EXPORT LICENSE

NRC FORM 250

United States of America

Nuclear Regulatory Commission
Washington, D.C. 20555

NRC LICENSE NO.: PXB6.44

Page 1 of 9

NRC DOCKET NO.: 11006027

LICENSE EXPIRES: March 31, 2032

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

Alpha-Omega Services, Inc.
1282 Bigwoods-Starks Road
Vinton, LA 70668

Attn: Carl Tunnell

ULTIMATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)

See following page(s)

INTERMEDIATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)

None

OTHER U.S. PARTY(IES) TO EXPORT

See following page(s)

APPLICANT'S REFERENCE: Amendment 44

ULTIMATE DESTINATIONS: See following page.

DESCRIPTIONS OF 110, APPENDIX P, BYPRODUCT MATERIALS TO BE EXPORTED, INCLUDING CONDITIONS AND NOTES
(NOTE) SEE PAGE 9 FOR DEFINITIONS OF CATEGORY 1 AND CATEGORY 2

Export to Canada and Sweden, of Category 1 quantities of Co-60 (not to exceed 244.2 TBq per shipment) contained in sealed sources to authorized recipients for recycling and/or end of life-cycle management.

Export to Japan, of Category 2 quantities of Ir-192, contained in sealed sources for use in medical brachytherapy devices, is authorized.

Licensee is responsible for compliance with all applicable 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 pertinent documentation required by 10 CFR 110.32(g) at least 24 hours prior to shipment. See Page 9 for Mandatory Advanced Notifications.

The license amendment PXB6.43 is superseded upon the issuance of NRC license PXB6.44, amending its authority. This application revises the list of "Other U.S. Party(ies) to Export," #1, #28, #31, #68, #72 and adding another "Other U.S. Party(ies) to Export," #89.

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: PETER HABIGHORST Digitally signed by PETER HABIGHORST Date: 2024.04.01 15:24:23 -04'00'

Peter J. Habighorst, Acting Deputy Director
Office of International Programs

DATE OF ISSUANCE: April 1, 2024

EXPORT LICENSE

CONDITIONS

[1] Licensee is prohibited from shipping Category 1 quantities until government-to-government consent has been requested, received and processed.

[2] 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 NRC to request and obtain consent for the specified transaction(s) from the importing country's regulatory authority;

[3] Shipment may only proceed after the NRC has informed the licensee in writing that the consent request has been granted, authorizing the transfer of materials to the ultimate consignee(s) specified on the NRC Form 7 consent request.

ULTIMATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES) Continued:

1. **(For export of 10 CFR Part 110 Appendix P Category 1 quantities of Co-60)**

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

2. **(For export of 10 CFR Part 110 Appendix P Category 2 quantities of Ir-192)**

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

3. **(For export of 10 CFR Part 110 Appendix P Category 1 quantities of Co-60)**

   Studsvik Nuclear AB
   Atomvagen 1
   611 82 Nykoping
   Sweden

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

1. Adventist Health Systems/Sunbelt Inc.
   AdventHealth Cancer Institute Orlando
   2501 North Orange Avenue
   Orlando, FL 32804

2. Akron General Medical Center
   762 South Cleveland Massillon Road
   Montrose, OH 44333

3. Alexian Brothers Medical Center
   800 West Biesterfield Road
   Elk Grove Village, IL 60007

4. Alpha-Omega Services, Inc.
   1282 Big Woods-Starks Road
   Vinton, LA 70668

5. Anchorage Radiation Oncology Management, Inc.
   dba Anchorage Radiation Therapy Center
   2841 Debarr Road, Suite 100
   Anchorage, AK 99508

6. Augusta University Medical Center
   1120 15th Street
   Augusta, GA 30912

7. Aurora Health Care Metro, Inc.
   dba Aurora St. Luke's Medical Center, Room 115
   Gamma Knife Department
   2900 West Oklahoma Avenue
   Milwaukee, WI 53215

8. Avera McKennan - Avera Radiation Oncology
   Avera Cancer Institute Prairie Center
   1000 East 23rd St.
   Suite 100, Room #2,
   Sussex Falls, SD 57105

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

9. Baptist Hospital of Miami, Inc.
Department of Radiation Oncology
8900 North Kendall Drive
Miami, FL 33176

10. Billings Clinic
2800 TenthAvenue North
Billings, MT 59101

11. Bryan Medical Center
2300 South 16th Street
Lincoln, NE 68502

12. Center for Advanced Medicine
Long Island Jewish Medical Center
450 Lakeville Road
Lake Success, NY 11042

13. Central DuPage Hospital Association
Northwestern Medicine Cancer Center Central DuPage Hospital
4405 Weaver Parkway
Warrenville, IL 60555

