

EXPORT LICENSE

NRC FORM 250

NRC LICENSE NO.: PXB3.13

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NRC DOCKET NO.: 11006070**LICENSE EXPIRES:** July 31, 2030

United States of America
Nuclear Regulatory Commission
Washington, D.C. 20555

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 export of the byproduct materials listed below, subject to the terms and conditions herein. This license is only valid if the licensee or 'Other Party (ies) to Export' maintain the requisite NRC or Agreement State domestic license(s).

LICENSEE

Nordion (Canada) Inc.
447 March Road
Ottawa, Ontario, K2K 1X8
Canada

Attn: Luc Desgagne

ULTIMATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)

Nordion (Canada), Inc.
447 March Road
Ottawa, Ontario K2K 1X8
Canada

INTERMEDIATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)
None

OTHER U.S. PARTY(IES) TO EXPORT
See following page(s)

APPLICANT'S REFERENCE: PXB3.12 Amend1-2022**ULTIMATE DESTINATION:** Canada

**DESCRIPTIONS OF 10 CFR, APPENDIX P, BYPRODUCT MATERIALS
TO BE EXPORTED, INCLUDING CONDITIONS AND NOTES**
(NOTE: SEE PAGE 5 FOR DEFINITIONS OF CATEGORY 1 AND CATEGORY 2)

Export to Nordion (Canada) Inc., of Category 1 and Category 2 quantities of Co-60, contained in sealed sources for disposition in Canada, is authorized. See conditions on Page 2.

Licensee is responsible for compliance with all applicable export and other domestic regulatory requirements, including all terms and conditions of domestic material license(s). Licensee is exempt from the requirement in 10 CFR 110.53(a) to maintain an office within the United States.

Licensee must submit pertinent documentation required by 10 CFR §110.32(g) at least 24 hours prior to shipment. See Page 5 for Mandatory Advanced Notifications.

License expiration date is based on established limits. This license replaces PXB3.12 and amends its authority by revising the state code for address #33 in the Other U.S. Part(ies) to Export.

Neither this license nor 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 the other provisions of said Acts, now or hereafter in effect and to all valid rules and regulations of the Nuclear Regulatory Commission.

**THIS LICENSE IS INVALID UNLESS SIGNED BELOW
BY AUTHORIZED NRC REPRESENTATIVE**

NAME AND TITLE: David L. Skeen
Digitally signed by David L. Skeen
Date: 2022.06.01 08:40:37
-04'00'

**David L. Skeen Deputy Director
Office of International Programs**

DATE OF ISSUANCE: June 1, 2022

EXPORT LICENSE

CONDITIONS

Licensee is prohibited from shipping 10 CFR Part 110 Appendix P Category 1 quantities of Co-60 to Canada for which government-to-government consent has not yet been requested, received and processed until the following actions are taken:

1. The licensee submits a consent request to the NRC with pertinent details for a specific shipment or series of shipments on the NRC Form 7, which notifies the importing country's regulatory authority;
2. The NRC receives and considers the consent from the importing country's regulatory authority pursuant to 10CFR 110.42(e)(3); and
3. The NRC has informed the licensee in writing, that the consent request has been granted and it is authorized to ship the materials to the ultimate consignee(s) specified on the NRC Form 7 consent request.

OTHER U.S.PARTY(IES) TO EXPORT Continued:

