FORM NRC-313M (8-78) 10 CFR 35	U.S. NUCLEAR REGULATORY COMMISSION APPLICATION FOR MATERIALS LICENSE – MEDICAL	Approved: GAO R0557

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

MANCHESTER MEMORIAL HOSPITAL
71 HAYNES STREET
MANCHESTER, CT. 06040

TELEPHONE NO.: AREA CODE (203) 646 1222

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

2. PERSON TO CONTACT REGARDING THIS APPLICATION

DAN MIKOLOWSKI

TELEPHONE NO.: AREA CODE (203) 646 1222 EXT 2353

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

a. ☐ NEW LICENSE
b. ☐ AMENDMENT TO LICENSE NO. _____
c. ☒ RENEWAL OF LICENSE NO. 06-03413-01

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

WALTER G. HEIMANN, M.D.

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.)*

WALTER G. HEIMANN, M.D.

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	X	1 EACH
10 CFR 35.100, SCHEDULE A, GROUP I	X	AS NEEDED
10 CFR 35.100, SCHEDULE A, GROUP II	X	AS NEEDED
10 CFR 35.100, SCHEDULE A, GROUP III	X	2000 EACH
10 CFR 35.100, SCHEDULE A, GROUP IV	X	AS NEEDED
10 CFR 35.100, SCHEDULE A, GROUP V	X	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.	X	

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
IODINE-125	SEALED SOURCE	2 SOURCES 50 mCi Each	FOR USE IN LIXISCOPE EXTREMITY IMAGING DEVICE.

License Fee Information on Next Page

RECEIVED MAR - 1 1985 REGION 1 MATERIALS BRANCH

"OFFICIAL RECORD COPY" 0348C

8508300052 850807
REG1 LIC30
06-03413-01 PDR

ML1

MAR 01 1985

FORM NRC-313M (8-78)

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. 1 Date: OCT 1980

7. MEDICAL ISOTOPES COMMITTEE	
X	Names and Specialties Attached; and
	Duties as in Appendix B; or *(Check One)*
X	Equivalent Duties Attached
8. TRAINING AND EXPERIENCE SEE ATTACHED	
	Supplements A & B Attached for Each Individual User; and
	Supplement A Attached for RSO.
9. INSTRUMENTATION *(Check One)*	
	Appendix C Form Attached; or
X	List by Name and Model Number
10. CALIBRATION OF INSTRUMENTS	
	Appendix D Procedures Followed for Survey Instruments; or *(Check One)*
X	Equivalent Procedures Attached; and
	Appendix D Procedures Followed for Dose Calibrator; or *(Check One)*
X	Equivalent Procedures Attached
11. FACILITIES AND EQUIPMENT	
X	Description and Diagram Attached
12. PERSONNEL TRAINING PROGRAM	
X	Description of Training Attached
13. PROCEDURES FOR ORDERING AND RECEIVING RADIOACTIVE MATERIAL	
	Detailed Information Attached
14. PROCEDURES FOR SAFELY OPENING PACKAGES CONTAINING RADIOACTIVE MATERIALS *(Check One)*	
	Appendix F Procedures Followed; or
X	Equivalent Procedures Attached

15. GENERAL RULES FOR THE SAFE USE OF RADIOACTIVE MATERIAL *(Check One)*	
	Appendix G Rules Followed; or
X	Equivalent Rules Attached
16. EMERGENCY PROCEDURES *(Check One)*	
	Appendix H Procedures Followed; or
X	Equivalent Procedures Attached
17. AREA SURVEY PROCEDURES *(Check One)*	
	Appendix I Procedures Followed; or
X	Equivalent Procedures Attached
18. WASTE DISPOSAL *(Check One)*	
	Appendix J Form Attached; or
X	Equivalent Information Attached
19. THERAPEUTIC USE OF RADIOPHARMACEUTICALS *(Check One)*	
	Appendix K Procedures Followed; or
X	Equivalent Procedures Attached
20. THERAPEUTIC USE OF SEALED SOURCES	
	Detailed Information Attached; and
	Appendix L Procedures Followed; or *(Check One)*
	Equivalent Procedures Attached
21. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE GASES (e.g., Xenon – 133)	
	Detailed Information Attached
22. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL IN ANIMALS	
	Detailed Information Attached
23. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL SPECIFIED IN ITEM 6.b	
X	Detailed Information Attached

24. PERSONNEL MONITORING DEVICES

TYPE (Check appropriate box)			SUPPLIER	EXCHANGE FREQUENCY
a. WHOLE BODY		FILM		
	✓	TLD	SIEMENS GAMMASONICS INC	QUARTERLY
		OTHER (Specify)		
b. FINGER		FILM		
	✓	TLD	SIEMENS GAMMASONICS INC	QUARTERLY
		OTHER (Specify)		
c. WRIST		FILM		
	✓	TLD	SIEMENS GAMMASONICS INC	QUARTERLY
		OTHER (Specify)		

d. OTHER (Specify)

RECEIVED BY LFMB
Date 3/7/85
Log March 6I
By Brown
Orig. To
Action Compl 3/8/85

Applicant 072183
Check No. A580/7C
Amount/Fee
Type of Fee Renewal
Date Check Rec'd 3/7/85
Received by Brown

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:

(2) LICENSE FEE ENCLOSED: $ 580

b. APPLICANT OR CERTIFYING OFFICIAL *(Signature)*

(1) NAME *(Type or Print)*
WARREN PRELESNIK

(2) TITLE
EXECUTIVE DIRECTOR

c. DATE
2/21/85

FORM NRC-313M (8-78)

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 Form NRC-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.

