



**APPLICATION FOR MATERIALS
LICENSE**

Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Information Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW. *AMENDMENTS/RENEWALS THAT INCREASE THE SCOPE OF THE EXISTING LICENSE TO A NEW OR HIGHER FEE CATEGORY WILL REQUIRE A FEE.

| | |
|---|---|
| <p>APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:</p> <p>OFFICE OF FEDERAL & STATE MATERIALS AND ENVIRONMENTAL MANAGEMENT PROGRAMS DIVISION OF MATERIALS SAFETY AND STATE AGREEMENTS U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20555-0001</p> <p>ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:</p> <p>IF YOU ARE LOCATED IN:</p> <p>ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA,</p> <p>SEND APPLICATIONS TO:</p> <p>LICENSING ASSISTANCE TEAM DIVISION OF NUCLEAR MATERIALS SAFETY U.S. NUCLEAR REGULATORY COMMISSION, REGION I 2100 RENAISSANCE BOULEVARD, SUITE 100 KING OF PRUSSIA, PA 19406-2713</p> | <p>IF YOU ARE LOCATED IN:</p> <p>ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:</p> <p>MATERIALS LICENSING BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION III 2443 WARRENVILLE ROAD, SUITE 210 LISLE, IL 60532-4352</p> <p>ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING,</p> <p>SEND APPLICATIONS TO:</p> <p>NUCLEAR MATERIALS LICENSING BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION IV 1600 E. LAMAR BOULEVARD ARLINGTON, TX 76011-4511</p> |
|---|---|

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

| | | | | | |
|---|--|---------------------------|------------------------------------|----------------|----------------|
| <p>1. THIS IS AN APPLICATION FOR <i>(Check appropriate item)</i></p> <p><input type="checkbox"/> A. NEW LICENSE</p> <p><input checked="" type="checkbox"/> B. AMENDMENT TO LICENSE NUMBER <u>21-26632-01</u></p> <p><input type="checkbox"/> C. RENEWAL OF LICENSE NUMBER _____</p> | <p>2. NAME AND MAILING ADDRESS OF APPLICANT <i>(Include ZIP code)</i></p> <p>Vrinda Narayana, Ph.D. Providence Cancer Center, Providence Hospital 22301 Foster Winter Drive, I floor Southfield, MI 48075</p> | | | | |
| <p>3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED</p> <p>Providence Cancer Center, Providence Hospital 22301 Foster Winter Drive, I floor Southfield, MI 48075</p> | <p>4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION</p> <p>Vrinda Narayana, Ph.D.</p> <table border="1"> <tr> <td>BUSINESS TELEPHONE NUMBER</td> <td>BUSINESS CELLULAR TELEPHONE NUMBER</td> </tr> <tr> <td>(248) 849-8622</td> <td>(248) 867-8424</td> </tr> </table> <p>BUSINESS EMAIL ADDRESS</p> <p>vrinda.narayana@stjohn.org</p> | BUSINESS TELEPHONE NUMBER | BUSINESS CELLULAR TELEPHONE NUMBER | (248) 849-8622 | (248) 867-8424 |
| BUSINESS TELEPHONE NUMBER | BUSINESS CELLULAR TELEPHONE NUMBER | | | | |
| (248) 849-8622 | (248) 867-8424 | | | | |

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

| | | | | | |
|--|--|--------------|--------------------|--|--|
| <p>5. RADIOACTIVE MATERIAL</p> <p>a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.</p> | <p>6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.</p> | | | | |
| <p>8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.</p> | <p>7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.</p> | | | | |
| <p>10. RADIATION SAFETY PROGRAM.</p> | <p>9. FACILITIES AND EQUIPMENT.</p> | | | | |
| <p>12. LICENSE FEES (Fees required only for new applications, with few exceptions*) <i>(See 10 CFR 170 and Section 170.31)</i></p> | <p>11. WASTE MANAGEMENT.</p> <table border="1"> <tr> <td>FEE CATEGORY</td> <td>AMOUNT ENCLOSED \$</td> </tr> <tr> <td></td> <td></td> </tr> </table> | FEE CATEGORY | AMOUNT ENCLOSED \$ | | |
| FEE CATEGORY | AMOUNT ENCLOSED \$ | | | | |
| | | | | | |

