

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, NM55
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
475 ALLENDALE ROAD
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 2800
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
MATERIALE 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
- B. AMENDMENT TO LICENSE NUMBER NRC-45-16222-01
- C. RENEWAL OF LICENSE NUMBER _____

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

Northern Virginia Doctors Hospital
601 S. Carlin Springs Road
Arlington, VA 22204

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

Same as #2.

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Mark Lerner

TELEPHONE NUMBER

703-578-2280

SUBMIT ITEMS 5 THROUGH 11 ON 8 1/2 x 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. 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.

6. 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 \$ 120.00

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

Allen Williams

Allen Williams

Administrator

1/19/89

9002080395 890214
REG2 LIC30
45-16222-01 PDR

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	COMMENTS	APPROVED BY
And	Feb-1-89	7c		M. Messeri
AMOUNT RECEIVED	CHECK NUMBER			DATE
\$120	046153		252660	2/6/89

Facilities and Equipment

- 9.2 Portable survey instruments will be calibrated in accordance with the provisions of Appendix B to NRC Guide 10.8, Revision 2 (revised August, 1987) by the following service organization or equivalent:

Mid-Atlantic Radiation Physics, Inc.
10408 Truxton Road
Adelphi, Maryland 20783

Calibration procedures are on-file under Maryland radioactive materials license MD-33-023-01.

- 9.3 The dose calibrators will be calibrated in accordance with the procedures in Appendix C to NRC Guide 10.8, Revision 2 (August, 1987).

Radiation Safety Program

- 10.4 Safe Use of Radiopharmaceuticals: Rules for the safe use of radiopharmaceuticals will be established and implemented as per Appendix I to Regulatory Guide 10.8, Revision 2 (August, 1987) with the following proviso appended to paragraph 13 of the Appendix: "Syringes will not be labelled when one individual draws a dose from a vial and the same individual immediately injects the patient."
- 10.7 Opening Packages: The procedures of Appendix L of Regulatory Guide 10.8, Revision 2 (August, 1987) will be followed for safely opening packages containing radioactive material.
- 10.12 Area Survey Procedures: Area survey procedures will be established and implemented according to the procedures found in Appendix N of Regulatory Guide 10.8, Revision 2, (August, 1987).

Authorized Users

7.1 User - Materials/Procedures - please add the following individuals to our license.

7.1.1 Alfred P. Coccaro, M.D.

Any material from Sections 31.11, 35.100, 35.200, 35.300. Dr. Coccaro is certified by the ABR in Diagnostic Radiology and Nuclear Medicine (1972) and is an authorized user of NRC License 08-20702-01 (Metropolitan Radiology Associates, Chtd., Washington, D.C.).

7.1.2 Gary H. Gordon, M.D.

Any materials from Sections 31.11, 35.100, 35.200, 35.300. Dr. Gordon is certified by the ABR in Diagnostic Radiology and Supplements A and B are attached to verify training and experience.

7.1.3 Dereck Hanlan, M.D.

Iodine 125 seeds for implant therapy. Dr. Hanlan is listed as an authorized user on NRC License 45-01099-01 (Arlington Hospital, Arlington, VA).

Dr. Coccaro will assume the duties of Radiation Safety Officer.

**TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER**

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER GARY H. GORDON, M.D.	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE Pennsylvania, N.J.
------------------------------------------------------------------------------------	------------------------------------------------------------------------------------

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
Radiology	Diagnostic Radiology	6/86

4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

FIELD OF TRAINING A	LOCATION AND DATE (S) OF TRAINING B	TYPE AND LENGTH OF TRAINING	
		LECTURE/ LABORATORY COURSES (Hours) C	SUPERVISED LABORATORY EXPERIENCE (Hours) D
a. RADIATION PHYSICS AND INSTRUMENTATION	Albert Einstein Medical School & Montefiore Medical Center, Bronx, N.Y. (7/84 - 6/85)	50	100
b. RADIATION PROTECTION	Same as above	15	30
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	Same	10	10
d. RADIATION BIOLOGY	Same	10	10
e. RADIOPHARMACEUTICAL CHEMISTRY	Same	20	40

5. EXPERIENCE WITH RADIATION. (Actual use of Radioisotopes or Equivalent Experience)

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
$^{99m}_{43}\text{Tc}$, $^{123}_{31}\text{Ga}$	Standard Doses	Albert Einstein Medical School, Bronx, N.Y.	7 weeks (during technician strike)	Preparation of radionuclides prior to patient injection.
$^{125}_{53}\text{I}$	Standard Doses	Albert Einstein Medical School, Bronx, N.Y.	3 months	Rotation in radioisotope lab (Central Lab)

PRECEPTOR STATEMENT

Supplement B must be completed by the applicant physician's preceptor. If more than one preceptor is necessary to document experience, obtain a separate statement from each.

