

United Kingdom

Chemical company suppresses dioxin report

WORKERS exposed to 2,3,7,8-tetrachlorodibenzodioxin (dioxin), between 1968 and 1971, during manufacture of the herbicide 2,4,5-T, at the Derbyshire site of the UK company Coalite and Chemical Products Ltd, could face an increased risk of developing cardiovascular complaints, according to confidential documents in *Nature's* possession.

The documents — reports of detailed clinical and laboratory investigations on a number of dioxin-exposed workers at Coalite — suggest that the company has been falsely reassuring about the health of this particular sector of its workforce. According to a spokesperson for the Health and Safety Executive (HSE), the Executive also believes that the Coalite workforce has no long-term health problems. However, its view is based only on reassurances given by the company and not on a study of the medical reports which Coalite has not published and which the HSE is powerless, in law, to demand from the company because it no longer manufactures the product, 2,4,5-T.

Ironically, it was pressure from the HSE which forced Coalite to carry out the investigations in the first place shortly after the Séveso accident in 1976. Included in the study were 126 individuals, 41 of whom were known to have been exposed to dioxin, and showed symptoms of chloracne; 54 of whom might have been exposed to the chemical; and a supposed control group of 31. One of the studies compared the blood chemistry of the different groups. The author of the report of that study is Dr Jenny Martin, a lecturer in Occupational Medicine at the University of Manchester and a consultant chemical pathologist at Chesterfield Royal Hospital when the study was commissioned.

The results of that study show that the dioxin-exposed group has a greater incidence of impaired liver function as measured by the enzyme gamma-glutamyl transpeptidase. Furthermore when the results for serum cholesterol, triglyceride, high density lipoprotein etc were subjected to multivariate analysis — under the guidance of the Department of Probability and Statistics at the University of Sheffield — they showed a significant difference between the dioxin-exposed group and the controls. In the dioxin-exposed group, levels of serum cholesterol and triglyceride were higher and high density lipoprotein lower than in the controls. These are factors commonly held to imply an increased risk of cardiovascular disease.

None of this information is to be published, however. According to Martin, Coalite decided not to publish it on the

advice of Dr Kenneth Crow, a consultant dermatologist at St Margaret's Hospital, Swindon. She claims that Crow had told her that he had advised Coalite not to publish on the grounds that he was not happy with the statistics used in the report.

Crow, one of the world's leading authorities on chloracne, was involved in the treatment of such cases at Coalite. When approached by *Nature* to comment on the study, he said that he did not know which study was being referred to and that he would have to see it before he could comment. However, he strongly denies ever having advised Coalite not to publish the results of any study. *Nature* has approached Coalite for its side of the story, but with no success. Coalite stopped talking to journalists shortly after the Séveso accident in 1976.

Some related information, however, has been published. Instead of using an age and occupation-matched control group, Coalite chose to bolster the number of controls by including management staff undergoing a regular lipid screen at the time. When the study was commissioned, Martin was unaware of the composition of the three study groups. When she later learnt that the control groups had not been properly matched, she arranged to re-examine eight of the Coalite workers suffering from chloracne and to compare their blood chemistry with a matched control group.

The results of this second investigation, published in a letter to the *Lancet* (24 February, 1979, page 446), also show increased serum cholesterol and reduced serum high density lipoprotein in the dioxin-exposed group. The differences were considerably more marked than in the original, larger study. However, they were not statistically significant, a point which Martin notes, but says is simply due to the small numbers of subjects involved.

Perhaps the most extraordinary aspect of the story, however, concerns a burglary at Martin's house. Shortly after publishing her letter in the *Lancet*, Martin's house was broken into and the detailed medical records of the eight Coalite subjects were removed from her filing cabinet. Martin reported the theft to the local police constabulary but as she had no idea why anyone would want to steal this information the police investigation never got off the ground. A police spokesperson at Macclesfield confirms that the theft had been reported, that the case was not closed, but that as there was no clues about the motives for the theft, it was unlikely that it would ever be solved.

Martin told *Nature* that she had been

very distressed when she discovered the theft of the material for the second survey. She has no duplicate copy so the work is now lost.

She was surprised that *Nature* had obtained a copy of her original Coalite report, and having confirmed its authenticity said she was most unhappy that Coalite were not publishing the data. She said the company's decision was a major reason for her carrying out a second study and reporting it to the *Lancet*.

Coalite did, however, release an abbreviated form of the original report to one of the unions involved with the workforce at its Bolsover complex — the Association of Scientific Technical and Managerial Staffs. The abbreviated report is totally different from the original. In addition to its selective reporting, the union version says there were no statistically significant differences between the dioxin-exposed group and the controls, a statement which is quite untrue.

The most worrying aspect of this affair however, is the position of the HSE. The Executive has said that it is satisfied that the Coalite workers have not been unduly affected by their exposure to dioxin. Yet, if it has never seen the results of the clinical investigations, how can it express such a view? It says that it has to rely on the good faith of the company on this matter. According to an HSE spokesperson, when a product is no longer manufactured the Executive has no legal powers to demand medical records of workers. It is abundantly clear that if the Executive is to do its job properly it should have access to this information and should be given the legal powers to demand it. **Alastair Hay**

Unions want 2,4,5-T ban

THE UK Trades Union Congress has called for an immediate ban on the use of 2,4,5-T, pending a thorough investigation into its effects by the Health and Safety Executive. The National Union of Agricultural and Allied Workers has already advised members not to handle it. 2,4,5-T is widely used by the Forestry Commission in the UK, which has rejected such alternatives as manual or mechanical clearing as too costly. Two County Councils in England have also banned the pesticide.

The Ministry of Agriculture's Pesticides Advisory Committee has investigated 2,4,5-T eight times, and stuck to its conclusion that it is safe as long as handled in accordance with instructions. The TUC has condemned these enquiries as inadequate. □