

week, however, the French President, Valéry Giscard d'Estaing, said that he had personally vetoed the sale.) West Germany, in addition, is widely believed to be negotiating to supply reactors, and possibly a reprocessing plant, to Iran.

Those deals mark a significant qualitative shift in international nuclear trade, since they would transfer directly the means for producing weapons-grade materials. What makes them particularly worrying is the fact that none of the recipients, except for Iran, is a party to the NPT. They have all been bitterly opposed by the United States, and US officials from Dr Kissinger down tried in vain to dissuade France and Germany from going through with them.

Aside from sales of enrichment and reprocessing technology, there has also been considerable doubt expressed recently about the adequacy of present safeguards on reactor sales. For one thing, many reactors have already been

sold without IAEA safeguards—the Canadian sale to India provides a particularly vivid example, and similarly the sale by France of a small research reactor to Israel in the early 1960s is widely believed to have provided Israel with the means to produce weapons. According to a recent CIA analysis, Israel has taken up that option and now possesses between 12 and 20 plutonium bombs.

And the IAEA safeguards themselves do not provide an insurmountable barrier against diversion of fissile material. In a speech on May 13, Dr Fred Iklé, Director of the Arms Control and Disarmament Agency (ACDA) and one of the more outspoken Administration officials on nuclear proliferation, warned that the IAEA is understaffed, relies chiefly on information supplied by the country under safeguards, has no power to impose sanctions against violators and cannot investigate unsafeguarded plants. IAEA safeguards, Iklé said, provide “a bur-

glar alarm, but not a lock”, and it is a “fallacy” to believe that we don't have to worry about facilities under IAEA safeguards.

The United States itself, moreover, is not entirely blameless. In 1974, then President Nixon promised to sell nuclear reactors to Israel and Egypt, two antagonists who have not ratified the NPT. (Negotiations concerning those reactors are not yet complete.) And last week it became known that the General Electric Corporation has applied for a licence to sell two 1,000 MW reactors to South Africa, together with 1.4 million pounds of slightly enriched fuel. According to Administration sources, that deal is likely to be officially approved, even though South Africa has not signed the NPT and is believed to be interested in joining the nuclear weapons club.

That is the background against which the talks between the nuclear exporting nations will resume next month. Aside from the seven original participants, they are expected to include representatives from the Netherlands, Sweden, Belgium, East Germany, Italy and Poland. The critical issue is again expected to be the sale of enrichment and reprocessing technology, with the United States arguing against deals which would place such plants in the hands of individual purchasers, whether or not they are placed under IAEA safeguards.

The chief American argument is simply that reprocessing is not necessary at this time, and there is no economic need to sell either enrichment or reprocessing plants. Dr Iklé, for example, noted in his May 13 speech that separating plutonium from spent fuel and recycling it “could replace at most about one third of the fuel required, and far less in a rapidly growing nuclear power system. Hence, recycling would not bring independence from imported fuel”. He added: “Before we plunge into a plutonium fuel economy, let us look very closely at the risks and our ability to control them . . . spreading plutonium should be avoided if possible, and with the current generation of reactors it can be avoided at no economic cost”.

If it proves impossible to curb the desire for reprocessing plants, the Administration will probably continue to urge that instead of selling such plants to individual countries, nuclear exporters should consider placing such technology under multinational control. Iklé noted that the United States is now studying the feasibility of “multinational fuel centres for storage of fuel, waste management, and other services when needed”.

The United States' arguments are, however, likely to fall foul of the desire,

Passage to India ?

THE Nuclear Regulatory Commission (NRC) announced last week that it will hold public hearings to decide whether or not the United States should supply slightly enriched uranium to India, for the Tarapur Atomic Reactor located near Bombay. The hearings, the first ever to be held on a nuclear export licence application, graphically underline the fact that because the United States is the world's major supplier of reactor fuel, it is in a strong position to force many countries to accept strong safeguards against the diversion of peaceful nuclear technology to weapons production.

The hearings, set for June 2, will be held in response to a petition from the Natural Resources Defense Council, the Sierra Club and the Union of Concerned Scientists. The United States has supplied India with fuel for that reactor in the past, but the petitioners are essentially suggesting that NRC should use the application to supply another 40,000 pounds of uranium as a way to force India to accept extra safeguards.

The Tarapur reactor and its fuel supplies are all under the supervision of the International Atomic Energy Agency (IAEA), and those facilities were not the source of plutonium for India's nuclear explosives.

But the petitioners have pointed out that India hasn't signed the non-proliferation treaty, that a clash between India and one of its neighbours might disrupt present safeguards at the plant, that the United States has not required India to place all its other nuclear facilities under international

safeguards, and that the United States has not required India to accept bilateral safeguards in addition to the IAEA controls. The implication is that the United States should threaten to shut off fuel supplies to India unless it accepts those additional safeguards. The concept could clearly be applied to other countries.

At present, only the United States and the Soviet Union export enriched uranium fuel, and their dominance of the fuel export market is expected to last at least until the mid-1980s. Some observers have therefore raised the possibility of a joint US-USSR agreement that future fuel supplies should carry strict safeguards agreements, in addition to IAEA controls. Senator Abraham Ribicoff, for example, has even suggested that the United States should refuse to supply nuclear fuel to West Germany and France if those countries persist in selling enrichment or reprocessing plants. But Henry Kissinger has forcefully ruled out such “blackmail”, suggesting that a pact with the Soviet Union against America's NATO allies would have “the gravest foreign policy consequences”.

As for the proposed fuel shipment to India, the NRC has announced that it will decide whether to issue the licence before the end of June, and it has suggested that it might even act on the matter before the conclusion of the hearings “if it finds a need for greater expedition”. The hearings would, however, carry on with an examination of the broad policy issues involved in United States' fuel exports.