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

U.S. NUCLEAP REGULATORY COMMISSION
APPROVED BY OMB
3150-0120
Expires: 8-30-90

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 20666

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
NUCEAR 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
- [ ] B. AMENDMENT TO LICENSE NUMBER _____
- [X] C. RENEWAL OF LICENSE NUMBER 13-17956-01

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

Marion General Hospital
Wabash and Euclid Avenue
Marion, Indiana, 46952

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

Same

8903150522 890118
REG3 LIC30
13-17956-01 PNU

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

William H. Miller, Consultant NMA - Cleveland, OH

TELEPHONE NUMBER: (216)641-5799

SUBMIT ITEMS 5 THROUGH 11 ON 8½ 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 $580.00

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
X John W. Green	John W. Green	Administrator	X

RECEIVED
NOV 21 1989
REGION III

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	COMMENTS	APPROVED BY
Renewal	Roota	7C	CONTROL NO. 86445	
AMOUNT RECEIVED $580	CHECK NUMBER 014419			DATE 11/29/89

NOV 21 1989

ITEM #5		ITEM #6
BYPRODUCT MATERIAL	AMOUNT	PURPOSE
Material in 35.100	As needed	Medical use
Material in 35.200	As needed	Medical use
Material in 35.300	As needed	Medical use
Material in 35.500	As needed	Medical use

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Lic: #13-17956-01

INDIVIDUALS RESPONSIBLE FOR RADIATION
SAFETY PROGRAMS - THEIR TRAINING & EXPERIENCE

AUTHORIZED USERS FOR MEDICAL USE

7.1

AUTHORIZED USER	AUTHORIZATION
James C. Camerata, M.D.	Material in 35.100, 35.200, 35.300 and 35.500
Donald J. Bruns, M.D.	Material in 35.100, 35.200, 35.500 and I-131 for treatment of hyperthyroidism, cardiac dysfunction and thyroid carcinoma.
Alan D. Belcher, M.D.	Material in 35.100, 35.200, 35.300 and 35.500
Evrett E. Smith, M.D..	Material in 35.100, 35.200, 35.300 and 35.500

Refer to License #13-17956-01 for evidence of user qualification for all of the above physicians.

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AUTHORIZED USERS FOR NONMEDICAL USE

7.2

N/A

RADIATION SAFETY OFFICER

7.3

RSO	AUTHORIZATION
Alan D. Belcher, M.D.	License #13-17956-01
James C. Camerata, M.D. as Alternate*	License #13-17956-01

* Dr. Camerata will serve as an alternate RSO only in the absence (meeting conflicts, vacation, illness, etc) of Dr. Belcher. Upon his return, Dr. Camarata will report on his ctivity as alternate RSO to Dr. Belcher.

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TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

TRAINING PROGRAM

8.1

We will establish and implement the model training program that was published in Appendix A to Regulatory Guide 10.8 Revision 2.

ATT 8.1

INDIVIDUALS	FREQUENCY	METHOD
Chief Nuclear Medicine Technologist	Per the model program	One on one by the RSO supplemented by participation in quarterly audits provided by visiting consultants.
Assistant Nuclear Medicine Technologist	Per the model program	One on one by the RSO and/or the Chief Nuclear Medicine Technologist supplemented by review of reports generated following quarterly audits.
X-ray staff Nursing Service Housekeeping Maintainence/Engineering Security Reception Desk	At orientation and annual thereafter	One on one by RSO and/or Chief Nuclear Medicine Technologist and by annual memo to department heads.
Visitors	As needed	Immediate supervision by Radiation Safety Officer or Nuclear Medicine Staff

OTHER TRAINING PROGRAM

8.2

N/A

Item #9.1

FACILITIES AND EQUIPMENT DIAGRAM

Sink

Lead Castle

Lead Shielding

1 Survey Equipment
2 Uptake/Well
3 Camera
4 Lockable Door
5 Receipt Area
6 Generator
7 Kit/Dose Preparation
6 Isotope Storage
6 Waste Storage
8 Dose Calibrator
6 Fume Hood
9 Bone Mineral Analyzer

