Scottish CND News

Submarine accident comparison with Chernobyl

The manual "Reactor Accidents" produced by the Department of Nuclear Science and Technology at the Royal Naval College Greenwich in October 1992 says:

"Following a primary containment failure accident where the pressure hull is breached and secondary containment by-passed, then the consequence is a sudden release of
4 x 10^16 - 4 x 10 ^18 Bq of mixed fission products (including 4 x 10^14 - 4 x 10^16 Bq of I131) direct to the environment in less than an hour."

Ten years after Chernobyl, the OECD Nuclear Energy Agency said that the accident resulted in a total release of 1.1 x 10^19 Bq fission products of which 1.8 x 10^18 Bq was Iodine 131.

Comparing these figure shows that the total amount of fission products released by a submarine primary containment failure accident would be between 0.36 per cent and 36 per cent of the release from Chernobyl. The amount of Iodine 131 would be between 0.02 per cent and 2 per cent of the amount released from Chernobyl.