NRC FORM 250P (12/05)



## United States of America

Nuclear Regulatory Commission Washington, D.C. 20555

NRC LICENSE NUMBER: IBP93

EXPIRATION DATE: May 31, 2017

Page 1 of 2

Pursuant to the Atomic Energy Act of 1954, as amended, and the regulations issued by the Nuclear Regulatory Commission (NRC) pursuant thereto; and in reliance on statements and representations heretofore made by the applicant/licensee, this license is hereby issued authorizing the licensee to import and/or export the pyproduct materials listed below, subject to the terms and conditions herein. This license is only valid if the licensee maintains the requisite NRC or Agreement State domestic licenses.

LICENSEE

Daughters of Charity Health Services of Austin d/b/a Dell Children's Medical Center of Central Texas ATTN: Robert Bowman 4900 Mueller Blvd.

Austin, Texas 78723

APPLICANT'S REFERENCE: DCMC-01

INTERMEDIATE FOREIGN AND/OR DOMESTIC CONSIGNEE(S)

NONE

**ULTIMATE FOREIGN CONSIGNEE(S)** 

NONE

OTHER PARTY(IES) TO IMPORT AND/OR EXPORT

MDS Nordion 447 March Road Ottawa, Ontario K2K 1X8 Canada

COUNTRY(IES) OF ULTIMATE DESTINATION: United States.

CONDITIONS, NOTES, AND DESCRIPTIONS OF 10 CFR PART 110, APPENDIX P. BYPRODUCT MATERIALS TO BE IMPORTED AND/OR EXPORTED (NOTE: SEE PAGE 2 FOR DEFINITIONS OF CATEGORY 1 AND CATEGORY 2)

Import, from MDS Nordion in Canada, Category 2 quantity of Cesium-137, contained in sealed source for use in Gammacell 3000 device to irradiate blood and blood products.

Daughters of Charity Health Services of Austin d/b/a Dell Children's Medical Center of Central Texas is responsible for compliance with all applicable import, export, and other domestic regulatory requirements, including all terms and conditions of domestic materials license(s).

Daughters of Charity Health Services of Austin d/b/a Dell Children's Medical Center of Central Texas must submit information required by 10 CFR §110.32(d) and pertinent documentation required by 10 CFR §110.32(h) at least 24 hours prior to shipment. Please see Page 2 Mandatory Notifications.

License expiration date is based on May 31, 2017 expiration date of the State of Texas, Department of State Health Services, Radioactive Material License L06065.

Neither this license or any right under this license shall be assigned or otherwise transferred in violation of the provisions of the Atomic Energy Act of 1954, as amended.

This license is subject to the right of recapture or control by Section 108 of the Atomic Energy Act of 1954, as amended, and to all of the other provisions of said Act, now or hereafter in effect and to all valid rules and regulations of NRC.

THIS LICENSE IS INVALID UNLESS SIGNED BELOW BY AUTHORIZED NRC REPRESENTATIVE

NAME AND TITLE: Scott Moore, Deputy Director Office of International Programs

DATE OF ISSUANCE: November 17.

Table 1: Appendix P to Part 110-Category 1 and Category 2 Radioactive Material Threshold Limits

Radioactive Material	Category 1		Category 2	
	Terábequerels	Curies	Terabequerels	Curies
	(TBq)	(Ci) <sup>1</sup>	(TBq)	(Ci)1
Americium-241	60	1,600	0.6	16
Americium-241/Beryllium	60	1,600	0.6	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Californium-252	20.	540	0.2	5.4
Curium-244	50	1,400	0.5	14
Cobalt-60	30	810	0.3	8.1
Cesium-137	100	2,700	1.0	Super
Gadolinium-153	1,000	27,000	10.0	1. 1. 1. 1. 1. 1. 1. 1. 1. 270 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
1ridium-192	80	2,200	0.8	**************************************
Plutonium-2382	60	1,600	0.6	16
Plutonium-239/Beryllium²	60	1,600	0.6	6
Promethium-147	40,000	1,100,000	400	11,000
Radium-226³	40.	1.100	0.4	
Selenium-75	200	5,400	2.0	54
Strontium-90 (Y-90)	1,000	27,000	10.0	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3.0	81

## Calculation of Shipments Containing Multiple Sources or Radionuclides:

The "sum of fractions" methodology for evaluating combinations of radionuclides being transported, is to be used when import or export shipments contain multiple sources or multiple radionuclides. The threshold limit values used in a sum of the fractions calculation must be the metric values (i.e., TBg).

If multiple sources and/or multiple radionuclides are present in an import or export shipment, the sum of the fractions of the activity of each radionuclides must be determined to verify the shipment is less than the Category 1 or 2 limits of Table 1, as appropriate. If the calculated sum of the fractions ratio, using the following equation, is greater than or equal to 1.0, then the import or export shipment exceeds the threshold limits of Table 1 and the applicable security provisions of this part apply.

II. Use the equation below to calculate the sum of the fractions ratio by inserting the actual activity of the applicable radionuclides or of the individual sources (of the same radionuclides) in the numerator of the equation and the corresponding threshold activity limit from the Table 1 in the denominator of the equation. Ensure the numerator and denominator values are in the same units and all calculations must be performed using the TBg (i.e., metric) values of Table 1.

R1 = activity for radionuclides or source number 1

R2 = activity for radionuclides or source number 2

RN = activity for radionuclides or source number n ...

AR1 = activity limit for radionuclides or source number 1

AR2 = activity limit for radionuclides or source number 2

ARN = activity limit for radionuclides or source number n

$$\sum_{1}^{n} \left[ \frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \frac{R_n}{AR_n} \right] \ge 1$$

MANDATORY NOTIFICATIONS: Notifications required by 10 CFR 110.50(b)(4) are to be emailed to noo1@nrc.gov (preferred method) or faxed to 301-816-5151. In the subject line of the email or on the fax cover page include: "10 CFR 110.50(b)(4) Notification." To contact someone in the Operations Center, use the same e-mail address or call 301-816-5100. Difficulties notifying the U.S. Nuclear Regulatory Commission must be promptly reported to the Office of International Programs' import/export licensing staff at (301) 415-2342 or 415-1678.

<sup>&</sup>lt;sup>1</sup> The values to be used to determine whether a license is required are given in TBq. Curie (Ci) values are provided for practical usefulness only and are rounded after conversion.

<sup>&</sup>lt;sup>2</sup> The limits for Pu-238 and Pu-239/Be in this table apply for imports to the U.S. The limits for exports of Pu-238 and Pu-239/Be can be found in § 110.21.

<sup>&</sup>lt;sup>3</sup>Discrete sources of radium-266.