FORM NRC-313M
(8-78)

MANCHESTER MEMORIAL HOSPITAL -- MANCHESTER, CT.
LICENSE NO. 06-03413-01

RADIATION SAFETY COMMITTEE

MEMBERSHIP

NAME	SPECIALTY
WALTER G. HEIMANN, M.D.	RADIOLOGY -- RADIATION SAFETY OFFICER
RITA KESSING, R.N.	NURSING REPRESENTATIVE
DAN MIKOLOWSKI, R.T.	DEPT MANAGER, NUCLEAR MEDICINE
CLARENCE SILVA	ASSIST EXECUTIVE DIR. HOSP. ADMIN.
JEFFREY S. WASSER, M.D.	HEMATOLOGY & ONCOLOGY

MANCHEST[redacted] MEMORIAL HOSPITAL -- MAN[redacted]STER, CT.
LICENSE NO. 06-03413-01

RADIATION SAFETY COMMITTEE
DUTIES AND RESPONSIBILITIES

RESPONSIBILITY

1. ENSURE THAT ALL PERSONS WORKING IN OR NEAR RADIOACTIVE MATERIAL HAVE SUFFICIENT TRAINING AND EXPERIENCE TO PERFORM THEIR DUTIES SAFELY AND IN ACCORDANCE WITH NRC REGULATIONS AND CONDITIONS OF THE LICENSE.
2. ENSURE THAT ALL USE OF RADIOACTIVE MATERIAL IS CONDUCTED IN A SAFE MANNER AND IN ACCORDANCE WITH NRC REGULATIONS AND LICENSE CONDITIONS.

DUTIES

1. BE FAMILIAR WITH NCR REGULATIONS, TERMS OF LICENSE, & INFORMATION SUBMITTED IN SUPPORT OF THE REQUEST FOR LICENSES AND AMENDMENTS.
2. REVIEW THE TRAINING & EXPERIENCE OF ALL INDIVIDUALS WHO USE RADIOACTIVE MATERIAL (INCLUDING PHYSICIANS, TECHNOLOGISTS, PHYSICISTS, AND PHARMACISTS) AND DETERMINE THAT THEIR QUALIFICATIONS ARE SUFFICIENT TO PERFORM THEIR DUTIES SAFELY AND ACCORDING TO NRC REGULATIONS AND LICENSE CONDITIONS.
3. ESTABLISH A PROGRAM TO ENSURE THAT ALL INDIVIDUALS WHOSE DUTIES MAY REQUIRE THEM TO WORK IN THE VICINITY OF RADIOACTIVE MATERIAL (e.g. NURSING, SECURITY, AND HOUSEKEEPING) ARE PROPERLY INSTRUCTED AS REQUIRED BY SECTION 19.12 OF 10 CFR PART 19.
4. REVIEW AND APPROVE ALL REQUESTS FOR USE OF RADIOACTIVE MATERIAL WITHIN THE INSTITUTION.
5. PRESCRIBE SPECIAL CONDITIONS WHICH MAY BE REQUIRED DURING A PROPOSED USE OF RADIAOACTIVE MATERIAL SUCH AS REQUIREMENT FOR BIOASSAYS, PHYSICAL EXAMS OF USERS, AND SPECIAL MONITORING.
6. REVIEW THE ENTIRE RADIATION SAFETY PROGRAM AT LEAST ANNUALLY TO DETERMINE THAT ALL ACTIVITIES ARE BEING CONDUCTED SAFELY AND IN ACCORDANCE WITH NRC REGULATIONS AND LICENSE CONDITIONS. THE REVIEW SHALL INCLUDE AN EXAMINATION OF ALL RECORDS, REPORTS FROM THE RADIATION SAFETY OFFICER, RESULTS OF NRC INSPECTIONS, WRITTEN SAFETY PROCEDURES, AND THE ADEQUACY OF THE INSTITUTION'S MANAGEMENT CONTROL SYSTEM.
7. RECOMMEND REMEDIAL ACTION TO CORRECT ANY DEFICIENCIES IDENTIFIED IN THE RADIATION SAFETY PROGRAM.
8. MAINTAIN WRITTEN RECORDS OF ALL COMMITTEE MEETINGS, ACTIONS, RECOMMENDATIONS, AND DECISIONS.
9. ENSURE THAT THE BYPRODUCT MATERIAL LICENSE IS AMENDED, WHEN NECESSARY, PRIOR TO ANY CHANGES IN FACILITIES, EQUIPMENT, POLICIES, PROCEDURES, AND PERSONNEL, AS SPECIFIED IN THE LICENSE.

MEETING FREQUENCY

THE COMMITTEE SHALL MEET AS OFTEN AS NECESSARY TO CONDUCT ITS BUSNESS BUT NOT LESS THAN ONCE IN EACH CALENDAR QUARTER.

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LICENSE NO. 06-03413-01

AUTHORIZED INDIVIDUAL USERS

THE FOLLOWING INDIVIDUAL IS LISTED AS AN AUTHORIZED USER ON THE PRESENT LICENSE:

WALTER G. HEIMANN, M.D.

DR HEIMANN IS ALSO THE RADIATION SAFETY OFFICER.

MANCHESTER MEMORIAL HOSPITAL -- MANCHESTER, CT.
LICENSE NO. 06-03413-01

NUCLEAR MEDICINE RADIATION DETECTION INSTRUMENTATION

SURVEY METERS

QNTY	MANUFACTURER & MODEL	MODEL NUMBER	SERIAL NO.	MIN.RANGE (mR/Hr)	MAX.RANGE (mR/Hr)
1	VICTOREEN CUTIE-PIE	740 F	2935	0 TO 25	0 TO 25R/HR
1	VICTOREEN FRISKER	425 ROOM/SURVEY	394	0-500 CPM	0-500 KCPM

DOSE CALIBRATORS

QNTY	MANUFACTURER	MODEL NO.	SERIAL NO.
1	CAPINTEC, INC.	CRC-6A	62458

WELL COUNTERS/UPTAKE/RECTILINEAR SCANNER

QNTY	MANUFACTURER	MODEL NO.	SERIAL NO.
1	PICKER 3INCH SCANNER MAGNASCANNER II	28060	148

WITH B.N.C. PORTANIM SCALAR MN AP-2/A; SN 411
USED FOR ALSO FOR WIPE TESTING.

GAMMA CAMERAS

QNTY	MANUFACTURER	MODEL NO.	SERIAL NO.
1	PICKER DYNACAMERA 4C WITH N.S.I UPGRADE	2C 15 IN. UFOV 37 PM 3/8IN. THICK CRYSTAL	
1	SIEMENS WITH ADAC COMPUTER	ZLC-750 40 CM. UFOV 75 PM 1/4IN. THICK CRYSTAL	

XENON MONITOR

QNTY	MANUFACTURER	MODEL NO.	SERIAL NO.
1	NUCLEAR ASSOCIATES XENALERT		6405

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LICENSE NO. 06-03413-01

SURVEY METER CALIBRATION PROCEDURES

SURVEY METERS ARE CALIBRATED ANNUALLY AND FOLLOWING REPAIR.

