of litigation between himself and the agency, a fact which Mr Auchter initially used as a reason for not providing detailed comments on the case to the investigations committee. However, under pressure from the Congressmen, who presented legal advice that the hearings would not prejudice any later trial, Mr Auchter shifted his stance — and went on to deny that he had ordered Dr Infante's dismissal, directly contradicting the sworn testimony given by Dr Walker.

Dr Walker, who told the subcommittee members that "the data suggested that formaldehyde was a potential carcinogen and should be treated as such", has now resigned from OSHA to take up the position of director of public health for the State of Michigan.

The subcommittee has yet to announce the conclusions of its investigations. Indeed one minority member, Republican Congressman Robert Walker, sharply defended OSHA's actions on the grounds that Dr Infante had broken federal rules in representing his own scientific opinion as that of the agency. Mr Gore, however, was in no doubt "that the formaldehyde industry had 'engineered a decision in the agency to change OSHA's view on the scientific data' and that this was behind the decision to fire Dr Infante."

David Dickson

Local DNA guidelines

Boston strikes out

Boston

In what could become a prototype for American cities seeking control of recombinant DNA research, the Boston City Council has passed a law regulating research at universities and commercial companies. The city ordinance follows community activism by residents of the Mission Hill district of Boston, who are concerned about the \$50 million grant by the Hoechst chemical company to the Massachusetts General Hospital and by the leasing of empty hospital space in their neighbourhood to Genetics Institute Inc., the newly formed genetic engineering company.

The city council hearings of the past month have actually been a repeat of events in nearby Cambridge eight years ago, when recombinant DNA research was entirely new. But on this occasion, there was less open conflict between citizens and university officials than in Cambridge.

The new law requires compliance with National Institutes of Health (NIH) standards but there are also further local restrictions which have been added since work began on the original proposal in late May. As well as assuring strict conformity with NIH guidelines, the ordinance demands:

- "Timely response to guideline amendment and permit applications in accordance with good governmental

practice".

- Research proposal not subject to NIH guidelines should receive council-administered permits.

- Broadening and restructuring of the Boston Biohazards Committee — an area regulatory organization — which will now serve as an advisory board to the commissioner of the Boston Department of Health and provide an annual report to the city council.

- Opening of normally confidential employee health records for "regulatory or public health study purposes".

- Institutions performing recombinant DNA research should monitor the health of their employees and the institutional responsibilities in this area should be "reasonable and related to potential risks".

- Costs of monitoring to be reimbursed to the city by the regulated institutions.

The final version of the ordinance left out the harshest requirement of the original proposal — that institutions should perform regular effluent monitoring and the testing for live organisms in the city sewer system. This was dropped because it is not technologically feasible.

In the past, local universities have agreed that guidelines of some sort would be helpful but have opposed the introduction of laws requiring compliance with official regulations, arguing that universities should set their own standards. But campus officials are generally pleased with the outcome of this debate and confident that they will easily meet the provisions.

The new ordinance will run for five years and is renewable. Several other cities in the Boston area and elsewhere in the United States have begun to review their own proposals for regulation as commercial companies are proliferating.

Michael D. Stein

Aspartame sugar substitute

New court overruled

Washington

It had been described as the first official attempt to resolve a complicated dispute over the safety of a new food additive by using a so-called "science court", with evidence on both sides being presented to a panel of three outside scientists. But last Wednesday the US Food and Drug Administration (FDA) overruled the verdict of its Scientific Public Board of Inquiry, reached after hearings held in January and February last year, and approved the marketing of a new low-calorie sweetener, aspartame.

Permission to market the sweetener had first been requested from FDA by its manufacturers, G.D. Searle, seven years ago. Initially FDA had agreed; but in the light of reports from a scientist at Washington University, St Louis, that the sweetener could produce brain lesions when fed to laboratory animals — and the general

concern that accompanied the decision to ban cyclamates in 1970 — permission was withdrawn the following year pending further studies.

