NRC FORM 313
(1-87)
10 CFR 30, 32, 33, 34, 35 and 40

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED BY OMB
3150-0120
Expires 6-30-90

APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATIONS FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF FUEL CYCLE AND MATERIAL SAFETY, NMSS
WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS, IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION I
NUCLEAR MATERIALS SAFETY SECTION B
631 PARK AVENUE
KING OF PRUSSIA, PA 19406

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
NUCLEAR MATERIALS SAFETY SECTION
101 MARIETTA STREET, SUITE 2900
ATLANTA, GA 30323

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION III
MATERIALS LICENSING SECTION
799 ROOSEVELT ROAD
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
MATERIAL RADIATION PROTECTION SECTION
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V
NUCLEAR MATERIALS SAFETY SECTION
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CA 94596

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTION.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- [ ] A. NEW LICENSE
- [X] B. AMENDMENT TO LICENSE NUMBER 24-24518-01
- [ ] C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip Code)

St. Louis Regional Medical Center
5535 Delmar Blvd.
St. Louis, Missouri 63112

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

SAME

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION: Tom Dickinson, Consultant, NMA-Medical Physics Consultation, 1827 Belt Way Dr., St. Louis MO 63114 | TELEPHONE NUMBER: (314) 427-5833

SUBMIT ITEMS 6 THROUGH 11 ON 8½ x 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

6. RADIOACTIVE MATERIAL a. Element and mass number, b. chemical and/or physical form, and c. maximum amount which will be possessed at any one time.	8. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED
7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE	8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS
9. FACILITIES AND EQUIPMENT	10. RADIATION SAFETY PROGRAM
11. WASTE MANAGEMENT	12. LICENSEE FEES (See 10 CFR 170 and Section 170.31) FEE CATEGORY: 7C AMOUNT ENCLOSED: $120

13. CERTIFICATION (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN, IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948, 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

SIGNATURE–CERTIFYING OFFICER	TYPED/PRINTED NAME	TITLE	DATE
x Charlotte Lehmann	Charlotte Lehmann	Vice President of Ancillary Services	5/30/89

9001300020 890629
REG3 LIC30
24-24518-01 PDR

CONTROL NO. 87455

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	COMMENTS	APPROVED BY
amd	June 3	7C	RECEIVED JUN 01 1989 REGION III JUN 0 1 1989	CP
AMOUNT RECEIVED: $120	CHECK NUMBER: 007920			DATE: 6/1/89

ITEM 7.1

Additional individuals to be added as Authorized Users for Medical Use.

AUTHORIZED USER	AUTHORIZATION
1) Young Sik Kho, M.D.	35.100, 35.200, 35.300, 35.400

Please refer to the attached Radioactive Material License Nos. 12-03755-01 and IL-00173-01 for evidence of training and experience.

2) Nalini Bidani, M.D.	35.100, 35.200, 35.300

Dr. Bidani is certified in nuclear medicine by the American Board of Nuclear Medicine (1976 Cert. #03922). She was Assistant Professor Radiology, Section of Nuclear Medicine (1979-1986) at the University of Chicago, Chicago, Illinois.

ITEM 7.3

Edward P. Feutz, M.D., is the Radiation Safety Officer at this facility.

IDNS.FLM-004-01(5/87)

STATE OF ILLINOIS
DEPARTMENT OF NUCLEAR SAFETY

RADIOACTIVE MATERIAL LICENSE

DIVISION OF NUCLEAR MATERIALS
1035 OUTER PARK DRIVE
SPRINGFIELD, ILLINOIS 62704

Pursuant to the Illinois Radiation Protection Act and the rules and regulations in 32 Illinois Administrative Code promulgated thereunder, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, own, possess and transfer radioactive material(s) listed herein; and to use such radioactive material(s) for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations and orders of the Illinois Department of Nuclear Safety now or hereafter in effect and to any conditions specified in the license.

LICENSEE	LICENSE NUMBER	EXPIRATION DATE
The Memorial Hospital 4501 North Park Drive Belleville, Illinois 62223	IL-00173-01	June 30, 1992
	AMENDMENT NUMBER ☐ INITIAL LICENSE 15	REFERENCE NUMBER 9067414
Attention: Harry R. Maier, President	☐ Initial License Amendment through Amendment constitute a complete license. ☒ PREVIOUS AMENDMENTS ARE VOID.	

RADIOISOTOPE ELEMENT	RADIOISOTOPE MASS NO.	MAXIMUM NUMBER OF SOURCES	MAXIMUM ACTIVITY * OR QUANTITY PER SOURCE	SEALED SOURCE IDENTIFICATION / CHEMICAL and/or PHYSICAL FORM	DEVICE, SOURCE HOLDER OR CONTAINER / AUTHORIZED USE
Co	57	Total	200 mCi	Prepackaged Kits	In vitro studies
Any in Groups I or II		Total as necessary		Any radiopharmaceutical listed in Groups I or II, 32 Ill. Adm. Code 330. App.C	Any diagnostic procedure listed in Groups I or II, 32 Ill. Adm. Code 330. App. C
Co	57	Any	2 mCi	Sealed sources (Nuclear Associates Model 67-294)	Calibration, reference, flood studies or anatomical marking
Co	57	Any	1 mCi	Sealed sources (Picker Model 615205)	Testing and calibration of radiation detection instrumentation.
Co	57	Any	5 mCi	Sealed sources (New England Nuclear Model NES-206)	Quality control testing of dose calibrator

