Chapter 49

Radioactive Cargoes

If a radioactive cargo is not ‘excepted matter’, the consignment is not covered by P&I Club Rules and the consignor must arrange nuclear liability insurance and produce a certificate of financial security.

Transport of radioactive materials is a well-regulated international activity and it may be surprising to many people to know that over 10,000,000 radioactive packages are transported around the world each year, with up to 4,000,000 of these by sea. Records show that radioactive material transport is a highly safe activity in terms of people and the environment because of the regulatory standards to which the carriage is subject internationally and the careful application of them by industry and transporters. As with the transport of all hazardous materials, the carrier places great reliance on the consignor to declare the materials correctly. In the case of liability insurance, there is an additional question of whether or not the consignment is ‘excepted matter’. If it is not ‘excepted matter’, the consignment is not covered by P&I Club Rules and the consignor must arrange nuclear liability insurance and produce a certificate of financial security from their government before the consignment can be moved.
The following case involving an international shipment highlights the fact that, while Members may think they know that a certain shipment is probably ‘excepted matter’, they should always consult the Club for their nuclear consultant’s confirmation.

Two consignments of uranium – one of uranium trioxide and one of uranium metal ingots – were shown on the dangerous goods note as being *Radioactive Material, Low Specific Activity (LSA-11), N.O.S.* and as being ‘fissile excepted’. However, the dangerous goods note also showed that, from the weights of uranium and of the U235 fissile isotope, the uranium trioxide was 5.55% fissile and the uranium ingots were 1.23% fissile. In each case, the limit for the quantity involved to be fissile excepted was 1.0%. When the Member refused these consignments, the consignor reverted with revised weights for the U235 fissile isotope that brought both consignments within the 1.0% limit. The Club’s nuclear consultant was able to confirm that the revised figures were correct by obtaining the relevant data independently from the consignee (who he knew) by asking them what they were expecting to receive.

In this case, the outcome was satisfactory, but if the U235 fissile isotope weights in the first dangerous goods note had been correct and the packages had been stowed on a vessel in the proximity of other fissile material, there would have been a real risk of a ‘criticality excursion’ (chain reaction).

The Association’s Rule 5, Exclusion of Nuclear Risks, applies.