CALIBRATION IS PERFORMED BY:
HEALTH PHYSICS ASSOCIATES, LTD.
NORTHBROOK, ILL.
N.R.C. CALIBRATION LICENSE NUMBER: 12-09160-06

SURVEY METERS ARE SENT SEQUENTIALLY, TO ASSURE THAT THERE IS AT LEAST ONE FUNCTIONING SURVEY METER ON HAND AT ALL TIMES.

DAILY CONSTANCY CHECKS AND BATTERY CHECKS OF SURVEY METERS ARE MADE BEFORE AND AFTER EACH USE TO ASSURE PROPER OPERATION.

PROCEDURES FOR WELL COUNTER CALIBRATION

WELL COUNTERS ARE CHECKED ROUTINELY FOR PROPER OPERATION ANNUALLY, DAILY, AND AFTER REPAIR OR ADJUSTMENT.

ANNUAL CALIBRATION CHECKS

ANNUAL CALIBRATION TESTS ARE CONDUCTED TO DETERMINE INSTRUMENT CALIBRATION AND CHECK FOR CORRECT INSTRUMENT OPERATION.

E-DIAL CALIBRATION

THE E-DIAL CALIBRATION IS CHECKED USING CO-57, BA-133, & CS-137 REFERENCE SOURCES AND SETTINGS RECORDED.

TEST COUNT (3600 CPM)

THE TEST COUNT CIRCUITRY IS CHECKED WHERE APPLICABLE FOR ACCURACY.

BACKGROUND

BACKGROUND READINGS ARE COUNTED AND RECORDED.

COUNTING EFFICIENCY (uCi/dpm)

COUNTING EFFICIENCY IS DETERMINED FOR CO-57, BA-133, & CS-137 AT 20% WINDOWS AND OPEN WINDOW SETTINGS.

COUNTER SENSITIVITY

USING THE BACKGROUND AND COUNTING EFFICIENCIES ABOVE, THE MINIMUM DETECTABLE ACTIVITY IS CALCULATED FOR EACH OF THE ABOVE ISOTOPES.

PULSE HEIGHT RESOLUTION

THE PULSE HEIGHT RESOLUTION IS DETERMINED USING THE CS-137 AND RECORDED.

CHI-SQUARE TEST

CHI SQUARE TESTING IS PERFORMED AND REPORTED.

DAILY CHECKS (EACH DAY OF USE)

DAILY CHECKS ARE PERFORMED TO INSURE INSTRUMENT CONSTANCY. RESULTS WHICH ARE NOT WITHIN ACCEPTABLE LIMITS INDICATE THE NEED FOR RE-CALIBRATION, REPAIR OR ADJUSTMENT.

E-DIAL CALIBRATION

PERFORMED FOR CS-137 SOURCE AND RECORDED.

BACKGROUND COUNT RATE

UNUSUALLY HIGH BACKGROUND RATES WILL BE INVESTIGATED TO ASCERTAIN THE SOURCE AND ELIMINATE IT IF POSSIBLE.

TEST COUNT (3600 CPM)

TEST COUNT CIRCUITRY COUNTS WILL BE TAKEN WHERE APPLICABLE.

CONSTANCY CHECK

THE CS-137 REFERENCE ROD SOURCE WILL BE COUNTED TO DETERMINE THE NET CPM AND COMPARED WITH THE PREDICTED DECAY CORRECTED VALUE TO DETERMINE INSTRUMENT CONSTANCY FROM THE ANNUAL CALIBRATION.

PROCEDURES FOR CALIBRATION OF DOSE CALIBRATOR PAGE 1

GEOMETRICAL VARIATION (AT INSTALLATION & AFTER REPAIR)

APPROX. 5 mCi OF TC-99m IN 1 ml IN A 30cc VIAL WILL BE USED.

PROCEDURE

1. THE VIAL IS ASSAYED AT THE APPROPRIATE INSTRUMENT SETTING, AND BACKGROUND SUBTRACTED TO OBTAIN THE NET ACTIVITY.
2. THE VOLUME IS THEN INCREASED IN THE VIAL IN STEPS TO VOLUMES OF 2,4,8,10,20, AND 25 ml BY ADDING THE APPROPRIATE AMOUNT OF WATER, GENTLY SHAKEN TO MIX, AND ASSAYED AS IN STEP 1.
3. THE MEAN READING IS THEN DETERMINED, AND THE RATIO OF EACH READING TO THE MEAN IS DETERMINED. ANY READING WITH A DIFFERENCE GREATER THAN 2% FROM THE MEAN WILL REQUIRE THE CONSTRUCTION AND USE OF A VOLUME CORRECTION GRAPH.

ACCURACY (AT INSTALLATION, AFTER REPAIR, AND ANNUALLY)

ACCURACY OF THE INSTRUMENT IS CHECKED USING REFERENCE VIAL STANDARDS OF CO-57 (1-10 mCi), BA-133 (100-300 uCi), AND CS-137 (100-300 uCi) WITH N.B.S. TRACEABLE CALIBRATIONS.

PROCEDURE

1. THREE READINGS ARE TAKEN FOR EACH REFERENCE STANDARD, BACKGROUND SUBTRACTED, TO OBTAIN THE AVERAGE NET ACTIVITY READING.
2. THE AVERAGE ACTIVITY OBTAINED SHOULD AGREE WITH THE CERTIFIED ACTIVITY WITHIN 5% AFTER DECAY CORRECTION. READINGS WHICH DO NOT AGREE WITHIN 5% WILL REQUIRE REPAIR OR ADJUSTMENT OF THE INSTRUMENT, OR THE USE OF A CALIBRATION FACTOR FOR ROUTINE USE.
3. THE CS-137 REFERENCE STANDARD IS PLACED IN THE INSTRUMENT, AND THE INSTRUMENT IS SET IN TURN TO THE VARIOUS RADIONUCLIDE SETTINGS NORMALLY USED, AND THE READINGS RECORDED. THESE READINGS ARE USED TO CHECK INSTRUMENT CALIBRATION CONSTANCY.