- | | |
|---|--|
| 1. 3M Company
601 22nd Avenue South
Brookings, SD 57006 | 2. Bausch & Lomb
8507 Pelham Road
Greenville, SC 29615 |
| 3. Baxter Healthcare of Puerto Rico
State Road 721, Km 0.3
Aibonito, PR 00705 | 4. BD Life Sciences
1575 Airport Road
Sumter, SC 29153 |
| 5. Becton Dickinson Infusion
Therapy Systems, Inc.
150 South 1st Avenue
Broken Bow, NE 68822 | 6. Becton, Dickinson and Company
1852, 10th Avenue
Columbus, NE 68601 |
| 7. Becton, Dickinson and Company
dba BD Medical Systems - Diabetes Care
1329 West Highway 6
Holdrege, NE 68949 | 8. Corning Incorporated
One Becton Circle
Durham, NC 27712 |
| 9. Department of the Army Commander
White Sands Missile Range, NM 88002 | 10. GE-Hitachi Nuclear Energy Americas, LLC
Vallecitos Nuclear Center
6705 Vallecitos Road
Sunol, CA 94586 |
| 11. Isomedix Operations, Inc.
dba Steris Applied Sterilization Technologies
1000 S. Sarah Place
Ontario, CA 91761 | 12. Isomedix Operations, Inc.
dba STERIS Isomedix Services
1880 Industrial Drive
Libertyville, IL 60048 |
| 13. Isomedix Operations, Inc.
dba STERIS Isomedix Services
2500 Commerce Drive
Libertyville, IL 60048 | 14. Isomedix Operations, Inc.
dba Steris Applied Sterilization Technologies
435 Whitney Street
Northborough, MA 01523 |
| 15. Isomedix Operations, Inc.
dba STERIS Applied Sterilization Technologies
4405 Marketing Place
Groveport, OH 43125 | 16. Isomedix Operations, Inc.
dba STERIS Applied Sterilization Technologies
1435 Isomedix Place
El Paso, TX 79936 |

OTHER U.S.PARTY(IES) TO EXPORT Continued:

- | | |
|--|--|
| 17. Isomedix Operations, Inc.
dba STERIS Applied Sterilization Technologies
9120 South 150 East
Sandy, UT 84070 | 18. Isomedix Operations, Inc.
dba Steris Applied Sterilization Technologies
2072 Southport Road
Spartanburg, SC 29306 |
| 19. KPR U.S., L.L.C.
2010 East International Speedway Blvd.
DeLand, FL 32724 | 20. KPR U.S., L.L.C.
1222 Sherwood Road
Norfolk, NE 68701 |
| 21. Isomedix Operations, Inc.
dba Steris Applied Sterilization Technologies
9 Apollo Drive
Whippany, NJ 07981 | 22. Isomedix Operations, Inc.
dba Steris Applied Sterilization Technologies
23 Elizabeth Drive
Chester, NY 10918 |
| 23. Nypro Healthcare Baja, Inc.
3801 University Blvd, SE
Albuquerque, NM 87106 | 24. Pall Hauppauge
225 Marcus Blvd.
Hauppauge, NY 11788 |
| 25. Sandia National Laboratories
Operated for the U.S. Department of Energy
by Sandia Corporation
Albuquerque, NM 87185 | 26. Sterigenics U.S., LLC
1401 Morgan Circle
Tustin, CA 92780 |
| 27. Sterigenics US., LLC
2311 Lincoln Avenue
Hayward, CA 94545 | 28. Sterigenics US., LLC
10811 Withers Cove Park Drive
Charlotte, NC 28278 |
| 29. Sterigenics US., LLC
305 Enterprise Drive
Lewis Center, OH 43081 | 30. Sterigenics US., LLC
1148 Porter Avenue
Haw River, NC 27258 |
| 31. Sterigenics US., LLC
108 Lake Denmark Road
Rockaway, NJ 07866 | 32. Sterigenics US., LLC
75 Tilbury Road
Salem, NJ 08079 |
| 33. Sterigenics US., LLC
1700 College Boulevard
West Memphis, AR 72301 | 34. Sterigenics US., LLC
344 Bonnie Circle
Corona, CA 92878 |
| 35. Sterigenics US., LLC
5900 Obata Way
Gilroy, CA 95020 | 36. Sterigenics US., LLC (Location 1)
3001 Wichita Court
Fort Worth, TX 76140 |
| 37. Sterigenics US., LLC (Location 1)
711 East Cooper Court
Schaumburg, IL 60173 | 38. Sterigenics US., LLC (Location 2)
1003 Lakeside Dr.
Gurnee, IL 60031 |
| 39. Sterigenics US., LLC (Location 2)
3125 Wichita Court
Fort Worth, TX 76140 | 40. Sterigenics US., LLC.
502 Prairie Mine Road
Mulberry, FL 33860 |

