

Asbestos

Conflicts ahead on UK rules

PROPOSALS for new safety controls on asbestos are high on the agenda for the meeting of the British Health and Safety Commission on 23 August. Asbestos has loomed large in the public consciousness for some time now, and seems likely to stay that way.

The most awkward document before the commission is a report from a working group under the chairmanship of Mr Steven Grant, senior director of the Scottish Health and Safety Executive. When the commission decided a year ago to tighten its control limits for exposure to asbestos dust, Grant was asked to identify and recommend new measures for control that were not considered at the last major review. His unpublished report, a copy of which was obtained by TV-am, argues that guidance given by the commission is inconsistent with the 1969 Asbestos Regulations.

The commission's guidance note for asbestos users lists "control limits" for the three main fibre types; if airborne fibre concentrations exceed the limits, protective equipment must be used. The 1969 regulations, however, seem to require the use of protective equipment wherever there is dust containing asbestos "to such an extent as is liable to cause danger to health". Grant says that because many factories now have exposure levels below the control limit, the "carrot is now behind the donkey": despite the lack of evidence for a safe exposure level, factory inspectors are reluctant to take action if control limits are not being exceeded.

He proposes an "action limit" for protective measures that would depend only on medical evidence of health dangers and feasibility of measurement. Grant's report also highlights apparently serious deficiencies in the way protective clothing and equipment are used in practice.

After Grant's report was submitted to the commission, there was an acrimonious correspondence between Grant and Mr William Simpson, the commission's chairman. Simpson wrote that the report could be seen as undermining the commission's advice, that the committee had exceeded its brief and that the report should be looked at again. Grant threatened to resign and the commission now says his report will be published unchanged after the meeting on 23 August. One thing the commission will want to know is whether the report represents the unanimous view of the working group; at least one member, Mr Albert Blyghton of the Transport and General Workers Union, is thought to have complained that there was insufficient time for its consideration.

A second report to be considered by the commission is an update of the evidence on health effects of asbestos prepared by Professor Donald Acheson and Dr Martin

Gardner of the Medical Research Council's Environmental Epidemiology Unit at Southampton. The authors have complained publicly that a press release they had agreed with the Health and Safety Executive was not published with the report. The executive says the document was held up because the commission had been unable to consider Acheson and Gardner's report fully before publication.

The report does not come to any startling new conclusions on medical effects, although the case that amosite (brown asbestos) is more dangerous than chrysotile (white asbestos) is strengthened and the linear relation between exposure to chrysotile and lung cancer mortality is supported. Though chrysotile is now almost the only type of asbestos used in UK manufacturing, Acheson and Gardner recommend a formal ban on the manufacture and importation of products made of amosite or crocidolite (blue asbestos) and call for further improvements in control to be made as engineering advances make them possible. Use of all types of asbestos should be reduced as substitutes become available. A separate full review is being prepared by Sir Richard Doll, warden of Green College, Oxford, although this will not be available until

towards the end of this year.

As if the two working group reports were not enough, the commission will also have to consider how enforcement will be affected by two new EEC directives finally passed in June but subject to a parliamentary reserve. Parts of these — such as the formal ban on crocidolite — will merely formalize changes that have already been made in practice. In other areas there will have to be some reorganization, as, for example, in the requirement for a formal notification and medical surveillance system.

Last but not least on the agenda, the commission will be looking at proposals for new legislation on the licensing of asbestos stripping operations. Work was recently halted twice during stripping of a disused power station at Fulham, London, after airborne fibres were detected. In response to public concern over Fulham, the Central Electricity Generating Board has now decided that it will in future itself take responsibility for stripping operations rather than sell power stations complete with asbestos insulation *in situ*. The Health and Safety Executive was much relieved that it will in future have to deal with only one authority to monitor the work: some 40 power stations are expected to be decommissioned over the next few years. The board's decision will cost electricity consumers about £1 million per power station.

Tim Beardsley

Plant biotechnology

Rockefeller seeks new success

THE Rockefeller Foundation in New York is to re-enter the field of agricultural research, but this time by means of a programme of plant molecular biology aimed at "putting the technology into the seed". As part of the programme the foundation has just made a grant of £230,000 to two scientists at the Plant Breeding Institute, near Cambridge, England. The grant will enable Dr David Baulcombe and Dr Michael Bevan to develop methods of introducing viral disease resistance genes into crop plants.

The Rockefeller Foundation's Agricultural Science Program has (under a variety of names) been sponsoring research aimed at improving food production in developing countries since the 1940s, when it established the first of the International Agricultural Research Institutes in Mexico. The institutes introduced improved varieties of wheat and rice that are now widely cultivated. Since the Consultative Group on International Agricultural Research took over the running of the institutes in 1971, the foundation has concentrated more on supporting specific research projects. Roughly one third of the Agricultural Science Program's \$7-8 million annual spending is now on plant genetic engineering.

The immediate aim of the research at

Cambridge is to investigate how cross-protection may be used to protect plants against tobacco rattle virus and cucumber mosaic virus, both of which cause diseases of agronomic importance. Characterized and sequenced genes from these viruses will be attached to plant promoter sequences and transferred into host plants using as a vector the transforming bacterium *Agrobacterium tumefaciens*. The researchers have already obtained a complementary DNA clone of the satellite cucumber mosaic virus. Tobacco plants will be used as hosts initially, to be followed by tomato and potato plants; these will be tested for resistance in collaboration with Dr B.D. Harrison, at the Scottish Crop Research Institute. If the idea proves workable, one of its applications may be in preventing diseases of potato crops.

As Rockefeller is a charitable foundation, one condition of its support is that research results are published and available to all interested parties. There was some concern during negotiations that the "first rights" agreement between the newly-formed Agricultural Genetics Company (see *Nature* 28 July, p.296) and the British Agricultural Research Council might prove to be an obstacle, but the foundation is now satisfied that its conditions will be met.

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