



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

November 30, 2006

Docket No. 03010626
Control No. 139622

License No. 45-16231-01

Beth Matish
Administration
Henrico Doctors' Hospital
Forest Campus
1602 Skipwith Road
Richmond, VA 23229

SUBJECT: HENRICO DOCTORS' HOSPITAL, LICENSE AMENDMENT, CONTROL NO.
139622

Dear Ms. Matish:

This refers to your license amendment request. Enclosed with this letter is the amended license.

Please review the enclosed document carefully and be sure that you understand and fully implement all the conditions incorporated into the amended license. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5239, so that we can provide appropriate corrections and answers.

An environmental assessment for this action is not required, since this action is categorically excluded under 10 CFR 51.22(c)(14).

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Medical, Academic, and Industrial Uses of Nuclear Material**; then **Toolkit Index Page**. Or you may obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-888-293-6498. The GPO is open from 7:00 a.m. to 8:00 p.m. EST, Monday through Friday (except Federal holidays).

Thank you for your cooperation.

Sincerely,

Original signed by Pamela J. Henderson

Pamela J. Henderson, Chief
Medical Branch
Division of Nuclear Materials Safety

Enclosure:
Amendment No. 43

B. Matish
Henrico Doctors' Hospital

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cc:
Julius Hurwitz, M.D., Radiation Safety Officer

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SUNSI Review Complete: RMcKinley

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NAME	RMcKinley/RWM		PHenderson/PJH					
DATE	11/30/2006		11/30/2006					

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MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

<p style="text-align: center;">Licensee</p> <p>1. Henrico Doctors' Hospital</p> <p>2. Forest Campus 1602 Skipwith Road Richmond, Virginia 23229</p>	<p>In accordance with the letters dated October 25, and November 2, 2006,</p> <p>3. License number 45-16231-01 is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration date October 31, 2011</p> <hr/> <p>5. Docket No. 030-10626 Reference No.</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Any byproduct material permitted by 10 CFR 35.100</p> <p>B. Any byproduct material permitted by 10 CFR 35.200</p> <p>C. Any byproduct material permitted by 10 CFR 35.300</p> <p>D. Any byproduct material permitted by 10 CFR 31.11</p> <p>E. Iridium 192 permitted by 10 CFR 35.600</p> <p>F. Gadolinium 153</p>	<p>7. Chemical and/or physical form</p> <p>A. Any</p> <p>B. Any</p> <p>C. Any</p> <p>D. Prepackaged Kits</p> <p>E. Sealed Sources [Alpha-Omega Services Model CSNOO10-192; Varian Medical Systems, Ltd. Model VS2000, Varian Medical Systems or Omnitron International Model SL-777V]</p> <p>F. Sealed Sources (Amersham GDC Models)</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. As needed</p> <p>B. As needed</p> <p>C. 10 curies</p> <p>D. As needed</p> <p>E. 2 sources, 1 source not to exceed 13 curies and 1 source not to exceed 8 curies</p> <p>F. 1 curie</p>
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**MATERIALS LICENSE
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9. Authorized use:

- A. Any uptake, dilution and excretion study permitted by 10 CFR 35.100.
- B. Any imaging and localization study permitted by 10 CFR 35.200.
- C. Any diagnostic study or therapy procedure permitted by 10 CFR 35.300.
- D. In vitro studies.
- E. One source for medical use permitted by 10 CFR 35.600, in a Varian-TEM Ltd. Model VariSource HDR remote afterloader unit. The source activity may not exceed 10 curies at the time of medical use. One source in its shipping container as necessary for replacement of the source in the remote afterloader unit.
- F. For storage only incident to disposal.

CONDITIONS

10. Licensed material may be used or stored only at the licensee's facilities located at:

- A. Materials listed in Items 6.A. - D., and F. may be used or stored at the licensee's facilities located at Henrico Doctors' Hospital - Forest Campus, 1602 Skipwith Road, Richmond, Virginia, and Henrico Doctors' Hospital - Parham, 7700 East Parham Road, Richmond, Virginia.
- B. Item 6.E. may only be used and stored at the licensee's facilities located in the Radiation Oncology Department at 7603 Forest Avenue, Suite 106, Richmond, Virginia.

11. The Radiation Safety Officer for this license is Julius Hurwitz, M.D.

12. Licensed material is only authorized for use by, or under the supervision of:

- A. Individuals permitted to work as an authorized user, authorized nuclear pharmacist, and/or authorized medical physicist in accordance with 10 CFR 35.13 and 35.14.
- B. The following individuals are authorized users for medical use as indicated:

Authorized Users

Material and Use

Sonia Crimaldi, M.D.