13. CERTIFICATION. *(Must be completed by applicant)* THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

| | | |
|---|------------------|------------------------------|
| <p>CERTIFYING OFFICER -- TYPED/PRINTED NAME AND TITLE</p> <p>Vrinda Narayana/ Chief Physicist/RSO</p> | <p>SIGNATURE</p> | <p>DATE</p> <p>15 Aug 13</p> |
|---|------------------|------------------------------|

| FOR NRC USE ONLY | | | | | |
|------------------|---------|--------------|-----------------|--------------|----------|
| TYPE OF FEE | FEE LOG | FEE CATEGORY | AMOUNT RECEIVED | CHECK NUMBER | COMMENTS |
| APPROVED BY | | | \$ | DATE | |



PROVIDENCE
Cancer Institute

August 15, 2013

U.S. Nuclear Regulatory Commission, Region III
Nuclear Materials Licensing
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

Ref: Material License # # 21-26632-01,

Subject: Request to remove Rm 102 for unrestricted use

To the person concerned:

On August 1st 2013, the GammamediX unit was moved from Rm 102 to a dedicated newly built HDR vault. I have enclosed

- a copy of the last leak test for the Ir 192 source
- the radiation survey results for Rm 102 after the source was removed

The above 2 documents should serve as a type of closeout survey for Rm 102.

I request that Rm 102 be deleted from our license and the room released for unrestricted use.

Thank you,

Sincerely,

A handwritten signature in black ink, appearing to read 'Vrinda Narayana'.

Vrinda Narayana, Ph.D

RSO

22301 Foster Winter Drive, I Floor
Southfield, MI 48075
248 849 8622



AOS

Alpha-Omega Services, Inc.

MEDICAL SOURCE CERTIFICATE

| | |
|-------------------------------------|--------------------------------------|
| Customer Name | Providence Hospital & Medical Center |
| Machine Number | H640690-GM |
| Source serial number | 24-01-2162-001-041813-12532-28 |
| AOS Work Order Number | A-0158431 |
| Source Type | GM12000680 |
| Model | GammaMed 232 |
| Connector serial number | 24-001-2162 |
| Container serial number | 588 |
| Source code | Medical source GM+HDR GM12000680 |
| Material | AISI 316L |
| ISO Code | ISO/99/E 53211 |
| Certificate number for special form | USA/0723/S-96 (Revision 2) |
| Isotope | Iridium-192 |
| Physical form | Solid |
| Chemical form | Metal |
| Active dimensions (Diam x h) mm | 0.6 mm x 3.5 mm |
| Capsule dimensions | 0.9mm x 4.57mm |
| Encapsulation | Single |
| Apparent activity | 463.68GBq (12.53 Ci) |
| Air kerma rate at 1 m | 51.007 mGy/h +/- 5% |
| Calibration date @ 12:00 noon CST | 18-Apr-2013 |
| Welding | laser |
| 10 Ci Date | 13-May-2013 |

Tests

| | |
|---|----------|
| Total length | ACCEPTED |
| Diameter | ACCEPTED |
| Laser weld visual check | ACCEPTED |
| Capsule integrity (15N) | ACCEPTED |
| Cables-connector assembly integrity (40N) | ACCEPTED |
| Free of surface contamination (*) | ACCEPTED |
| Leakage test (*) | < 5 nCi |

(*) the surface contamination is detected by the wet wipe test according to the ISO norm 9978 (1992) (5.3.1)

We certify that the source is in compliance with the following norms : NF ISO 9978 (1992), ISO 2919 (1999)

