

Managing the Safety–Security Interface in the Transport of Radioactive Material: The Australian Context

The regulatory framework governing the transport of radioactive material in Australia is established through a combination of Commonwealth, State, and Territory legislation. There are eleven competent authorities responsible for the safe transport of radioactive material: three at the Commonwealth level, six at the State level, and two at the Territory level.

Australia applies the International Atomic Energy Agency (IAEA) Regulations for the Safe Transport of Radioactive Material (SSR-6, Rev. 1, 2018 edition) through the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Code for the Safe Transport of Radioactive Material 2019 (the Transport Code). This Code governs transport by road, rail, and inland waterways not covered by maritime legislation. All States and Territories implement the Transport Code through their respective regulatory systems.

The security of radioactive material is governed by two Commonwealth Agencies namely, ARPANSA and ASNO (Australian Safeguards and Non-proliferation Office). ARPANSA regulates the security of radioactive sources through ARPANSA Code of Practice for the Security of Radioactive Sources 2019 (Security Code), which is adopted across all jurisdictions as part of their regulatory frameworks. ASNO regulates security of nuclear material including uranium, thorium and plutonium through the Nuclear Non-Proliferation (Safeguards) Act 1987, and the object of which is to give effect to certain obligations of Australia as party to the Non-Proliferation Treaty (NPT), Australia's safeguards agreement with the IAEA, and other bilateral safeguards agreements; and certain obligations that Australia has as a party to the Convention for the Physical Protection of Nuclear Materials (CPPNM).

The security of dangerous goods in air transport, including Class 7 radioactive materials, is governed by the Aviation Transport Security Act 2004, which aims to prevent unauthorised access to aircraft and airport facilities.

In Australia, the transport of radioactive material necessitates a well-defined interface between safety and security, both of which share the overarching objective of protecting people and the environment from the harmful effects of radiation. Recognising this shared purpose, ARPANSA underscores the importance of regulatory complementarity where safety and security requirements intersect. While such overlap can enhance protective outcomes, it may also result in conflicting measures. ARPANSA therefore promotes coordinated regulatory approaches that ensure alignment and minimise potential inconsistencies.

This paper outlines key elements for managing safety-security interface in the transport of radioactive material by applying a risk-informed and evidence-based approach. It addresses the assessment of transport safety and security plans, safety and security culture, compliance monitoring, emergency preparedness and response, delineation of roles and responsibilities, information management, and training and competency requirements. A case study demonstrating the effectiveness of the safety and security interface is also included.

Country or International Organization

Instructions

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