1. Radioactive material shall be used only at the licensee's address stated above.

2. Radioactive material is authorized for use by, or under the supervision of, the following individual(s) for the materials and uses indicated:

NAME	USES
William Kamm, M.D.	All
Young Sik Kho, M.D.	All
Salvatore Contri, M.D.	All
Mary W. Conti, M.D.	All
Charles L. Mitchell, M.D.	All
Lawrence Taylor, M.D.	In Vitro studies
Edwin Paul Linnette, Ph.D.	In Vitro studies

*μCi-Microcurie; mCi-Millicurie; Ci-Curie

BY:	DATE	PAGE	OF	PAGES
Steven C. Collins, Chief L 473-0058	June 24, 1987	1		4

CONTROL NO. 87455

MATERIALS LICENSE

Amendment Number 40

ant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, of Federal Regulations, Chapter 1, Parts 30, 31, 32, 33, 34, 35, 36, 40 and 70, and in reliance on statements and representations fore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, , and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s); and to such byproduct and source material. This license shall be deemed to contain the conditions specified in Section 183 of the Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory ission now or hereafter in effect and to any conditions specified below.

Licensee	
he Memorial Hospital epartment of Nuclear Medicine 501 North Park Drive elleville, Illinois 62223	In accordance with application dated September 22, 1982, 3. License number 12-03755-01 is amended in its entirety to read as follows: 4. Expiration date January 31, 1988 5. Docket or Reference No. 030-01452

roduct, source, and/or ial nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
byproduct material ted in Groups I and of Schedule A, tion 35.100 of 10 35	A. Any radiopharmaceutical listed in Groups I and II of Schedule A, Section 35.100 of 10 CFR 35	A. As necessary for uses authorized in Subitem 9.A.
byproduct material ted in Group III of edule A, Section 100 of 10 CFR 35	B. Any form listed in Group III of Schedule A, Section 35.100 of 10 CFR 35	B. 4 curies of each by-product material authorized in Subitem 6.B.
byproduct material ted in Group IV of edule A, Section 100 of 10 CFR 35	C. Any radiopharmaceutical listed in Group IV of Schedule A, Section 35.100 of 10 CFR 35	C. As necessary for uses authorized in Subitem 9.C.
byproduct material ted in Group VI of edule A, Section 35.100 0 CFR 35	D. Any sealed source listed in Group VI of Schedule A, Section 35.100 of 10 CFR 35	D. 1 curie total for all sources authorized in Subitem 6.D.

CONTROL NO. 87455

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 12-03755-01

Docket or Reference number: 030-01452

Amendment Number 40

Continued from Page 1

Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time
Xenon-133	E. Gas or gas in solution that is the subject of an active (i.e., not withdrawn or terminated) "New Drug Application" (NDA) approved by FDA or an active (i.e., not withdrawn, terminated or on "clinical hold") "Notice of Claimed Investigational Exemption for a New Drug" (IND) that has been accepted by FDA	E. 2.5 curies
Any byproduct material listed in Section 31.11(a) of 10 CFR 31	F. Prepackaged kits	F. 3 millicuries of each byproduct material authorized in Subitem 6.F.
Iodine-131	G. Iodide	G. 250 millicuries
Uranium (Depleted in Uranium-235)	H. Cadmium Plated Metal	H. 159 kilograms

Authorized use

Any diagnostic procedure listed in Groups I and II of Schedule A, Section 35.100 of Title 10, Code of Federal Regulations.

Preparation and use of radiopharmaceuticals for any diagnostic procedure listed in Group III of Schedule A, Section 35.100 of Title 10, Code of Federal Regulations.

Any therapeutic procedure listed in Group IV of Schedule A, Section 35.100 of Title 10, Code of Federal Regulations.

Any procedure listed in Group VI of Schedule A, Section 35.100 of Title 10, Code of Federal Regulations.

Blood flow studies. Pulmonary function studies.

In vitro studies.

For treatment of thyroid carcinoma.

For use as shielding in a Varian Clinac 6X Medical Linear Accelerator.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 12-03755-01
Docket or Reference number: 030-01452

Continued from Page 2

Amendment Number 40

CONDITIONS

0. Licensed material shall be used only at the licensee's facilities located at 4501 North Park Drive, Belleville, Illinois.

1. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 19, "Notices, Instructions and Reports to Workers; Inspections" and Part 20, "Standards for Protection Against Radiation."

2. Licensed material listed in Item 6 above is authorized for use by, or under the supervision of, the following individual(s) for the materials and uses indicated:

Mary W. Conti, M.D.	All
William Kamm, M.D.	Groups I, II, III, IV and VI Xenon-133 In vitro studies
Young Sik Kho, M.D.	Groups I, II, III, IV and VI Xenon-133 In vitro studies
Salvatore Conti, M.D.	Groups I, II, III and IV Xenon-133 In vitro studies
Charles L. Mitchell, M.D.	Groups I, II and III Xenon-133 Iodine-131 for treatment of hyperthyroidism In vitro studies
Lawrence Taylor, M.D.	Types, quantities and uses of byproduct material listed in 10 CFR 31.11 and 10 CFR 35.31
Edwin Paul Lennette, Ph.D.	In vitro studies
Keith L. Mullenger, M.D.	Groups I, II and III Xenon-133 Iodine-131 for treatment of hyperthyroidism In vitro studies

4. Licensed material shall be used in accordance with the provisions of Section 35.14(b)(c)(e) and (f) of Title 10, Code of Federal Regulations.