LINEARITY (AT INSTALLATION, AFTER REPAIR & QUARTERLY)

LINEARITY IS CHECKED OVER THE ENTIRE RANGE OF ACTIVITIES EMPLOYED. THIS TEST USES A STERILE VIAL OF TC-99m WHOSE ACTIVITY EQUALS THE MAXIMUM ACTIVITY TO BE ASSAYED.(e.g. FIRST ELUTION OF NEW GENERATOR).

PROCEDURE WHEN ON SITE GENERATOR IS AVAILABLE

1. USING THE FIRST ELUTION OF THE NEW GENERATOR (REFERRED TO AS THE GEN.VIAL), THE ACTIVITY IS ASSAYED AND RECORDED ALONG WITH THE TIME AND DATE.
2. A STERILE SYRINGE IS USED TO REMOVE APPROXIMATELY 10% OF THE VOLUME TO PLACE IT INTO AN IDENTICAL VIAL (REFERRED TO 10% VIAL). USING THE SAME SYRINGE, WATER IS ADDED TO THE 10% VIAL UNTIL THE VOLUME IS EQUAL TO THE GEN.VIAL, AND SHAKEN GENTLY TO MIX.
3. THE GEN.VIAL IS AGAIN ASSAYED AS IN 1.ABOVE, AND THE ACTIVITY, TIME, AND DATE RECORDED. (THIS VIAL MAY NOW BE USED FOR CLINCAL PURPOSES)
4. THE 10% VIAL IS ALSO ASSAYED AS IN 1. AND DATA RECORDED.
5. THE 10% VIAL IS THEN ASSAYED EACH AM AND PM THEREAFTER AS IN 1., RECORDING ALL DATA, UNTIL THE MEASURED ACTIVITY IS APPROX. 100 uCi.
6. ALL READINGS ARE THEN CORRECTED FOR DECAY TO THE TIME OF THE INITIAL 10% VIAL READING IN 4., USING THE VALUE OF 6.02 HOURS FOR THE HALF LIFE. THE LINEARITY IS THEN CHECKED AS FOLLOWS:
   A. THE SUM OF READINGS IN 3. AND 4. ARE DIVIDED BY THE READING IN 1. TO DETERMINE THE % DIFFERENCE. A DIFFERENCE GREATER THAN 5% INDICATE THE NEED FOR REPAIR OR ADJUSTMENT OF THE INSTRUMENT.
   B. EACH READING OBTAINED IN 5. IS DIVIDED BY THE READING IN 4. TO DETERMINE THE % DIFFERENCE. A DIFFERENCE GREATER THAN 5% IN ANY READING INDICATES THE NEED FOR REPAIR OR ADJUSTMENT OF THE INSTRUMENT.
7. IF INSTRUMENT CANNOT BE CORRECTED A CALIBRATION GRAPH WILL BE CONSTRUCTED FOR USE IN ROUTINE ASSAYS.

PROCEDURE WHEN NO ON SITE GENERATOR IS USED

1. A BULK VIAL OF TC-99M IS USED. THE ACTIVITY IS EQUAL TO OR LARGER THAN THE MAXIMUM ACTIVITY ROUTINELY MEASURED IN THE DOSE CALIBRATOR.
2. THE ACTIVITY OF THE VIAL IS ASSAYED EACH AM & PM UNTIL THE ACTIVITY IS APPROXIMATELY 100 uCi. THE ACTIVITY, TIME AND DATE OF MEASUREMENTS ARE RECORDED.
3. ALL READINGS ARE CORRECTED FOR DECAY TO ONE OF THE READINGS CLOSEST TO A TYPICAL PATIENT DOSE, USING THE VALUE OF 6.02 HOURS HALF LIFE.
4. ALL CORRECTED READINGS SHOULD BE WITHIN 5% OF THE CHOSEN STANDARD (TYPICAL PATIENT) DOSE. ERRORS GREATER THANT 5% INDICATE NEED FOR INSTRUMENT REPAIR OF ADJUSTMENT.
5. IF THE INSTRUMENT CANNOT BE CORRECTED, A CALIBRATION GRAPH IS CONSTRUCTED FOR USE IN ROUTINE ASSAYS.

INTEGRITY CHECK (QUARTERLY)

THE INSTRUMENT IS INSPECTED QUARTERLY TO ASCERTAIN THE CORRECT PLACEMENT AND INTEGRITY OF THE LINER, THE PROPER ZERO SETTING, DC BALANCE, AND BACKGROUND SUBTRACT IF APPLICABLE. (REF MFGR'S INSTRUCTIONS)

CONSTANCY (EACH DAY OF USE)

INSTRUMENT REPRODUCIBILITY IS CHECKED EACH DAY OF USE WITH THE CS-137 AND BA-133 REFERENCE VIAL SOURCES.

PROCEDURE

1. THE BA-133 STANDARD IS ASSAYED AT THE BA-133 SETTING, AND THE NET ACTIVITY RECORDED.
2. THE CS-137 STANDARD IS ASSAYED AT THE CS-137 SETTING, AND AT EACH SETTING FOR THE COMMONLY USED RADIONUCLIDES, AND RECORDED.
3. THE READINGS OBTAINED IN 1. AND 2. ARE THEN COMPARED TO THE PREDICTED DECAY CORRECTED READINGS.
4. READINGS WHICH DIFFER BY MORE THAN 5% FROM THE PREDICTED VALUES INDICATE THE NEED FOR REPAIR OR ADJUSTMENT OF THE INSTRUMENT.
5. HIGHER THAN NORMAL BACKGROUND READINGS WILL BE INVESTIGATED TO DETERMINE THEIR ORIGIN AND TO ELIMINATE THEM IF POSSIBLE.