Date : 5/1/13

Responsible for quality control

Signature :



TO WHOM IT MAY CONCERN

This will hereby certify that Alpha-Omega Services, Inc., having its HDR facility located at 1282 Bigwoods-Starks Road, Vinton, Louisiana, 70668, USA has received the following container and source:

- Date of returning container : 08/07/2013
- Container serial number : 1102
- Connector number : 24-2162-12
- Source serial number : 24-01-2162-001-041813-12532-28
- Machine number : H640690-GM

From Providence Hospital & Medical Center
Radiation Oncology
22301 Foster Winter Drive
Southfield
MI
48075
USA

This container was originally shipped on behalf of Varian Medical Systems.

The source will be disposed of by Alpha-Omega Services, Inc., at its HDR facility, located at 1282 Bigwoods-Starks Road, Vinton, Louisiana, USA on behalf of Varian Medical Systems. Alpha-Omega Services, Inc. is licensed by the state of Louisiana to perform this service.

David Mornic, Engineer
Alpha-Omega Services, Inc.
Tel. 337-589-5720
Fax 337-589-5955
aoslab@alpha-omegaserv.com

PROVIDENCE CANCER INSTITUTE - Southfield, MI HDR SOURCE EXCHANGE - RADIATION SURVEY

Date: 1 Aug 2013 Physicist: Vincent Kang

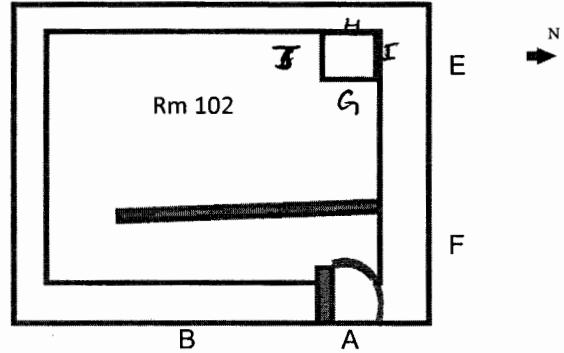
Survey Meter 1: Ion Chamber: Fluke 451B, SN 667 Calibrated 29 July 2013

Adjacent Areas:

After source removal

| Position | Location | Reading mR/hr |
|----------|---------------|---------------|
| A | Door | 0.0 |
| B | Console | 0.0 |
| C | Parking South | 0.0 |
| D | Parking West | 0.0 |
| E | 2100 CD | 0.0 |
| F | Passage | 0.0 |

Location mR/h
G 0.0
H 0.0 C
I 0.0
J 0.0

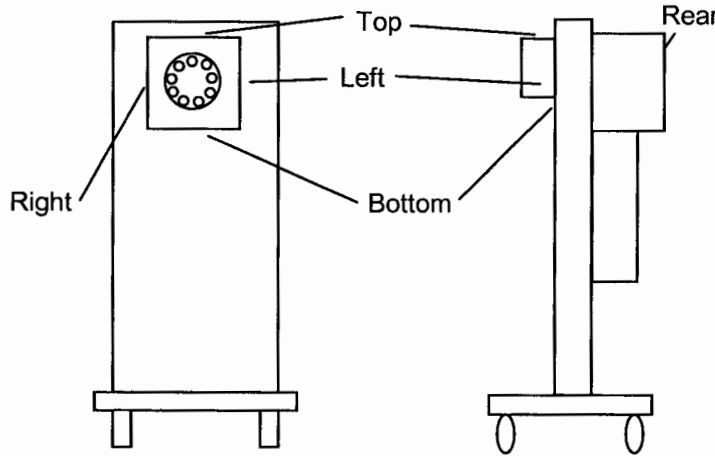


DATE: 8/1/13

GammaMedPlus iX

DATE: 8/2/13

| | mR/hr | |
|--------|------------|----------|
| | at surface | at 10 cm |
| Top | 0.10 | |
| Right | 0.08 | |
| Front | 0.53 | |
| Left | 0.02 | |
| Rear | 0.24 | |
| Bottom | 0.30 | |



| | mR/hr | |
|--------|------------|----------|
| | at surface | at 10 cm |
| Top | 0.18 | |
| Right | 0.13 | < |
| Front | 0.89 | |
| Left | 0.09 | |
| Rear | 0.52 | |
| Bottom | 0.70 | |

