NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 45

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.

OC02120 573668

Licensee	In accordance with letters dated **September 23, 2010,**
1. Children's Hospital of Michigan	3. License number 21-03298-05 is amended in its entirety to read as follows:
2. 3901 Beaubien Blvd. Detroit, MI 48201	4. Expiration date December 31, 2014
	5. Docket No. 030-13166 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	A. As needed
B. Any byproduct material permitted by 10 CFR 35.200	B. Any	B. As needed
C. Any byproduct material permitted by 10 CFR 35.300	C. Any	C. As needed **(not to exceed 1 curie of iodine-131)**
D. Any byproduct material listed in Subitems F.,G., and K.	D. Solid and/or liquid waste	D. See Item 9.D. below
E. Hydrogen-3	E. Any	F. 50 millicuries
F. Carbon-14	F. Any	G. 20 millicuries
G. Chromium-51	G. Any	H. 400 millicuries
H. Zinc-65	H. Any	I. 5 millicuries
I. Iodine-125	I. Any	J. 100 millicuries
J. Sulfur-35	J. Any	K. 100 millicuries
K. Phosphorus-33	K. Any	L. 100 millicuries
L. Phosphorus-32	L. Any	M. 100 millicuries

9. Authorized Use:

A. Any uptake, dilution and excretion study permitted by 10 CFR 35.100.

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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. Possession incident to interim storage of waste in accordance with statements, representations and procedures contained in letter dated November 15, 1993.

E. through L. In vitro clinical diagnosis and in vitro laboratory research.

CONDITIONS

10. Location of Use: Children's Hospital of Michigan, 3901 Beaubien Boulevard, Detroit, Michigan.

11. Radiation Safety Officer: Nancy Maniaci, CNMT, RT(N).

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
Cristie Becker, M.D.	10 CFR 35.100 and 35.200.
Daniel E. Eggleston, M.D.	10 CFR 35.100 and 35.200.
William Lyman, M.D.	Subitems 6.E. through 6.L.
Patrick Long, M.D.	Subitems 6.E. through 6.L.
J. Michael Zerin, M.D.	10 CFR 35.100 and 35.200.
Richard N. Joyrich, M.D.	10 CFR 35.100, 35.200 and 35.300.
William John Powell, M.D.	10 CFR 35.100 and 35.200.
Florence Prigent, M.D.	10 CFR 35.200.
Majid Zaydan Khalaf, M.D.	10 CFR 35.100 and 35.200.
Harry Chugani, M.D.	10 CFR 35.100 and 35.200.

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.

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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. Licensed material listed in Subitems 6.E. through 6.L. shall not be used in or on humans.

16. The licensee is authorized to hold radioactive material with a physical half-life of less than 120 days for decay-in-storage before disposal in ordinary trash provided:

    A. Before disposal as ordinary trash, byproduct material shall be surveyed at the container surface with the appropriate survey meter set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.

    B. A record of each disposal permitted under this License Condition shall be retained for three years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.

17. The licensee may upgrade survey instruments as necessary as long as they are adequate to measure the type and level of radiation for which they are used.

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. Letters dated September 23, 2004, with attached application for renewal, June 6, 2005, May 30, 2006, and June 15, 2006, August 10, 2009, (excluding Item 3), January 27, 2010, April 29, 2010, **September 23, 2010; and**

    B. Facsimile dated December 10, 2004.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date NOV 02 2010

By James Mullauer

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