



# Certification of Transport Packages and Special Form Radioactive Material

January 2018





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The Canadian Nuclear Safety Commission (CNSC) regulates the use of nuclear energy and materials to protect the health, safety and security of Canadians and the environment; and to respect Canada's international commitments on the peaceful use of nuclear energy.

Pursuant to the [\*Packaging and Transport of Nuclear Substances Regulations, 2015\*](#), the CNSC is authorized to certify transport package designs, special form radioactive material and low dispersion radioactive material. To achieve this, the CNSC has incorporated into its regulations, the International Atomic Energy Agency's transport regulations, namely the [\*Regulations for the Safe Transport of Radioactive Material, 2012 Edition\*](#), Safety Standards Series SSR-6.

Two of the most common certified designs in use today are Type B packages and packages designed to contain fissile material. Type B packages contain radioactive material that emit large activities of radiation and must be certified by the CNSC. Examples include packages designed to transport cobalt therapy sources and exposure devices.

The hazards are controlled by the strength of the package, which is designed to pass stringent impact, drop and puncture tests, an engulfing fire test, and immersion in water. Type B packages may be constructed of steel with depleted uranium or lead as shielding. The weight can vary from about 25 kg to 35 tonnes, or more, depending on the radioactive activity of the material it is designed to contain. The shape of the package can also vary.

The CNSC also revalidates package design certificates that are issued by other countries. Occasionally, special arrangements may also be approved by the CNSC, under which consignments that do not satisfy all the applicable requirements may be transported.

What follows is the list of all special form radioactive material and package designs that are certified by the CNSC for use in Canada, as of January 31, 2018. Those highlighted in red color font will expire within the next 12 months.



### Valid Special Form Certificates

Certificate Number	Designer/Manufacturer	Source Model	Issue Date	Expiry Date
CDN/0001/S-73 (Rev. 18)	Nordion (Canada) Inc.	Capsule Assemblies listed in Appendix A	2017-05-29	2021-05-31
<b>CDN/0004/S-96 (Rev. 11)</b>	<b>Nordion (Canada) Inc.</b>	<b>C-146; C-151 and XC-325 Teletherapy Source Capsules</b>	<b>2014-08-13</b>	<b>2018-09-30</b>
CDN/0009/S-96 (Rev. 9)	Best Theratronics	TC-346	2016-10-28	2021-10-31
CDN/0010/S-96 (Rev. 10)	Nordion (Canada) Inc.	C-188 Sealed Source, Types 1 to 13 inclusive	2017-06-21	2021-09-30
CDN/0011/S-73 (Rev. 8)	Best Theratronics	C-161 Type 8 Capsule and C-1000 Capsule	2017-07-07	2022-06-30
CDN/0014/S-96 (Rev. 6)	Nordion (Canada) Inc.	C-198 Capsule	2015-10-21	2020-10-31
CDN/0015/S-96 (Rev. 5)	Nordion (Canada) Inc.	C-168 Capsule	2016-05-18	2021-05-31
<b>CDN/0017/S-96 (Rev. 3)</b>	<b>Best Theratronics</b>	<b>C-378 Capsule</b>	<b>2014-04-28</b>	<b>2018-04-30</b>
CDN/0019/S-96 (Rev. 3)	Nordion (Canada) Inc.	C-442 Capsule	2016-10-28	2021-11-30
CDN/0034/S-96 (Rev.0)	Best Theratronics	C1610	2014-11-19	2019-11-30
CDN/0035/S-96 (Rev.0)	Best Theratronics	C3100	2014-11-19	2019-11-30
CDN/0036/S-96 (Rev.0)	Nordion (Canada) Inc.	C-446	2017-01-16	2022-01-31



