

Tarapur reactor

US spare parts deal held up

Washington

THE Reagan Administration's plan to supply India with spare parts for the troubled Tarapur nuclear reactor is under fire from two fronts, and the prospect now is for a long fight that may drag on for months. Last week, six environmental and anti-nuclear groups including the Union of Concerned Scientists filed a legal challenge with the Nuclear Regulatory Commission (NRC) seeking to block the sale. The challenge accuses India of violating the requirements of the Nuclear Non-Proliferation Act by refusing to accept full international inspections of its nuclear activities and by continuing its efforts to develop a nuclear explosives capability. India, which has refused to sign the non-proliferation treaty, exploded a nuclear device in 1974.

Earlier last month, 55 senators and congressmen — including Democratic presidential candidates Gary Hart, John Glenn and Alan Cranston — asked President Reagan to reject the State Department's recommendation, announced by Secretary of State George Shultz in New Delhi on 30 June, to release the spare parts, which have been held up since 1980.

The State Department is hoping to avoid a confrontation by persuading Italy or West Germany, which own reactors of a type similar to that at Tarapur, to supply the needed parts to India. It seems likely, however, that at least some of the parts are not available from these third parties and will have to come directly from the United States.

NRC will have to pass on those exports coming from the United States. In a briefing to congressional staff, NRC has already indicated that on the basis of intelligence information it has received on India's nuclear explosives programme, it will have to block the sale. The Nuclear Non-Proliferation Act requires that nations receiving nuclear assistance from the United States should not be "engaged in activities having direct significance for the manufacture or acquisition of nuclear explosive devices". According to congressional staff, the intelligence information includes satellite photographs of new test holes in the Rajasthan desert where India detonated a nuclear device in 1974.

An NRC finding against the sale would put the President in a sticky position. Although he can under the law order a waiver that would allow the sale to go ahead, he could only do so by first issuing a written determination that India was indeed in violation of the non-proliferation requirements — precisely the diplomatic embarrassment the administration has been trying to avoid.

The law also gives Congress 60 days to override the President's waiver, but this provision has almost certainly been nul-

lified by the Supreme Court's recent decisions that congressional vetoes are unconstitutional.

The problems with the Tarapur reactor stem from defective fuel elements made by the Indians from low-enrichment uranium supplied by the United States. As the cladding of the fuel has deteriorated, the coolant has become contaminated; leaking seals, flanges and pumps are allowing significant amounts of radioactivity to escape. In announcing the administration's intention to supply these replacement parts, Shultz stressed the need to prevent further exposure to radioactivity of plant workers and nearby residents.

The Indian press has described "bucket brigades" of workers hired to dash into contaminated regions of the plant, twist a wrench a few turns and then dash out before accumulating an excessive radiation dose. Although the Indian Embassy in Washington discounts these reports, NRC staff is said to have reported that Tarapur workers were given iodine pills, a preventive measure that blocks uptake of radio-nuclides by the thyroid gland.

Opponents of the parts sale argue that the situation is probably not as critical as the administration suggests. A General Electric engineer who visited the plant last month reported that both of the 210-MW reactors at Tarapur were operating and that no exceptional problems were

apparent. But opponents of the sale also contend that the "marginal improvement" that would be gained by supplying the parts would not make the plant safe. NRC officials have said privately that a plant of the Tarapur design and condition would not be granted an operating licence within the United States; safety features ordered in the wake of the Browns Ferry plant fire and the Three Mile Island accident have not been incorporated into Tarapur.

The main point of denying India the parts would be to maintain pressure on India to drop its nuclear explosives programme and to accept full international safeguards on its nuclear activities. Tarapur itself has not so far been involved in any of the explosives work. But concern is mounting that this situation may change; although a reprocessing facility at Tarapur is currently under International Atomic Energy Agency inspection, India has refused to offer assurances that the inspections will continue after 1993, when the US-India joint agreement that established Tarapur expires. The United States has refused to give its permission for reprocessing of spent fuel from the Tarapur reactors; India maintains that it does not need US permission. Earlier this year, the director of India's Atomic Energy Commission was quoted as saying that reprocessing of Tarapur spent fuel — which contains about one tonne of plutonium — would commence at the end of this year; he subsequently disclaimed the statement, saying he had been misquoted.

Stephen Budiansky

French nuclear tests

Tazieff report urges change

CHARLES Hernu, French minister of defence, has promised to act on a report that criticizes the safety and environmental monitoring of French nuclear tests in the Pacific. Remarkably, this report is French, and official, compiled by a seven-man team of scientists headed by geologist Dr Haroun Tazieff. But Tazieff is also director of the "centre for the study of major natural risks", supported by the Prime Minister's office, and some are dismissing the report being as biased too much towards the government point of view.

In fact, the report does indeed play down most of the risks of the tests — and gives no figures, using terms such as "feeble" and "innocuous" radioactivity — but it does stress wide areas of ignorance and hints at

poorly organized monitoring. One of the main releases from the atoll, for example, appears to have come from a storm in March 1981, which tore up part of a dump containing plutonium waste from aerial tests. (These tests ended in 1974, according to ministry of defence sources.)

But according to one member of the Tazieff team, who, like each other member, appends a personal view to the agreed report, the monitoring system "ignored the quantities introduced into the environment, their solubility and possible dispersal". Some "10-20 kg" of plutonium may have been mobilized, another scientist estimates, in one of the few figures in the report.

Another area of uncertainty concerns the sediments around the atoll, the report

