

This week

Controlling cancer—asbestos shows the way

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New safety standards for asbestos, recommended in a report published yesterday, are more than they appear: the thinking behind them will almost certainly dominate the setting of future standards for all cancer-causing substances in the workplace.

The long-awaited report (*Asbestos: Final Report of the Advisory Committee*, vols 1 and 2, HMSO, £5 each), recommends tighter safety standards for the three main types of asbestos. It says blue asbestos (crocidolite) is so dangerous that the current voluntary ban should be strengthened by law. Concentrations of white asbestos (chrysotile) in the workplace should be kept as low "as is reasonably practicable" and, in any case, lower than 1 fibre/millilitre in the air that workers breathe. Similar strictures should apply to brown asbestos (amosite), says the report, except that the control limit for this type of asbestos should be 0.5 fibres/ml. In all cases, employers and users of asbestos should be obliged to consider safer alternatives.

The thinking behind these standards is new. It closely reflects the philosophy of safety standards for radiation set out by the International Commission on Radiological Protection. Indeed members of the Advisory Committee on Asbestos read ICRP Report 26, which expresses the commission's thinking.

The logic behind the recommended standards is a way out of a bind that increasingly traps the Health and Safety Commission (HSC) and Executive (HSE), which are responsible for safety at work. Traditionally, so the theory goes, safety standards in industry were set on the basis of scientific evidence which showed, for any particular substance, how low concentrations of it had to be before

causing no ill effects. But more and more, both the HSC and HSE face the problem of setting standards for cancer-causing substances (such as asbestos) which have no such "threshold": they have some effect, however small, even at very low concentrations.

The philosophy adopted by the advisory committee to escape this trap is three fold. First, it says, manufacturers and users of asbestos should have a duty "to consider the substitution of asbestos by other materials so far as it is reasonably practicable to do so". The Health and Safety Executive, or the Commission, should issue general advice on substitutes to help manufacturers decide whether asbestos is the best material to use. This falls far short of the measures the TUC, representing the unions point of view, demanded in its evidence to the advisory committee—it wanted the HSE to enforce a policy of gradual compulsory substitution.

The second part of the advisory committee's approach is to replace "safety standards" by "control limits". This recognises that even very low concentrations of asbestos can cause cancer—there are no "safety limits". Instead the advisory committee recommends "control limits"—the "upper limit of permitted exposure". Above this limit, the risks resulting from exposure would be "unduly high". Below the limit, risks would still exist, but they would not be unacceptable in all circumstances.

Whatever the arguments for or against this philosophy, the advisory committee's specific recommendations for control limits for asbestos are sure to run into a barrage of opposition from scientists and trade unionists. First, its advocacy of different standards for different types of asbestos contradicts a strong current in scientific thinking. Irving J. Selikoff, of the Mount Sinai School of Medicine in New York, who is probably the US's leading asbestos researcher says: "It is now generally conceded that . . . distinctions as regards the need for control should not be made solely on the grounds of [fibre] type". In his evidence to the advisory committee, Julian Peto, a prominent asbestos researcher from Oxford University, specifically attacked the idea that chrysotile does not cause cancer of the lining of the lung or abdomen (mesothelioma). Yet the advisory committee set a laxer "control limit" for this type of asbestos, largely on the grounds that it "rarely" causes mesothelioma.

The advisory committee sees a control limit of 1 fibre/ml for chrysotile as acceptable because exposure to this level every day for 50 years would cause between 0.02 and 1.25 per cent excess deaths among workers so exposed. But the accuracy of these figures depends crucially on assumptions about the accuracy of past methods of measuring



Removing blue asbestos dumped next to a playground in London

asbestos in the air—assumptions which not all researchers share with the advisory committee. In any case, trade unionists are hardly likely to be happy with a control limit which could, conceivably, mean that 310 of the estimated 25 000 workers currently exposed to asbestos will die from diseases caused by their work.

Neither does the report say anything at all about very small asbestos fibres—too small to be seen by the present microscopic methods of analysis. Some researchers believe that these fibres could prove dangerous—yet the control limits the advisory committee recommends ignore fibres that the light microscope cannot see.

The third pillar of the advisory committee's recommendations is that all exposures to asbestos should be as small "as is reasonably practicable". Thus the control limit is merely a "maximum" limit—the duty to reduce exposures to the minimum is overriding. Again, however acceptable this approach may or may not be in theory, its practical application by the advisory committee is almost certain to leave many trade unionists dissatisfied.

The advisory committee assessed what concentrations of asbestos are "reasonably practicable" to achieve in the asbestos industry by calculating, in broad terms, what measures the industry could afford. But in this task it relied almost entirely on figures and estimates that the industry itself provided—a procedure hardly likely to inspire confidence.

The advisory committee's report will now go to the Health and Safety Commission which, in time, will issue draft regulations for comment. So the report by no means ends the asbestos saga. □