MANCHESTER MEMORIAL HOSPITAL -- MANCHESTER, CT.
LICENSE NO. 06-03413-01

FACILITIES AND EQUIPMENT

THE NUCLEAR MEDICINE SUITE IS LOCATED IN THE BASEMENT LEVEL OF THE MAIN HOSPITAL BUILDING . IT CONSISTS OF THREE ROOMS AS FOLLOWS (SEE DIAGRAM):

RM 3 -- HOT LAB/INJECTION AREA -- APPROX 290 SQ.FT.
RM 2 -- PICKER CAMERA ROOM -- APPROX 290 SQ.FT.
RM 1 -- SIEMENS CAMERA ROOM -- APPROX 290 SQ.FT.

IN ADDITION THERE ARE TWO OFFICES, A RECEPTION AREA AND WAITING ROOM, A FILM DEVELOPING ROOM, AND BATHROOM.

THE LABORATORY IS AMPLY SUPPLIED WITH NECESSARY SHIELDING DEVICES FOR STORAGE, PREPARATION, AND TRANSPORT OF RADIOACTIVE MATERIALS USED. IN ADDITION TO THE ITEMS SPECIFIED ON THE DIAGRAM, IT IS EQUIPPED WITH NUMEROUS SYRINGE AND VIAL SHIELDS, LONG HANDLE DEVICES FOR HANDLING, DISPOSABLE RUBBER GLOVES, LAB COATS, BENCH LINERS, AND ASSORTED LEAD SHIELDING.

RADIOPHARMACEUTICALS ARE PREDOMINANTLY SUPPLIED BY A RADIO-PHARMACY (SYNCOR) IN THE FORM OF INDIVIDUAL DOSES PRELOADED IN INDI-VIDUAL SYRINGES. THIS REDUCES THE AMOUNT OF HANDLING INVOLVED, AND THEREFORE REDUCES PERSONNEL EXPOSURE. LEAD APRONS ARE ALSO UTILIZED WHEN IT IS NECESSARY TO HOLD UNCOOPERATIVE PATIENTS.

PERSONNEL TRAINING PROGRAM

DOCUMENTED CONTINUING EDUCATION COURSES ALONG WITH SEMINAR ATTENDANCE BY TECHNICAL PERSONNEL ARE KEPT.

IN-SERVICE EDUCATION FOR TECHNICAL PERSONNEL VIA IN-HOUSE LECTUREC, ON THE JOB DISCUSSIONS AND AUDIO-TAPE LECTURES PURCHASED FROM EDUCATIONAL REVIEWS INC. OF LEEDS, ALABAMA. TESTS PROVIDED BY THE EDUCATIONAL REVIEW INC. ARE TAKEN BY THE TECHNICAL PERSONNEL AFTER LISTENTING TO THE TAPE LECTURES.

ANNUAL LECTURES ARE PROVIDED TO THE NURSING DEPT. WHICH INCLUDE RADIATION SAFETY AND NUCLEAR MEDICINE PROCEDURES TO PATIENTS.

RADIATION SAFETY PROCEDURES ARE ALSO PROVIDED TO THE HOUSEKEEPING AND MAINTENANCE PERSONNEL THAT COME IN CONTACT WITH THE RADIATION AREAS.

EMERGENCY NAMES AND TELEPHONE NUMBERS ARE LISTED ON DOORS LEADING TO THE RADIATION AREAS.

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LICENSE NO. 06-03413-01

PROCEDURES FOR ORDERING AND RECEIPT OF RADIOACTIVE MATERIAL
(NUCLEAR MEDICINE LABORATORY)

1. THE SUPERVISORY NUCLEAR MEDICINE TECHNOLOGIST WILL PLACE ALL ORDERS FOR RADIOACTIVE MATERIALS AND WILL ENSURE THAT THE REQUESTED MATERIALS AND QUANTITIES ARE AUTHORIZED BY THE LICENSE AND THAT POSSESSION LIMITS ARE NOT EXCEEDED.

2. WRITTEN RECORDS THAT IDENTIFY THE ISOTOPE, COMPOUND, ACTIVITY LEVELS, AND SUPPLIER, ETC., WILL BE USED AND MAINTAINED.

3. DURING ALL HOURS, CARRIERS ARE INSTRUCTED TO DELIVER ALL RADIOACTIVE PACKAGES TO THE EMERGENCY ROOM. SHIPMENTS ARE ONLY RECEIVED BY THE NURSING SUPERVISOR WHO UNLOCKS THE LEAD SAFE. THE PACKAGE IS PLACED IN THE LEAD SAFE BY THE OUTSIDE DELIVERY SERVICE, AND THEN THE SUPERVISOR LOCKS THE SAFE AND KEEPS THE KEY ON HER NARCOTICS KEY HOLDER.

4. NUCLEAR DEPARTMENT PERSONNEL RETRIEVES THE SHIPMENT VIA A WHEELCHAIR AND IT IS BROUGHT TO THE NUCLEAR MEDICINE DEPT. HOT LAB.

5. EMERGENCY DEPT. NURSING SUPERVISORS ARE INSTRUCTED BY A MEMORANDUM THAT IF SHIPMENTS APPEAR DAMAGED IN ANY WAY, THAT THE RADIATION SAFETY OFFICER SHOULD BE NOTIFIED IMMEDIATELY, AND THE OUTSIDE DELIVERY SERVICE PERSON BE ASKED TO REMAIN AT THE HOSPITAL UNTIL IT IS DETERMINED THAT NEITHER HE NOR THE VEHICLE IS CONTAMINATED.

