NRC FORM 313
(6-88)
10 CFR 30, 32, 33, 34, 35 and 40

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED BY OMB
3150-0120
Expires 6-31-91

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.

FEDERAL AGENCIES 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 MATERIAL 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
MATERIAL RADIATION PROTECTION 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
MATERIAL RADIATION PROTECTION 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 20-00506-03

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

Lowell General Hospital
295 Varnum Avenue
Lowell, Ma. 01854-2195

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

SAME

9002010387 881227
REG1 LIC30
20-00506-03 PDR

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION | **TELEPHONE NUMBER**

George B. Inglis, Ph.D. | 508-937-6164

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 7.c | 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
Robert Donovan	Robert Donovan	CEO/President	7-27-88

14. VOLUNTARY ECONOMIC DATA

a. ANNUAL RECEIPTS

- [ ] <$250K
- [ ] $250K–500K
- [ ] $500K–750K
- [ ] $750K–1M
- [ ] $1M–3.5M
- [ ] $3.5M–7M
- [ ] $7M–10M
- [X] >$10M

b. NUMBER OF EMPLOYEES *(Total for entire facility excluding outside contractors)*: 827 FTE's

c. NUMBER OF BEDS: 293

d. WOULD YOU BE WILLING TO FURNISH COST INFORMATION *(dollar and/or staff hours)* ON THE ECONOMIC IMPACT OF CURRENT NRC REGULATIONS OR ANY FUTURE PROPOSED NRC REGULATIONS THAT MAY AFFECT YOU? *(NRC regulations permit it to protect confidential commercial or financial—proprietary—information furnished to the agency in confidence)*

- [X] YES
- [ ] NO

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	COMMENTS	APPROVED BY
REN	Aug. 1F	7C	"OFFICIAL RECORD COPY"	S. Kimberly
AMOUNT RECEIVED	**CHECK NUMBER**			**DATE**
$580	109400		ML10 11 9350	8/15/88

PRIVACY ACT STATEMENT ON THE REVERSE

28 JUL 1988

ITEM 5 Radioactive Material
ITEM 6 Purpose

Byproduct Material	Amount	Purpose
5.a Material in §35.100	As Needed	6.a Medical Use
5.b Material in §35.200	As Needed	6.b Medical Use
5.c Material in §35.300	As Needed	6.c Medical Use
5.d Implant Material in §35.400	2000 mCi	6.d Medical Use

ITEM 7

ATT 7.1.1

George B. Inglis, Ph.D.	RSO	Named on License 20-00506-03

ATT 7.1.2

Peter T. Koch-Weser, M.D.	5.a,5.b,5.c	Named on License 20-03339-02

ATT 7.1.3

Ferris J. Bargoot, M.D.	5.a,5.b	Named on License 20-03339-02

ATT 7.1.4

Herbert Leventhal,M.D.	5.a,5.b	Named on License 20-03339-02

ATT 7.1.5

Dean Wasserman, M.D.	5.a,5.b	Named on License 20-03339-02

ATT 7.1.6

Harold Weintraub,M.D.	5.a,5.b	Named on License 20-03339-02

ATT 7.1.7

Magdi Christian Semine,M.D.	5.a,5.b	Named on License 20-03339-02

ATT 7.1.8

Peter M.Reveno,M.D.	5.a,5.b	See attached Supplement A

ATT 7.1.9

Mark Davis,M.D.	5.a,5.b	See attached Supplement A

ATT 7.1.10

Sanford M. Smoot,M.D.	5.a,5.b	See attached Supplement A

ATT 7.1.11

Astrid O. Peterson, M.D.	5.d	See attached Supplement A & B

NRC FORM 313M SUPPLEMENT A (8-86)

U.S. NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

Approved by OMB 3150-0041 Expires 8-30-89

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE
PETER M. REVENO, M.D.	Massachusetts

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
American Board of Radiology	Radiology	June, 1970

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			
b. RADIATION PROTECTION			
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY			
d. RADIATION BIOLOGY			
e. RADIOPHARMACEUTICAL CHEMISTRY			

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE

NRC FORM 313M SUPPLEMENT A (8-86) U.S. NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

