Nuclear reactor safety

Super-Sara's fate undecided

Brussels

Community ministers have again failed to reach a "final" decision on the Super-Sara project at the Joint Research Centre at Ispra in Italy to experiment with loss-of-coolant situations in nuclear reactors. Ever since the project was first proposed after the accident at Three Mile Island in the United States, the Community has procrastinated (*Nature* 11 November, p.99), letting the cost of the project soar.

At last week's meeting, the United Kingdom and West Germany again refused to be placated by Commissioner Etienne Davignon's promises to keep the project within the current estimates of 293.9 million European currency units (ECU) (£161.7 million) up to 1988. Vicomte Davignon, the European Commissioner for Energy and Industry, made a passionate appeal, arguing that it would be irrational to cancel the project when attempts should be made to reassure public opinion over nuclear energy. He recalled that the Western economic summit at Versailles agreed to promote international research into nuclear safety and that there was a danger that, if EEC halted its project, the United States would be unwilling to pass on its own research results.

Davignon held that continuing with Super-Sara would not need extra money apart from an extra 13 million ECU for each year between 1984 and 1987. The extra 27.5 million ECU needed for 1982 and 1983 could be found by transferring resources from another part of the budget. And he thought that by reducing funds for other research at the Joint Research Centres, half of the 39 million ECU needed for the three following years could be found comparatively easily.

The United Kingdom and West Germany were not impressed by this financial juggling and asked whether such a large sum of money might not be better employed in some other way.

The upshot is that a panel of three wise men, independent experts from Denmark, France and West Germany, will review the budgetary estimates and assess the value of the Super-Sara project in comparison with that of similar projects elsewhere. Their report, to be presented at the next research council meeting on 8 February, will also take into account the British delegation's suspicion that Super-Sara will absorb too many of EEC's nuclear scientists in an experiment concerned with coping with an emergency rather than on the prevention of disaster.

In the meantime, the European Commission is to think about alternatives for Ispra if in the end the Super-Sara project is cancelled.

Jasper Becker

Interferon in France

Trial condemned

Paris

Professor Georges Mathé, a well known cancer researcher from the Paul Brousse Hospital at Villejuif, has publicly described as incompetent French doctors involved in preliminary trials with interferon as a possible treatment for cancer. He has criticized the method of administration and the dose and has asked for more information about the circumstances in which four patients involved in the trials died (see *Nature* 11 November, p.97). Mathé has also attacked the establishment where the trials took place and has even asked for the resignation of the members of the scientific council which was set up to monitor the experiments. As a result, the council and IPP (Institut Pasteur Production, the subsidiary of Sanofi-Elf-Aquitaine that produces the interferon) published information about the trials in November. More recently, in a confidential letter addressed to two journalists, they advised wariness of the aggressive tone of Professor Mathé's remarks, which could bring clinical trials of interferon and even

clinical trials in general into disrepute.

Two of the four deaths were from myocardial infarction and another has been tentatively attributed to the same diagnosis, but nobody yet knows for certain what caused them. Professor Flamant, president of the monitoring council, says that it is necessary to keep an open mind about the possible role of interferon. But according to Dr Denis Pouillard, clinical physician at the Curie Foundation who participated in the trials, there was a marked similarity between the symptoms and those he had seen ten years earlier in patients given infusions of leukocytes that had been conserved in poor conditions. Dr Pouillard draws attention to the fact that IPP stores its interferon preparation at 4°C whereas -20°C is generally used for leukocyte interferon storage. He also says that since interferon made up only 1 per cent of the protein in the IPP preparation that was injected, it is likely that proteins other than interferon caused the toxicity.

The accidents gave strength to the supporters of gene splicing methods to produce interferon, which give purer and cheaper products. Professor Flamant, Dr Pouillard and Professor Falcoff at the Institut Curie, who is working with gamma-interferon, all advocate that both methods should continue and their products should be compared simultaneously. They would like to see an international body created to compare clinical trials with different kinds of interferon. At the moment, IPP is performing toxicity trials with the suspect interferon and with a ten-fold purified derivative. If they show that the purified leukocyte interferon is innocuous, clinical trials will begin again, perhaps in January.

Isabelle Trocheris

Toxic wastes blow

Brussels

One of the European Economic Community's hardy perennials has reappeared at the latest meeting of the Environment Council, the battle between the methods used on the mainland of Europe and in Britain for calculating the degree to which industrial discharges of toxic wastes should be restricted. Last Christmas, the British persuaded their partners to include in the directives regulating the discharge of toxic substances into water the "quality objective" method as well as the more strict "limit value" system. The latter sets fixed limits on discharges while the former relates the regulations to the use to which the environment concerned is put.

In the first directive, dealing with mercury, the British conceded that whichever system is used, all new plant must use the modern and effective pollution control equipment.

The second directive deals with cadmium discharges, and the French have been pressing for the British to agree that only limit values should be applied to regulations dealing with new plant. The British claim, however, that this breaks the compromise agreement reached last year.

The issue has now been referred back to Coreper, the committee of the member states' permanent representatives, for further discussion, a considerable setback for the Commission.

Jasper Becker

Jojoba oil

Too late now?

Commercial interest in jojoba oil, once heralded as a substitute for sperm whale oil but since discredited largely because of cost, could be rekindled by a tissue culture technique being developed at Twyford Plant Laboratories in Somerset.

The high price of the oil is largely a reflection of the problems of cultivating jojoba plants. Only female plants produce the oil-yielding nuts and only a small proportion of plants provide a high enough yield of oil to be of commercial value. Attempts to develop the vegetative propagation of high yielding plants have failed because jojoba does not grow well from cuttings.

Now, however, Twyford — part of International Plant Laboratories — and other groups in Israel and the United States have developed a successful approach to propagation by culture of the jojoba's meristem — the growing tip of a shoot or root. The meristem is grown on a series of nutrient media until a seedling develops from it. The seedling is then split into two