

Mental stress given environmental status

Court delays start at Three Mile Island

Washington

In a precedent-setting decision, the US Court of Appeals in Washington has decided not to allow the Metropolitan Edison Company of Pennsylvania to switch on the undamaged power plant at Three Mile Island, near Harrisburg, until it can demonstrate that such a move would not adversely affect the mental health of people living in the area.

The immediate impact of the decision, which reverses a ruling by the Nuclear Regulatory Commission (NRC) that psychological factors do not necessarily have to be taken into account in deciding whether to allow nuclear plants to start operating, will be to delay for several more months the start up of "Unit One" at Three Mile Island. The reactor was undamaged in the accident which occurred to its twin, Unit Two, in March 1979, and since then has been considerably modified to improve safety.

The ruling, however, which was made by two of the three members of the appeals court, could have a significantly wider impact. For the first time it means that although the powerful Natural Environmental Policy Act of 1970 does not require psychological factors to be taken into account when the social impact of a federal decision is being assessed, the act can be interpreted as allowing such factors to be included.

The Three Mile Island accident resulted in a small amount of radioactivity being discharged into the environment but no significant extra radiation exposure to individuals, so nobody suffered physical health damage as a result. The principal focus of interest, therefore, has been on the psychological implications of the accident.

Arguments about the psychological impact of the accident have been continuous since it occurred. Civic leaders warned NRC that thousands of people might be driven from their homes by fear of radiation if krypton gas was allowed to be vented from the crippled plant. Some claimed that "riots" might result as a possible manifestation of the population's nervousness.

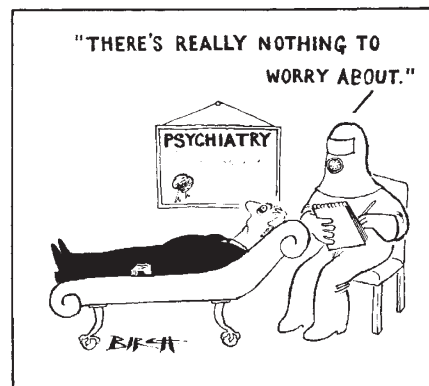
Such arguments have, until now, fitted uneasily into the institutional mechanisms set up to cope with the social consequences of major technological actions. Thus when Metropolitan Edison applied to NRC to be allowed to start up the undamaged plant, the commission rejected claims from a local citizens' group, the People Against

Nuclear Energy (PANE) of Middletown, Pennsylvania, that such a move would have sufficient psychological effects to make it necessary to take these into account.

The request from PANE had been supported by the members of NRC's own Atomic Safety and Licensing Board — partly on the grounds that taking such factors into account while the licensing decision was being reached could head off later conflict — but was rejected by NRC.

The Appeals Court has now told NRC that it was wrong, and has directed the commissioners to conduct a broad assessment of the effects that starting up Three Mile Island's Unit One will have on "the psychological health of neighbouring residents and on the well-being of surrounding communities". After that, the commission will have to decide whether the National Environmental Policy Act requires a more detailed analysis of the social and environmental impact — possibly including a public hearing — before the decision to restart the undamaged reactor could be taken.

The court's decision was not unanimous. In a strongly-worded dissent, Judge Malcolm Wilkey argued that by establishing psychological stress as a factor which had to be taken into account by NRC, the court was defining "an 'impact' which has never before been considered as covered by the National Environmental



Policy Act", a move which, he said, had "enormous consequences".

The decision was greeted with gloom at Metropolitan Edison, which had been hoping to start up Unit One within the next few days, and which was depending on revenues the reactor would produce from the sale of electricity to help cover some of the costs of the clean-up at Unit Two which are already threatening to force the utility into bankruptcy.

Predictably, the appeal court's decision was welcomed by members of PANE. The group had argued that the inclusion of psychological factors should be part of the responsibility of licensing institutions to protect the public health and safety, as defined in the Atomic Energy Act of 1954.

David Dickson

European nuclear safety policy attacked

Brussels

Has the Euratom treaty, which binds the European Community's nuclear energy policies together, been properly interpreted and applied? A lengthy report by the leading Belgian socialist member of the European Parliament, Anne-Marie Lizin, suggests not and attacks the lack of progress towards achieving the aim of a European zone of unified nuclear safety standards.

Lizin's report was the subject of heated debate in the European Parliament's Committee on Research and Energy, where 91 amendments were proposed. Having looked in detail at EEC's activities in the fields of radiation protection, reactor safety, decommissioning, safety of the fuel cycle and the national nuclear inspection services, Lizin concluded that the Euratom treaty is outdated and vague and that the European Commission has made too little use of its powers under the treaty.

Lizin alleges that when the treaty was first drawn up, more than 20 years ago, too little consideration was given in the nuclear energy development plans to reactor safety and worker protection. Since then, the member states have proved reluctant to provide the European Commission with effective consultation procedures for all

decisions concerning the location and operation of nuclear power stations. In Lizin's native country, Belgium, the licence to build a nuclear power station is granted independently of the initial safety analysis, and given the fact that too many nuclear power stations are built close to frontiers or use shared river systems, the report complains that there is too little consultation on measures to protect workers and local populations.

The report goes on to say that although the Community has been efficient at listing methodologies, standards and safety criteria, work on listing similarities and differences among the member states has been too slow and the Community has yet to go on to the third stage of putting forward its own regulations. This work has largely been left to other international bodies such as the Organization for Economic Cooperation and Development and the International Atomic Energy Agency. Lizin attributes particular importance to the Super-Sara project but calls for more studies into the safety of gas-cooled and heavy water reactors. The problems of waste management and recycling are given particular attention because the report considers that this field requires intense supervision by an independent public

authority.

