogenic effects of certain wood dusts (e.g. oak and beech) on humans which has been available for decades is countered with the argument that these effects are attributable to the impregnation or surface treatment used rather than the wood dust itself.

In its official report, the SCOEL unanimously found conclusive evidence that oak and beech dust are carcinogenic. The evidence for other types of wood is less convincing, but recent reliable studies indicate that exposure to softwood dust could be linked to incidence of sino-nasal squamous cell carcinomas, albeit with a lower risk than observed for oak and beech dust. The SCOEL does point out, however, that possible contamination of the softwood dust by hardwood dust cannot be ruled out in these studies.

The Commission backs this view, which is reflected in its proposal for a second amendment by listing activities involving exposure to beech and oak wood dust in Annex I to the Directive. As yet, however, no binding limit value has been set out in Annex III. While there is a consensus in the Advisory Committee on including wood dust, it has become clear during its meetings that the employers are firmly opposed to extending some of the Directive's provisions to wood dust, especially the principle of substitution.

Coming soon: a consolidated Directive on protection from carcinogens at work?

The question is whether the 1978 Vinyl Chloride Monomer (VCM) Directive and the Asbestos Directive should be consolidated in the Carcinogens Directive.

While inclusion of the VCM Directive is a possibility, there are no plans to re-examine and adapt the existing outdated exposure limits for the time being. The Asbestos Directive is likely to remain an individual directive for two reasons:

It contains more specific and detailed provisions than the Carcinogens Directive, especially as regards building demolition work and a ban on certain working practices (spraying). Also, the Carcinogens Directive already applies to asbestos dust.
The Commission is currently preparing an amendment to the Asbestos Directive, which it will submit next year.

The Advisory Committee gave its opinion in November 1997, and the Commission proposal will now be sent forward to Parliament and the Economic and Social Committee. The British government has made the adoption of the Directive a priority for its presidency in the first half of 1998.

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[1] O.J. No L179 of 8 June 1997, p. 4. See also "Carcinogens: Commission proposes an occupational exposure limit for benzene", in *TUTB Newsletter* No 2, February 1996, p. 18.

[2] ppm = parts per million by volume in air.