

EXPORT LICENSE

NRC FORM 250P (4/10)



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

NRC LICENSE NO.: PXB17a.02

LICENSE EXPIRES: May 31, 2012

Page 1 of 3

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 byproduct 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.

Table with 2 columns: LICENSEE and ULTIMATE FOREIGN CONSIGNEE(S). Licensee: Industrial Nuclear Company, Inc. Ultimate Foreign Consignee: Listed on Page 3. Other columns: INTERMEDIATE FOREIGN AND/OR DOMESTIC CONSIGNEE(S) (None), OTHER PARTY(IES) TO IMPORT AND/OR EXPORT (None).

COUNTRY(IES) OF ULTIMATE DESTINATION: Canada, France, Netherlands, Philippines, South Korea, Singapore, South Africa, Thailand, and United Kingdom.

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

Export, to facilities listed on Page 3, Category 2 quantity of Iridium-192, contained in sealed sources for use in industrial radiography and for the development of custom design.

Licensee is responsible for compliance with all applicable import, export, and other domestic regulatory requirements, including all terms and conditions of domestic material possession licenses. Licensee, if not already submitted with your application, 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. See Page 2 for Mandatory Pre-shipment Notifications.

License expiration date is based on applicant's request. This license replaces XBP17a-1 and amends its authority by: 1) extending expiration date from May 31, 2010 to May 31, 2012; and 2) removing the Massachusetts address.

////////////////////////////////////END////////////////////////////////////

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 of the other provisions of said Acts, now or hereafter in effect and to all valid rules and regulations of the NRC.

THIS LICENSE IS INVALID UNLESS SIGNED BELOW BY AUTHORIZED NRC REPRESENTATIVE

NAME AND TITLE:

Signature of Scott W. Moore, Deputy Director, Office of International Programs

DATE OF ISSUANCE: June 11, 2010

MANDATORY PRE-SHIPMENT NOTIFICATIONS PER 10 CFR PART 110.50(b)(4)

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

Prior Shipment 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(b)(4) Notification." For technical assistance, use the same e-mail address or call 301-816-5100.

Prior Shipment 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 Prior Shipment 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 301-415-2344.

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 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 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

$$\sum_1^n \left[\frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \frac{R_n}{AR_n} \right] \geq 1$$

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 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.

³ Discrete sources of Radium-226.

ULTIMATE FOREIGN CONSIGNEE(S)
(Recipient)

1. Canadian Institute for NDE
ATTN: Douglas J. Marshall
135 Fennell Avenue West Portable #7
Hamilton
Ontario L8N 3T2
Canada
2. IRISNDT
ATTN: Wes Barlow
5908-96 Street Edmonton, AB T6E
3G3 Canada
3. Kodiak Quality Control
ATTN: Edwin Hauge, Jr.
Unit 9-52 Steeles Avenue East
Milton
Ontario L9T4X1
Canada
4. CEGELEC
ATTN: Jean-Claude Godin
Z1 du Bois des Bordes BP57 91229
Bretigny Sur Orge Cedex
France
5. NRG
Westerduin Weg 3 P.O. Box 25
1755 ZG Petten
Netherlands
6. Welders Testing Lab
ATTN: Dante Bernardo
S-7 Sunbar Plaza Pasay Road Corner
Amorsolo Street, Makati City
Manila
Philippines
7. Na-woo Tech
ATTN: Bon-woo Ku
Kranz Techno Bldg., Room #608
5442-1 Sandawon-Dong, Jungwon-KU
Seongnam-Si, Gyeonggi-Do 462-819
South Korea
8. Micro-Tech Supplies
ATTN: Ben Lim
BLK 194, Pandan Loop #06-10
Pantech Ind. Complex
Singapore 128383
9. Gammatec Engineering
13 King Street Ducanville Ext. 3
Vereeninging
South Africa
10. Entsys Technologies Company, Ltd
ATTN: Premjai Lamkhorpong
137/27 Moo 11 Saunphak Road
Taling Chan
Bangkok 10170
Thailand
11. Orex Trading Company, Ltd.
ATTN: Somnuk Soponlakana
39/491 Moo 1 Soi 3 Rattanathibeth Rd
Talad Khuan
Nonthoburi 11000
Thailand
12. Gilligan Engineering
Andrews House Princess Way Low
Orudhoc Industrial Estate
Northumberland NE4 6H
United Kingdom

//////////////////////////////////////END//////////////////////////////////////