

IRRS Good Practices

Review and Assessment (Module 6)

Review and assessment for transport

Canada – Initial Mission

Mission Date: September 2019

Good Practice

The peer reviews adopted for certification of packages minimized the risk associated with the certification of higher risk designs and increased reliability and consistency of certificates issued by the Canadian Nuclear Safety Commission (CNSC). They also improved communication and knowledge sharing among Certification Engineers.

Observation

The CNSC internal process “Peer Review of Radiation Devices, Class II Prescribed Equipment and Transport Certificate Applications” documented the process required for peer review of a technical assessment for certification performed by a Certification Engineer.

Basis

TS-G-1.5 para. 2.10 states that “*The competent authority should be able to independently assess and verify the technical and test data submitted by an applicant. Such independent assessment may cover nuclear criticality control, heat transfer, radiation protection, structural analysis and risk studies, and all related measures of the management system of the applicant*”.

IAEA Comments/Highlights

CNSC was responsible for the review and assessment of applications for package certification, for the issue of transport licences and for evaluation of compliance through audits and inspections.

A review of the management system of the applicant was part of the approval process of the package and could be reviewed as part of the reissuance of the certificate of approval. The CNSC Certification Engineers followed the internal documents “Technical Assessment of Transport Certificate Applications”, when assessing certificate applications, and “Case Management: Process Transport Licence Application”, when assessing the licence

applications. CNSC issued the regulatory document, RD-364, Joint Canada-United States Guide for Approval of Type B(U) and Fissile Material Transportation Packages which provides guidance to the applicant as well as to the CNSC for conducting the review and assessment. This process also included independent internal peer review which was not common practice in transport licensing and the certification of packages in IAEA Member States.

Multilateral approval of packages of foreign countries were performed either by independent certification or validation of the approval certificate issued by the competent authority in the country of origin. In both cases CNSC followed the same certification process for multilateral approval. The assessment of the Safety Analysis Report for certification consisted of a technical evaluation of the report and of independent analysis performed on some of the requirements for the package such as the prevention of criticality in case of certification of fissile packages.

The peer review process allowed for knowledge sharing among CNSC technical staff and contributed to developing and maintaining the necessary competence and skills of staff of the regulatory body, as described in paragraph 4.13 of GSR Part 1 (Rev. 1).