

**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  
**November 27, 2006,**

1. Lakeland Medical Center, St. Joseph
2. 1234 Napier Avenue  
St. Joseph, MI 49085

3. License number 21-04177-01 is amended  
in its entirety to read as follows:

4. Expiration date February 28, 2015

5. Docket No. 030-02049  
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 35.200

A. Any

A. As needed

B. Any byproduct material  
permitted by 10 CFR 35.200

Any

B. As needed

C. Any byproduct material  
permitted by 10 CFR 35.300

C. As needed, not to exceed 1  
curie of I-131

D. Any byproduct material  
permitted by 10 CFR 35.400

D. Sealed sources (North American Scientific, Inc. Model 8101 Series)

D. Not to exceed 165 millicuries for cesium-137, not to exceed 1 curie for iodine-125 and not to exceed 100 millicuries for iridium-192

E. Gadolinium-153

E. Sealed sources (North American Scientific, Inc. Model 3601)

E. 4 sources not to exceed 250 millicuries each

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.

# **MATERIALS LICENSE SUPPLEMENTARY SHEET**

License Number

21-04177-01

Docket or Reference Number

030-02049

Amendment No. 76

- E. 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.

## CONDITIONS

10. A. Licensed material shall be used only at the licensee's facilities located at Lakeland Medical Center - St. Joseph, 1234 Napier Avenue, St. Joseph, Michigan.
- B. Licensed material listed in subitems 6.A., 6.B., 6.C., 6.D. (limited to iodine-125) and 6.E. may be used at Lakeland Medical Center - Niles, 31 North Saint Joseph Avenue, Niles, Michigan
- C. Licensed material listed in subitems 6.A. and 6.B. may be used at temporary job sites of the licensee anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.
11. Radiation Safety Officer for this license is David E. Sieffert, M.S.
12. Licensed material is only authorized for use by, or under the supervision of:
- A. Individuals permitted to work as authorized user in accordance with 10 CFR 35.13 and 35.14.
- B. The following individuals are authorized users for medical uses:

### Authorized Users

William F. Leaney, M.D. 10 CFR 35.100, 35.200, 35.300 (for iodine-131, oral administration of sodium iodide-131 in quantities less than 40 millicuries) and gadolinium-153 in VANTAGE device for medical radiography.

Roman Hyszczyk, M.D. 10 CFR 35.100, 35.200 and gadolinium-153 in VANTAGE device for medical radiography.

Daniel F. Kreider, M.D. 10 CFR 35.100, 35.200, 35.300 and gadolinium-153 in VANTAGE device for medical radiography.

Kent T. Lancaster, M.D. 10 CFR 35.100, 35.200, 35.300 and gadolinium-153 in VANTAGE device for medical radiography.

Brad Bastow, M.D. 10 CFR 35.100, 35.200 and gadolinium-153 in VANTAGE device for medical radiography.

Dilip Arora, M.D. 10 CFR 35.100, 35.200 and gadolinium-153 in VANTAGE device for medical radiography.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**License Number  
21-04177-01Docket or Reference Number  
030-02049

Amendment No. 76

|                                |                                  |
|--------------------------------|----------------------------------|
| Brian T. Eller, M.D.           | 10 CFR 35.100 and 35.200.        |
| Srinivasan Dhatreecharan, M.D. | 10 CFR 35.100 and 35.200.        |
| Peter Lai, M.D.                | 10 CFR 35.300 and 35.400.        |
| Jose Cassini Pacheco, M.D.     | 10 CFR 35.100 and 35.200.        |
| Denis L. Gibbs, D.O.           | 10 CFR 35.100 and 35.200.        |
| Mark Ottmar, M.D.              | 10 CFR 35.100 and 35.200.        |
| Thomas K. Pow, M.D.            | 10 CFR 35.100 and 35.200.        |
| Ogubay Mesmer, M.D.            | 10 CFR 35.100 and 35.200         |
| Thomas J. DeWind, M.D.         | 10 CFR 35.100, 35.200 and 35.300 |

13. For sealed sources not associated with 10 CFR Part 35 use the following conditions apply:

- A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under the Agreement State.
- B. In the absence of a certificate of registration 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 the 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 not more than 100 microcuries of beta- and/or gamma-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.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**License Number  
21-04177-01Docket or Reference Number  
030-02049

Amendment No. 76

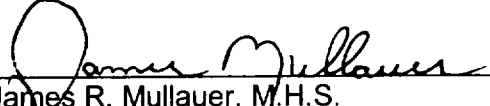
- F. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
14. The licensee shall conduct a physical 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.
15. The licensee may transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
16. In addition to the possession limits in Condition 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.
17. Sealed sources containing licensed material shall not be opened or sources removed from source holders by the licensee.
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 condition applies 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 its program as provided for in 10 CFR 35.26. The Nuclear Regulatory Commission's regulations apply unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application dated December 26, 2004;
- B. Letter dated October 12, 2006.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date

MAY 10 2007

By

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