35.100; 35.200; *In vitro* studies

B. Gerald Yount, Jr., M.D.

35.100; 35.200; *In vitro* studies

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<u>Authorized Users</u>	<u>Material and Use</u>
George W. Martin, M.D.	35.100; 35.200; <i>In vitro</i> studies
Joel F. Parker, M.D.	35.100; 35.200; <i>In vitro</i> studies
Scott Cunningham, M.D.	35.100; 35.200; <i>In vitro</i> studies
Timothy R. Taylor, M.D.	35.100; 35.200; <i>In vitro</i> studies
Ray A. Beauchamp, M.D.	35.100; 35.200; <i>In vitro</i> studies
W. Powell Baker, M.D.	35.100; 35.200; <i>In vitro</i> studies
Jeffrey E. Hull, M.D.	35.100; 35.200; <i>In vitro</i> studies
Kiernan Cross, M.D.	35.100; 35.200; <i>In vitro</i> studies
Arnold John Kuta, M.D.	35.100; 35.200; <i>In vitro</i> studies
James Anthony Urso, M.D.	35.100; 35.200; <i>In vitro</i> studies
Robert Young Fidler, Jr., M.D.	35.100; 35.200; <i>In vitro</i> studies
Melanie Ann Fidler, M.D.	35.100; 35.200; <i>In vitro</i> studies
Carlisle L. Morgan, Ph.D., M.D.	35.100; 35.200; <i>In vitro</i> studies
David A. May, M.D.	35.100; 35.200; <i>In vitro</i> studies
Lowrey H. Holthaus, M.D.	35.100; 35.200; <i>In vitro</i> studies
Julius Hurwitz, M.D.	35.100; 35.200; <i>In vitro</i> studies; Gadolinium-153 sealed sources in storage
Alexander K. Girevandulis, M.D.	35.100; 35.200; <i>In vitro</i> studies
Thomas Underhill, D.D.S., M.D.	35.100; 35.200; <i>In vitro</i> studies
Diran Roger Bezirdjian, M.D.	35.100; 35.200; <i>In vitro</i> studies
Jacquelyn P. Hogge, M.D.	35.100; 35.200; <i>In vitro</i> studies
William James Pommersheim, M.D.	35.100; 35.200; <i>In vitro</i> studies
Craig Daniel McCormick, M.D.	35.100; 35.200; <i>In vitro</i> studies

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<u>Authorized Users</u>	<u>Material and Use</u>
Hong Andy Park, M.D.	35.100; 35.200; <i>In vitro</i> studies
Craig G. Rowell, M.D.	35.100; 35.200; <i>In vitro</i> studies
Howard F. Faunce III, D.O.	35.100; 35.200; <i>In vitro</i> studies
James F. Snyder, M.D.	35.100; 35.200; <i>In vitro</i> studies
Yvonne J. Weaver, M.D.	35.200
Steven Craig Vranian, M.D.	35.200
Reza K. Omarzair, M.D.	35.200
Ramesh N. Kundur, M.D.	35.200
Shaival J. Kapadia, M.D.	35.200
Vipal Sabharwal, M.D.	35.200
Massimo Giusti, M.D.	35.200
Christopher S. Nicholson, M.D.	35.200
Steven M. Wiebe-King, M.D.	35.200
James D. Wadsworth, M.D.	35.100; 35.200; 35.300 except iodine-131; <i>In vitro</i> studies
Charles Cockrell, M.D.	35.100; 35.200; 35.300 except iodine-131; <i>In vitro</i> studies
Nathaniel W. Cuthbert, M.D.	35.100; 35.200; 35.300 except iodine-131; <i>In vitro</i> studies
Vasundhara Raval, M.D.	35.100; 35.200; 35.300; <i>In vitro</i> studies
Russell O. Briere, M.D.	35.100; 35.200; 35.300; <i>In vitro</i> studies
James Zelenak, M.D.	35.100; 35.200; 35.300; <i>In vitro</i> studies
Efstathios Spinos, M.D.	35.100; 35.200; 35.300; <i>In vitro</i> studies

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<u>Authorized Users</u>	<u>Material and Use</u>
R. West Fuller, M.D.	35.100; 35.200; 35.300; <i>In vitro</i> studies
J. Keith Thompson, M.D.	35.100; 35.200; 35.300; <i>In vitro</i> studies
Gerry Lee Reece, M.D.	35.100; 35.200; 35.300; <i>In vitro</i> studies
Jo Anne Walker, M.D.	35.300; Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
John Curtis Chinault, Jr., M.D.	35.300; Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
Thomas James Eichler, M.D.	35.300; Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
Taryn G. Torre, M.D.	35.300; Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
David R. Penberthy, M.D.	35.300; Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
Christopher R. Johnson, M.D.	Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
Michael P. Hagan, M.D., Ph.D.	Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
Douglas W. Arthur, M.D.	Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
Theodore D. K. Chung, M.D., Ph.D.	Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
Olubunmi K. Abayomi, M.D.	Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
Monica M. Morris, M.D.	Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
Michael G. Chang, M.D.	Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit
Laurie Cuttino, M.D.	Iridium-192 for uses in a High Dose Rate Remote Afterloader Unit

