



# CAPITAL REGION MEDICAL CENTER

*In partnership with the University of Missouri Health Sciences Center*

P.O. Box 1128  
Jefferson City, Missouri 65102-1128  
573/632-5000

June 25, 2009

U.S. Nuclear Regulatory Commission  
Nuclear Materials Licensing Section  
2443 Warrenville Road  
Suite 210  
Lisle, IL. 60532

Re: Amendment application for the purpose of adding an authorized user to Capital Region Medical Center's NRC License, 24-12699-01

Capital Region Medical Center, license 24-12699-01, requests Patricia O. MacFarlane M.D. be added as an authorized user for Materials and Use in 10 CFR 35.100 , and 35.200 .

Dr. MacFarlane is currently listed as an authorized user for Materials and Use on NRC License Number 24-00128-03.

I have enclosed a copy of the licenses for Southeast Missouri Hospital, license 24-00128-03, and Capital Region Medical Centers' License.

You may direct any questions to Ron Thompson, Supervisor of Nuclear Medicine, at 573-632-5286.

Sincerely,

Janet Weckenborg,

Vice President, VP Operations and Administrative Representative Radiation Safety Committee

U.S. NUCLEAR REGULATORY COMMISSION

**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>Licensee</p> <ol style="list-style-type: none"> <li>Capital Region Medical Center<br/>Nuclear Medicine Department</li> <li>1125 Madison<br/>P.O. Box 1128<br/>Jefferson City, MO 65102</li> </ol> | <p>In accordance with the letter dated <b>September 25, 2008</b>,</p> <ol style="list-style-type: none"> <li>License number 24-12699-01 is amended in its entirety to read as follows:</li> <li>Expiration date June 30, 2015</li> <li>Docket No. 030-02375<br/>Reference No.</li> </ol> |
|--|--|

|   |   |   |
|---|---|---|
| <p>6. Byproduct, source, and/or special nuclear material</p> <ol style="list-style-type: none"> <li>Any byproduct material permitted by 10 CFR 35.100</li> <li>Any byproduct material permitted by 10 CFR 35.200</li> <li>Any byproduct material permitted by 10 CFR 35.300</li> <li>Any byproduct material permitted by 10 CFR 35.400</li> </ol> | <p>7. Chemical and/or physical form</p> <ol style="list-style-type: none"> <li>Any</li> <li>Any</li> <li>Any</li> <li>Sealed Sources (Theragenics Corporation I-Seed Model 125.S06, Bard Brachytherapy Inc. Model STM 125-1; Theragenics Corporation Model 200; 3M Health Physics Services Model 6711; BEBIG GmbH Model 125.S06; Best Industries Model Nos. 2301 and 2335; Implant Sciences Corp., Model 3500; International Brachytherapy, Inc. Model Nos. Intersource 1251L and 1032P; IsoAid, LLC Model IAI--125A; Mills Biopharmaceuticals, Inc. Model Nos. 125SL and 125SH; North American Scientific, Model Nos. Med 3631 and 3633.)</li> </ol> | <p>8. Maximum amount that licensee may possess at any one time under this license</p> <ol style="list-style-type: none"> <li>As needed</li> <li>As needed</li> <li>As needed (not to exceed 1 curie of iodine-131)</li> <li>2 curies of palladium-103, 2 curies of iodine-125, 4 curies total.</li> </ol> |
|---|---|---|

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
24-12699-01

Docket or Reference Number  
030-02375

Amendment No. 64

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. Any manual brachytherapy procedure permitted by 10 CFR 35.400.

CONDITIONS

- 10. Licensed material may be used or stored only at the licensee's facilities located at 1125 Madison, Jefferson City, Missouri.
- 11. The Radiation Safety Officer for this license is Kenneth L. Andrews, M.S., DABR.
- 12. Licensed material is only authorized for use by, or under the supervision of:
  - A. Individuals permitted to work as an authorized user 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

|                           |                                   |
|---------------------------|-----------------------------------|
| S. J. Westgate, M.D.      | 10 CFR 35.400.                    |
| Conrad Balcer, D.O.       | 10 CFR 35.100 and 35.200.         |
| Mark Phillip Bryer, M.D.  | 10 CFR 35.300 and 35.400.         |
| William L. Schlegel, D.O. | 10 CFR 35.100 and 35.200.         |
| Rodney Adkison, D.O.      | 10 CFR 35.100, 35.200 and 35.300. |
| Joseph M. Bean, M.D.      | 10 CFR 35.300 and 10 CFR 35.400.  |
| James Russell Allen, M.D. | 10 CFR 35.300 and 35.400.         |
| Patrick J. Morello, M.D.  | 10 CFR 35.100 and 35.200.         |
| Joy A. Johnson, M.D.      | 10 CFR 35.100, 35.200 and 35.300. |

- 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.

