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Control of the Export and Import of Risk-Significant Radioactive Sources

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Document availability
This document can be viewed on the CNSC Web site at nuclearsafety.gc.ca. To order a printed copy of the document in English or French, please contact:

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CONTROL OF THE EXPORT AND IMPORT OF RISK-SIGNIFICANT RADIOACTIVE SOURCES

1.0 OVERVIEW

Canada's export and import control program for risk-significant radioactive sources includes consideration of the government's commitment to two key International Atomic Energy Agency (IAEA) documents: the *Code of Conduct on the Safety and Security of Radioactive Sources* (the Code) and the *Guidance on the Import and Export of Radioactive Sources* (the Guidance). Under the leadership of the IAEA, the Code and the Guidance were developed by the international community to augment the safety and security of radioactive sources around the world. In support of the IAEA and its efforts to develop a global control regime, the Government of Canada committed to working to meet the provisions contained within the Code, including implementing export and import controls consistent with the provisions of the Guidance.

As Canada's nuclear regulatory authority, the Canadian Nuclear Safety Commission (CNSC) is responsible for controlling the export and import of risk-significant radioactive sources. Through its role in implementing export and import control measures, the CNSC enhances national and international safety and security by ensuring that only authorized persons are recipients of risk-significant radioactive sources. The CNSC's program is consistent with the Code and Guidance, which have the following objectives:

1. Achieving a high level of safety and security regarding risk-significant radioactive sources;
2. Reducing the likelihood of accidental harmful exposure to risk-significant radioactive sources or the malicious use of such sources to cause harm to individuals, society and the environment; and
3. Mitigating or minimizing the radiological consequences of any accident or malicious act involving risk-significant radioactive sources.

2.0 RISK-SIGNIFICANT RADIOACTIVE SOURCES

Canada is a global leader in the manufacture, supply, and export of risk-significant radioactive sources that are subject to the provisions of the Code and Guidance. As such, the Government of Canada is a strong proponent of the establishment and maintenance of an effective, efficient and harmonized international regime to ensure the safety and security of such sources.

Risk-significant radioactive sources reflect the Code's categorization of radionuclides based on their threshold activity. Table I provides details of the threshold activities in terabecquerels (TBq) for both Category 1 and Category 2 radioactive sources. Category 1 and Category 2 radioactive sources are defined as risk-significant radioactive sources, for the purpose of the CNSC export and import control program.

Table I: Threshold Activities for Category 1 and Category 2 Radioactive Sources

Nuclear Substance	Category 1 (TBq)	Category 2 (TBq)
Americium 241	60	0.6
Americium 241/Beryllium	60	0.6
Californium 252	20	0.2
Curium 244	50	0.5
Cobalt 60	30	0.3
Cesium 137	100	1.0
Gadolinium 153	1 000	10.0
Iridium 192	80	0.8
Promethium 147	40 000	400.0
Plutonium 238	60	0.6
Plutonium 239/Beryllium	60	0.6
Radium 226	40	0.4
Selenium 75	200	2.0
Strontium 90 (Yttrium 90)	1 000	10.0
Thulium 170	20 000	200.0
Ytterbium 169	300	3.0

3.0 CNSC EXPORT AND IMPORT CONTROL PROGRAM

The CNSC export and import control program is designed to meet the provisions of the Code and the Guidance, in addition to the regulatory requirements under the *Nuclear Safety and Control Act* (NSCA). Key elements of this regulatory program include:

1. A licensing and compliance process for the export of risk-significant radioactive sources;
2. A control process for the import of risk-significant radioactive sources; and
3. Implementation of bilateral administrative procedures with foreign regulatory authorities.

3.1 Export Licensing

A CNSC licensee authorized to use or possess a risk-significant radioactive source must apply for and be issued an export licence before exporting that source. The licensee must ensure the information provided in an application is comprehensive enough to enable the CNSC to evaluate effectively the request for authorization to export. The CNSC assesses the information provided by the applicant to ensure that the proposed export meets national requirements and international obligations. For Category 1 radioactive source exports, the CNSC consults with the importing government authority prior to completing the assessment of an application.

Decisions on issuance of an export licence are made by a Designated Officer of the CNSC. Export licences may contain any term or condition considered necessary for the purpose of the *Nuclear Safety and Control Act*, including requirements for providing prior notification of shipments.

3.2 Import Controls

The CNSC does not issue specific licences for the import of risk-significant radioactive sources. CNSC licensees that are authorized to possess risk-significant radioactive sources may import such sources consistent with any general import authorization for those sources that exists in their possession licences.

