NRC FORM 313M (9-81) 10 CFR 35	U.S. NUCLEAR REGULATORY COMMISSION **APPLICATION FOR MATERIALS LICENSE – MEDICAL**	Approved by OMB 3150-0041

INSTRUCTIONS - *Complete Items 1 through 26 if this is an initial application or an application for renewal of a license. Use supplemental sheets where necessary. Item 26 must be completed on all applications and signed. Retain one copy. Submit original and one copy of entire application to: Director, Office of Nuclear Materials Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Upon approval of this application, the applicant will receive a Materials License. An NRC Materials License is issued in accordance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30, and the Licensee is subject to Title 10, Code of Federal Regulations, Parts 19, 20 and 35 and the license fee provision of Title 10, Code of Federal Regulations, Part 170. The license fee category should be stated in Item 26 and the appropriate fee enclosed.*

1.a. NAME AND MAILING ADDRESS OF APPLICANT *(institution, firm, clinic, physician, etc.)* INCLUDE ZIP CODE

V.A. Medical Center
4100 West 3rd Street
Dayton, Ohio 45428

TELEPHONE NO.: AREA CODE(513) 268 - 6511

1.b. STREET ADDRESS(ES) AT WHICH RADIOACTIVE MATERIAL WILL BE USED *(If different from 1.a.)* INCLUDE ZIP CODE

Same

2. PERSON TO CONTACT REGARDING THIS APPLICATION

Sam Pontillo, Consultant
Nuclear Medicine Associates

TELEPHONE NO.: AREA CODE(216) 641 - 5799

3. THIS IS AN APPLICATION FOR: *(Check appropriate item)*

a. ☐ NEW LICENSE
b. ☒ AMENDMENT TO LICENSE NO. 34-05015-01
c. ☐ RENEWAL OF LICENSE NO. _____

4. INDIVIDUAL USERS *(Name individuals who will use or directly supervise use of radioactive material. Complete Supplements A and B for each individual.)*

See Item #8

5. RADIATION SAFETY OFFICER (RSO) *(Name of person designated as radiation safety officer. If other than individual user, complete resume of training and experience as in Supplement A.)*

Khairoon Ally, M.D. with consultation from Nuclear Medicine Associates, Cleveland, Ohio 44125

6.a. RADIOACTIVE MATERIAL FOR MEDICAL USE

RADIOACTIVE MATERIAL LISTED IN:	ITEMS DESIRED "X"	MAXIMUM POSSESSION LIMITS *(In millicuries)*
10 CFR 31.11 FOR IN VITRO STUDIES		
10 CFR 35.100, SCHEDULE A, GROUP I		AS NEEDED
10 CFR 35.100, SCHEDULE A, GROUP II		AS NEEDED
10 CFR 35.100, SCHEDULE A, GROUP III		
10 CFR 35.100, SCHEDULE A, GROUP IV		AS NEEDED
10 CFR 35.100, SCHEDULE A, GROUP V		AS NEEDED
10 CFR 35.100, SCHEDULE A, GROUP VI		

ADDITIONAL ITEMS:	MARK ITEMS DESIRED "X"	MAXIMUM POSSESSION LIMITS *(In millicuries)*
IODINE-131 AS IODIDE FOR TREATMENT OF HYPERTHYROIDISM		
PHOSPHORUS-32 AS SOLUBLE PHOSPHATE FOR TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA AND BONE METASTASES		
PHOSPHORUS-32 AS COLLOIDAL CHROMIC PHOSPHATE FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.		
GOLD-198 AS COLLOID FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.		
IODINE-131 AS IODIDE FOR TREATMENT OF THYROID CARCINOMA		
XENON-133 AS GAS OR GAS IN SALINE FOR BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES.		

6.b. RADIOACTIVE MATERIAL FOR USES NOT LISTED IN ITEM 6.a. *(Sealed sources up to 3 mCi used for calibration and reference standards are authorized under Section 35.14(d), 10 CFR Part 35, and NEED NOT BE LISTED.)*

ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	MAXIMUM NUMBER OF MILLICURIES OF EACH FORM	DESCRIBE PURPOSE OF USE
The purpose of this amendment application is twofold: 1. Update authorized user list (see Item #8). 2. Reflect additional room for Nuclear Medicine (see Item #11).			

