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	NRC LICENSE NO.: CBP0045			
United States of America U.S. Nuclear Regulatory Commission	LICENSE EXPIRES: May 31, 2010 Page 1 of 2			
Pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorg Commission issued pursuant thereto, and in reliance on statements and represe o the licensee authorizing the import/export of the materials and/or production of perein.	panization Act of 1974 and the regulations of the Nuclear Regulatory entations heretofore made by the licensee, a license is hereby issued or utilization facilities listed below, subject to the terms and conditions			
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Lifeblood/Mid-South Regional Blood Center 1040 Madison Avenue Memphis, TN 38104	MDS Nordion 447 March Road Ottawa, Ontario K2K 1XB Canada			
ATTN: Cedric M. Robinson				
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Radioactive Material	Terabequerels (TBq)	Curles (Ci) [†]	Terabequerels (TBq)	Curies (CI)1	
Americium-241	60	1,600	0.6	16	
Americium-241/Be	60	1,600	0.6	16	
Californium-252	20	540	0.2	Harris and success of the sector	
Curium-244	50	1,400	0.5		
Cobalt-60	30	810			
Cesium-137	100	2,700	1.0	27	
Gadolinium-153	1,000	27,000	10.0	270	
Iridium-192	80	2,200	0,8	22 	
Plutonium-238 ^z	60	1,600	0.6	an a les services de la 16 19 de les de la companya de la 16 19 de les de la companya de la 16	
Plutonium-239/Be2	60.	1,600	0.6	16	
Promethium-147	40,000	1,100,000	400	11,000	
Selenium-75	200	5,400	20	54	
Strontium-90 (Y-90)	1,000	27,000	10.0	270	
Thulium-170	20,000	540,000	200	5,400	
Vtterbium-169	300	8 100	and the second	n g al born to the autom to a so	

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

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., TBq).

I. 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 TBq (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

$$\sum_{1}^{n} \left[\frac{\mathbf{R}_{1}}{\mathbf{A}\mathbf{R}_{1}} + \frac{\mathbf{R}_{2}}{\mathbf{A}\mathbf{R}_{2}} + \frac{\mathbf{R}_{n}}{\mathbf{A}\mathbf{R}_{n}} \right] \geq 1$$

NOTIFICATIONS: The notifications required by 10 CFR 110.50(b)(4) are to be emailed to hoo1@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. The contact information is current at the time of license issuance. Difficulties notifying the U.S. Nuclear Regulatory Commission must be promptly reported to the Office of International Programs' Import/Export licensing staff.

¹ The values to be used to determine whether a license is required are given in TBg. Curie (Ci) values are provided for practical usefulness only and are rounded after conversion.

² 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.