14. Chesapeake Regional Riverside &
University of Virginia Radiosurgery Center
500 J Clyde Morris Boulevard
Newport News, VA 23601

15. Chippenham and Johnston-Willis Hospitals, Inc.
dba CJW Medical Center
Johnston-Willis Campus
1401 Johnston-Willis Drive
Richmond, VA 23235

16. Cooper Health System
Robert Wood Johnson Medical School at Camden
3 Cooper Plaza
Camden, NJ 08103

17. Covenant Health System
Covenant Gamma Southwest
3603 21st Street
Lubbock, TX 79410

18. Dignity Health
dba St. Joseph's Hospital and Medical Center
350 West Thomas Road
Phoenix, AZ 85013

19. Doctors Hospital, Inc.
dba Doctors Hospital
5000 University Drive
Coral Gables, FL 33146

20. Emory Saint Joseph's Hospital
5665 Peachtree Dunwoody Road, NE
Atlanta, GA 30342

21. Fort Sanders Regional Gamma Knife Center
1915 WhiteAvenue
Knoxville, TN 37916

22. Gamma Knife Center of the Pacific
2226 Liliha Street, Level B2
Honolulu (Island of Oahu), HI 96817

23. GE-Hitachi Nuclear Energy Americas, LLC
Vallecitos Nuclear Center
6705 Vallecitos Road
Pleasanton, CA 94586

24. GKMD, Inc.
Deaconess Medical Center, Gamma Knife Suite
Basement Floor, Room 117
910 West 5th Ave.
Spokane, WA 99204

25. Hackensack University Medical Center
John Theurer Cancer Center
92 2nd St.
Hackensack, NJ 07601

26. Harborview Medical Center
325 9th Avenue
Gamma Knife Suite
Seattle, WA 98133

27. Hoag Memorial Hospital Presbyterian
One Hoag Drive
Newport Beach, CA 92658

28. IHC Health Services, Inc.
dba Intermountain Medical Center
Jon and Karen Huntsman Cancer Center
(Building #3), Gamma Knife Room
5121 South Cottonwood Street
Murray, UT 84107

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

29. Indiana University Health Methodist Hospital
1701 N. Senate Blvd
Indianapolis, IN 46202

30. Jewish Hospital, LLC.
4777 East Galbraith Road
Cincinnati, OH 45236

31. John F. Kennedy Medical Center
65 James Street
Edison TWP, NJ 08817

32. Karmanos Cancer Center
Gershenson Radiation Oncology Center
4100 John R. Street, Room 379
Detroit, MI 48201

33. Kettering Medical Center
3535 Southern Boulevard
Kettering, OH 45429

34. Larkin Community Hospital, Inc.
6129 Southwest 70th Street
South Miami, FL 33143

35. Legacy Health System
1130 North West 22nd Avenue, Suite LL50
Portland, OR 97210

36. Lehigh Valley Health Network
1240 South Cedar Crest Boulevard
Allentown, PA 18103

37. Lewis Hall Singletary Oncology Center
at John D. Archbold Memorial Center
919 South Broad Street
Thomasville, GA 31792

38. Los Robles Regional Medical Center
2200 Lynn Road
Thousand Oaks, CA 91360

39. Lovelace Medical Center
601 Dr. Martin Luther King, Jr. NE
Albuquerque, NM 87102

40. Marshfield Medical Center
611 St. Joseph Avenue
Marshfield, WI 54449

41. Mayo Clinic Hospital-Rochester
SMC Mary Brigh Building
1216 2nd St. SW
Rochester, MN 55902

42. Mayo Clinic Jacksonville
4500 San Pablo Road
Jacksonville, FL 32224

43. Medical College of Wisconsin
Froedtert Memorial Lutheran Hospital
9200 West Wisconsin Avenue
Milwaukee, WI 53226

44. Medical University Hospital Authority
dba Medical University of South Carolina
171 Ashley Avenue (MUSC)
Charleston, SC 29425

45. Memorial Hermann Health System
dba Memorial Hermann Texas Medical Center
6411 Fannin Street
Houston, TX 77030

46. Mercy Health - St. Vincent Medical Center, LLC
Perrysburg Cancer Center
12623 Eckel Junction Road
Perrysburg, OH 43552

47. Mercy Health Center
4300 West Memorial Road
Oklahoma City, OK 73120

48. Merit Health Central
Central Mississippi Medical Center
Radiation Oncology Department
1850 Chadwick Drive
Jackson, MS 39204