FEE EXEMPT
RECEIVED BY LFMB
Date 12/6/85
Log Rec. 5
By
Orig. To
Action Compl 12/9/85

INFORMATION REQUIRED FOR ITEMS 7 THROUGH 23

For Items 7 through 23, check the appropriate box(es) and submit a detailed description of all the requested information. Begin each item on a separate sheet. Identify the item number and the date of the application in the lower right corner of each page. If you indicate that an appendix to the medical licensing guide will be followed, do not submit the pages, but specify the revision number and date of the referenced guide: Regulatory Guide 10.8 , Rev. _____ Date: _____

7. MEDICAL ISOTOPES COMMITTEE	**15. GENERAL RULES FOR THE SAFE USE OF RADIOACTIVE MATERIAL** *(Check One)*
☐ Names and Specialties Attached; and	☐ Appendix G Rules Followed; or
☐ Duties as in Appendix B; or *(Check One)*	☐ Equivalent Rules Attached
☐ Equivalent Duties Attached	**16. EMERGENCY PROCEDURES** *(Check One)*
8. TRAINING AND EXPERIENCE	☐ Appendix H Procedures Followed; or
☒ Supplements A & B Attached for Each Individual User; and	☐ Equivalent Procedures Attached
☐ Supplement A Attached for RSO.	**17. AREA SURVEY PROCEDURES** *(Check One)*
9. INSTRUMENTATION *(Check One)*	☐ Appendix I Procedures Followed; or
☐ Appendix C Form Attached; or	☐ Equivalent Procedures Attached
☐ List by Name and Model Number	**18. WASTE DISPOSAL** *(Check One)*
10. CALIBRATION OF INSTRUMENTS	☐ Appendix J Form Attached; or
☐ Appendix D Procedures Followed for Survey Instruments; or *(Check One)*	☐ Equivalent Information Attached
☐ Equivalent Procedures Attached; and	**19. THERAPEUTIC USE OF RADIOPHARMACEUTICALS** *(Check One)*
☐ Appendix D Procedures Followed for Dose Calibrator; or *(Check One)*	☐ Appendix K Procedures Followed; or
☐ Equivalent Procedures Attached	☐ Equivalent Procedures Attached
11. FACILITIES AND EQUIPMENT	**20. THERAPEUTIC USE OF SEALED SOURCES**
☒ Description and Diagram Attached	☐ Detailed Information Attached; and
12. PERSONNEL TRAINING PROGRAM	☐ Appendix L Procedures Followed; or *(Check One)*
☐ Description of Training Attached	☐ Equivalent Procedures Attached
13. PROCEDURES FOR ORDERING AND RECEIVING RADIOACTIVE MATERIAL	**21. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE GASES (e.g., Xenon – 133)**
☐ Detailed Information Attached	☐ Detailed Information Attached
14. PROCEDURES FOR SAFELY OPENING PACKAGES CONTAINING RADIOACTIVE MATERIALS *(Check One)*	**22. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL IN ANIMALS**
	☐ Detailed Information Attached
☐ Appendix F Procedures Followed; or	**23. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL SPECIFIED IN ITEM 6.b**
☐ Equivalent Procedures Attached	☐ Detailed Information Attached

24. PERSONNEL MONITORING DEVICES

TYPE (Check appropriate box)			SUPPLIER	EXCHANGE FREQUENCY
a. WHOLE BODY		FILM	No change	
		TLD		
		OTHER (Specify)		
b. FINGER		FILM		
		TLD	No change	
		OTHER (Specify)		
c. WRIST		FILM		
		TLD		
		OTHER (Specify)		

d. OTHER (Specify)

25. FOR PRIVATE PRACTICE APPLICANTS ONLY

a. HOSPITAL AGREEING TO ACCEPT PATIENTS CONTAINING RADIOACTIVE MATERIAL

NAME OF HOSPITAL

MAILING ADDRESS

CITY | STATE | ZIP CODE

b. ATTACH A COPY OF THE AGREEMENT LETTER SIGNED BY THE HOSPITAL ADMINISTRATOR.

c. WHEN REQUESTING THERAPY PROCEDURES, ATTACH A COPY OF RADIATION SAFETY PRECAUTIONS TO BE TAKEN AND LIST AVAILABLE RADIATION DETECTION INSTRUMENTS.

26. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 1a certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Parts 30 and 35, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

a. LICENSE FEE REQUIRED *(See Section 170.31, 10 CFR 170)*

(1) LICENSE FEE CATEGORY: Fee exempt

(2) LICENSE FEE ENCLOSED: $

b. APPLICANT OR CERTIFYING OFFICIAL *(Signature)*

X Khairoon M. Ally M.D

(1) NAME *(Type or Print)*

X KHAIROON M. ALLY, M.D.