Before Source Exchange
Rm 102 old vault

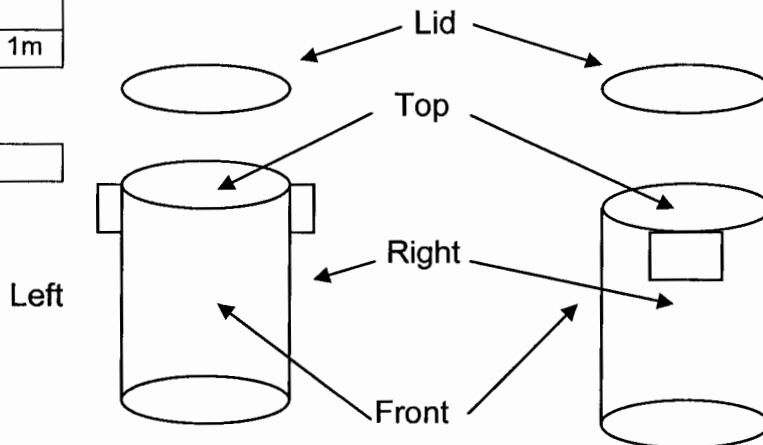
After Source Exchange
new vault

DATE: 7/31/13

Source Shipping Container

DATE: 8/2/13

| | mR/hr | |
|-------|------------|-------|
| | at surface | At 1m |
| Top | 1.41 | |
| Right | 6.5 | |
| Front | 4.2 | |
| Left | 5.1 | |
| Rear | 9.3 | |



| | mR/hr | |
|-------|------------|-------|
| | at surface | At 1m |
| Top | 0.55 | |
| Right | 2.9 | |
| Front | 3.0 | 0.12 |
| Left | 1.92 | |
| Rear | 1.73 | |

Before Source Exchange

After Source Exchange

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. **Fold the printed sheet containing the label at the line so that the entire shipping label is visible.** Place the label on a single side of the package and cover it completely with clear plastic shipping tape. Do not cover any seams or closures on the package with the label. Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. **GETTING YOUR SHIPMENT TO UPS**
UPS locations include the UPS Store[®], UPS drop boxes, UPS customer centers, authorized retail outlets and UPS drivers.
 Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
 Hand the package to any UPS driver in your area.
 Take your package to any location of The UPS Store[®], UPS Drop Box, UPS Customer Center, UPS Alliances (Office Depot[®] or Staples[®]) or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
Customers with a Daily Pickup
 Your driver will pickup your shipment(s) as usual.

FOLD HERE

| | | | |
|---|--|--|--------|
| VRINDA NARAYANA 248.849.8622 PROVIDENCE CANCER CENTER - SOU 22301 FOSTER WINTER DR. SOUTHFIELD MI 48075 | | 0.1 LBS LTR | 1 OF 1 |
| SHIP TO: MATERIALS LICENSING BRANCH US NRC REGION III SUITE 210 2443 WARRENVILLE ROAD LISLE IL 60532-4352 | | | |
|  | | IL 603 9-03  | |
| UPS NEXT DAY AIR | | 1 | |
| TRACKING #: 1Z W22 100 01 9102 2143 | | | |
|  | | | |
| BILLING: P/P | | | |
| LHM: SOUCAN Cost Center: 807152 | |  | |
| CS 15.5.25. | | WXP1E80 36.0A 01/2013 | |

RECEIVED AUG 19 2013

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