

# IMPORT AND EXPORT LICENSE

NRC FORM 250P (12/05)



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

**NRC LICENSE NO.: CBP6-2**

**LICENSE EXPIRES: October 1, 2007**

Page 1 of 4

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;"><b>LICENSEE</b></p> <p>Alpha - Omega Services, Inc.<br/>9156 Rose Street<br/>ATTN: Cary Hedger<br/>Bellflower, California 90706</p> <p>APPLICANT'S REFERENCE: Application dtd 1/25/07</p> | <p style="text-align: center;"><b>ULTIMATE FOREIGN CONSIGNEE(S)</b></p> <p style="text-align: center;">Listed on Page 3.</p>                   |
| <p style="text-align: center;"><b>INTERMEDIATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES) AND/OR IN THE U.S.</b></p> <p style="text-align: center;">NONE</p>                                                                   | <p style="text-align: center;"><b>OTHER PARTY(IES) TO IMPORT AND/OR EXPORT</b></p> <p style="text-align: center;">Listed on pages 3 and 4.</p> |

**COUNTRY(IES) OF ULTIMATE DESTINATION:** Canada, Japan, and United States.

**DESCRIPTION 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 (maximum activity per shipment 244.44 TBq) and export (maximum activity per shipment 122.2 TBq) of Category 1 quantities of Cobalt-60, contained in sealed sources used in medical teletherapy devices, are authorized from and to MDS Nordion in Canada.

Import (maximum activity per shipment 44.4 TBq) and export (maximum activity per shipment 44.4 TBq) of Category 2 quantities of Iridium-192, contained in sealed sources used in medical brachtherapy devices, are authorized from and to Japan Radioisotope Association in Japan. Licensee is exempt from submitting information required by 10 CFR §110.32(d) and "pertinent documentation" required by 10 CFR §110.32(h) with its application for named and unnamed recipients (ultimate foreign consignee(s)) in foreign countries, until 24 hours prior to shipment. Licensee is responsible for compliance with all applicable import, export, and other domestic regulatory requirements, including all terms and conditions of domestic materials license(s).

License expiration date is based on October 1, 2007 expiration date of the State of California, Health and Human Services Agency, Radioactive Material License 3925-19, Amendment Number 28.

Licensee 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).

This license is amended to add locations 3, 5, 6, 7, 8, 10, 11, 13, 17, 20, and 23, listed on pages 3 and 4, as Other Party(ies) to Import and/or Export.

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

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

*Margaret M. Doane*

NAME AND TITLE: Margaret M. Doane, Deputy Director  
Office of International Programs

DATE OF ISSUANCE: March 12, 2007

# IMPORT AND EXPORT LICENSE

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

| Radioactive Material          | Category 1             |                             | Category 2             |                             |
|-------------------------------|------------------------|-----------------------------|------------------------|-----------------------------|
|                               | Terabequerels<br>(TBq) | Curies<br>(Ci) <sup>1</sup> | Terabequerels<br>(TBq) | Curies<br>(Ci) <sup>1</sup> |
| Americium-241                 | 60                     | 1,600                       | 0.6                    | 16                          |
| Americium-241/Be              | 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 <sup>2</sup>    | 60                     | 1,600                       | 0.6                    | 16                          |
| Plutonium-239/Be <sup>2</sup> | 60                     | 1,600                       | 0.6                    | 16                          |
| Promethium-147                | 40,000                 | 1,100,000                   | 400                    | 11,000                      |
| 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

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

**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.

<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>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.

**ULTIMATE FOREIGN CONSIGNEE(S):**

**For import and export of 10 CFR §110 Appendix P Category 1 quantities 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 quantities of Iridium-192:**

Japan Radioisotope Association (JRIA)  
124-45, Honkomagome 2-Chome, Bunkyo-ku  
Tokyo 113-8941

**OTHER PARTY(IES) TO IMPORT AND/OR EXPORT**

- |                                                                                               |                                                                                                 |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Alpha-Omega Services, Inc.<br>1282 Starks Road<br>Edgerly, Louisiana 70668                 | 8. Froedtert Memorial Lutheran Hospital<br>9200 Wisconsin Avenue<br>Milwaukee, Wisconsin 53226  |
| 2. Bryan Medical Center West<br>2300 South 16 <sup>th</sup> Street<br>Lincoln, Nebraska 68506 | 9. HealthSouth Doctors Hospital<br>5000 University Drive<br>Coral Gables, Florida 33146         |
| 3. Caelian Medical, LLC<br>800 Century Drive<br>Mechanicsburg, Pennsylvania 17055             | 10. Hoag Memorial Hospital Presbyterian<br>301 Newport Blvd.<br>Newport Beach, California 92658 |
| 4. Cedars-Sinai Hospital<br>San Vicente Blvd Suite L-2000<br>Los Angeles, California 90048    | 11. Intermountain Medical Center<br>5300 South State<br>Murray, Utah 84117                      |
| 5. Central Mississippi Medical Center<br>1850 Chadwick Drive<br>Jackson, Mississippi 39204    | 12. Medical College of Georgia<br>1455 Laney Walker Blvd.<br>Augusta, Georgia 30912             |
| 6. Cleveland Clinic Foundation<br>9500 Euclid Avenue<br>Cleveland, Ohio 44195                 | 13. Mid Michigan Medical Center<br>4005 Orchard Drive<br>Midland, Michigan 48670                |
| 7. Cooper University Hospital<br>Three Cooper Plaza<br>Camden, New Jersey 08103               | 14. Neurologic & Orthopedic of Chicago<br>4501 N. Winchester<br>Chicago, Illinois 60640         |

## OTHER PARTY(IES) TO IMPORT AND/OR EXPORT

- |     |                                                                                                          |     |                                                                                                                                       |
|-----|----------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------|
| 15. | Puerto Rico Medical Center<br>Intersection Moncillaos Ward<br>Rio Piedras<br>San Juan, Puerto Rico 00922 | 22. | University of Virginia<br>Primary Care Center Bldg<br>1143 Lee Street & Park Place<br>Charlottesville, Virginia 22904-4322            |
| 16. | Riverside Regional Medical Center<br>500 J Clyde Morris Blvd<br>Newport News, Virginia 23601             | 23. | Wake Forest University School of Medicine<br>And NC Baptist Hospital<br>Medical Center Blvd<br>Winston-Salem, North Carolina 27157    |
| 17. | Skyline Medical Center<br>3444 Dickerson Pike<br>Nashville, Tennessee 37207                              | 24. | Washington Hospital<br>2000 Mowry Avenue<br>Fremont, California 94538                                                                 |
| 18. | St. Joseph Hospital<br>611 St. Joseph Avenue<br>Marshfield, Wisconsin 54449                              | 25. | Washington University School of Medicine<br>Barnes-Jewish Hospital CAM Bldg.<br>4540 Forest Park Parkway<br>St. Louis, Missouri 63108 |
| 19. | St. Luke's Medical Center<br>2900 West Oklahoma Avenue<br>Milwaukee, Wisconsin 53201                     | 26. | West Virginia University Hospital<br>One Medical Center Drive<br>Morgantown, West Virginia 26506                                      |
| 20. | St. Mary's Hospital<br>1216 SW 2 <sup>nd</sup> Street<br>Rochester, Minnesota 55902                      | 27. | Yale - New Haven Hospital<br>Radiosurgery Center<br>40 Temple Street<br>New Haven, Connecticut 06510                                  |
| 21. | University of Pittsburgh Hospital<br>130 Desoto Street<br>Pittsburgh, Pennsylvania 15261                 |     |                                                                                                                                       |

[illegible]