

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, 37, 39, 40, 70 and 71, 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 1. Crittenton Hospital Medical Center 2. 1101 W. University Dr. Rochester, MI 48307 | | In accordance with letter dated October 25, 2017. | 4. Expiration Date: August 31, 2021 |
| | | 3. License number: 21-13562-01 is amended in its entirety to read as follows: | 5. Docket No.: 030-02157 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 | 9. Authorized use |
| A. Any byproduct material permitted by 10 CFR 35.100 | A. Any | A. As Needed | A. For use in uptake, dilution and excretion studies permitted by 10 CFR 35.100. |
| B. Any byproduct material permitted by 10 CFR 35.200 | B. Any | B. As Needed | B. For use in imaging and localization studies permitted by 10 CFR 35.200. |
| C. Any byproduct material permitted by 10 CFR 35.300 | C. Any | C. 1 curie total | C. For any use permitted by 10 CFR 35.300. |
| D. Iridium-192 permitted by 10 CFR 35.400 | D. Sealed Sources (Best Medical International, Inc., Model 81-01 Series) | D. 300 millicuries total | D. For any manual brachytherapy procedure permitted by 10 CFR 35.400. |

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**License Number
21-13562-01

Amendment No. 77

Docket or Reference Number
030-02157

- | | | | |
|---|--|---|---|
| 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 | 9. Authorized use |
| E. Iodine-125 permitted by 10 CFR 35.400 | E. Sealed Sources (Bard Brachytherapy, Inc., Model STM 1251; IsoAid, L.L.C. Model IAI-125A (Advantage); Medi-Physics, Inc., Model 6711 (OncoSeed) 9011; North American Scientific, Inc., Model MED 3631) | E. 400 millicuries total | E. For any manual brachytherapy procedure permitted by 10 CFR 35.400. |
| F. Palladium-103 permitted by 10 CFR 35.400 | F. Sealed Sources (North American Scientific, Inc., Model MED 3633) | F. 300 millicuries total | F. For any manual brachytherapy procedure permitted by 10 CFR 35.400. |
| G. Cesium-131 permitted by 10 CFR 35.400 | G. Sealed Sources (IsoRay, Model CS-1) | G. 400 millicuries total | G. For any manual brachytherapy procedure permitted by 10 CFR 35.400. |
| H. Gadolinium-153 permitted by 10 CFR 35.500 | H. Sealed Sources (AEA Technology, Model GD.LIN2; Isotope Products Laboratories, Model NES-8426) | H. 32 sources, not to exceed 14 sources per tray, not exceed 120 millicuries per source tray, and 320 millicuries total | H. For diagnostic medical use of sealed sources permitted by 10 CFR 35.500 in compatible devices registered in accordance with 10 CFR 30.32(g). |

CONDITIONS

10. A. Licensed material may be used or stored at the licensee's facilities located at 1101 W. University Dr., Rochester, Michigan, 48307.
- B. Licensed material listed in Subitem Nos. 6.A. and 6.B. only may be used or stored at the licensee's facilities located at 42370 Van Dyke, Sterling Heights, Michigan, 48314.
11. The Radiation Safety Officer (RSO) for this license is Annie Kalappambath, M.D.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**License Number
21-13562-01

Amendment No. 77

Docket or Reference Number
030-02157

12. Licensed material shall only be used by, or under the supervision of:

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

B. The following individuals are authorized users for the material and medical uses as indicated:

Authorized User(M.D.,D.O.,etc.)

Annie Kalapparambath, M.D.

Carla Cook, M.D.

Kenneth Levin, M.D.

Amf Aref, M.D.

Anna Norris Rabbani, M.D.

Paul Chuba, M.D.

Shahzad Sadiq, M.D.

Material and Use

10 CFR 35.100, 10 CFR 35.200, 10 CFR 35.300 (limited to the oral administration of sodium iodide I-131), 10 CFR 35.500

10 CFR 35.400

10 CFR 35.300, 10 CFR 35.400

10 CFR 35.400

10 CFR 35.400

10 CFR 35.400

10 CFR 35.100, 10 CFR 35.200, 10 CFR 35.300

13. 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 29, 2010 (excluding request to permit a medical physicist under the supervision of an Authorized Medical Physicist (AMP) to be physically present during HDR treatments instead of the AMP) (ML110030161)
- B. Letter dated November 30, 2011 (ML113400517)
- C. Letter dated April 13, 2012 (ML12095A154)
- D. Letter dated April 23, 2014 (ML14115A303)

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**License Number
21-13562-01

Amendment No. 77

Docket or Reference Number
030-02157

- E. Letter dated April 24, 2015 (ML15117A583)
- F. Letter dated July 9, 2015 (ML15205A257)
- G. Letter dated July 16, 2015 (ML15205A259)
- H. Letter dated August 27, 2015 (ML15240A392)
- I. Letter dated February 2, 2017 (ML17033A300)
- J. Letter dated February 17, 2017 (ML17047A718)
- K. Letter dated April 26, 2017 (ML17121A544)
- L. Letter dated May 22, 2017 (ML17142A413)

Date: DEC 19 2017

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

By: Cassandra F. Frazier
Region III