### Canadian Package Design Certificates

Certificate Number	Designer/Manufacturer	Package Model	Issue Date	Expiry Date
<b>CDN/1039/B(U)-96 (Rev. 8)</b>	<b>Nordion (Canada) Inc.</b>	<b>F-376 Transport Package, Serial Nos. 1 and up</b>	<b>2016-05-26</b>	<b>2018-04-30</b>
<b>CDN/1040/B(U)-73 (Rev. 6)</b>	<b>Gammamat</b>	<b>TI Radiography Exposure Device, Serial No. D/DB/0005B-22-603</b>	<b>2014-06-12</b>	<b>2018-05-31</b>
CDN/2003/B(U)-73 (Rev. 18)	Best Theratronics	F-143 Transfer Case, Serial Nos. 20, 50, 53, 54, 59, 62, 64; and F-158 Transfer Case, Serial Nos. 3, 4, 5, 6, 8, 9, 10, 14	2016-03-04	2020-03-31
<b>CDN/2005/B(U)-73 (Rev. 16)</b>	<b>Nordion</b>	<b>Shipping Containers F-144, Serial Numbers 1, 5, 9; and F-144-AC, Serial No. 3</b>	<b>2013-12-16</b>	<b>2018-05-31</b>
<b>CDN/2009/B(U)-73 (Rev. 14)</b>	<b>Nordion</b>	<b>F-147 Transfer Case, Serial Nos. 18, 24, 26, 27, 34-36, 39-48, 50, 52, 54, 56-60</b>	<b>2014-11-13</b>	<b>2018-11-30</b>
CDN/2012/B(U)-73 (Rev. 24)	Nordion (Canada) Inc.	F-168 Shipping Flask, Serial Nos. 20, 21, 28, 31, 32, 33, 36, 38, 39, 42 to 52 inclusive.	2015-12-02	2020-03-31
CDN/2044/B(U)-73 (Rev. 11)	Best Theratronics	F-127-X J-Rod Shipping Container, Serial Nos. 49, 51, 53, and 55	2015-02-23	2019-02-28
CDN/2045/B(U)-73 (Rev. 19)	Nordion (Canada) Inc.	F-168-X Shipping Flask, Serial Nos. 22-X, 23-X, 24-X, 25-X, 26-X, 41-X	2016-02-22	2020-04-30
CDN/2047/B(U)-73 (Rev. 15)	Nordion (Canada) Inc.	F-231, Serial Numbers 7, 8 and 9	2015-03-17	2019-04-30
CDN/2048/B(U)F-73 (Rev. 9)	Atomic Energy of Canada Limited	F-257 Shipping Package, Serial No. 002	2016-07-29	2021-09-30
<b>CDN/2049/B(U)-96 (Rev. 10)</b>	<b>Ontario Power Generation</b>	<b>Tritiated Heavy Water Transportation Package</b>	<b>2015-02-25</b>	<b>2018-02-28</b>
CDN/2051/B(U)-96 (Rev. 14)	Nordion (Canada) Inc.	F-271 Transport Package, Serial Nos. 1 and up	2015-12-09	2021-01-31
<b>CDN/2052/B(U)-96 (Rev. 7)</b>	<b>Nuclear Waste Management Organization</b>	<b>Used Fuel Transportation Package (UFTP)</b>	<b>2013-07-29</b>	<b>2018-07-31</b>
CDN/2054/B(U)-96 (Rev. 9)	Ontario Power Generation	Dry Storage Container (DSC) Transportation Package	2017-11-20	2021-07-31
CDN/2055/B(U)-96 (Rev. 11)	Nordion	F-339 Transport Package	2015-06-08	2020-06-30
CDN/2058/B(U)-96 (Rev. 9)	Ontario Power Generation	Radioactive Filter Transportation Package (RFTP)	2015-04-16	2020-04-30
<b>CDN/2060/B(U)-85 (Rev. 6)</b>	<b>Atomic Energy of Canada Limited</b>	<b>AECL (CRL) Tritide Package, Serial Nos. 2060-01, 2060-02, 2060-03</b>	<b>2014-10-28</b>	<b>2018-10-31</b>
<b>CDN/2061/B(U)F-85 (Rev. 9)</b>	<b>Atomic Energy of Canada Limited</b>	<b>Irradiated Material Transportation Package</b>	<b>2016-09-27</b>	<b>2018-05-31</b>
CDN/2062/B(U)-96 (Rev. 8)	Best Theratronics	F147(96) Transfer Case, Serial Nos. 61 and higher	2015-02-23	2019-02-28
CDN/2071/B(U)-96 (Rev. 9)	Ontario Power Generation	Roadrunner, Serial No. Roadrunner-01	2017-09-28	2022-09-30
CDN/2072/B(U)-96 (Rev. 9)	Nordion (Canada) Inc.	F-127, F-127-X and RAI/F-127 Transport Packages, Serial Numbers 59 and up	2016-01-28	2020-04-30
CDN/2076/B(U)-96 (Rev. 11)	Best Theratronics	F-430/GC-40; F-430/GC-1000 and GC-3000; F-430/CIS model IBL 437C; F-430/CIS model IBL 637; F-430/Molsgaard model GC-2000; and F-430/Gammator M38	2015-06-08	2019-02-28
CDN/2077/B(U)-96 (Rev. 6)	Nordion (Canada) Inc.	F-231 and F-231-MK2, Serial Nos. 11 and up	2016-09-08	2021-11-30

