

Czech chartists claim two died in nuclear accident

CHARTER-77, the Czechoslovak human rights movement, last week entered the nuclear debate, with an exposé of conditions at the Jaslovské Bohunice power station. According to Document 22 of the Charter movement (distributed abroad by the Palach press), employees at the power station have been compelled (under threat of loss of premium payments) to expose themselves to radiation levels considerably above the safety standards, while, in the course of the last three years, two serious accidents, one of them causing the death of two workers, have taken place at the station. Indeed, claim the Chartists, since the second accident in February, 1977, the station is still "temporarily" closed.

The Jaslovské Bohunice power station has a long and chequered history. It was constructed under the terms of the Soviet-Czechoslovak general agreement for nuclear energy cooperation of April 1955. In 1956, it was predicted that the station would be commissioned in "about 1962"—in fact, it went critical in 1972 and became fully operational the following year.

According to Dr Frantisek Janouch, who at that time was working at the Czechoslovak Institute of Nuclear Research, and who took part in the many professional and organisational discussions relating to the construction of the reactor, the project was essentially a Soviet proposal and was carried out under Soviet supervision. The station uses a 110 MW gas-cooled

heavy-water reactor. According to Dr Janouch, the Russians wanted to see if it was possible to construct an effective reactor of this type—leaving the details to be worked out by the Czechs and done at Czech cost.

In 1969, before the Jaslovské Bohunice station, known as the A-1, was completed, the Czechoslovak nuclear energy industry was switched, following a Soviet "recommendation", to light-water pressure reactors of the VVER type, for which the Soviet Union would supply "a substantial part of the main equipment". Whether this change of plan affected the final stages of work on the A-1 is not clear; it appears, however, from the Chartists' report that the projected automatic system for mounting new fuel elements was never brought into operation, and the mounting was done manually. Workers on the reactor were, says the report, "under psychological stress", often working a 16-hour shift instead of the six hours or less customary in "developed" countries. On 5 January, 1976, an error occurred in the mounting process. The element shot out of the reactor, under a pressure of 60 atmospheres together with a large quantity of radioactive CO₂. Since the emergency gas-traps and filters were insufficient for an accident of this magnitude, radioactive gas escaped into the atmosphere. In the area of the accident, emergency evacuation plans went into operation; unfortunately, one escape door had been locked, apparently to reduce petty thefts, and

two workers were suffocated.

Some six weeks later, however, disaster struck again (according to the Chartists). During the mounting of new fuel cells, the primary circuit overheated, the air-tight seal of the steam generator ruptured, and, as a result, the primary circuit, part of the secondary circuit and the working area all became contaminated. Radioactive material entered the drainage system of the plant and a stream in the vicinity has since had to be "fenced off" as contaminated.

During the repair work to the reactor, says the Chartists' document, safety levels of radiation were increasingly ignored, in an attempt to expedite the work.

The anonymous authors of the document urge nothing less than an open discussion and local referenda as to whether nuclear power stations should be constructed at all. This is all the more remarkable since uranium is Czechoslovakia's sole native energy source of any magnitude, and current plans envisage a nuclear expansion of 10,280 MW over the next 15 years, so that by 1990 over 30% of the installed generating capacity will be nuclear.

With such a major commitment to nuclear energy, the reaction of the Czechoslovak authorities to the report is predictably to deny everything. No such accidents occurred, they say, and even if they had occurred, they were under no obligation to make any public announcement.

Vera Rich

Canadian scientists confused by government moves on R & D funding

LAST week the Canadian Government appointed a new Minister of State for Science and Technology. Mr Alastair Gillespie. A brief occupant of the post when it was first established in 1971, Mr Gillespie will take over from Mr Judd Buchanan, who was promoted in a Cabinet shuffle to president of the Treasury Board.

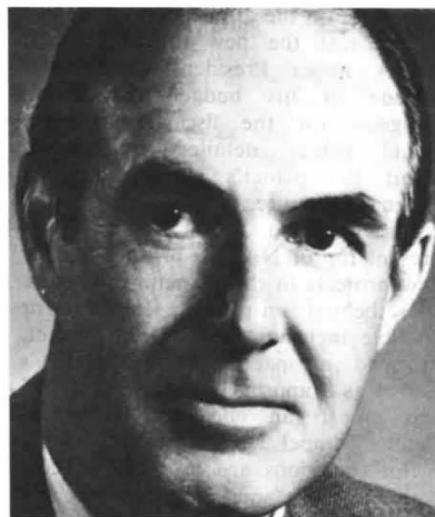
One of the new Minister's first tasks will be to sort out the confusion created in the minds of many Canadian scientists by recent moves over the funding of research. In particular, a strategy announced earlier this year by Mr Buchanan pledging greater support for research and development has been followed by budget cuts severely reducing various areas of federally-funded research, particularly in government laboratories.

R&D policy has recently become a hot political issue in Canada, figuring prominently in the pre-election cam-

paigns of all the main political parties. This prominence is based largely on the feeling that many of the country's economic problems have been due to its relatively low expenditure on research compared to other industrialised nations.

In June of this year, Mr Buchanan announced a number of funding increases and other measures designed ultimately, he claimed, to raise the proportion of the gross national product spent on R&D from 0.9% to 1.5% by 1983 (the comparable figure for countries such as West Germany and the US is about 2.5%).

In line with this strategy, a pre-election budget presented to the Canadian Parliament last month by Prime Minister Pierre Trudeau included a number of tax incentives to encourage private companies to invest in R&D. In particular, firms taxable at the small business rate will receive



Alastair W. Gillespie

a new investment tax credit of 25% on all R&D expenditure; for other firms, the basic rate of the R&D investment tax credit will be doubled from 5 to 10%.

The Government's declared commitment to increase R&D support have