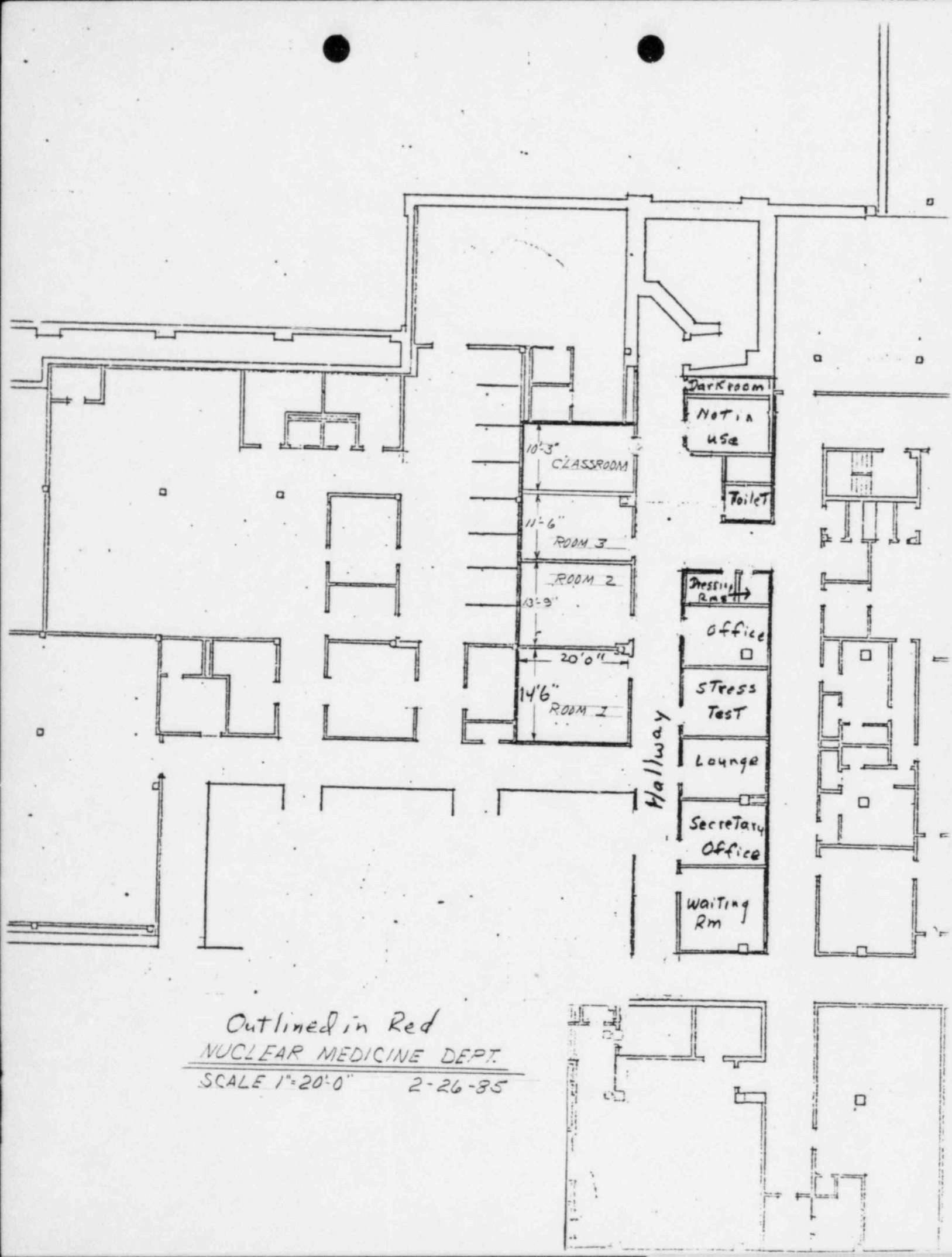
MEMO TO: JOEL REICH, M.D., E.R. DEPT. HEAD DATE: 2/21/85
FROM: WALTER G. HEIMANN, M.D., RADIATION SAFETY OFFICER
SUBJECT: RECEIPT OF PACKAGES CONTAINING RADIOACTIVE MATERIAL.

PLEASE REVIEW THE FOLLOWING EXISTING PROCEDURES WITH ALL E.R. NURSING SUPERVISORS:

ALL PACKAGES CONTAINING RADIOACTIVE MATERIAL WILL BE DELIVERD TO THE E.R. ROOM. THE NURSING SUPERVISOR WILL UNLOCK THE LEAD SAFE, AND THE DELIVERY SERVICE WILL PLACE THE PACKAGE IN THE SAFE. THE SUPERVISOR WILL LOCK THE SAFE AND KEEP THE KEY ON THE NARCOTICS KEY HOLDER. THE PACKAGE WILL THEN BE TRANSPORTED BY NUCLEAR MEDICNE PERSONNEL TO THE NUCLEAR MEDICINE DEPT.

IF THE PACKAGE APPEARS DAMAGED IN ANY WAY THE SUPERVISOR WILL IMMEDIATELY CONTACT THE RADIATION SAFETY OFFICER, AND REQUEST THAT THE DELIVERY SERVICE PERSON REMAIN AT THE HOSPITAL UNTIL IT IS VERIFIED THAT NEITHER HE NOR THE VEHICLE IS CONTAMINATED.