49. Methodist Children's Hospital
dba Joe Arrington Cancer Center
4101 22nd Place
Lubbock, TX 79410

50. Methodist Healthcare System
of San Antonio LTD Methodist Hospital
7700 Floyd Curl Drive
San Antonio, TX 78229

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

51. Methodist Hospital of Gary, Inc.
Methodist Hospital - Southlake Campus
8701 Broadway
Merrillville, IN 46410

52. Mid-Michigan Gamma Knife Facility
4000 Wellness Drive
Room H-1405
Midland, MI 48670

53. Neurologic & Orthopedic Institute of Chicago
4501 N. Winchester
Chicago, IL 60640

54. New York Presbyterian Hospital
Columbia University Medical Center
Gamma Knife Suite
Columbia-Presbyterian Medical Center
630 West 168th Street
New York, NY 10032

55. North Carolina Baptist Hospital
Outpatient Comprehensive Cancer Center
Medical Center Boulevard
Winston-Salem, NC 27157

56. Northern Westchester Hospital Center
400 East Main Street
Mount Kisco, NY 10549

57. Northside Hospital Forsyth
1200 Northside Forsyth Drive
Cumming, GA 30041

58. Northwestern Memorial Hospital
Galter Pavilion
201 E. Huron Street
Chicago, IL 60611

59. NYU Langone Hospitals
Tisch Hospital
550 FirstAve.
New York, NY 10016

60. Ochsner Clinic Foundation
Ochsner Medical Center
Department of Radiation Oncology
1514 Jefferson Highway
New Orleans, LA 70121

61. OSF Healthcare System
St. Francis Medical Center
530 NE Glen Oak Avenue
Peoria, IL 61637

62. OU Medical Center
Presbyterian Tower
700 N.E. 13th Street
Oklahoma City, OK 73104

63. Our Lady of the Lake Hospital Inc.
dba Thomas J. Moran Imaging Center
4950 Essen Lane
Baton Rouge, LA 70809

64. PeaceHealth Sacred Heart Medical Center
3333 RiverBend Drive
Springfield, OR 97477

65. Penn State Health Holy Spirit Medical Center
GSR Suite at the Oakwood Center
880 Century Drive
Mechanicsburg, PA 17055

66. Penn State Milton S. Hershey Medical Center
500 University Drive
Hershey, PA 17033

67. Piedmont Hospital Atlanta
1968 Peachtree Road N.W.
Atlanta, GA 30309

68. Pitt County Memorial Hospital
2100 Statonsburg Road
Greenville, NC 27835

69. Prisma Health Richland Hospital
7 Medical Park
Columbia, SC 29203

70. Providence Portland Medical Center
North Pavilion
4805 NE Glisan Street
Portland, OR 97213

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

71. Puerto Rico Medical Services Administration
Puerto Rico Medical Center, Centro Medico de Rio Piedras
First Floor, Central Building, Carr 22 Barrio Monacillos
San Juan, PR 00935

72. Puget Sound Radiosurgery, LLC.
Gamma Knife Suite, Room 103
St. Joseph's Medical Pavillion
1802 South Yakima Ave.
Tacoma, WA 98405

73. Research Medical Center
Midwest Gamma Knife Center
2316 E. Meyer Blvd.
Kansas City, MO 64132

74. Rhode Island Hospital
593 Eddy Street
Providence, RI 02903

75. Robert Wood Johnson University Hospital
Gamma Knife Suite
10 Plum Street
New Brunswick City, NJ 08901

76. Roswell Park Cancer Institute Corp.
Elm & Carlton Street
Buffalo, NY 14263

77. Sacred Heart Health System, Inc.
dba Sacred Heart Hospital of Pensacola
5151 North 9th Avenue
Pensacola, FL 32504

78. San Antonio Community Hospital
999 San Bernardino Road
Upland, CA 91786

79. San Diego Gamma Knife Center
9834 Genesee Avenue, Suite 110
La Jolla, CA 92037

80. South Nassau Communities Hospital
One Healthy Way
Oceanside, NY 11572

81. St. Lukes The Woodlands Hospital
17200 St. Luke's Way
The Woodlands, TX 77384

82. St. Vincent Medical Center
2 Shircliff Way
Jacksonville, FL 32204

83. SUNY Upstate Medical University
750 East Adams Street
Syracuse, NY 13210

84. Sutter Gamma Knife Center
2801 K St., Suite 110
Sacramento, CA 95816

85. Swedish Medical Center
799 East Hampden Ave. Suite 110
Englewood, CO 80113

86. Temple University
Temple Hospital
3401 N. Broad Street
Philadelphia, PA 19140

87. Tenet Good Samaritan, Inc.
1309 North Flagler Drive
West Palm Beach, FL 33401

88. Tenet Hospitals Limited
dba The Hospitals of Providence Sierra Campus
Gamma Knife Suite
1625 Medical Center Drive
El Paso, TX 79902

