

US nuclear power

Court gives backing to state moratorium

Washington

THE Supreme Court dealt the beleaguered nuclear power industry a sharp blow last week by ruling that state governments possess extensive powers to regulate or prevent the construction of new power plants, provided only that they do not trespass on the federal government's exclusive responsibility for radiological safety.

In a unanimous opinion, the court upheld the legality of California's 1976 statute declaring a moratorium on future reactor construction. The federal government had joined two Californian utilities in challenging the statute on the grounds that the 1954 Atomic Energy Act vested the regulation of nuclear matters solely in the federal government.

Justice Byron White, accepting California's contention that it had declared the moratorium for economic and not safety reasons, said the Atomic Energy Act made the federal government responsible for all nuclear safety questions but left states with their "traditional responsibility" for regulating electric utilities on the basis of need, reliability, cost and other local concerns. He added that the act does not expressly require the states to construct or authorize nuclear power plants or prohibit the states from deciding not to permit the construction of any further reactors.

The court's opinion is particularly ominous for the nuclear power industry because of antinuclear sentiment among state legislatures. Five states have already passed laws similar to California's and 30 states supported California in its arguments before the Supreme Court. A *Washington Post*-American Broadcasting Company News poll this month found 65 per cent of a random sample of Americans opposed to building new nuclear power plants and only 27 per cent in favour.

Justice White's opinion also dashed the hopes of some in the industry that it would be possible to overturn state laws barring new plant construction by proving that the statutes had in fact been motivated by fears on safety and not on economic or other grounds. The court said it ought not to become embroiled in an unsatisfactory attempt to discover the "true motive" of state legislators, and pointed out that safety and cost questions were closely linked.

If not properly stored, the court declared, nuclear wastes might leak and endanger the environment and human health. "The lack of a long-term disposal option increases the risk that the insufficiency of interim storage space for spent fuel will lead to reactor shutdowns, rendering nuclear energy an unpredictable and

uneconomical adventure. The California laws at issue here are responses to these concerns."

The Californian law does not ban the construction of new power plants permanently, but only until the state is satisfied that an adequate national system exists for the disposal of high level nuclear waste. The Department of Energy has begun the search for a permanent geological depository for spent fuel but is not expected to select a site until 1987. And the site might not become operational until the end of the century.

Ironically, the ruling came while the nuclear industry was celebrating another Supreme Court decision a day earlier absolving the Nuclear Regulatory Commission (NRC) of any need to investigate the psychological impact that local residents might suffer following a decision to restart the undamaged Unit 1 reactor at Three Mile Island.

Residents of Harrisburg, Pennsylvania, had been supported by a federal appeals court in maintaining that under the Environmental Policy Act of 1969, NRC was obliged to include psychological fallout in its mandatory assessment of the impact on the environment of a decision to restart. But that ruling was struck down unanimously by the Supreme Court, which said the relationship between a construction project and the anxiety it might cause was too indirect to be part of a federal review procedure.

Justice William Rehnquist said risk was a pervasive element of modern life and many risks were generated by modern technology. But the fears associated with these risks were for Congress to consider in policy decisions; the 1969 law was not intended to give citizens a general opportunity to air their policy objections to proposed federal actions.

The ruling means that NRC can proceed to a decision on restarting Unit 1 without conducting extensive enquiries about the psychological aftermath of the Three Mile Island accident. NRC officials are still reviewing technical problems at the plant — particularly the condition of the steam generators — and will not say when they will decide on a restart date.

In his Supreme Court opinion, Justice Rehnquist made a point of saying the court did not intend to denigrate the fears of Harrisburg residents or deny their existence. In fact, since the Three Mile Island accident, a number of studies, including several commissioned by NRC, have suggested that psychological stress and the use of tranquilizers and alcohol have increased substantially.

Peter David

Spanish oil deaths

Toxin is elusive

Barcelona

PHYSICIANS and scientists seem to be agreed that the cause of the toxic oil syndrome (TOS) that killed 300 people in Spain in 1981 is some constituent of unpurified rape-seed oil. But the identity of the toxic material is still obscure.

TOS was the subject of two meetings last month in Madrid — the meeting of the CSIC (Spanish Consejo Superior de Investigaciones Científicas) Programme for the Study of TOS and the World Health Organization Working Group on TOS. The weeks preceding these meetings were marked by sit-ins and demonstrations by many of the 20,000 people affected by the epidemic, some of them with severe chronic disabilities, asking the Spanish Government for more medical and social assistance.

The epidemiological evidence about the origin of TOS was reviewed by the WHO Working Group which found "overwhelmingly" in favour of the association of TOS with consumption of illegally sold denatured rape-seed oil. Other hypotheses had been formulated as the origin of this new and complex disease, such as a purely infectious agent or a link with tomatoes treated with certain pesticides or with toxins produced by fungi associated with grape-seed oil, but the evidence has been unconvincing. This international endorsement of denatured rape-seed oil as the culprit is important for Spanish scientists working on the subject, coming as it does after accusations by those affected, the media and government officials that they had not considered other alternatives.

Another important question discussed was the toxic agent responsible for TOS. The CSIC programme concentrated its research on fatty acid anilides, which were present in up to 2,000 p.p.m. in the most reliable samples of toxic oil available for analysis. The evidence for the toxicity of anilides was reviewed last year (*Nature*, 298, 608; 1982) and new correlations between anilides and lesions in model animals similar to those observed in patients were presented. The WHO working group recommended that the presence of anilides in at least 700 mg l⁻¹ should be taken as one of the markers for toxic oil but the evidence for the anilides as the origin of TOS was considered still inconclusive.

The need for increased and coordinated research to understand the origin and consequences of TOS was one of the main conclusions of the two meetings. The medical recommendations stress the need for Spain to develop a national epidemiological programme, to prepare for publication all the epidemiological evidence and to define a long-term follow-up programme for the affected people.

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