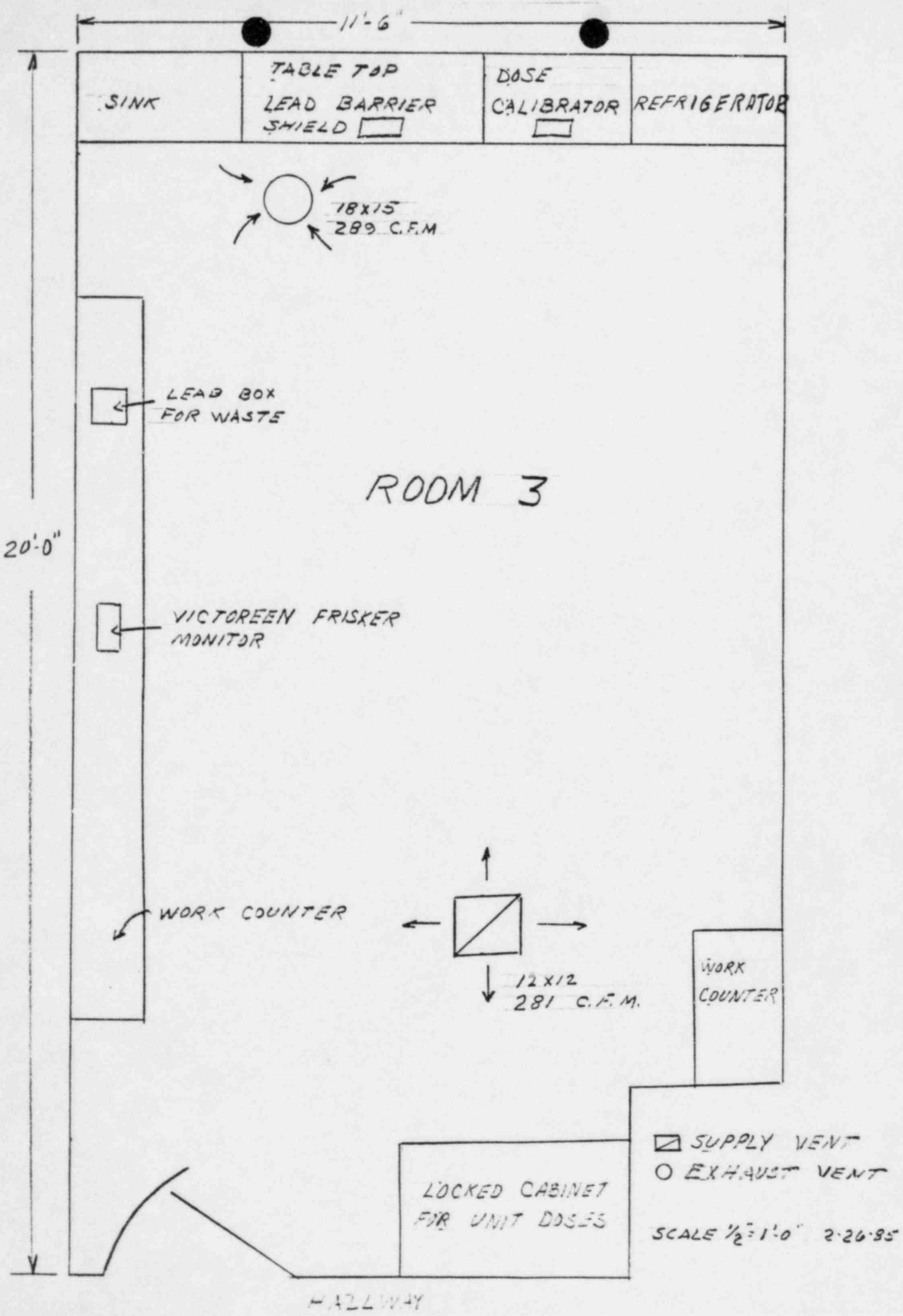
RADIATION SAFETY OFFICER: WALTER G. HEIMANN, M.D.
TELEPHONE NUMBERS -- OFFICE: 646-1222 HOME: 649-7204



Outlined in Red

NUCLEAR MEDICINE DEPT.

SCALE 1"=20'-0" 2-26-85


11'-6"
SINK
TABLE TOP
LEAD BARRIER SHIELD
DOSE CALIBRATOR
REFRIGERATOR
18x15
289 C.F.M
LEAD BOX FOR WASTE
ROOM 3
20'-0"
VICTOREEN FRISKER MONITOR
WORK COUNTER
12x12
281 C.F.M.
WORK COUNTER
SUPPLY VENT
EXHAUST VENT
LOCKED CABINET FOR UNIT DOSES
SCALE ½"=1'-0" 2-26-85
HALLWAY

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PROCEDURES FOR OPENING PACKAGES CONTAINING RADIOACTIVE MATERIAL (NUCLEAR MEDICINE LABORATORY)

1. PUT ON GLOVES TO PREVENT HAND CONTAMINATION.

2. VISUALLY INSPECT PACKAGE FOR ANY SIGN OF DAMAGE (e.g. WETNESS OR CRUSHED). IF DAMAGE IS NOTED, STOP PROCEDURE AND NOTIFY RADIATION SAFETY OFFICER.

3. MEASURE EXPOSURE RATE AT 3 FEET FROM PACKAGE SURFACE AND RECORD. IF GREATER THAN 10mR/hr, STOP PROCEDURE AND NOTIFY RADIATION SAFETY OFFICER.

4. MEASURE SURFACE EXPOSURE RATE AND RECORD. IF GREATER THAN 200 mR/hr, STOP PROCEDURE AND NOTIFY RADIATION SAFETY OFFICER.

5. OPEN THE OUTER PACKAGE (FOLLOWING THE MANUFACTURER'S DIRECTIONS IF SUPPLIED) AND REMOVE PACKING SLIP.

6. OPEN INNER PACKAGE AND VERIFY THAT CONTENTS AGREE WITH THOSE ON PACKING SLIP. COMPARE REQUISITION, PACKING SLIP AND LABEL ON BOTTLE.

7. CHECK FINAL SOURCE CONTAINER FOR BREAKAGE OF SEALS OR VIALS, LOSS OF LIQUID, OR DISCOLORATION OF PACKAGING MATERIAL.

8. VERIFY THAT SHIPMENT DOES NOT EXCEED POSSESSION LIMIT.

9. WIPE THE EXTERNAL SURFACE OF FINAL SOURCE CONTAINER AND COUNT. IF REMOVABLE ACTIVITY EXCEEDS 0.01uCi/100sq.cm., STOP PROCEDURE AND NOTIFY RADIATION SAFETY OFFICER.

10. MONITOR THE PACKING MATERIAL AND PACKAGES FOR CONTAMINATION BEFORE DISCARDING.
    IF CONTAMINATED, TREAT AS RADIOACTIVE WASTE.
    IF NOT CONTAMINATED, OBLITERATE RADIATION LABELS BEFORE DISCARDING IN REGULAR TRASH.

11. MAINTAIN RECORDS OF THE RESULTS OF CHECKING EACH PACKAGE.

RADIATION SAFETY REGULATIONS FOR LABORATORIES

IT IS THE RESPONSIBILITY OF THOSE WORKING WITH RADIOACTIVE MATERIAL TO PROTECT THEMSELVES AND OTHERS FROM RADIATION HAZARDS ARISING FROM THEIR WORK. BAD EXAMPLES AND CARELESS WORKING HABITS MAY UNNECESSARILY EXPOSE ASSOCIATES OR CONTAMINATE FACILITIES AND CANNOT BE TOLERATED. THE FOLLOWING REGULATIONS SHALL BE OBSERVED:

THE LABORATORY DIRECTOR IS RESPONSIBLE FOR ORDERING STOCK SHIPMENTS OF RADIONUCLIDES AND ASSURING THAT ALL ORDERS ARE IN COMPLIANCE WITH LICENSE LIMITATIONS AS REGARD TO NUCLIDE, COMPOUND, MAXIMUM ACTIVITY, AND USE.

