assumed that there is no threshold below which the chemical can be considered "safe" — and industry is required to lower exposure to the limits of technological feasibility.

OSHA acted on benzene even though the evidence of increased leukaemia incidence among workers in Turkey and Ohio involved people who had been exposed to considerably more than 10 ppm over long periods of time.

The agency argued that only a technological feasibility strategy would suffice to guarantee the protection of workers, but the Supreme Court, in a 5-4 vote, agreed with industry critics that a more thorough scientific and technological justification must be produced. Admitting the existence of considerable uncertainties, the court accepted that the agency is not required to prove its point "with anything approaching scientific certainty".

Even so, in writing the majority opinion, Justice John Stevens said that OSHA had failed to produce "substantial evidence" that the new benzene rules were "reasonably necessary and appropriate" to remedy a "significant risk of material health impairment". OSHA, he said, had not produced empirical evidence or scientific opinion to show that exposure to benzene at or below the 10 ppm level had in fact caused cancer.

Predictably, the court's decision has been welcomed by industry, which has long protested at the expense of meeting the "lowest technologically feasible" criterion. Agency officials admitted that they were "disappointed" with the ruling, but vowed to press on with regulating benzene and other toxic substances.

The closeness of the Supreme Court's decision and the fact that different members gave different reasons for concurring are likely to cushion the impact. Indeed, if OSHA can produce more evidence on benzene, then the tough standard could still stand.

In a strongly worded dissenting opinion, four of the nine justices said they felt OSHA had already produced enough evidence to justify the low exposure limit. And a fifth said that, given additional evidence, he might be persuaded by OSHA's case.

David Dickson.

Soviet environment

Spending more

SOVIET capital investment in environmental protection and the conservation of endangered species will be trebled in the next Five Year Plan (1981-1985), according to what TASS has described as "preliminary data". Since the official figures for the present plan include 11,000 million rubles of direct state

funding and 50,000 million from the budgets of industrial enterprises and institutions, this suggests an investment of at least 180,000 million rubles (£125,000 million) in the next five years.

The TASS announcement followed the passing of two major environmental bills, on clean air and the protection of fauna, by the Supreme Soviet. Enactment of the laws was preceded by unusually extensive reporting in *Pravda*, perhaps because of the undoubted pride which the members of the Supreme Soviet show in their progress to date. No other country, observed Deputy P.P. Vavilov, president of the All-Union Academy of Agricultural Sciences, has on its statute books laws of comparable scope, which even protect insects and soil fauna with a direct bearing on soil fertility.

Vavilov nevertheless emphasized that, even when the act becomes law in 1981, further research will be needed to ensure that its provisions are implemented in strict accordance with ecological principles.

What nobody mentioned in the debate, but what must surely have been in the minds of many of the deputies — especially those from central Russia, central Asia, Byelorussia and Estonia — was the present threat from wolves and wolf-dog cross-breeds which, according to some estimates, have doubled in numbers over the past ten years, following cutbacks in hunting and the disbanding of skilled hunting teams. The threat is particularly acute in Estonia.

No less complex are the management problems raised by the clean air bill. Air pollution has been a major problem in many Soviet cities for a considerable time, and one of the earliest preparations for the Moscow Olympic Games was the designing of electric runabout cars for the Olympic village, to reduce the effect of petrol fumes

on the athletes.

Not only cities are at risk, however. In the Supreme Soviet debate, Deputy V.M. Kanun from Zhitomir spoke of the pollution threat to the Polesian forests — in spite of the expenditure, during the current Five Year Plan, of "tens of millions of rubles" on anti-pollution measures. Deputy Yu. A. Izrael', Chairman of the State Committee on Hydrometeorology and Environmental Monitoring, observed that the Union-wide anti-pollution monitoring service now has air-pollution monitoring projects in 450 cities; nevertheless, as Deputy Kipel' observed, "many plants and factories go on polluting the atmosphere and water in the same old way".

Water, in fact, is not specifically the subject of the new legislation, although, according to Deputy Izrael', progress in this field is one of the "major successes" of the environmental control programme. "Almost all the rivers of the European part of the USSR", he said, "have become cleaner".

Nevertheless, water may well soon be better regulated. A 200-person multidisciplinary research team, led by Vladimir Lazanskii, head of the All-Union Research Institute for Water Conservation, has completed a detailed computer analysis of the ecology of 26 of the largest rivers in the USSR and fifteen seas and lakes. On the basis of this study, the team has put forward several proposals ranging from the automated control of water conservation complexes and the introduction of closed-cycle processes for metallurgical works to the special processing of rain water and snow melt bearing particles of petroleum products.

Vera Rich

Industrially financed research, OECD countries