Approved by OMB 3150-0041 Expires 6-30-89

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE
MARK C. DAVIS, M.D. Ph.D.	Massachusetts

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
American Board of Radiology	Radiology	JUne 1987

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			
b. RADIATION PROTECTION			
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY			
d. RADIATION BIOLOGY			
e. RADIOPHARMACEUTICAL CHEMISTRY			

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE

NRC FORM 313M SUPPLEMENT A
(8-86)

U.S. NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

Approved by OMB
3150-0041
Expires 6-30-89

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE
SANFORD M. SMOOT, M.D.	Massachusetts

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
American Board of Radiology	Radiology	June, 1986

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			
b. RADIATION PROTECTION			
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY			
d. RADIATION BIOLOGY			
e. RADIOPHARMACEUTICAL CHEMISTRY			

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE

NRC FORM 313M SUPPLEMENT A (8-86) — NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

Approved by OMB 3150-0041 Expires 6-30-89

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE
Astrid O. Peterson, M.D.	Massachusetts

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
American Board of Radiology	Therapeutic Radiology	Board Eligible

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	TYPE AND LENGTH OF TRAINING: SUPERVISED LABORATORY EXPERIENCE (Hours) D
a. RADIATION PHYSICS AND INSTRUMENTATION	University Hospital - Boston, MA. 7/1/82 thru 4/30/85	100 hrs.	10 hrs.
b. RADIATION PROTECTION	University Hospital-Boston, MA. 7/1/82 thru 4/30/85	15 hrs	
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	University Hospital-Boston, MA. 7/1/82 thru 4/30/85	120 hrs.	
d. RADIATION BIOLOGY	University Hospital-Boston,MA. 7/1/82 thru 4/30/85	136 hrs.	
e. RADIOPHARMACEUTICAL CHEMISTRY	University Hospital-Boston, MA. 7/1/82 thru 4/30/85	60 hrs.	

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
^{192}Ir	55 mCi	University Hospital and Boston City Hospital	3 yrs. of Residency 7/1/82 thru 4/30/85	Interstitial Implants
^{198}Au	20 mCi	University Hospital and Boston City Hospital	7/1/82 thru 4/30/85	Implants to Oropharynx
^{125}I	30 mCi	University Hospital and Boston City Hospital	7/1/82 thru 4/30/85	Prostate Interstitial
Radium	75 mg.	"	" " "	Intercavitary GYN Implants

NRC FORM 313M SUPPLEMENT B
(8-86)

U. S. NUCLEAR REGULATORY COMMISSION

Approved by OMB
3150-0041
Expires 6-30-89

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

Astrid O. Peterson, M.D.

STREET ADDRESS

Lowell General Hospital
295 Varnum Avenue

CITY	STATE	ZIP CODE
Lowell	MA	01864

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		
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME		
	LIVER FUNCTION STUDIES		
	FAT ABSORPTION STUDIES		
	KIDNEY FUNCTION STUDIES		
	IN VITRO STUDIES		
OTHER			
I-125	DETECTION OF THROMBOSIS		
I-131	THYROID IMAGING		
P-32	EYE TUMOR LOCALIZATION		
Se-75	PANCREAS IMAGING		
Yb-169	CISTERNOGRAPHY		
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES		
OTHER			
Tc-99m	BRAIN IMAGING		
	CARDIAC IMAGING		
	THYROID IMAGING		
	SALIVARY GLAND IMAGING		
	BLOOD POOL IMAGING		
	PLACENTA LOCALIZATION		
	LIVER AND SPLEEN IMAGING		
	LUNG IMAGING		
	BONE IMAGING		
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		
P-32 (Colloidal)	INTRACAVITARY TREATMENT	1	
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Au-198	INTRACAVITARY TREATMENT	3	
Co-60 or Cs-137	INTERSTITIAL TREATMENT		
	INTRACAVITARY TREATMENT		
I-125 or Ir-192	INTERSTITIAL TREATMENT	48	
Co-60 or Cs-137	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE		
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS		
Other Radium	GYN Intracavitary Implants	32	All GYN Implants used Radium at that time. University Hospital has now changed to Cs-137.