89. The Charlotte-Mecklenburg Hospital Authority
dba Atrium Health Advanced Radiation Therapy 1310 East Morehead Street
Charlotte, NC 28203

90. The Cleveland Clinic Foundation
dba The Cleveland Clinic
10201 Carnegie Avenue
Cleveland, OH 44195

91. The Methodist Hospital
dba Houston Methodist
6551 Bertner Avenue
Houston, TX 77030

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

92. The Ohio State University
Radiation Medicine Department
Arthur G. James Cancer Hospital and
Richard J. Solove Research Institute
300 West 10th Avenue
Columbus, OH 43210

93. The Regents of the University of California
San Francisco Medical Center
UCSF Medical Center
Parnassus Ave.
San Francisco, CA 94143

94. The Regents of the University of California
U.C. Davis Medical Center
2315 Stockton Blvd.
Sacramento, CA 95817

95. The Swedish Radiosurgery Center
Suite A10 James Tower
550 17th Avenue
Seattle, WA 98122

96. The University of Iowa
University of Iowa Campus
200 Hawkins Drive
Iowa City, IA 52242

97. The University of Texas
MD Anderson Cancer Center
1515 Holcombe Boulevard
Houston, TX 77030

98. The Valley Hospital Luckow Pavilion
1 Valley Health Plaza
Paramus, NJ 07652

99. Thomas Jefferson University and Hospitals
900 Walnut Street
Philadelphia, PA 19107

100. Tufts Medical Center
800 Washington Street
Boston, MA 02111

101. University Health Shreveport, LLC.
dba Ochsner LSU Health Shreveport
1541 Kings Highway
Shreveport, LA 71103

102. University Hospitals of Cleveland
11100 Euclid Avenue
Cleveland, OH 44106

103. University of Colorado Hospital Authority
1635 Aurora Court
Aurora, CO 80045

104. University of Kentucky
Markey Cancer Center, Roach Bldg.
Room CC049
800 Rose Street
Lexington, KY 40536

105. University of Maryland Medical System
Gamma Knife Suite, South Hospital B Wing
22 South Greene Street
Baltimore, MD 21201

106. University of Miami
Sylvester Cancer Center West
1400 NW 12th Avenue
Miami, FL 33136

107. University of Minnesota Medical Center
Room 1-285
500 SE Harvard Street
Minneapolis, MN 55455

108. University of Mississippi Medical Center
350 West Woodrow Wilson Avenue
Jackson, MS 39216

109. University of Pennsylvania
Pennsylvania Hospital Campus
800 Spruce Street
Philadelphia, PA 19107

110. University of Pittsburgh
Presbyterian University Hospital
230 Lothrop Street, Room F-185
Pittsburgh, PA 15213

111. University of Pittsburgh
Presbyterian University Hospital
230 Lothrop Street, Room G-102
Pittsburgh, PA 15213

112. University of Pittsburgh
Presbyterian University Hospital
230 Lothrop Street, Room F-179
Pittsburgh, PA 15213

113. University of Texas Southwestern
Medical Center at Dallas
6201 Harry Hines Blvd.
Dallas, TX 75390

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

114. University of Virginia Physicians Group
University of Virginia Lars Leksell Center
of Gamma Surgery Primary Care Center
Building 1143; Room G411
1215 Lee Street
Charlottesville, VA 22908

115. USC University Hospital
1540 Alcazar Street
Los Angeles, CA 90033

116. Washington Hospital Center
110 Irving Street, NW
Washington, DC 20010

117. Washington Hospital Healthcare System
2500 Mowry Ave.
Fremont, CA 94538

118. Washington University in St. Louis
Barnes-Jewish Hospital
4921 Parkview Place
St. Louis, MO 63110

119. West Virginia University Hospital, Inc.
Ruby Memorial Hospital, Mary Babb
Randolph Cancer Center
and Health Sciences Center South Building
Medical Center Drive
Morgantown, WV 26506

120. William Beaumont Hospital
Department of Radiation Oncology
3601 W. Thirteen Mile Road
Royal Oak, MI 48073

121. Yale-New Haven Hospital
20 York Street
New Haven, CT 06510

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
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

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

[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.