(2) TITLE

X Chief, Nuclear Medicine Service

c. DATE

X 11 / 20 / 65

CONTROL NO. 80248

PRIVACY ACT STATEMENT

Pursuant to 5 U.S.C. 552a(e)(3), enacted into law by section 3 of the Privacy Act of 1974 (Public Law 93-579), the following statement is furnished to individuals who supply information to the Nuclear Regulatory Commission on NRC Form 313M. This information is maintained in a system of records designated as NRC-3 and described at 40 Federal Register 45334 (October 1, 1975).

1. **AUTHORITY** Sections 81 and 161(b) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2111 and 2201(b)).

2. **PRINCIPAL PURPOSE(S)** The information is evaluated by the NRC staff pursuant to the criteria set forth in 10 CFR Parts 30-36 to determine whether the application meets the requirements of the Atomic Energy Act of 1954, as amended, and the Commission's regulations, for the issuance of a radioactive material license or amendment thereof.

3. **ROUTINE USES** The information may be used: (a) to provide records to State health departments for their information and use, and (b) to provide information to Federal, State, and local health officials and other persons in the event of incident or exposure, for their information, investigation, and protection of the public health and safety. The information may also be disclosed to appropriate Federal, State, and local agencies in the event that the information indicates a violation or potential violation of law and in the course of an administrative or judicial proceeding. In addition, this information may be transferred to an appropriate Federal, State, or local agency to the extent relevant and necessary for a NRC decision or to an appropriate Federal agency to the extent relevant and necessary for that agency's decision about you. A copy of the license issued will routinely be placed in the NRC's Public Document Room, 1717 H Street, N.W., Washington, D.C.

4. **WHETHER DISCLOSURE IS MANDATORY OR VOLUNTARY AND EFFECT ON INDIVIDUAL OF NOT PROVIDING INFORMATION** Disclosure of the requested information is voluntary. If the requested information is not furnished, however, the application for radioactive material license, or amendment thereof, will not be processed.

5. **SYSTEM MANAGER(S) AND ADDRESS** Director, Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

NRC FORM 313M SUPPLEMENT B
(9-81)

U. S. NUCLEAR REGULATORY COMMISSION

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

FULL NAME

Berta Hildene Olson Baumann, M.D.

STREET ADDRESS

232 Walnut Grove Drive

CITY | STATE | ZIP CODE

Centerville Ohio 45459

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	139	
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME	36	
	LIVER FUNCTION STUDIES	—	
	FAT ABSORPTION STUDIES	—	
	KIDNEY FUNCTION STUDIES	—	
	IN VITRO STUDIES	33,867	
OTHER			
I-125	DETECTION OF THROMBOSIS	—	
I-131	THYROID IMAGING	17	
P-32	EYE TUMOR LOCALIZATION	—	
Se-75	PANCREAS IMAGING	—	
Yb-169	CISTERNOGRAPHY	—	
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES	397	
OTHER			
Tc-99m	BRAIN IMAGING	76	
	CARDIAC IMAGING	1223	
	THYROID IMAGING	171	
	SALIVARY GLAND IMAGING	8	
	BLOOD POOL IMAGING	236	
	PLACENTA LOCALIZATION	—	
	LIVER AND SPLEEN IMAGING	220	
	LUNG IMAGING	426	
	BONE IMAGING	2351	
OTHER			

PRECEPTOR STATEMENT *(Continued)*

2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN *(Continued)*

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
P-32 *(Soluble)*	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES	17	
P-32 *(Colloidal)*	INTRACAVITARY TREATMENT	2	
I-131	TREATMENT OF THYROID CARCINOMA	22	
	TREATMENT OF HYPERTHYROIDISM	59	
Au-198	INTRACAVITARY TREATMENT	—	
Cs-60 or Cs-137	INTERSTITIAL TREATMENT	—	
	INTRACAVITARY TREATMENT	—	
I-125 or Ir-192	INTERSTITIAL TREATMENT	—	
Co-60 or Cs-137	TELETHERAPY TREATMENT	—	
Sr-90	TREATMENT OF EYE DISEASE	—	
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR	30	
Sn-113/ In-113m	GENERATOR	—	
Tc-99m	REAGENT KITS	250	
Other			