Adjacent Areas

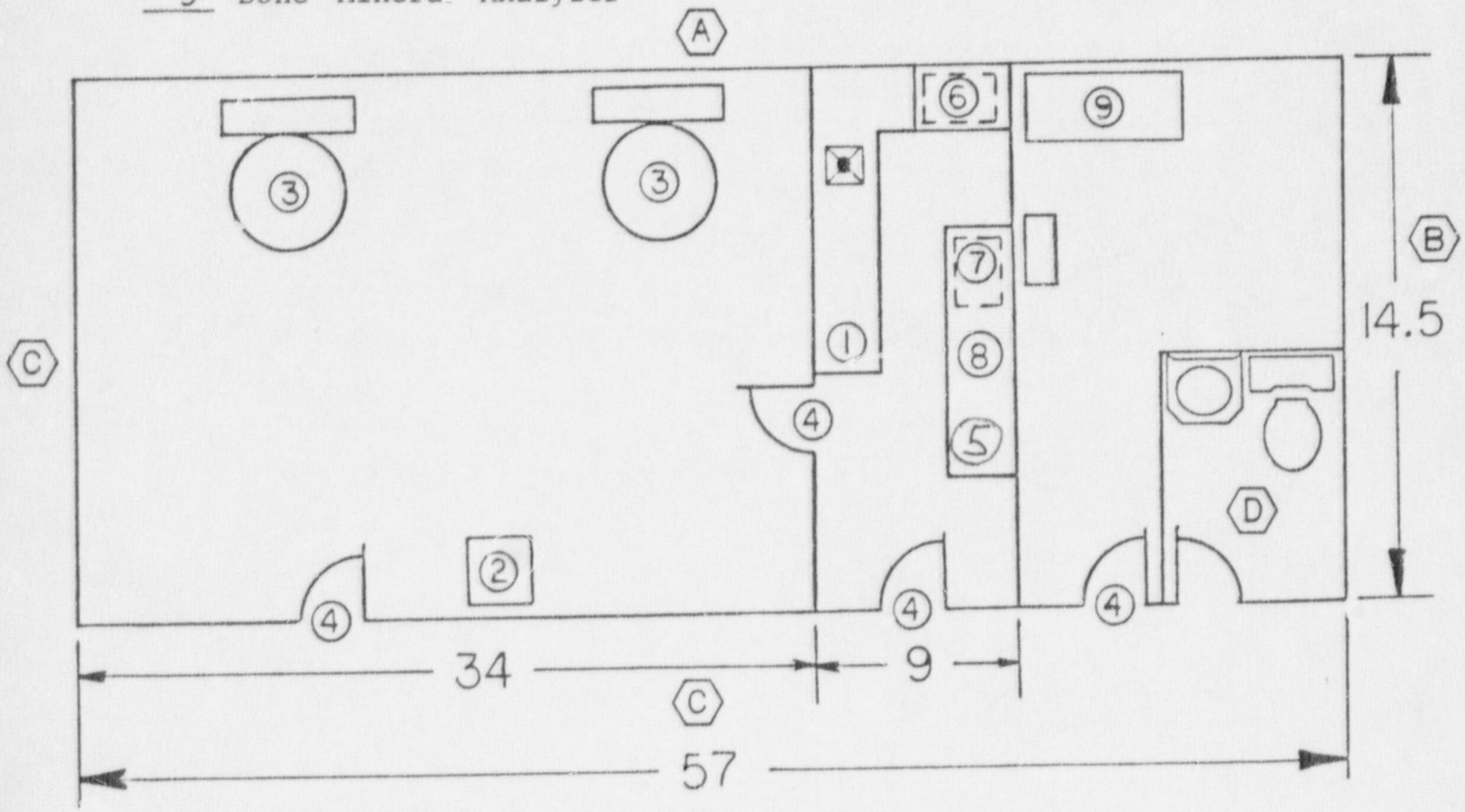
A	Boiler room
B	Dark room
C	Hallway
D	Patient toilet

5 Generator Coddles
11"L x 13"W x 9.5"H x .75"T

6 Standard L-Block
___L x ___W x ___H x ___T

___L x ___W x ___H x ___T

___L x ___W x ___H x ___T



NOTE: - All dimensions are in feet
- Drawing not to scale for purposes of detail
- Do not scale drawing

N

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FACILITIES & EQUIPMENT

SURVEY INSTRUMENT CALIBRATION

9.2

We will establish and implement the model procedure for calibrating survey instruments that was published in Appendix B to Regulatory Guide 10.8, Revision 2.

DOSE CALIBRATOR CALIBRATION

9.3

We will establish & implement the model procedure for calibrating our dose calibrator that was published in Appendix C to Regulatory Guide 10.8, Revision 2.

ATT 9.3: If the sleeve method is used for linearity testing, Calicheck or Lineator systems will be used. The manufacturer's directions for use and data handling will be followed because the procedure deviates from the model, but the results are the same.

PERSONNEL MONITOR PROGRAM

9.4

We will establish and implement the model personnel exposure monitoring program published in Appendix D to Regulatory Guide 10.8, Revision 2.

IMAGING EQUIPMENT

9.5

N/A

OTHER EQUIPMENT AND FACILITIES

9.6

N/A

RADIATION SAFETY PROGRAM

RADIATION SAFETY COMMITTEE/RADIATION SAFETY OFFICER

10.1

We will issue the model Radiation Safety Committee Charter and Radiation Safety Officer Delegation of Authority that was published in Appendix F to Regulatory Guide 10.8, Revision 2.

ALARA PROGRAM

10.2

We will establish and implement the model ALARA program that was published in Appendix G to Regulatory Guide 10.8, Revision 2.