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

7/1/82 thru 4/30/85 At least 600 hours.

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

a. NAME OF SUPERVISOR
Shelagh McCauley, M.D.

b. NAME OF INSTITUTION
University Hospital

c. MAILING ADDRESS
75 East Newton Street

d. CITY
Boston, MA 02118

5. MATERIALS LICENSE NUMBER(S)

20-02215-01

6. PRECEPTOR'S SIGNATURE

Shelagh M. Cauley MD

7. PRECEPTOR'S NAME (Please type or print)

SHELAGH MCCAULEY, M.D.

8. DATE

7/15/88

NRC FORM 313M SUPPLEMENT B
(8-86)

☆ U.S. GOVERNMENT PRINTING OFFICE: 1986-181-314

GPO 690-018

ITEM 8

We will establish and implement the model training program that was published in Appendix A to Regulatory Guide 10.8, Revision 2, and have appended a table ATT 8.1 that identifies the groups of workers who will receive training and the method and frequency of training.

ATT 8.1

GROUP	METHOD	FREQUENCY
1. Nuclear medicine technologist	lecture/demonstration	annually
2. Evening X-ray technologist	lecture/demonstration	annually
3. Nurses	lecture	per procedure
4. Housekeeping	lecture	annually

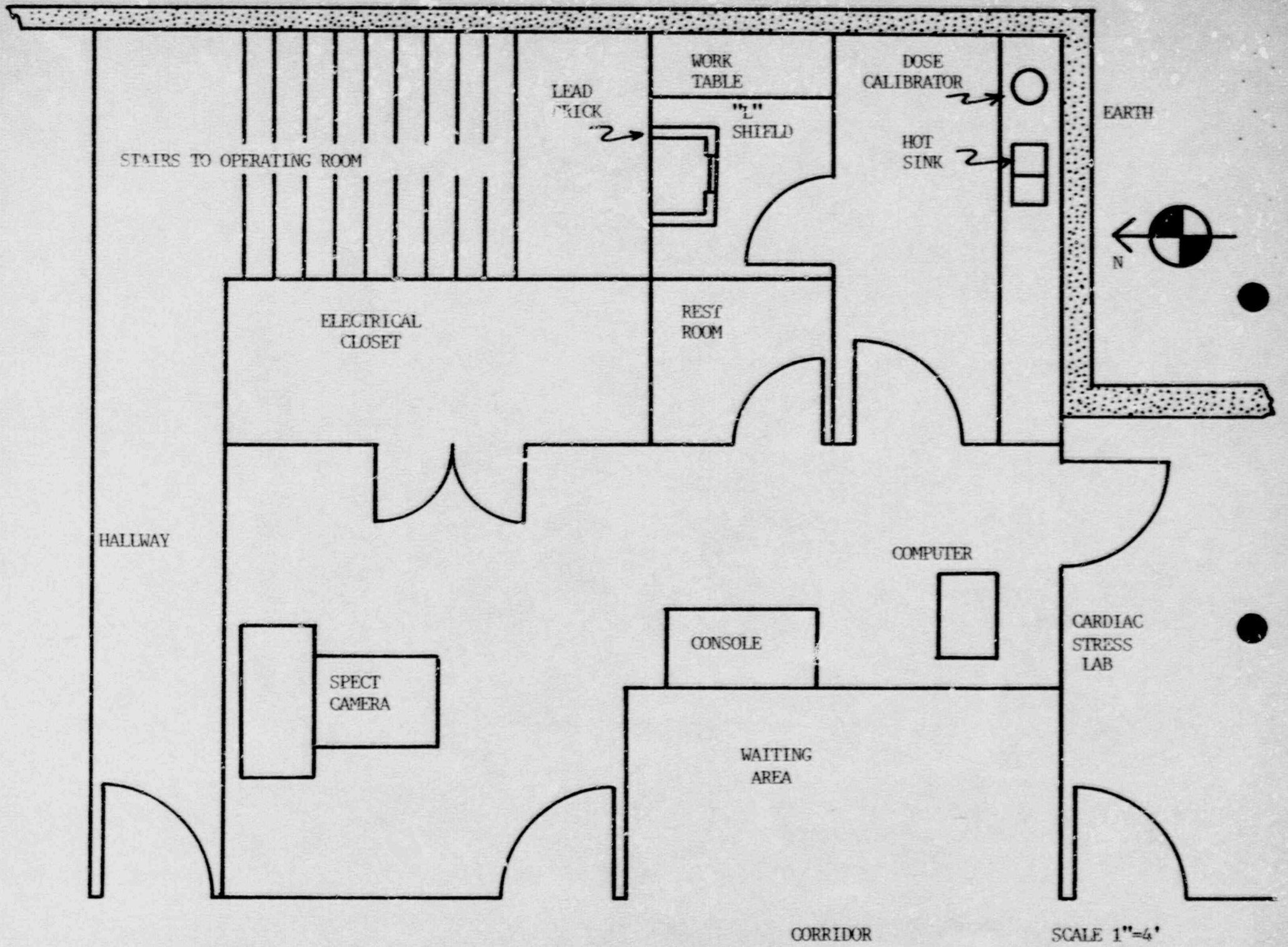
ITEM 9

ATT 9.1

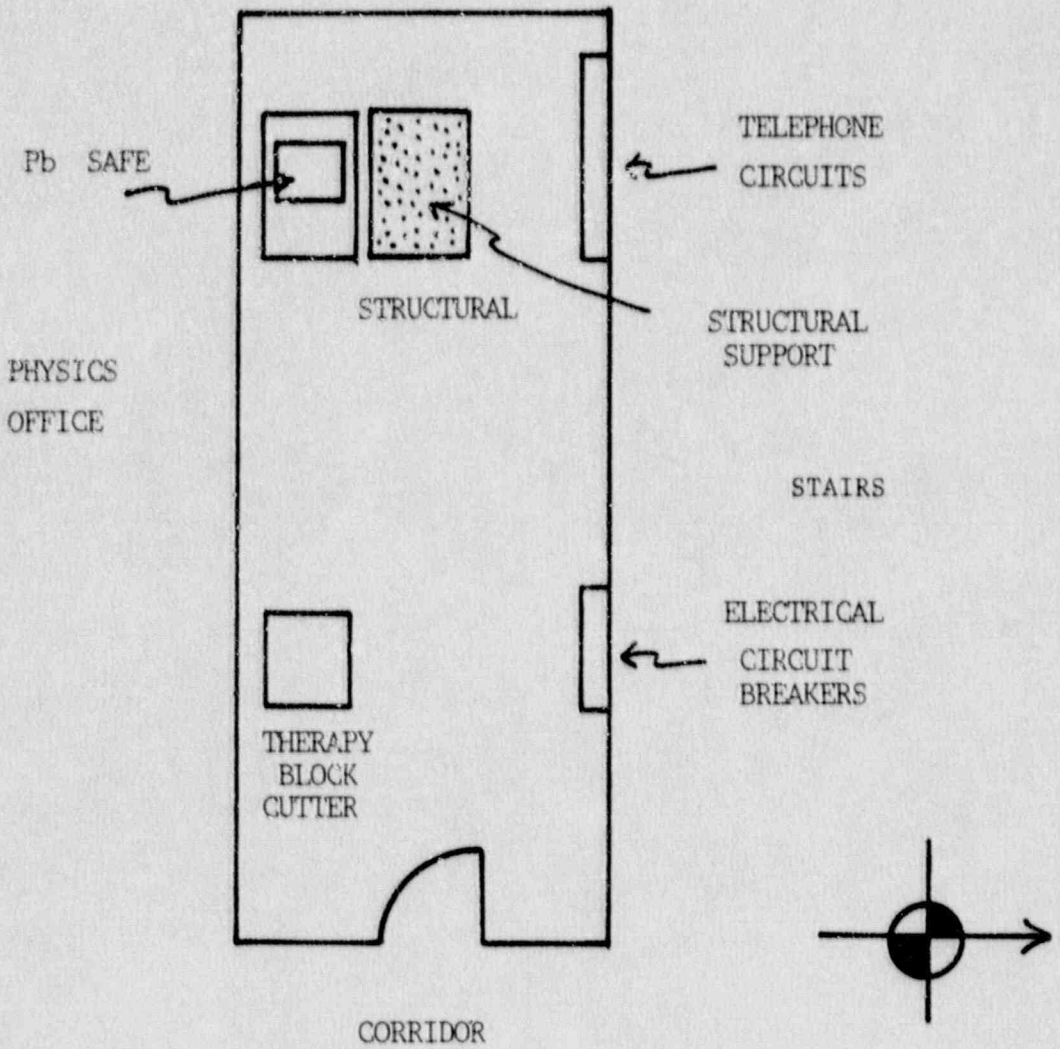
Drawings

ATT 9.1.1

Equipment


WORK
TABLE
DOSE
CALIBRATOR
LEAD
BRICK
"L"
SHIELD
EARTH
HOT
SINK
STAIRS TO OPERATING ROOM
N
ELECTRICAL
CLOSET
REST
ROOM
HALLWAY
COMPUTER
CONSOLE
CARDIAC
STRESS
LAB
SPECT
CAMERA
WAITING
AREA
CORRIDOR
SCALE 1"=4'

ATT 9.1.2



STORAGE AREA FOR ELEMENTS IN 5.d

Pb SAFE FROM RADIUM CHEMICAL CO. MINIMUM THICKNESS = 9.5 cm Pb

WALL MATERIAL --- 1" concrete