Doubts about the validity of animal studies conducted for Searle to generate the data needed for new drug approval were discounted after two years of independent auditing of the studies. FDA then turned to the brain lesion claims, which were examined by a three-person team headed by Dr Walle J.H. Nauta, professor of neuroanatomy at the Massachusetts Institute of Technology. In their report, issued last October, the scientists said the data shown to them did not support the suggestions that aspartame might kill clusters of brain cells or cause other types of brain damage.

However, the "science court" also raised doubts about whether the reports of brain lesions could be completely discounted on the grounds that the tests had been carried out at doses far higher than those humans would normally experience. It recommended that marketing approval be withheld until further long-term animal tests had been carried out to rule out any possibility that aspartame could result in brain damage.

This conclusion was bitterly contested by Searle, already sitting on a stockpile of 300,000 lb of the sweetener, with a market value of over \$25 million. The company claimed that the three scientists' conclusions made "significant errors" in dealing with issues of tumorigenicity; and that they had "failed to employ biological and statistical principles that would have provided guidance in assessing the potential carcinogenicity of a compound".

Searle pointed out that the sweetener is already being marketed in France, Belgium and Luxembourg, and that it has also been approved for use by the Joint Expert Committee on Food Additives of the Food and Agriculture Organization, and the World Health Organization.

The new FDA commissioner, Dr Arthur Hayes, now seems to have accepted Searle's arguments. Following the conclusion of the agency's Bureau of Foods that the "science court's" concerns were unfounded and that the sweetener would be safe even at the "highest conceivable levels" of consumption, he has agreed that it should be approved for use as a sugar-substitute and food additive, although not yet for soft drinks.

David Dickson

Environmental lead

Playing safe

Britain's health and environment departments seem to have won a victory behind the scenes in the government's decision last month to reduce the lead content of petrol from 0.4 to 0.15 g per litre. Other government departments concerned about the financial effects on the car and oil refining industries finally gave

way last May to the arguments that lead from car exhausts could damage the health of children in the inner cities. The environment and transport departments, however, supported the decision chiefly as a way of countering some of the increasingly fierce objections to building new roads.

The decision on lead in petrol came as a surprise just one year after a report commissioned by the health department concluded that there is no proof of a link between low blood-lead levels in children and impaired mental development. That report, prepared by a working party under the chairmanship of Professor P.J. Lawther of St Bartholomew's Hospital, was stimulated by research in Germany and the United States which implicated blood-lead levels as low as 35 µg per dl, now accepted as the maximum permissible by the European Commission. Although the working party concluded that these and other studies were equivocal, it recommended that steps be taken to reduce lead in food and water, seen as major sources, and air, a less significant source.

The Department of Health, however, seems to have persuaded the Department of Energy and the Treasury to act on petrol on the basis of evidence not covered in the Lawther report. A study by Dr R.G. Lansdown of the Great Ormond Street Hospital and Dr William Yule of the University of London Institute of Psychiatry of children in the Greenwich area of London is thought to have shown a correlation between low blood-lead levels commonly found in the British population and a slight impairment in IQ. That study, although made known to government officials, has not yet been published because of difficulties in interpreting data. Dr Yule now expects it to appear in the October issue of *Developmental Medicine*.

Other evidence which seems to have weighed in the decision includes the findings by the Greater London Council of exceptionally large quantities of lead in dust in some inner city playgrounds, research at ISPRA in Italy which suggests that 25–40 per cent of the total body lead burden may be contributed by lead in petrol and a critique of the Lawther report prepared by Professor D. Bryce-Smith and Dr Robert Stephens for the Conservation Society. The Conservation Society's document complained that the Lawther report did not pay sufficient attention to animal studies and that it underestimated the contribution of airborne lead by failing to allow for the fact that much of the lead in food and dust settles from the air.