LEAK TEST

10.3

We will establish and implement the model procedure for leak-tesing sealed sources that was published in Appendix H to Regulatory Guide 10.8, Revision 2.

SAFE USE OF RADIOPHARMACEUTICALS

10.4

We will establish and implement the model safety rules published in Appendix I to Regulatory Guide 10.8, Revision 2.

SPILL PROCEDURES

10.5

We will establish and implement the model spill procedures published in Appendix J to Regulatory Guide 10.8, Revision 2.

ORDERING AND RECEIVING

10.6

We will establish and implement the model guidance for ordering and receiving radioactive material that was published in Appendix K to Regulatory Guide 10.8, Revision 2.

ATT 10.6: The sample memorandum in the Appendix K model will be modified to the extent it will be directed to the Administrative Director of the Radiology Department. In addition, the memo will carry instructions that radiopharmaceutical couriers are to directly deliver packages bearing radioactive material labeling to the nuclear medicine unit. During off duty hours, weekends or when the unit is otherwise not staffed, couriers are to be provided access to the hot lab by the Radiology Department receptionist or night technologist through the use of a key stored in the reception area. The hot lab is to be resecured after delivery is complete.

A copy of the memorandum will be issued to the director of the hospital lobby information desk and the supervisor of emergency room services. The memo will also be given to the chief of the security section.

OPENING PACKAGES

10.7

We will establish and implement the model procedure for opening packages that was published in Appendix L to the Regulatory Guide 10.8, Revision 2.

UNIT DOSE, MULTIDOSE VIAL AND MOLYBDENUM CONCENTRATION RECORDS

10.8

Unit Dosage Records: We will establish and implement the model procedure for ;unit dosage record system that was published in Appendix M.1 to Regulatory guide 10.8, Revision 2.

10.9

Multi-dose Vial Records: We will establish and implement the model procedure for a multi-dose vial record system that was published in Appendix M.2 to Regulatory guide 10.8, Revision 2.

10.10

Molybdenum concentration Records: We will establish and implement the model procedure for measuring and recording molybdenum concentration that was published in Appendix M.3 to Regulatory guide 10.8 Revision 2.

INPLANT SOURCE USE AND RECORDS

10.11

N/A

AREA SURVEY PROCEDURES

10.12

We will establish and implement the model procedure for area surveys that was published in appendix N to Regulatory Guide 10.8, Revision 2.

ATT 10.12: Quarterly surveys described in the model (Appendix N, Ambient Dose Rate Surveys 1.d.) will be performed using a radiation detection instrument calibrated with Cs-137 or Ra-226 and having the same or a conservative response in fields generated by radionuclides having a specific gamma ionization constants lower than the calibrating radionuclide.

RSO review and initialling of area survey records as outlined in the model (Appendix N, Records 2.) will be at least quarterly instead of monthly except where action levels are exceeded. In the latter case prompt document review by the RSO will be initiated through notification by the surveyor.

AIR CONCENTRATION CONTROL

WORKER DOSE FROM NOBLE GASES

10.13.1

We will collect spent noble gas in a shielded container and will establish and implement the model procedure for checking trap effluent that was published in Appendix 0.3 to Regulatory Guide 10.8, Revision 2.

WORKER DOSE FROM AEROSOLS

10.13.2

We will collect spent aerosol in a shielded trap and, for reusable traps, monitor the trap effluent with an air contamination monitor that we will check regularly according to the manufacturers instructions.

PUBLIC DOSE FROM AIRBORNE EFFLUENT

10.13.3

We will not directly vent spent aerosols and gases to the atmosphere and therefore no effluent estimation is necessary.

SPILLED GAS CLEARANCE TIME

10.13.4

We will calculate spilled gas clearance times according to the procedure that was published in Appendix 0.4 to Regulatory Guide 10.8, Revision 2.

RADIOPHARMACEUTICAL THERAPY

10.14

We will establish and implement the model procedure for radiation safety during radiopharmaceutical therapy that was published in Appendix P to Regulatory Guide 10.8, Revision 2.

IMPLANT THERAPY

10.15

N/A

OTHER SAFETY PROCEDURES

10.16

N/A

WASTE MANAGEMENT

WASTE DISPOSAL

11.1

We will establish and implement the general guidance and model procedures for waste disposal that were published in Appendix R to Regulatory Guide 10.8, Revision 2.

Att 11.1: Radioactive materials received from a local radiopharmacy or other supplier having an NRC or agreement state approved return program will be transferred to that supplier as a method of disposal in accordance with their shipping and/or pick up instructions. The elements of the "Model Procedure for Returning Generators to the Manufacturer" as described in Appendix R to Regulatory Guide 10.8, Revision 2 will be applied to these returns.

A copy of the recipient's license describing the return authorization and the procedure will be acquired and maintained on file for review.

OTHER WASTE DISPOSAL

11.2

N/A

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