ATT 9.1.1

EQUIPMENT

1.	Low Range Survey Meter	Ludlam Model 2 GM Probe 44-7
2.	High Range Survey Meter	Searle Model 2592 Probe Model 2593
3.	Crystal detector	Ludlam MOdel 3 Proble Model 44-3
4.	Dose Calibrator	NPI Accu Cal 2002
5.	Gamma Camera	Toshiba Spect GCA - 90B

ATT 9.2

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

ATT 9.3

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

ATT 9.4

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

ATT 9.5

N/A

ATT 9.6

N/A

ATT 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.

ATT 10.2

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

ATT 10.3

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

ATT 10.4

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

ATT 10.5

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

ATT 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 10.7

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

ATT 10.8

We will establish and implement the model procedure for a unit dosage record system that was published in Appendix M.1 to Regulatory Guide 10.8, Revision 2.

ATT 10.9

We will establish and implement the model procedure for a multidose vial record system that was published in Appendix M.2 to Regulatory Guide 10.8, Revision 2.

ATT 10.10

N/A

ATT 10.11

We will establish and implement the model procedure for keeping an inventory of implant sources that was published in Appendix M.4 to Regulatory Guide 10.8, Revision 2.

ATT 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 10.13.1

We will follow the model procedure for calculating worker dose from noble gases that was published in Appendix O.1 to Regulatory Guide 10.8, Revision 2.

ATT 10.13.2

We will follow the model procedure for calculating worker dose from aerosols that was published in Appendix O.1 to Regulatory Guide 10.8,Revision 2.

ATT 10.13.3

We will follow the model procedure for calculating airborne effluent concentration that was published in Appendix O.2 to Regulatory Guide 10.8, Revision 2.

ATT 10.13.4

We will calculate spilled gas clearance times according to the procedure that was published in Appendix O.4 to Regulatory Guide 10.8, Revision 2.

ATT 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.

ATT 10.15

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

ITEM 11

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.

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

(FOR LFMS USE)
INFORMATION FROM LTS

PROGRAM CODE: 02120
STATUS CODE: 2
FEE CATEGORY: 7C
EXP. DATE: 19880831
FEE COMMENTS: CODE_23

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED
APPLICANT/LICENSEE: LOWELL GENERAL HOSPITAL
RECEIVED DATE: 880728
DOCKET NO: 3001811
CONTROL NO.: 109350
LICENSE NO.: 20-00506-03
ACTION TYPE: RENEWAL

2. FEE ATTACHED
AMOUNT: $580.00
CHECK NO.: 109402

3. COMMENTS

SIGNED R. T. brown
DATE 8/08/04

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED / 5/)

1. FEE CATEGORY AND AMOUNT: 7C $580

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:
AMENDMENT ____
RENEWAL ____
LICENSE ____

3. OTHER ____
____

SIGNED S. Kimberley
DATE 8/15/88