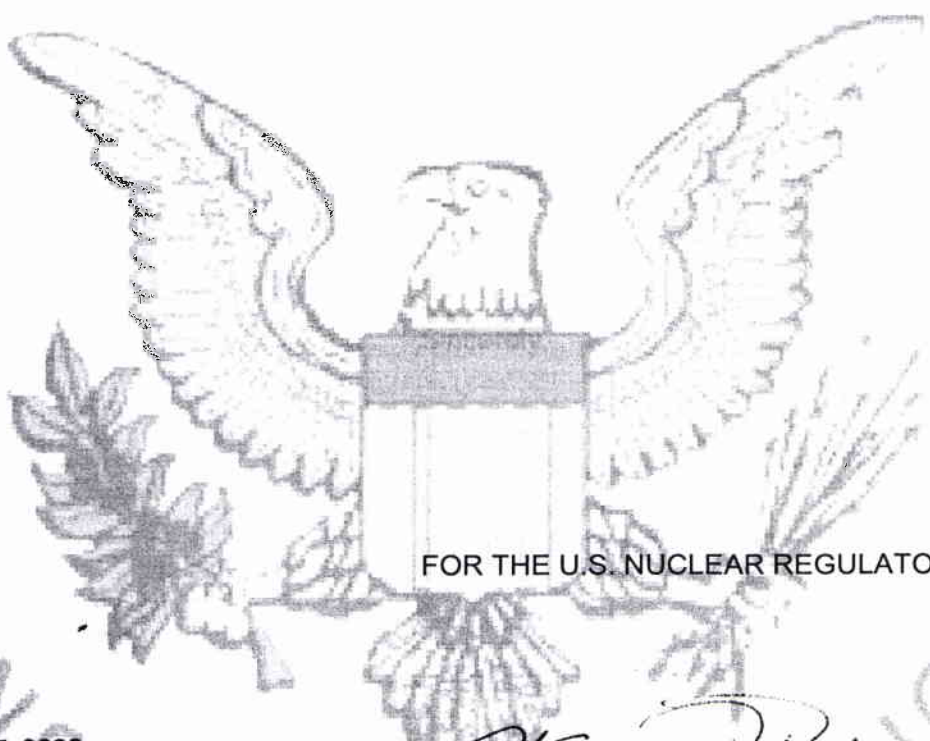
**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
24-12699-01

Docket or Reference Number  
030-02375

Amendment No. 64

- 14. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
- 15. 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. Application dated December 6, 2004; and
  - B. Facsimile letters dated May 26, 2005, June 6 and 7, 2005 and March 8, 2006.



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date DEC 05 2008

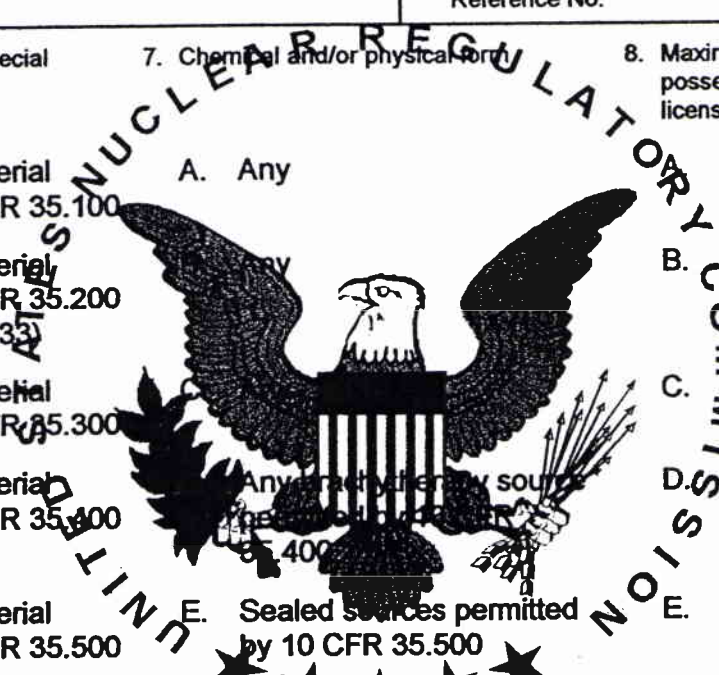
By William P. Reichhold  
 William P. Reichhold  
 Materials Licensing Branch  
 Region III