The Department of Health seems to have persuaded the government to play safe by ordering the reduction. The search is still on, however, for better evidence of the possible effects of low lead levels on health. Dr Lansdown and Dr Yule are at present engaged on another study of inner city children and are discussing the possibility of a third, more extensive study with the Medical Research Council. **Judy Redfearn**

UK defence research

Slimming down

The Royal Aircraft Establishment at Farnborough, which with its several outstations is the largest of the in-house research stations run by the British Ministry of Defence, seems also to be the first in line for substantial reorganization. In the past year, the total staff of the establishment has fallen from 4,500 to 3,800, largely as a result of natural wastage (principally retirement) made possible by the top-heavy age distribution at the laboratory, itself a consequence of rapid recruitment during and immediately after the Second World War. But the remaining staff at the laboratory are now anxious that attrition has a lot further to go.

The establishment is the most conspicuous of the defence research establishments considered by the internal government review under Lord Strathcona, whose report has not been formally published but has instead been placed in the library of the House of Commons, where its presence is almost certain to have the most damaging consequences. In respect of Farnborough, the report recommended that further consideration should be given to the need for maintaining three airfields (at Farnborough, Bedford and Boscombe Down), a balloon station (at Cardington), three missile ranges and a variety of wind tunnels that (in Lord Strathcona's view) could well be hived off to private contractors.

At a meeting at Farnborough on 4 March, the director of the establishment, Mr T.H. Kerr, told the staff that the future of these offshoots was being considered by a series of working parties, and that decisions would be made later in the year. The most obvious possibility of change is that missile ranges may in future be managed by private contractors (as is to a large extent already the case at the Welsh firing range at Aberporth). But there are also to be rearrangements of the internal divisions at Farnborough (leading to the loss of relatively senior staff) and the future scale of operations at the establishment has not yet been determined, which is why some members of staff fear that their director's promise (on 4 March) that reductions could be accomplished by retirement, early retirement and other wastage (as well as the transfer of some staff to private contractors) may not be feasible.

The chief source of anxiety in the past few weeks, however, is strictly speaking hardly relevant — the steps being taken by private interests in case the Farnborough airfield is eventually put up for sale. It seems to have been decided that, if any of the three airfields is to be sold, the sale of Farnborough would cause the least damage even though the establishment would wish to retain the right to mount the biennial air show of the Society of British Aerospace Companies on the site. The bid to purchase

New Forest flutter

In the name of science, lepidopterists have for many years, chloroformed butterflies to death and displayed them in glass cabinets. Now many of those butterflies are increasingly imperilled by loss of habitat, killing by insecticides and other hazards of the twentieth century. A cautious welcome then, for Britain's very first public "butterfly farm", which opened yesterday (22 July) in the New Forest. It's not being run for the good of science though, simply as a tourist attraction to bring in money to an estate at Ashurst, near Southampton.

There should be more than 1,000 butterflies at Ashurst if the breeding programme is successful, flying freely in a glasshouse covering 6,750 square feet.

Now in Hampshire — the American monarch

Over 50 different species will be on view, mostly colourful imports from the tropics, including the North American monarch, *Heliconius* from South America, swallowtails from South-East Asia, and the Camberwell beauty.

Like all would-be "tourist traps" the farm boasts a gift shop. Books on butterflies will be on sale, of course, but so too will live caterpillars and pupae, presumably to encourage butterfly farming as a hobby. Traditionalists are also catered for, they can buy mounted butterflies.

None of this is likely to do any direct good to the average butterfly in the street, or field. But the "farm" owners reckon that by increasing the public's awareness of what they call "these delicate creatures", life will gradually improve for what's left of Britain's butterfly population.

Charles Wenz

the airfield is based on the hint in the Strathcona Report that the airfield would be suitable as a base for business flying, but will not be considered until all the working parties considering the future of the defence research establishments have had their way.

Last week, at another staff meeting, Mr Kerr had little extra to say. Discussions have begun with potential operators of the parts of the establishment to be hived off, but firm proposals are not expected until early next year. Bidders for these contracts (among which British Aerospace is conspicuous) are being asked to take over existing members of the staff — and unions such as the Institution of Professional Civil Servants are looking for an assurance that their members' terms of employment will not be adversely affected.