Certificate Number	Designer/Manufacturer	Package Model	Issue Date	Expiry Date
CDN/2078/B(U)-96 (Rev. 7)	Nordion (Canada) Inc.	F-458/F-245; F-247; F-251; F-251 MKII; F-318 and F-448	2015-09-14	2020-10-31
CDN/2080/B(U)-96 (Rev. 5)	Nordion (Canada) Inc.	F-168/F-444 Transport Container	2017-02-09	2019-11-30
CDN/2081/B(U)-96 (Rev. 4)	Nordion (Canada) Inc.	F-168 (1996) and F-168-X (1996), Serial Nos. 53 and up	2016-09-16	2021-11-30
CDN/2083/B(U)-96 (Rev. 8)	Best Theratronics	F-431/GC-1000; F-431/GC-3000 and F-431/Gammator M38	2016-11-28	2021-11-30
CDN/2084/B(U)-96 (Rev. 2)	Best Theratronics	F-423 Transport Package	2015-05-06	2020-06-30
CDN/2087/B(U)-96 (Rev. 4)	Ontario Power Generation	Multi-Purpose Transportation Package: MPTP-1, MPTP-2, MPTP-X, MPTP-SF	2017-09-25	2022-09-30
CDN/2091/ B(U)-96 (Rev. 2)	Aspect Technology Ltd.	12K Transport Package, Maxibulk Inner Container; Minibulk Inner Container; 10 Channel Inner Container	2017-11-14	2019-11-30
<b>CDN/2093/ B(U)-96 (Rev. 0)</b>	<b>Ontario Power Generation</b>	<b>Retube Waste Container Transportation Package (RWCTP)</b>	<b>2014-01-23</b>	<b>2019-01-31</b>
CDN/2094/B(U)-96 (Rev. 1)	Nordion (Canada) Inc.	F-522	2017-02-09	2020-03-31
CDN/3012/B(M)-96 (Rev. 12)	Nordion (Canada) Inc.	F-279 Shipping Flask	2015-08-26	2020-09-30
CDN/5198/X-96 (Rev. 5)	N/A	Type "A" Packaging	2015-02-02	2020-11-30