3. DATES AND TOTAL NUMBER OF HOURS RECEIVED IN CLINICAL RADIOISOTOPE TRAINING

July 1, 1983 to June 30, 1985

4. THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF:

a. NAME OF SUPERVISOR
B. David Collier, M.D.

b. NAME OF INSTITUTION
Milwaukee County Medical Complex

c. MAILING ADDRESS
8700 W. Wisconsin Avenue

d. CITY
Milwaukee, WI 53226

5. MATERIALS LICENSE NUMBER(S)
48-4193-0

6. PRECEPTOR'S SIGNATURE
B D Collier, M.D.

7. PRECEPTOR'S NAME *(Please type or print)*
B. David Collier, M.D.

8. DATE
October 1, 1985

NRC FORM 313M SUPPLEMENT B
(9-81)

GPO 690-913

FORM NRC-313M-SUPPLEMENT A (8-78) — U.S. NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE
Berta Hildene Olson Baumann, MD.	Ohio

3. CERTIFICATION

SPECIALTY BOARD (A)	CATEGORY (B)	MONTH AND YEAR CERTIFIED (C)
American Board of Radiology	Diagnostic Radiology with Special Competence in Nuclear Radiology	June, 1984

4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

FIELD OF TRAINING (A)	*MCOWAH = Medical College of Wisconsin Affiliated Hospitals LOCATION AND DATE(S) OF TRAINING (B)	TYPE AND LENGTH OF TRAINING: LECTURE/LABORATORY COURSES (Hours) (C)	TYPE AND LENGTH OF TRAINING: SUPERVISED LABORATORY EXPERIENCE (Hours) (D)
a. RADIATION PHYSICS AND INSTRUMENTATION	MCOWAH* 7/83-6/85 resident nuclear medicine MCOWAH 7/80-6/83 resident diagnostic radiology	30 30	60
b. RADIATION PROTECTION	MCOWAH 7/83-6/85 resident nuclear medicine MCOWAH 7/80-6/83 resident diagnostic radiology	20 20	30
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	MCOWAH 7/83-6/85 resident nuclear medicine Bowling Green State U. Ohio 1972 (precalculus, differential & integral calculus)	2 15 quarter hours	25
d. RADIATION BIOLOGY	MCOWAH 7/83-6/85 resident nuclear medicine Bowling Green State U. Ohio 1972-1976 (genetics, microbial genetics, limnology, biochemistry)	17 12 quarter hours with 4 quarter hours	50
e. RADIOPHARMACEUTICAL CHEMISTRY	MCOWAH 7/83-6/85 & 3/82-6/82 resident nuclear medicine & diagnostic radiology	10	30

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

	ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
(1)	^{99m}Tc	≤30mCi/dose	Medical College of Wisconsin Affiliated Hospitals	7/80-6/85	(1) IV, PO, intraocular, subconjunctival, nasal, intrathecal, cisternal
(2)	^{67}Ga	≤10mCi/dose	*Milwaukee County General Hospital, Milwaukee Children's Hospital, Wood VA Hospital (Zablocki Center), Froedtert Lutheran Memorial Hospital		(2) IV
(3)	^{131}I	≤200mCi/dose			(3) PO diagnosis, IV as therapy
(4)	^{123}I				(4) PO
(5)	^{32}P	≤10mCi/dose			(5) IV & intracavitary therapy
(6)	^{133}Xe	≤30mCi/dose			(6) inhalation gas
(7)	^{201}Tl	≤2.0mCi/dose	resident in diagnostic radiology then nuclear medicine (2 years)		(7) IV
(8)	^{111}In	≤2mCi/dose			(8) IV labeled to WBC, Oxine, Chloride (54) or DTPA intrathecal
(9)	^{51}Cr	^{125}I			(9)

NAME OF AUTHORIZED USER	AUTHORIZATION
Amend to add:	
Berta Hildene Olson Baumann, M.D.	All

For training and experience, please refer to NRC Form 313M Supplements A and B.