**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.

|  |  |
|--|--|
| Licensee   | In accordance with letter dated<br><b>October 5, 2005,</b>                   |
| 1. Southeast Missouri Hospital                   | 3. License number 24-00128-03 is amended in its entirety to read as follows: |
| 2. 1701 Lacey Street<br>Cape Girardeau, MO 63701 | 4. Expiration date <b>November 30, 2010</b>                                  |
|  | 5. Docket No. <b>030-02264</b><br>Reference No.                              |

| 6. Byproduct, source, and/or special nuclear material                      | 7. Chemical and/or physical form                                   | 8. Maximum amount that licensee may possess at any one time under this license |
|--|--|--|
| A. Any byproduct material permitted by 10 CFR 35.100                       | A. Any   | As needed  |
| B. Any byproduct material permitted by 10 CFR 35.200 (excluding xenon-133) | B. Any   | As needed  |
| C. Any byproduct material permitted by 10 CFR 35.300                       | C. Any   | As needed (not to exceed curie of iodine-131)                                  |
| D. Any byproduct material permitted by 10 CFR 35.400                       | D. Any   | As needed  |
| E. Any byproduct material permitted by 10 CFR 35.500                       | E. Sealed sources permitted by 10 CFR 35.500                       | As needed  |
| F. Gadolinium-153  | F. Sealed source (North American Scientific, Inc. Model No. 3601)  | 4 sources, not to exceed 250 millicuries each                                  |
| G. Cesium-137  | G. Sealed source (Isotope Products Laboratories Model No. HEG-137) | 4 sources, not to exceed 30 millicuries each                                   |
| H. Depleted Uranium  | H. Stainless steel covered metal                                   | 4 shields, not to exceed 12 kilograms each                                     |
| I. Iodine-125, as permitted by 10 CFR 35.1000                              | I. Liquid as Iotrex™   | As needed  |



**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
24-00128-03

Docket or Reference Number  
030-02264

Amendment No. 72

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. Any manual brachytherapy procedure permitted by 10 CFR 35.400.
- E. Diagnostic medical use of sealed sources permitted by 10 CFR 35.500 in compatible devices registered pursuant to 10 CFR 30.32(g).
- F. Two sources to be used in ADAC Laboratories Transmission Line Source Housing VANTAGE device for medical radiography in humans. Two sources in shipping containers for replacement of the sources.
- G. Two sources to be used in ADAC Laboratories Transmission Line Source Housing MCD-AC attenuation correction system for medical radiography in humans. Two sources in shipping containers for replacement of the sources.
- H. Shielding in ADAC Laboratories Transmission Line Source Housing MCD-AC attenuation correction system.
- I. For use in the Proxima Therapeutics' Glaston Radiotherapy System for medical use permitted by 10 CFR 35.1000.

10. Licensed material shall be used only at the licensee's facilities located at 1701 Lacey Street, Cape Girardeau, Missouri.

11. A. Radiation Safety Officer: Samuel S. Hancock, Ph.D.

B. Authorized Medical Physicist: Keith Hickey, Ph.D. and Samuel S. Hancock, Ph.D.

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

A. Individuals permitted to work as an authorized user in accordance with 10 CFR 35.13 and 35.14.

B. The following individuals are authorized users for medical use as indicated:

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
24-00128-03

Docket or Reference Number  
030-02264

Amendment No. 72

Authorized Users

Material and Use

Craig W. Williams, M.D.

10 CFR 35.100, 35.200, 35.300 (excluding iodine-131 for thyroid carcinoma), 35.500, gadolinium-153 in VANTAGE device for medical radiography, and cesium-137 in MCD-AC system for medical radiography.

Willeford J. Stoecker, M.D.

10 CFR 35.100, 35.200, 35.300 (excluding iodine-131 for thyroid carcinoma), gadolinium-153 in VANTAGE device for medical radiography, and cesium-137 in MCD-AC system for medical radiography.

Mark L. Pfautsch, D.O.

10 CFR 35.100, 35.200, 35.300, gadolinium-153 in VANTAGE device for medical radiography, and cesium-137 in MCD-AC system for medical radiography.