The CNSC implements additional regulatory controls on imports of risk-significant radioactive sources to ensure that it can implement bilateral responsibilities required under the Code and Guidance. These compliance controls include the review of prior import notifications received from foreign exporters, and decisions on requests received from foreign regulators for CNSC consent to the import of foreign-supplied Category 1 radioactive sources.

3.3 Bilateral Administrative Procedures

Implementation of radioactive source export and import controls consistent with the Code and Guidance requires cooperation and consultation between regulatory authorities in the exporting and importing countries. The CNSC may enter into bilateral administrative arrangements with regulatory authorities in countries with which Canada has trade in risk-significant radioactive sources and with countries that share Canada's commitments to strong international controls on transfers of radioactive sources. The objective of these arrangements is to establish harmonized bilateral procedures and communication channels for the efficient implementation of export and import controls, and thus to reduce the risk of undue delays in regulatory authorizations.

4.0 APPLYING FOR A LICENCE TO EXPORT A RISK-SIGNIFICANT RADIOACTIVE SOURCE

The Application for a Licence to Export a Risk-Significant Radioactive Source can be found on the CNSC website. Instructions on how to complete the application form are provided as well.

4.1 Prerequisites

Applicants for an export licence must hold a licence issued by the CNSC to possess the risk-significant radioactive sources in question before CNSC assessment of an export application can be completed.

4.2 Export Licence Constraints

Unless otherwise authorized by the CNSC:

1. A separate application is required for each export transaction or specific set of transactions that are anticipated to occur within a specific period of time.

2. Each export licence issued will pertain to one or more importers, but only in a single country.
3. Separate export licences will be issued for Category 1 and Category 2 radioactive sources.

Each transaction may involve multiple shipments carried out over a specified period of time.

4.3 Processing Time

In general, a CNSC decision on issuance of an export licence can be expected to be taken within three (3) weeks of receipt of an application. Incomplete applications cannot be processed and may result in delays in licensing.

The time required for processing an application for an export licence is affected, in part, by the scope of international communications and consultations that are required. The length of time for completing these will depend on a variety of factors, such as the state of the importing country's regulatory import/export control program, the availability of information on the importer, and whether the export item is a Category 1 or Category 2 source. As a result, additional time may be required in some cases to process an export licence application. Applicants are encouraged to apply for an export licence at the earliest opportunity.

5.0 ASSESSMENT CRITERIA

The assessment of the application to export risk-significant radioactive sources involves, but is not limited to:

1. Review of risk associated with the end-user and consignees involved in the transfer to provide assurances that the sources will not be diverted for malicious purposes. Open source and classified information may be used in this determination.
2. Review of the regulatory capability of the Importing State to provide assurances that the sources will be managed safely and securely.
3. Obtaining import consent from the Importing State Authority for all applications to export Category 1 radioactive sources from Canada to further verify the end-users' authority to receive and possess the sources.

6.0 BILATERAL ADMINISTRATIVE ARRANGEMENTS

To assist the international implementation of the IAEA Code and Guidance in a harmonized manner, the CNSC may enter into bilateral Administrative Arrangements with regulatory authorities in countries with which Canada has trade in risk-significant radioactive sources and with countries that share Canada's commitments to international controls on transfers of radioactive sources. These Arrangements establish measures to ensure that imports and exports of radioactive sources between Canada and these countries are conducted in an efficient, effective and harmonized manner, and facilitate the sharing of regulatory information related to such imports and exports.

7.0 CONTACT INFORMATION FOR THE CNSC EXPORT AND IMPORT CONTROL PROGRAM

To obtain further information on the CNSC export and import control program, please contact:

Licensing Administrator, Radioactive Sources Export/Import Controls
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GLOSSARY

For the purpose of this document, the following terms and definitions apply.

Importer
A recipient authorized to receive and possess an exported risk-significant radioactive source.

Intended end use
The ultimate purpose of the imported source as declared to the exporter by the importer (e.g., industrial irradiation, industrial radiography, teletherapy, blood irradiation).

Intermediate consignee
A person who is not the importer, but who handles the radioactive source at some point in its delivery to the importer. An entity associated solely with the transport of the source (e.g., carrier) is not considered an intermediate consignee.

Risk-significant radioactive source
Any radionuclide identified as a Category 1 or Category 2 radioactive source in Table I of Annex I of the IAEA *Code of Conduct on the Safety and Security of Radioactive Sources*.

TBq
Terabecquerels

Transaction
Any action involving an import or an export.

ASSOCIATED DOCUMENTS

1. *Code of Conduct on the Safety and Security of Radioactive Sources* (IAEA/CODEOC/2004). International Atomic Energy Agency (IAEA), Vienna, 2004.
2. *Guidance on the Import and Export of Radioactive Sources* (IAEA/CODEOC/IMP-EXP/2005). IAEA, Vienna, 2005.