Item #8
1 of 1 page
Prepared: 11/12/85
Lic. #34-05015-01

1084

CONTROL NO. 80248

Facilities and Equipment

Diagram

- ☒ Air Supply
- ⊘ Air Exhaust
- ___ Scanner
- ___ Uptake/Well
- ___ Camera
- 3 Lockable Door
- ___ Receipt Area
- ___ Generator
- ___ Kit Preparation
- 1 Isotope Storage
- ___ Dose Preparation
- 2 Waste Storage
- ___ Dose Calibrator
- ___ Refrigerator

Adjacent Areas

___ _____
___ _____
___ _____
___ _____
___ _____
___ _____
___ _____
___ _____

- ☒ Sink
- ⬚ Lead Castle

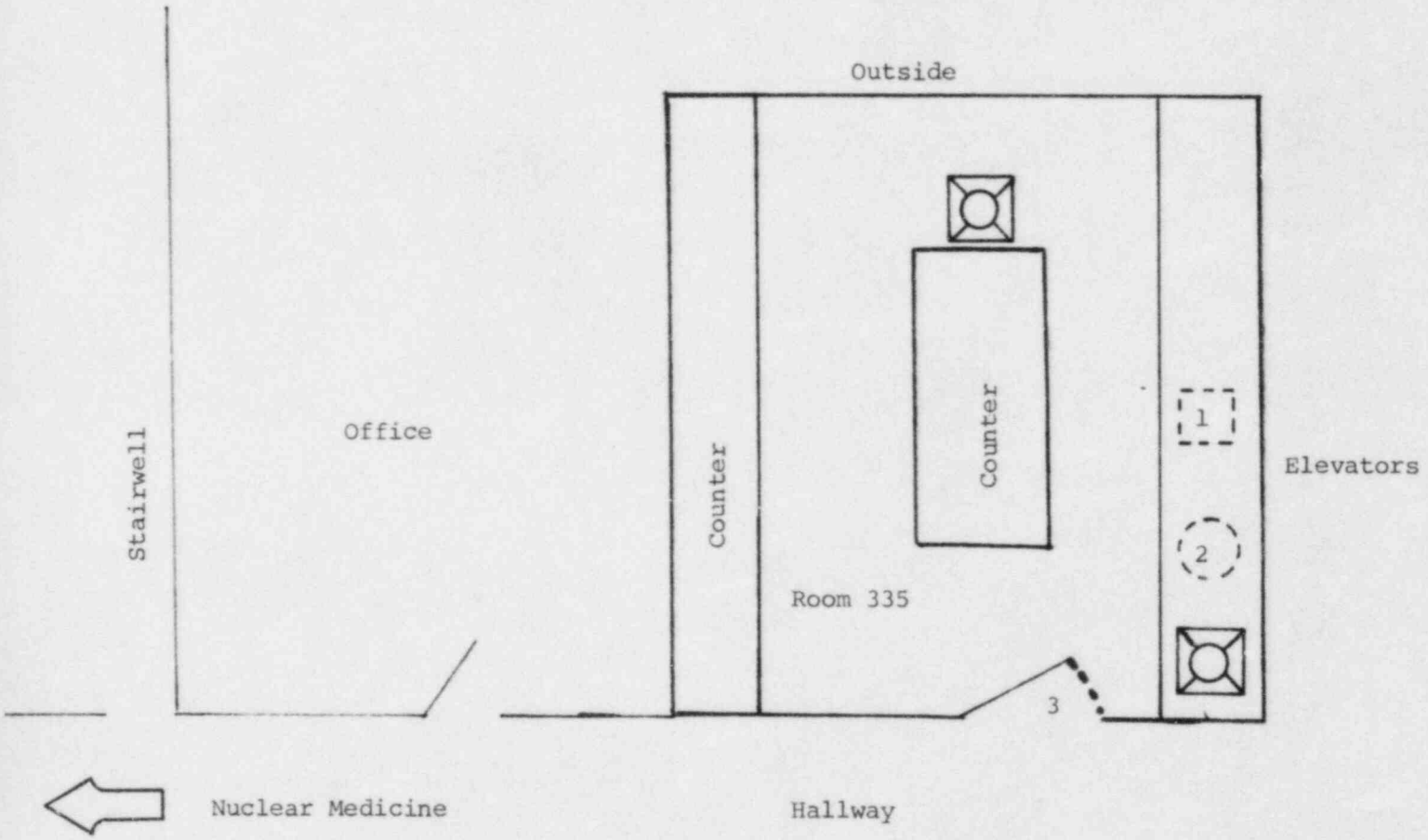
Lead Shielding

1
18" L x 10" W x 6" H x 2" T

2 Lead cylinder 7" diameter
___ L x ___ W x 15' H x 2" T

___
___ L x ___ W x ___ H x ___ T

___
___ L x ___ W x ___ H x ___ T



Item #11
1 of 1 pages
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CONTROL NO. 80243