

US has doubts on anti-proliferation proposals

PROPOSALS presented jointly by the UK Atomic Energy Authority (UKAEA) and the US Electric Power Institute (EPRI) for reducing the proliferation dangers associated with nuclear power plans have received a less-than-enthusiastic reception from a number of groups concerned with US nuclear policy.

The proposals were announced at a meeting in Washington last February by Dr Walter Marshall, deputy chairman of the UKAEA, and Dr Chauncey Starr, president of EPRI. They involve a new system for reprocessing spent reactor fuel known as CIVEX which, it is claimed, makes the diversion of nuclear fuel virtually impossible by ensuring that pure plutonium is not accessible at any point of the cycle.

The proposed system is now being looked at closely as part of the International Nuclear Fuel Cycle Evaluation (INFCE) study, set up last year largely at the suggestion of President Carter. It has already been studied by a number of organisations in Washington, and received a variety of responses.

In the report of a study group set up to assess the CIVEX concept, the industry-based Atomic Industry Forum said that it found the concept to be "technically feasible" and "worthy of further development" and that it represents a considerable advance in answering fears that plutonium could

be diverted from the fast-breeder cycle.

However the study group points out that there are a number of technical and economic questions that must be resolved before CIVEX's true potential can be realised. And it adds: "A breeder cycle embodying the CIVEX concept does not significantly increase diversion risk in comparison with no breeders at all. Other routes for obtaining fissile material exist independent of the breeder and dominate the diversion risk in either case".

Considerably stronger criticism of the CIVEX concept was made by one of the five members of the Nuclear Regulatory Commission (NRC), Mr Victor Gilinsky, speaking at a recent conference in London sponsored jointly by the AIF and the British Nuclear Forum.

"It is difficult to take CIVEX seriously as an answer to the manifest danger of dispersing plutonium in weapons usable form, a problem we will face, according to Judge Parker, ten years from now; there is no conceivable way this scheme can be implemented within the period Judge Parker has allowed us," he said.

Drawing on internal studies that have been conducted by NRC staff, Mr Gilinsky, who was previously director of applied science and technology with the Rand Corporation, said that CIVEX fuel remained radioactive long

enough to be self-protective for a "fleeting period of time" compared to spent fuel. Its radioactivity was so diminished a few years after leaving the reactor that it could not provide the protection for which it was designed, he said.

"Since most spent fuel reprocessed in this century will have cooled for longer than that, the CIVEX process cannot contribute to the solution of the problems we must worry about now," Dr Gilinsky said. The "abortive flurry" over CIVEX, underlined the importance of attacking the problem of plutonium return now.

Equally harsh words have come from public interest groups. An evaluation carried out by Jim Cubie of New Directions and Tom Cochran of the National Resources Defense Council comes to the conclusion that CIVEX is "much less promising than at first glance", and that rather than being proliferation proof, it at best increases proliferation resistance.

"Even though it is intended for use in the next mid-century, because CIVEX has been claimed to make reprocessing acceptable, it will be used as an excuse for undertaking new plutonium reprocessing ventures in the next few decades and thus spread nuclear weapons capabilities," the two authors say.

David Dickson

Libya bidding to join nuclear club, scientists warn

LIBYA is actively seeking nuclear weapons even though it signed the nuclear non-proliferation treaty three years ago, warns the Federation of American Scientists. The FAS is urging the Soviet Union to cancel an agreement to sell Libya a 400-megawatt nuclear power complex.

Jeremy Stone, director of the Washington-based federation, said that Ahmed al-Shahati, who is head of the foreign liaison office of the People's General Congress, told him openly that Libya is still trying to obtain an atomic bomb. "Shahati made no bones about it, saying they would seek all weapons with which to defend themselves," Mr Stone said of his conversation in Tripoli in October. "To be sure I understood, I asked again: were they seeking to maintain the right to get a bomb or actually trying to get the bomb itself? It was the latter."

The Soviet Union, whose policy is only to sell nuclear technology to countries that have ratified the non-proliferation treaty, announced the Libyan contract in October. The Russians are currently negotiating safeguards with the International Atomic

Energy Agency to prevent nuclear fuel being diverted from the Libyan reactor to make weapons. Professor George Rathjens of the Massachusetts Institute of Technology, who is chairman of the FAS, estimated that the Libyan plant would produce enough fissionable material to produce "a couple of dozen" bombs a year.

In a letter to Anatolij Dobrynin, the Soviet ambassador in Washington, Mr Stone asked: "Can the Soviet government rely upon the Libyan government to comply with the terms of the future

IAEA safeguards agreement if Libya cannot be relied upon to comply with the treaty itself?"

Libya's nuclear ambitions were well known in the early 1970s, when its leader Muammar al-Qaddafi reportedly tried to buy nuclear weapons from China and later said he wanted to purchase the bomb from anyone who would sell it to him. Mr Stone said these attitudes did not change when Libya cynically ratified the treaty to become eligible for the Soviet reactor.

The FAS has also written to President Carter, asking him to take the matter up with the Russians and raising the possibility of international sanctions against Libya. There is not much the US can do on its own, Mr Stone said, apart from sending home the 2,000 Libyan students in American colleges and universities (10% of whom are studying nuclear science.)

The federation also named four other "potential false adherents" to the non-proliferation treaty: Taiwan, South Korea, Iraq and Iran. But Mr Stone did not claim to have any direct evidence that any of them was blatantly seeking nuclear weapons like Libya. □



"I'm afraid, Colonel Qaddafi, you are suffering from a nuclear power complex . . ."