


OBSERVER



N-sub minutes from disaster

EXCLUSIVE

by JOHN MERRITT

A NUCLEAR accident on board a Polaris submarine was averted with minutes to spare while the vessel was in dock on the west coast of Scotland.

The emergency, which happened three weeks ago on the submarine Resolution, based at Faslane in the Firth of Clyde, has been described by nuclear experts as 'potentially catastrophic.'

The Ministry of Defence confirmed yesterday that a 'minor electrical malfunction' occurred on board the vessel on 26 January. It insisted there had been no danger to the crew or general public.

More than 13,000 people live within a five-mile radius of the base. They have been kept unaware of the emergency, which experts say could have had devastating consequences.

It resulted from the failure of the primary cooling system, which should transfer heat from the reactor in the vessel's nuclear power plant.

The precise cause of the failure is not known. The power supply to the coolant pumps was cut off; the coolant, pressurised water circulating in an enclosed loop through the reactor, stopped flowing.

Under normal circumstances two pumps are in operation to ensure back-up. Neither power supply, which works from an electric pony motor, did not activate. As alarms sounded, heat built up in the nuclear reactor's core.

A former nuclear submarine officer said: 'In these circumstances you would be in big trouble. It is heading for a runaway situation with a melt-down of the nuclear core.'

A leading consultant on nuclear reactors estimated that from the alarm being given there would have been between one-and-a-half and seven minutes for the situation to be brought under control.

In the event, two of the crew raced to start up a diesel generator as an alterna-

tive power source for the cooler system.

One of them was not wearing his Dosimeter, which registers the level of exposure to radioactivity, and is believed to have been exposed to radiation. He was made to scrub down with a special detergent for 24 hours until levels were reduced.

A radiation detection convoy of Ministry of Defence vans, with distinctive white umbrellas on the sides, was seen entering the Faslane base area, where it remained for several days. The Resolution left for a long-term patrol two weeks ago, several days later than scheduled.

A world expert on naval nuclear reactors, Mr. Richard Webb, told *The Observer*: 'They would have to have acted fast to stop a real disaster.' Mr. Webb, a former naval

officer in the reactor division of the US Atomic Energy Commission, gave crucial advice on the Three Mile Island accident in Pennsylvania in 1979.

He said: 'A failure in the coolant system would mean that there was no way to vent the heat being built up. If they hadn't got to it quickly enough there would have been some form of non-nuclear explosion, but with enormous energy potential. It would be the same scenario as a smaller-scale Three Mile Island or a mini-Chernobyl.'

It is conceivable that enough radioactivity could be released to contaminate an area of 2,000 square miles. The risk increases with the age of the machine.'

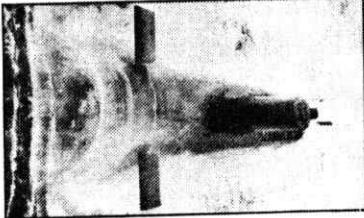
The Resolution, the oldest of Britain's four Polaris submarines, was commissioned in 1967 and had its third major refit in 1984. It is due for a two-year-long refit or decommission next year when it will be more than 21 years old.

Safety regulations in the event of a sub-

marine reactor accident in the Clyde area specifically mention the possibility of some failure in the primary coolant water system.

But the prepared public announcement, to be broadcast on BBC Radio and TV and Scottish Television, according to the official document, called 'Clydebase', reads: 'We have been asked to make the following urgent announcement. There has been a slight leak in the atomic reactor of a nuclear submarine which is at present resulting in a small release of radioactive products... There is no danger to the general public.'

Yesterday's Defence Ministry statement said: 'There was no hazard to the crew or general public. Normal precautionary measures and safety procedures were taken. We don't actually give details, because any information of that nature might be useful to people who shouldn't have it.'



Resolution: Back at sea.