

IMPORT AND EXPORT LICENSE

NRC FORM 250P (12/05)



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

NRC LICENSE NO.: **CBP6-4**

LICENSE EXPIRES: **January 31, 2009**

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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.

<p style="text-align: center;">LICENSEE</p> <p>Alpha-Omega Services, Inc. 9156 Rose Street ATTN: Cary Hedger Bellflower, California 90706</p> <p>APPLICANT'S REFERENCE: Application dtd 9/24/07</p>	<p style="text-align: center;">ULTIMATE FOREIGN CONSIGNEE(S)</p> <p style="text-align: center;">Listed on Page 3.</p>
<p style="text-align: center;">INTERMEDIATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES) AND/OR IN THE U.S.</p> <p style="text-align: center;">NONE</p>	<p style="text-align: center;">OTHER PARTY(IES) TO IMPORT AND/OR EXPORT</p> <p style="text-align: center;">Listed on pages 3 and 4.</p>

COUNTRY(IES) OF ULTIMATE DESTINATION: Canada, Japan, and 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 and export, from and to MDS Nordion in Canada, Category 1 quantity of Cobalt-60, contained in sealed sources used in medical teletherapy devices.

Import and export, from and to Japan Radioisotope Association in Japan, Category 2 quantity of Iridium-192, contained in sealed sources used in medical brachytherapy devices.

Alpha-Omega Services, Inc. is responsible for ensuring that all end users of Cobalt-60 sources and Iridium-192 sources have obtained and hold valid and appropriate material possession licenses prior to receipt of any sealed sources containing radioactive material(s). Alpha-Omega Services, Inc. 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 January 31, 2009 expiration date of consent from the Canadian Nuclear Safety Commission.

This license replaces CBP6-3 and amends its authority to 1) extend the expiration date from October 31, 2007, and 2) delete and add locations as 'Other Party(ies) to Import and/or Export.'

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

Scott W. Moore

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

DATE OF ISSUANCE: November 12, 2007

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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	60	1,600	0.6	16
Americium-241/Beryllium	60	1,600	0.6	16
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	27
Gadolinium-153	1,000	27,000	10.0	270
Iridium-192	80	2,200	0.8	22
Plutonium-238 ²	60	1,600	0.6	16
Plutonium-239/Beryllium ²	60	1,600	0.6	16
Promethium-147	40,000	1,100,000	400	11,000
Radium-226 ³	40	1,100	0.4	11
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., 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

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

MANDATORY NOTIFICATIONS: 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. 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.

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-266.

ULTIMATE FOREIGN CONSIGNEE(S)

For import and export of 10 CFR §110 Appendix P Category 1 quantity of Cobalt-60:

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

For import and export of 10 CFR §110 Appendix P Category 2 quantity of Iridium-192:

Japan Radioisotope Association (JRIA)
28-45, Honkomagome 2-Chome, Bunkyo-ku
Tokyo 113-8941

OTHER PARTY(IES) TO IMPORT AND/OR EXPORT

1. Alpha-Omega Services, Inc.
1282 Starks Road
Edgerly, Louisiana 70668
2. Caelian Medical, LLC
800 Century Drive
Mechanicsburg, Pennsylvania 17055
3. Central New York Gamma Knife Center
750 East Adams Street
Syracuse, New York 13210
4. Deaconess Medical Center
West 910 5th Avenue, Suite 100
Spokane, Washington 99204
5. Froedtert Memorial Lutheran Hospital
9200 Wisconsin Avenue
Milwaukee, Wisconsin 53226
6. The Gamma Knife Center
Northwestern Memorial Hospital
250 E. Superior Street
Chicago, Illinois 60611
7. The Gamma Knife Radiosurgery Center
University of Arkansas for Medical Science
4301 West Markham Street
Little Rock, Arkansas 72205
8. Gamma Knife of St. Louis
Barnes Jewish Hospital
216 S. Kings Highway Blvd.
St. Louis, Missouri 63110
9. HealthSouth Doctors Hospital
5000 University Drive
Coral Gables, Florida 33146
10. Indiana University Medical Center
541 Clinical Drive
Indianapolis, Indiana 46206
11. Mercy Gamma Knife Center of Long Island
Mercy Medical Center
1000 North Village Avenue
Rockville Center, New York 11570
12. Neurologic & Orthopedic of Chicago
4501 N. Winchester
Chicago, Illinois 60640
13. New England Gamma Knife Center
593 Eddy Street
Providence, Rhode Island 02903

OTHER PARTY(IES) TO IMPORT AND/OR EXPORT

14. The New Jersey Neuroscience Institute at
JFK Medical Center
65 Jamer Street
Edison, New Jersey 08818
15. Northwest Hospital
1560 North 115th Street
Seattle, Washington 98133
16. OSF Saint Francis Medical Center
530 NE Glen Oak Avenue
Peoria, Illinois 61637
17. Providence Portland Medical Center
4805 NE Glisan
Portland, Oregon 97213
18. Puerto Rico Medical Center
Intersection Moncillaos Ward
Rio Piedras
San Juan, Puerto Rico 00922
19. Richland Memorial Hospital
7 Medical Park
Columbia, South Carolina 29203
20. Skyline Medical Center
3444 Dickerson Pike
Nashville, Tennessee 37207
21. St. Joseph Hospital
611 St. Joseph Avenue
Marshfield, Wisconsin 54449

22. St. Luke's Medical Center
2900 West Oklahoma Avenue
Milwaukee, Wisconsin 53201
23. Sutter Medical Center
5151 F Street
Sacramento, California 95602
24. University Hospital of Cleveland
11100 Euclid Avenue
Cleveland, Ohio 44106
25. University of Kentucky Hospital
102 Animal Pathology
Lexington, Kentucky 40536
26. USC University Hospital
1500 San Pablo Street
Los Angeles, California 90033
27. Wake Forest University School of Medicine
And NC Baptist Hospital
Medical Center Blvd
Winston-Salem, North Carolina 27157
28. Washington Hospital Center
110 Irving Street, NW
Washington, DC 20010
29. West Virginia University Hospital
One Medical Center Drive
Morgantown, West Virginia 26506

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