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C. The following individuals are authorized medical physicists as indicated:

<u>Authorized Medical Physicists</u>	<u>Material and Use</u>
Alfred Strash, Ph.D.	Iridium-192 in a High Dose Rate Remote Afterloader Unit for calibrations, spot-checks, and training
Marcus Gilbert, M.Sc.	Iridium-192 in a High Dose Rate Remote Afterloader Unit for calibrations, spot-checks, and training
Stanley H. Benedict, Ph.D.	Iridium-192 in a High Dose Rate Remote Afterloader Unit for calibrations, spot-checks, and training
Dorin Todor, Ph.D.	Iridium-192 in a High Dose Rate Remote Afterloader Unit for calibrations, spot-checks, and training
Nesrin Dogan, Ph.D.	Iridium-192 in a High Dose Rate Remote Afterloader Unit for calibrations, spot-checks, and training
Jeffrey Williamson, Ph.D.	Iridium-192 in a High Dose Rate Remote Afterloader Unit for calibrations, spot-checks, and training
Nirmal Sakthi, M.S.	Iridium-192 in a High Dose Rate Remote Afterloader Unit for calibrations, spot-checks, and training

13. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d) for establishing decommissioning financial assurance.
14. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
15. The licensee shall conduct a physical inventory every six months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.
16. For sealed sources not associated with 10 CFR Part 35 use, the following conditions apply:

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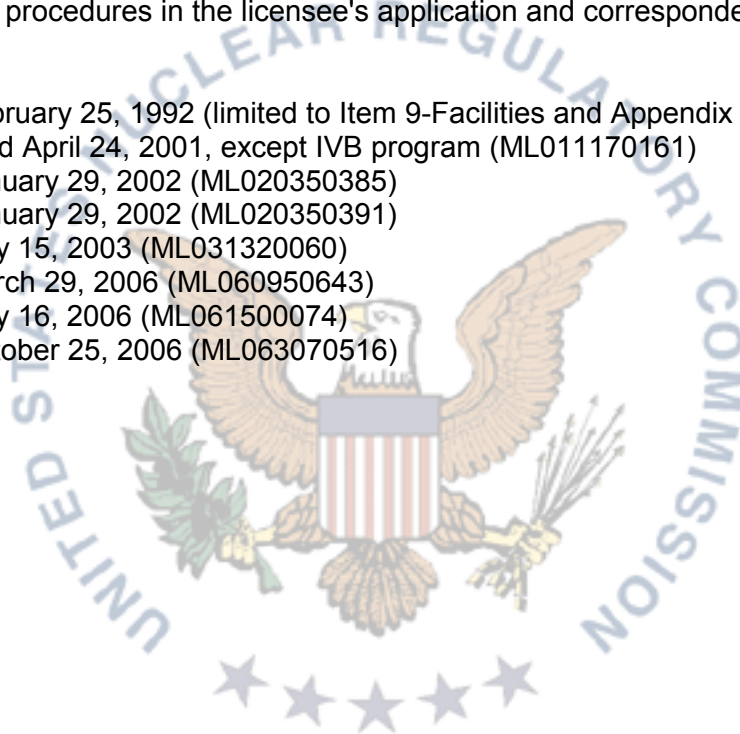
- A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months or at the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.
- B. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.
- C. Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material.
- D. Sealed sources need not be tested if they are in storage and are not being used; however, when they are removed from storage for use or transferred to another person and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- E. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.
- F. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- G. Records of leak test results shall be kept in units of microcuries and shall be maintained for 5 years.
17. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

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18. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. This license condition applies only to those procedures that are required to be submitted in accordance with the regulations. Additionally, this license condition does not limit the licensee's ability to make changes to the radiation protection program as provided for in 10 CFR 35.26. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

- A. Letter dated February 25, 1992 (limited to Item 9-Facilities and Appendix B)
- B. Application dated April 24, 2001, except IVB program (ML011170161)
- C. Letter dated January 29, 2002 (ML020350385)
- D. Letter dated January 29, 2002 (ML020350391)
- E. Letter dated May 15, 2003 (ML031320060)
- F. Letter dated March 29, 2006 (ML060950643)
- G. Letter dated May 16, 2006 (ML061500074)
- H. Letter dated October 25, 2006 (ML063070516)



For the U.S. Nuclear Regulatory Commission

Date November 30, 2006By **Original signed by Pamela J. Henderson**

Pamela J. Henderson, Chief
Medical Branch
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406