OTHER U.S.PARTY(IES) TO EXPORT Continued:

- | | |
|---|--|
| 41. Steris Isomedix Puerto Rico LLC.
dba Steris Applied Sterilization Technologies
State Road 690, Km 1.7
Vega Alta, PR 00692 | 42. Terumo Medical Corporation
950 Elkton Boulevard
Elkton, MD 21921 |
| 43. Uniformed Services University of the Health
Sciences
Armed Forces Radiobiology Research
Institute
8901 Wisconsin Avenue
Bethesda, MD 20889 | 44. University of Massachusetts Lowell
One University Ave
Lowell, MA 01854 |

MANDATORY ADVANCED NOTIFICATIONS PER 10 CFR PART 110.50(c)

The following Advanced Notifications must be made to both the NRC and, in case of exports, the government of the importing country in advance of each shipment:

Mandatory Advanced Notifications to the NRC are to be emailed to hoo.hoc@nrc.gov (preferred method) or faxed to the NRC at 301-816-5151. In the subject line of the email or on the fax cover page include: "10 CFR 110.50(c) Notification." For technical assistance, use the same e-mail address or call 301-287-9056.

Mandatory Advanced Notifications to the government of the importing country must be emailed or faxed to the appropriate foreign government authorities. To locate the point-of-contact for international Advanced Notifications see: <http://www-ns.iaea.org/downloads/rw/imp-export/import-export-contact-points.pdf>. In the subject line of the email or on the fax cover page include: "NOTIFICATION TO THE IMPORTING STATE PRIOR TO SHIPMENT OF CATEGORY 1 OR 2 RADIOACTIVE SOURCES." For technical assistance or for countries not listed, contact the Office of International Programs' export/import staff at 301-287-9056.

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

Radioactive Material	Category 1		Category 2	
	Terabequerels (TBq)	Curies (Ci) ¹	Terabequerels (TBq)	Curies (Ci) ¹
Americium-241 (Am-241)	60	1,600	0.6	16
Americium-241/Beryllium (Am-241/Be)	60	1,600	0.6	16
Californium-252 (Cf-252)	20	540	0.2	5.4
Curium-244 (Cm-244)	50	1,400	0.5	14
Cobalt-60 (Co-60)	30	810	0.3	8.1
Cesium-137 (Cs-137)	100	2,700	1.0	27
Gadolinium-153 (Gd-153)	1,000	27,000	10.0	270
Iridium-192 (Ir-192)	80	2,200	0.8	22
Plutonium-238 ² (Pu-238)	60	1,600	0.6	16
Plutonium-239/Beryllium ² (Pu-239/Be)	60	1,600	0.6	16
Promethium-147 (Pm-147)	40,000	1,100,000	400	11,000
Radium-226 ³ (Ra-226)	40	1,100	0.4	11
Selenium-75 (Se-75)	200	5,400	2.0	54
Strontium-90 (Y-90)	1,000	27,000	10.0	270
Thulium-170 (Tm-170)	20,000	540,000	200	5,400
Ytterbium-169 (Yb-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., 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 radionuclide 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 AR1 = activity limit for radionuclides or source number 1
R2 = activity for radionuclides or source number 2 AR2 = activity limit for radionuclides or source number 2
RN = activity for radionuclides or source number n ARN = activity limit for radionuclides or source number n

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

¹ 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.

² The limits for exports of Pu-238 and Pu-239/Be can be found in § 110.21.

³ Discrete sources of Radium-226.