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THE PRIME MINISTER

6 March 1986

PRIME MINISTER'S
PERSONAL MESSAGE
SERIAL No. T 44/86

Dear Carol,

When we met on 19 February you expressed some concern about incidents at Sellafield and radiation pollution in and around Ireland. I said that I would write setting out the facts about Sellafield.

The nuclear industry in Britain is very conscious of the vital importance of maintaining high standards of safety, and its record is excellent. It has to operate within discharge limits which are based on the system of dose limitation recommended by the International Commission on Radiological Protection (ICRP) as endorsed by the National Radiological Protection Board (NRPB). These limits are supplemented by a requirement on all sections of the industry to keep discharges as low as reasonably achievable, known as ALARA.

It is important to keep the recent incidents at Sellafield in proper perspective. Almost one person in ten at Sellafield is employed on some aspect of health and safety at the plant. The discharges to the sea and atmosphere at Sellafield are subject to certificates of authorisation by the Department of the Environment and the Ministry of Agriculture, Fisheries and Food, and have been progressively reduced as plant improvements have taken place. The prosecution of British Nuclear Fuels (BNF) in respect of the November 1983 discharge to sea was for a failure to meet ALARA requirements, not for exceeding permissible limits. Substantial investment is going into additional effluent

treatment and storage plant which will further lower discharges from Sellafield. Ten years ago, alpha and beta discharges from reprocessing operations stood at 1,600 curies and 183,500 curies respectively. In 1984, the figures were 400 curies and 32,000 curies and they are expected, in five years time, to be less than 20 curies and 8,000 curies respectively for alpha and beta discharges.

The release to the Irish Sea on 23 January of about 440 kilogrammes of very low level radioactivity has been assessed by the Radiochemical Inspectorate as radiologically insignificant, presenting no hazard to the workforce or to the public on either side of the Irish Sea. Similarly, the interim assessment by the Health and Safety Executive on the incident on 5 February, when a pump taking samples of radioactive material from the reprocessing stream failed, giving rise to a release of plutonium activity, was that there was no significant effect on the environment. The amount of activity discharged, 50 micro-curies, was very small, only about a fifth of the daily dose from natural sources.

More recently, Sellafield reported the leak of roughly 250 gallons of mildly contaminated water on 18 February which was contained within a concrete-lined trench designed for that purpose. No airborne radioactivity was detected and although two workers were contaminated during the removal of protective clothing after repairing the leak, this was removed by washing. There was also an incident in a building which handles mixed plutonium/uranium oxide on 1 March in which a number of workers were exposed to higher than normal aerial activity. Ventilation from the building is through a double filter system and monitoring equipment indicated that there was no abnormal release of activity outside the building, and no risk whatsoever to the remainder of the workforce or to the public.

It is important not to let these relatively minor incidents, whose importance has been exaggerated in the media

out of all proportion to the real risks to health and safety in an apparent effort to discredit the nuclear industry, overshadowed the fact that BNF has substantially reduced its discharges in recent years at Sellafield and that further improvements will occur as new plant is brought into operation. On the other hand it would be wrong to ignore the public concern which has been aroused by recent incidents and, as I told you, I very much welcomed the decision by the Health and Safety Executive to carry out a thorough and systematic examination of the processing plant at Sellafield. The examination will take six or seven months, and the findings of the review will be made public. I hope the results of this extensive audit will help to restore public confidence and bring a greater sense of balance to discussion of Sellafield in the future.

You also expressed concern about the recent disclosures about radioactive discharges from Sellafield in the 1950s. Contrary to some allegations, there was no concealment by either BNF or the Government. The discharges were public knowledge in 1955 and were reported in the Press. Their under-estimation at the time, however, has not given rise to significant changes in the calculations of estimated doses and risks to young people which the NRPB prepared for the Black Committee in 1984. This is because the NRPB based their calculations on assumptions based on later environmental monitoring that bigger discharges may have occurred than were thought at the time. Their re-assessment has been passed to the Committee on the Medical Aspects of Radiation in the Environment (COMARE) which has been asked by the Government to assess the health significance of these revised estimates.

It would be wrong for me to prejudge COMARE's findings, but NRPB's provisional conclusions are that the new information does not invalidate the conclusions reached by the Black Committee. COMARE has already begun its assessment of the new information, and expects to complete its report, which will be published, within a matter of months.

You will also be aware of last Friday's newspaper allegations about the potential effect of an earth tremor on the Chapelcross and Calder Hall power stations. Perhaps the most worrying aspect of those allegations was the suggestion that BNF had put improper pressure on its engineering consultants to revise their assumptions in order to justify the continued operation of the stations. BNF strenuously denied this, and have stated, as the consultant engineer himself acknowledged, that the original computer programme was simplistic and flawed. Furthermore the NII have pointed out that they did, as a matter of course, engage their own firm of consultants to examine the assumptions used so as to form their own assessment of the risk. The further allegation that it was impossible to check the effects of the 1979 tremor was also inaccurate. The bolts supporting the reactor pressure vessel were inspected when the reactors were shut down, and showed no evidence of damage. It is, of course, true that those stations were designed and built to the engineering standards of the 1950s, and the possibility of earth tremors was not taken specifically into account. Nevertheless, those earlier standards provided substantial margins of safety, and the NII are content that both reactors are safe for continued operation.

I hope that the foregoing will go some way to reassuring you about BNF's operations at Sellafield. I can assure you that neither HMG nor the nuclear industry is complacent. The United Kingdom has a rigorous approach to design, giving defence in depth, and there is strict regulation and monitoring of operational safety and discharges to the environment. The average amount of radiation received by the UK public from the nuclear industry is only about one-tenth of 1 per cent of that from natural sources, and for the Irish public it is of course very much less.

Yours sincerely
Margaret Thatcher