1. APPLICANT PHYSICIAN'S NAME AND ADDRESS

PULL NAME
GARY HART GORDON, M.D.

STREET ADDRESS Germantown Hospital & Med. Ctr., Dept. of Radiology, One Penn Blvd.

CITY Philadelphia | **STATE** PENNA. | **ZIP CODE** 19144

KEY TO COLUMN C

PERSONAL PARTICIPATION SHOULD CONSIST OF:

1-Supervised examination of patients to determine the suitability for radioisotope diagnosis and/or treatment and recommendation for prescribed dosage.

2-Collaboration in dose calibration and actual administration of dose to the patient including calculation of the radiation dose, related measurements and plotting of data.

3-Adequate period of training to enable physician to manage radioactive patients and follow patients through diagnosis and/or course of treatment.

2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN

ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED B	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.) D
I-131 or I-125	DIAGNOSIS OF THYROID FUNCTION	300	
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME	10	
	LIVER FUNCTION STUDIES	4	
	FAT ABSORPTION STUDIES	0	
	KIDNEY FUNCTION STUDIES	200	
	IN VITRO STUDIES	1000	
OTHER	I-123 Diagnosis of Thyroid Function	125	
I-125	DETECTION OF THROMBOSIS	0	
I-123	THYROID IMAGING	300	
P-32	EYE TUMOR LOCALIZATION	0	
Se-75	PANCREAS IMAGING	3	
Yb-169	CISTERNOGRAPHY	8	
Xe-133 Kr-81m	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES	150	
OTHER			
Tc-99m	BRAIN IMAGING	50	
	CARDIAC IMAGING	300	
	THYROID IMAGING	2	
	SALIVARY GLAND IMAGING	4	
	BLOOD POOL IMAGING	200	
	PLACENTA LOCALIZATION	0	
	LIVER AND SPLEEN IMAGING	400	
	LUNG IMAGING	350	
BONE IMAGING	400		
OTHER			

ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED B	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheet.) D
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES	3	
P-32 (Colloidal)	INTRACAVITARY TREATMENT	1	
I-131	TREATMENT OF THYROID CARCINOMA	3	
	TREATMENT OF HYPERTHYROIDISM	30	
Au-198	INTRACAVITARY TREATMENT	0	
Co-60 or Co-137	INTERSTITIAL TREATMENT	0	
	INTRACAVITARY TREATMENT	0	
I-125 or Ir-192	INTERSTITIAL TREATMENT	0	
Co-60 or Co-137	TELE THERAPY TREATMENT	0	
Sr-90	TREATMENT OF EYE DISEASE	0	
	RADIOPHARMACEUTICAL PREPARATION	0	
Mo-99/ Tc-99m	GENERATOR	20	
Sr-113/ In-113m	GENERATOR	0	
Tc-99m	REAGENT KITS	0	
Other			
Kr/Rb Generator		10	
Tl-201 Heart		50	
Ga-67 Tumor/Abscess		100	

3. DATES AND TOTAL NUMBER OF HOURS RECEIVED IN CLINICAL RADIOISOTOPE TRAINING
 3 months spent on Nuclear Medicine rotations during Radiology Residency at St. Barnabas Medical Center, Livingston, N.J. (7/81-6/84), 12 months spent during my Nuclear Medicine Fellowship at Albert Einstein Medical School/Montefiore Medical Center, Bronx, N.Y. (7/84-6/85).

4. THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF:	6. PRECEPTOR'S SIGNATURE <i>David M. Milstein</i>
a. NAME OF SUPERVISOR David M. Milstein, M.D.	
b. NAME OF INSTITUTION Albert Einstein Medical School, Dept. of Nuclear Medicine	7. PRECEPTOR'S NAME (Please type or print) DAVID M. MILSTEIN, M.D.
c. MAILING ADDRESS 1300 Morris Park Avenue	
d. CITY Bronx, N.Y. 10461	8. DATE December 24, 1986
e. MATERIALS LICENSE NUMBER(S) 188-7	

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License number	45-01099-01
Docket or Reference number	030-03303
Amendment No. 54	

Arlington Hospital
1701 North George Mason Drive
Arlington, Virginia 22205

in accordance with letters dated May 21, 1987, September 9, 1987 and September 11, 1987, License No. 45-01099-01 is amended as follows:

Subitems 6.J., 7.J., 8.J. and 9.J are amended to read as follows:

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
J. Gadolinium 153	J. Sealed sources (Scan Detectronic Model 812.007)	J. No single source to exceed 1.5 curies

9. Authorized use
J. For use in Scan Detectronic A/S (Formerly Novo Diagnostic Systems A/S) Model BMC LAB 22a scanner for analysis of bone mineral content in humans.

CONDITIONS

Condition 12A. is amended to read as follows:

12. A. Licensed material listed in Item 6 above is authorized for use by, or under the supervision of, the following individuals for the materials and uses indicated:

Glen A. Landis, M.D.

Groups I, II, III, IV and VI
In-Vitro studies
Americium Anatomical Markers
Depleted uranium shielding
Xenon-133
Gadolinium 153 bone analyzer

Bruce Lundeen, M.D.

Group VI
Gadolinium 153 bone analyzer

88-4200290-388

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

45-01099-01

Docket or Reference number

030-03303

Amendment No. 54

(continued)

CONDITIONS

A. William A. Dolan, M.D.

Groups I, II, and III
Phosphorus 32 as soluble phosphate for
treatment of polycythemia vera,
leukemia, and bone metastasesIn-Vitro studiesXenon-133

Gadolinium 153 bone analyzer

Joseph A. Backer, M.D.

Groups I, II and III

In-Vitro studiesXenon-133

Gadolinium 153 bone analyzer

Samuel A. Crimone, M.D.

Groups I, II and III

In-Vitro studiesPhosphorus 32 as soluble phosphate for
treatment of polycythemia vera,
leukemia and bone metastasesXenon-133

Gadolinium 153 bone analyzer

John A. Long, Jr., M.D.

Group II

In-Vitro studiesXenon-133

Gadolinium 153 bone analyzer

Derick A. Hanlan, M.D.

Group VI

Gadolinium 153 bone analyzer

Hoa Ly, M.D.

Groups I, II and III

In-Vitro studiesXenon-133

Gadolinium 153 bone analyzer

Russell E. McWey, M.D.

Groups I, II and III

In Vitro studiesXenon-133

Gadolinium 153 bone analyzer

Iodine 131 for treatment of
hyperthyroidism, cardiac dysfunction,
and thyroid carcinoma

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License number	45-01099-01
Docket or Reference number	030-03303
Amendment No. 54	

Condition 19 is amended to read as follows:

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. The 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 July 20, 1983

B. Letters dated:

- o October 10, 1983
- o June 27, 1984
- o June 24, 1985 (Received)
- o January 27, 1986
- o September 9, 1987

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

EARL G. WRIGHT

Date SEP 28 1987

By Earl G. Wright
 Region II, Nuclear Materials
 Safety Section
 101 Marietta Street, Suite 2900
 Atlanta GA 30323

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 1, Parts 30, 31, 32, 33, 34, 35, 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		
1. Metropolitan Radiology Associates, Chartered	3. License number	08-20702-01
2. 2139 Georgia Ave, N.W. Suite 4B Washington, D.C. 20060	4. Expiration date	July 31, 1989
	5. Docket or Reference No.	030-20741
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 listed in Groups I and II of Schedule A, Section 35.100 of 10 CFR 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

9. Authorized use

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

CONDITIONS

10. Licensed material shall be used only at 2139 Georgia Ave, N.W., Suite 4B, Washington, D.C. 20060.
11. 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."
12. Licensed material shall be used by Barry G. Brotman, M.D., Alfred P. Coccaro, M.D., Louis D. Napoli, M.D., and Joel B. Bowers, M.D.
13. 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.
14. The licensee is authorized to hold radioactive material with a physical half-life of less than 65 days for decay-in-storage before disposal in ordinary trash provided:
 - A. Radioactive waste to be disposed of in this manner shall be held for decay a minimum of ten (10) half-lives.