The role of the Community in the decommissioning of nuclear plants is reassessed. Lizin suggests that EEC's financial instruments, such as the regional fund, could help and that electricity companies or utilities should be asked to pass on decommissioning costs directly to the consumer. Lizin's lengthy list of recommendations also tries to sting the Commission into providing stricter surveillance of the work carried out by national supervisory authorities.

Undoubtedly something akin to the steel crisis, which made many realize the immense emergency powers invested in the Commission by the treaty of the European Steel and Coal Community, will be necessary to bring the strength of the Euratom treaty into play. But Lizin's awareness of this possibility has been heightened by the controversy surrounding the enlargement of the French nuclear power site at Chooz, a few kilometres from the border with Belgium. Notwithstanding local and national protests from Belgians, and the French socialist party's preelection promises, the French Prime Minister, François Mitterrand, still seems set on increasing the number of nuclear reactors there.

Jasper Becker

French colloquium

Science passion

Paris

The great national colloquium last week on the state of science in France was sometimes like a high mass, sometimes more like a giant committee meeting. And although, after six months preparation, the colloquium (which was strictly advisory) displayed few radical disagreements, the test of its success will come only with the publication of a new law to be put to the French Parliament in the next few weeks.

The theme running through the four-day meeting was uplifting. M. Jean-Pierre Chevènement, Minister of State for Science and Technology, told the closing session that "the highest authorities of the state" have decided that scientific research is vital "for the successful change and future of our country". The highest authority himself, President François Mitterrand, had set the ball rolling with a declaration that "only a gigantic effort in research" will allow France to master its technology and thus make certain of its independence.

Both the President and his Prime Minister, M. Pierre Mauroy, were, however, anxious that the forthcoming expansion of science in France should follow the "wishes of society". Mauroy also wishes to reintegrate science into the wider culture of France from which he thinks it has been too long isolated. But to Chevènement himself, "science is a passion and France needs passion". Since the election in May 1981, he said, hostility

River of words, mountain of paper

Paris

There were no *bateaux mouches*, the "firefly boats" with glass roofs, on the Seine last week. The river was a torrent almost filling the arches of the bridges and menacing the city. It was much the same with *la vague Chevènement* (the Chevènement wave) as one paper dubbed it. The Minister of State for Science and Technology, Jean-Pierre Chevènement had organized all the tributaries of science in France, and in its overseas territories and departments, to converge on Paris.

The organizers of this national colloquium for science and technology estimated that there had been nearly 200,000 pages of written contributions to the colloquium and its regional predecessors (held in October and November last year). This is almost a page for each of the 280,000–300,000 scientists and technologists in France. There were almost 10,000 individual documents, all of them arguing over which points needed to be changed, modified or amplified in the politics and organization of science and technology.

A torrent of words, a torrent of ideas and clearly an historic moment for French science: Chevènement certainly hopes so, for his ambitions go beyond science and technology. Last week, he did his best to take strict control of the colloquium. The 200,000 pages were reduced to 950 reviews, written largely by people chosen by the ministry. Then 200 of these reviews were placed before 12 colloquium committees, also hand-

picked. And the committees reduced these to 40-page summaries, which were then discussed.

Neither colloquium nor committees were empowered to take decisions. And even the most apparently practical



committee, that on finance, was required to discuss only principles: such sordid matters as actual figures and percentages were set aside.

Nevertheless, there had been attempts to make the composition of the committees representative. There were more than 100 people in each committee, making 1,500 in all, drawn from three categories — 200 were directly involved in preparing the national colloquium and the regional summaries, 500 were from institutions, such as industries, the principal science funding bodies, ministries, universities and unions.

Robert Walgate

to science and technology had been turned back.

Inevitably, on what could not fail to be a patriotic occasion, the minister also developed his theme that French science must increasingly be seen to be French. He promised data banks and scientific books in French and that the great international science journals would be translated. Meanwhile, the French cabinet has agreed that the volume of government spending on science should increase by 17.8 per cent a year over the next three years and that private industry should be encouraged to increase research and development investment by 8 per cent a year. This should bring French research and development expenditure to 2.5 per cent of the Gross National Product by 1985. Jobs will be created at the rate of 4.5 per cent a year over the same period.

All this has given the minister for science more spending power and more influence. He already controls almost all the forward-looking agencies of the Ministry of Industry and is thought to be lobbying for the merger of that ministry with his own.

Chevènement is nothing if not visionary and ambitious. The politics of health

depend on research, he said, as do the politics of labour and employment. Science and technology could increase French independence while the creation of a "French pattern" for the organization of science could be a model in fields other than science and technology.

The new law, to be prepared in the next few weeks, will define new contracts of employment for researchers, set financial targets for institutions and set the "French pattern" of research for 1983–85. The expectations are that the law will leave most institutions unchanged except for the introduction of union representatives on certain committees. But the law will provide for new small-scale technical enterprises and regional centres of development in certain fields.

Under the promised arrangements, there is to a new high-level advisory council together with regional advisory committees. Social science, Chevènement said, needs to be impelled forward. And what is it all for? "To spread knowledge, to push back anti-scientific prejudice, to assure the progress of the sciences of man and society, to maintain or re-establish French."

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