The actual scale on which redundancies will occur remains to be determined. The committee's estimate of 3,000 academic redundancies is identical with that given by Dr Edward Parkes, chairman of the University Grants Committee, to a parliamentary committee earlier this year. Ministers at the Department of Education and Science are plainly sceptical about such large estimates. But Lord Flowers, vice-chairman of the committee and rector of Imperial College, said last week that not a single university institution in Britain would be able to avoid some redundancies before the next academic year is out.

The committee's calculations also suggest that the consequences of the decreed reduction of student numbers will be more serious than had been foreseen. Total numbers of home students are to be reduced from a peak of 272,000 (expected in the coming academic year) to 249,000 in 1984-85. This, the argument goes, will require that student intakes should be reduced from 78,000 (in the coming year) to 70,000 in 1982-83 and thereafter.

Salford University

Industry advertises

British industry has come to the aid of the University of Salford, the institution singled out by the University Grants Committee (UGC) earlier this month for the largest cut in grant and student numbers. Earlier this week, three leading manufacturing companies joined with the university in announcing the creation of the Campaign to Promote the University of Salford — CAMPUS. To launch the campaign, nearly 200 companies contributed to the cost of an advertisement in three national newspapers yesterday extolling Salford's virtues and calling for further support.

The scale and spontaneity of the support from industry suggests that UGC in deciding where the cuts should fall, may indeed have paid too much attention to grants awarded to universities by research councils and not enough to research funded by industry. The universities that are to suffer the largest cuts in their incomes, Bradford, Aston and Salford, are chiefly technological institutions, noted for their attempts to forge links with local industries. The UGC has told Salford that by 1983-84 its grant will be 44 per cent less than in 1980-81 and that it will have to cut student numbers by about 30 per cent. Although the university's arts faculties will suffer most, science and technology too will be cut drastically.

GEC-Marconi Electronics, Ferranti and Ward & Goldstone Ltd of Salford are the three companies that have taken the initiative in setting up CAMPUS. They say that the University of Salford has provided them with a steady stream of appropriately qualified graduates — GEC has employed 250 in the past seven years — has fostered

successful technology-transfer between university and industry and provides useful refresher courses for experienced technologists and managers. The local authority has also given support, especially to a new science park which is being established near the university campus in an attempt to revitalize manufacturing industry in the north-west of England.

The campaign has two aims: in the short term to convince UGC of the error of its decision and to persuade it to reinstate some of the grant it is taking from the university; and in the long term to foster closer cooperation with industry, in the running of the university. The campaign, however, is not a fund-raising exercise, according to Professor John Ashworth, vice-chancellor designate of the university. Professor Ashworth, who is in the embarrassing position of being chief scientist at the Central Policy Review Staff, the government's think tank, until he takes up the vice-chancellorship in September, hopes that, if the campaign's short-term aim fails, he will be able to call on the industrial supporters of CAMPUS for advice in restructuring the university.

Precisely what action CAMPUS takes in persuading the government and UGC of Salford's merits remains to be seen and will to some extent depend on the response to this week's newspaper advertisements. The other aggrieved technological universities are also being invited to join in the battle.

Judy Redfearn

Carcinogen regulations

Cleansing solution

Washington

Tension between the scientific staff of the US Department of Labor's Occupational Safety and Health Administration (OSHA) and their new political bosses came to a head last week, stimulated by complaints from the European-based International Agency for Research on Cancer (IARC) about the interpretation of data on the carcinogenicity of formaldehyde.

The dispute arose from a letter written by Dr Peter Infante, head of OSHA's Office of Carcinogen Identification and Classification, to Dr John Higginson, director of IARC, which queried the findings of an IARC working group that there were only "limited" data providing evidence of the carcinogenicity of formaldehyde on laboratory animals. Also included was a circular published last year by the National Institute of Occupational Safety and Health (NIOSH) describing formaldehyde as a carcinogen on the basis of various uncompleted studies with rats.

Dr Higginson complained that Dr Infante's letter appeared to "cast aspersions on the scientific integrity and objectivity" of the members of the IARC working group. And shortly afterwards Dr Infante was told by OSHA that he was

being fired for "insubordination" in sending his letter on official notepaper giving what the agency now describes as a purely personal opinion, as it is no longer prepared to endorse the conclusion that formaldehyde is, in fact, a carcinogen, and has withdrawn its co-sponsorship from the NIOSH bulletin.

Dr Infante's case is being seen as a symbol of the new Administration's determination to limit the powers of an agency previously accused of imposing a massive burden of regulation on the private sector. Already the director of NIOSH, Dr Anthony Robbins, has been dismissed by Mr Richard Schweiker, Secretary of Health and Human Services, as a "political activist", and the Administration has also announced its intention to move NIOSH administrators out of Washington, a step which many agency officials feel is designed to weaken their effectiveness. Last Thursday the head of OSHA, Mr Thorne Auchter, was confronted at an angry hearing by Congressman Albert Gore, chairman of the House Science and Technology Committee's subcommittee on oversight and investigation, who described Dr Infante's firing as unacceptable political pressure on the work of scientists.

On the previous day, several high-ranking government scientists, including Dr Vincent DeVita, director of the National Cancer Institute, had agreed that data produced last year by the Chemical Industry Institute for Toxicology provided a "sound scientific basis" for suspecting that formaldehyde was carcinogenic in humans.

At the Thursday meeting Mr Gore produced a memorandum, written to Mr Auchter by his special assistant for regulatory affairs, describing the latter's meeting with representatives of the formaldehyde manufacturers. At the meeting doubts were raised about the data on which the previous administration had based their description of formaldehyde as a carcinogen, doubts which Mr Gore suggested formed the basis of the decision by Mr Auchter to withdraw sponsorship of the circular issued jointly with NIOSH last December.

Dr Infante's immediate boss, Dr Bailus Walker, in his letter of dismissal said that OSHA "lacks confidence in the data" on which the circular, which has no regulatory impact but is meant primarily for information, was based. Dr Walker told Mr Gore that he had dismissed Dr Infante "on the advice" of his boss Mr Auchter.

Mr Auchter agreed that his decision that the carcinogenicity data were inadequate to support the conclusions of the circular, was made without consulting any of the agency's scientists. However, he insisted to Mr Gore that his lack of confidence was based solely on the use of the data for regulatory purposes, as conflicting data also existed.

Dr Infante's dismissal is now the subject

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