Bryan S. Beck, M.D.

10 CFR 35.200, (excluding iodine-125, iodine-131, generators and aerosols) limited to cardiovascular clinical procedures.

William S. Campbell, Jr., M.D.

10 CFR 35.100, 35.200, 35.300 (excluding iodine-131 for thyroid carcinoma), 35.500, gadolinium-153 in VANTAGE device for medical radiography, and cesium-137 in MCD-AC system for medical radiography.

Joseph Paul Miller, M.D.

10 CFR 35.300, 35.400 and iodine-125 in the Proxima Therapeutic Brachytherapy System.

Kenneth Retter, M.D.

10 CFR 35.200 limited to cardiovascular clinical procedures, gadolinium-153 in VANTAGE device for medical radiography, and cesium-137 in MCD-AC system for medical radiography.

Rajinder M. Gulati, M.D.

10 CFR 35.100, 35.200, 35.300 and 35.500.

Mark L. Gates, M.D.

10 CFR 35.100, 35.200, 35.300, 35.500 gadolinium-153 in VANTAGE device for medical radiography, and cesium-137 in MCD-AC system for medical radiography.

George A. Pjura, M.D.

10 CFR 35.100, 35.200, 35.300, 35.500 gadolinium-153 in VANTAGE device for medical radiography, and cesium-137 in MCD-AC system for medical radiography.

Tom B. Brumitt, D.O.

10 CFR 35.100, 35.200 and 35.300 (excluding iodine-131 for thyroid carcinoma).

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
24-00128-03

Docket or Reference Number  
030-02264

Amendment No. 72

- Theodore R. Swartz, M.D. 10 CFR 35.100, 35.200, 35.500, gadolinium-153 in VANTAGE device for medical radiography, and cesium-137 in MCD-AC system for medical radiography.
- Patricia O. MacFarlane, M.D. 10 CFR 35.100 , 35.200 and 35.500
- Andrew E. West, M.D. 10 CFR 35.100, 35.200, 35.500, and gadolinium-153 in VANTAGE device for medical radiography.
- Raleigh F. Johnson, III, M.D. 10 CFR 35.100, 35.200, 35.500, and gadolinium-153 in VANTAGE device for medical radiography.
- Christopher T. Russell, M.D. 10 CFR 35.100, 35.200 and 35.500
- David A. Law, M.D. 10 CFR 35.200 limited to cardiovascular clinical procedures (excluding generators, aerosols, iodine-125 and iodine-131).
- Huan Luong Nguyen, M.D. 10 CFR 35.100 , 35.200 and 35.500
- James J. Borders, M.D. 10 CFR 35.100 , 35.200 and 35.500
- Cedric C. Strange, M.D. 10 CFR 35.100, 35.200 and 35.500

13. For sealed sources not associated with a reactor, the following conditions apply:

- A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.
- B. In the absence of a certificate from a transferor indicating that a leak test has been made within 6 months prior to the transfer, a sealed source received from another person shall not be put into use until tested.
- C. Sealed sources need not be leak tested if 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.
- D. 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.





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030-02264

Amendment No. 72

- E. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to perform such services.
14. Sealed sources shall not be opened or removed from their respective source holders.
15. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by NRC, to account for all sources and/or devices received and possessed under the license.
16. When using technetium-99m aerosol, the license shall collect spent aerosol in a shielded trap and, for reusable traps, the licensee shall monitor the trap effluent with an air contamination monitor. The air contamination monitor shall be checked in accordance with the manufacturer's instructions. Effluent from single use traps are not required to be monitored.
17. 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.
18. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
19. 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 shall not be held liable unless the statements, representations, and procedures in the license application and correspondence are more restrictive than the regulations
- A. Application October 23, 2000;
- B. Letters dated August 5, 2003, and September 5, 2003; and,
- C. Facsimile dated September 23, 2003.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date NOV 02 2005

By James R. Mullauer  
James R. Mullauer, M.H.S.  
Materials Licensing Branch  
Region III

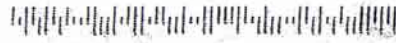


**CAPITAL REGION  
MEDICAL CENTER**

*University of Missouri Health Care*

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**RETURN SERVICE REQUESTED**



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U.S. Nuclear Regulatory Commission  
Nuclear Materials Licensing Section  
2443 Warrsville Road  
Suite 210  
Liste, IL. 60532