## Canadian Revalidation of Package Design Certificates

Certificate Number	Designer/Manufacturer	Package Model	Issue Date	Expiry Date
CDN/E030/-96 (Rev. 17)	QSA Global Inc.	741-OP Gamma Ray Projector	2015-07-30	2020-10-31
CDN/E033/-96 (Rev. 16)	QSA Global Inc.	680-OP Exposure Device	2015-07-20	2020-10-31
CDN/E044/-96 (Rev. 20)	Source Production & Equipment Co., Inc.	C-1 Source Changer [MDS Nordion F-365]	2016-10-25	2021-10-31
CDN/E094/-96 (Rev. 11)	Industrial Nuclear Company Inc.	IR-100	2015-10-05	2019-10-31
<b>CDN/E095/-85 (Rev. 3)</b>	<b>AEA Technology QSA Inc.</b>	<b>770 Source Changer, Serial No. 12</b>	<b>2013-12-03</b>	<b>2018-03-31</b>
CDN/E130/-73 (Rev. 10)	N/A	Cylinder Model Nos. 30B	2016-08-25	2021-09-01
CDN/E150/-96 (Rev. 23)	Columbiana Hi Tech	UX-30	2015-05-07	2019-12-31
CDN/E160/-85 (Rev. 8)	BWX Technologies	5X22 Transport Package	2017-12-11	2019-10-31
CDN/E170/-96 (Rev. 6)	Source Production & Equipment Co.	SPEC-150 Exposure Device	2015-06-18	2020-06-30
CDN/E173/-96 (Rev. 11)	NAC International, Inc.	NAC-LWT Shipping Container	2017-03-21	2020-04-30
CDN/E175/-96 (Rev. 8)	QSA Global Inc.	650L Source Changer	2015-10-29	2020-11-30
<b>CDN/E177/-96 (Rev. 9)</b>	<b>Transnucléaire</b>	<b>TN-BGC1 Transport Package</b>	<b>2016-05-10</b>	<b>2018-06-30</b>
CDN/E184/-96 (Rev. 3)	Industrial Nuclear Company Inc.	OP-100	2014-05-22	2019-02-28
CDN/E189/-96 (Rev. 6)	Energy Solutions	10-160B: Serial Nos. Trillium TP-01 and TP-02	2015-10-23	2020-10-31
<b>CDN/E192/-96 (Rev. 8)</b>	<b>Global Nuclear Fuel</b>	<b>BU-D Transport Container</b>	<b>2014-06-17</b>	<b>2018-11-30</b>
CDN/E193/-96 (Rev. 3)	Source Production & Equipment Co., Inc.	SPEC-300 Radiography Camera	2015-04-30	2020-04-30
<b>CDN/E195/-96 (Rev. 7)</b>	<b>UJP PRAHA a.s.</b>	<b>UKI-4-135 Source Changer</b>	<b>2013-12-06</b>	<b>2018-12-31</b>
CDN/E197/-96 (Rev. 4)	NTP Radioisotopes (Pty) Ltd.	ERIKA Transport Package	2015-07-31	2019-10-12
CDN/E199/-96 (Rev. 14)	QSA Global Inc.	880 Delta; 880 Sigma; 880 Elite; 880SC	2016-06-17	2021-06-30
CDN/E201/-96 (Rev. 3)	Cameco Corporation	48X and 48Y Cylinders	2016-06-01	2021-05-31
<b>CDN/E202/-96 (Rev. 3)</b>	<b>Global Nuclear Fuel</b>	<b>RAJ-III</b>	<b>2013-07-30</b>	<b>2018-04-09</b>
CDN/E207/-96 (Rev. 5)	Global Nuclear Fuel	NPC Transport Package	2015-12-04	2020-11-30
CDN/E210/-96 (Rev. 5)	TN International	TNF-XI	2017-01-23	2021-12-31
CDN/E213/-96 (Rev.7)	CROFT Associates Ltd.	SAFSHIELD 2773A Transport Package	2017-11-30	2020-06-30
CDN/E216/-96 (Rev. 5)	Westinghouse Electric Company	Traveller STD and Traveller XL Package	2014-11-27	2020-03-31
CDN/E217/-96 (Rev. 5)	QSA Global Inc.	976A; 976C; 976F	2015-11-23	2019-07-31
CDN/E218/-96 (Rev. 5)	REVISS Services (UK) Limited	R7008	2016-07-29	2020-06-30
CDN/E219/-96 (Rev. 6)	Oak Ridge Y-12 National Security Complex	ES-3100	2016-03-18	2020-09-30
CDN/E224/-96 (Rev. 2)	NTP Radioisotopes (Pty) Ltd.	JANE Transport Container	2017-11-21	2023-01-02
CDN/E225/-96 (Rev. 2)	Advanced Nuclear Fuel Corp.	ANF-50	2015-08-27	2020-01-31
CDN/E227/-96 (Rev. 2)	TN International	TNF-XI	2017-01-23	2021-12-31



<b>Certificate Number</b>	<b>Designer/Manufacturer</b>	<b>Package Model</b>	<b>Issue Date</b>	<b>Expiry Date</b>
CDN/E229/-96 (Rev. 2)	Global Nuclear Fuel	RAJ-II	2015-01-13	2019-11-30
CDN/E238/-96 (Rev. 2)	QSA Global Inc.	Sentry 110, 330 and 867	2016-07-18	2021-07-31
CDN/E239/-96 (Rev. 1)	Mitsubishi Nuclear Fuel Co. Ltd.	MST-30	2015-08-27	2019-09-25
<b>CDN/E241/-96 (Rev. 1)</b>	<b>QSA Global Inc.</b>	<b>702</b>	<b>2015-03-13</b>	<b>2018-06-30</b>
CDN/E243/-96 (Rev. 2)	QSA Global Inc.	360-2, 360-4, 360-4W, 360-10, 360-10W Source Changers	2016-01-12	2019-01-31
<b>CDN/E245/-96 (Rev.1)</b>	<b>NTP Radioisotopes (Europe) S.A.</b>	<b>GammaMat TSI 5 and TSI 5/1 Exposure Devices</b>	<b>2017-05-11</b>	<b>2018-03-31</b>
<b>CDN/E246/-96 (Rev. 1)</b>	<b>NTP Radioisotopes (Europe) S.A.</b>	<b>GammaMat TSI 3 and TSI 3/1 Exposure Devices</b>	<b>2017-05-11</b>	<b>2018-03-31</b>
<b>CDN/E248/-96 (Rev. 1)</b>	<b>NTP Radioisotopes (Europe) S.A.</b>	<b>GammaMat M10</b>	<b>2017-11-30</b>	<b>2018-05-31</b>
<b>CDN/E253/-96 (Rev. 1)</b>	<b>EnergySolutions</b>	<b>8-120-B</b>	<b>2017-10-04</b>	<b>2018-02-28</b>
CDN/E254/-96 (Rev. 0)	EnergySolutions	10-160B	2016-09-29	2020-10-31