ONLY AUTHORIZED PERSONNEL OVER THE AGE OF 18 YEARS OLD WILL BE ALLOWED TO HANDLE RADIOACTIVE MATERIAL. AUTHORIZATION MUST BE OBTAINED FROM THE LABORATORY DIRECTOR AND THE RADIATION SAFETY OFFICER (RSO).

EATING, DRINKING, SMOKING, AND THE APPLICATION OF COSMETICS ARE PROHIBITED IN AREAS WHERE RADIOACTIVE MATERIALS ARE BEING HANDLED. FOOD AND DRINK SHOULD NOT BE STORED IN THE SAME PLACE (E.G. REFRIGERATOR) WITH RADIOACTIVE MATERIALS.

WORKING WITH RADIOACTIVE MATERIALS WHEN OPEN WOUNDS ARE PRESENT ON EXPOSED SURFACES OF THE BODY IS PROHIBITED UNLESS WOUNDS ARE PROPERLY DRESSED AND PROTECTED.

DISPOSABLE RUBBER GLOVES AND LAB COATS WILL BE WORN WHENEVER WORKING WITH RADIOACTIVE MATERIAL, AND SHALL BE REMOVED BEFORE LEAVING THE LABORATORY.

PIPETTING OR ANY SIMILAR OPERATION BY MOUTH IS PROHIBITED. SYRINGE SHIELDS, DISPOSABLE ABSORBENT PADS, REMOTE HANDLING DEVICES, AND TRAYS SHALL BE UTILIZED WHEN POSSIBLE.

HANDS, FEET, AND CLOTHING SHALL BE MONITORED ROUTINELY FOR CONTAMINATION. HANDS SHOULD BE WASHED ROUTINELY AFTER HANDLING RADIOACTIVE MATERIALS, ESPECIALLY BEFORE EATING.

FILM BADGES FOR MONITORING TOTAL BODY EXPOSURE WILL BE WORN IN RESTRICTED AREAS. IN ADDITION, PERSONNEL WORKING WITH RADIOACTIVE MATERIAL WILL WEAR RING TYPE BADGES. BADGES WILL BE EXCHANGED MONTHLY FOR PROCESSING.
PERSONNEL WORKING ONLY IN THE IN-VITRO LABORATORY WITH MICROCURIE QUANTITIES OF MATERIALS WILL NORMALLY BE EXPOSED TO LEVELS WELL UNDER 10% OF THE PERMISSIBLE OCCUPATIONAL LIMITS OF 10 CFR PART 20. THEREFORE, FILM BADGE MONITORING OF THESE INDIVIDUALS MAY BE CONDUCTED FOR A TEST PERIOD WHEN A NEW PROGRAM IS BEGUN OR WHEN NEW PROCEDURES ARE INITIATED WHICH MAY INCREASE EXPOSURE. IF MONITORED EXPOSURES ARE LESS THAN 5% OF THE PERMISSIBLE LIMITS, FILM BADGE MONITORING MAY BE ELIMINATED.

GENERALLY, THE INDIVIDUAL PROCEDURES WITH RADIOACTIVE MATERIAL ARE WELL ESTABLISHED BY THE SUPPLIER. NEW PROCEDURES SHOULD BE TESTED, WITHOUT THE RADIONUCLIDE AT FIRST IF POSSIBLE, PRIOR TO NORMAL USE. THE RSO MUST BE CONSULTED BEFORE THE USE OF VOLATILE, GASEOUS, OR DUST-FORMING MATERIAL IS INITIATED.

RECEIPT OF STOCK SHIPMENTS SHALL BE IN ACCORDANCE WITH ESTABLISHED PROCEDURES.(SEE PROCEDURES FOR OPENING PACKAGES, AND PROCEDURES FOR RECEIPT OF PACKAGES)

RADIONUCLIDES SHALL BE HANDLED AND STORED IN THE SPECIALLY DESIGNATED LOCATIONS. VESSELS CONTAINING RADIOACTIVE MATERIALS SHALL BE LABELLED AS TO COMPOUND, RADIONUCLIDE, ACTIVITY, AND DATE OF CALIBRATION AND SHALL BE ADEQUATELY SHIELDED WHILE IN USE AND STORAGE. AREAS WHERE THESE MATERIALS ARE ROUTINELY USED OR STORED SHALL BE LABELED WITH A "CAUTION (OR DANGER) -- RADIOACTIVE MATERIAL" LABEL, AND WILL BE KEPT LOCKED WHEN UNATTENDED.

MOVEMENT OF RADIOACTIVE MATERIAL WITHIN THE HOSPITAL, IF REQUIRED, SHALL BE ACCOMPLISHED USING PROPERLY SHIELDED CONTAINERS.

CONTAMINATED WASTE AND UTENSILS SHALL BE DISPOSED OF IN THE CONTAINERS PROVIDED. ALL FORMS OF DISPOSAL MUST BE APPROVED BY THE RSO AND CONFORM TO APPROPRIATE LOCAL, STATE, AND FEDERAL REGULATIONS (SEE PROCEDURES FOR RADIOACTIVE WASTE DISPOSAL). IF LIQUID WASTE DISPOSAL INTO THE SANITARY SEWER SYSTEM IS APPROVED, A SINK WILL BE DESIGNATED AND LABELED "HOT SINK -- TO BE SURVEYED BEFORE PLUMBING WORK".

RADIATION SAFETY SURVEYS MUST BE CONDUCTED ROUTINELY AND WHENEVER A SUSPECTED HAZARD EXISTS. RESULTS SHALL BE RECORDED, AND ALL READINGS IN EXCESS OF PERMITTED LIMITS WILL BE BROUGHT TO THE ATTENTION OF THE RSO. (SEE SURVEY PROCEDURES)

"GOOD HOUSEKEEPING" SHALL BE MAINTAINED AT ALL TIMES. SPILLAGE SHOULD BE PREVENTED, BUT IN THE EVENT OF SUCH AN ACCIDENT, THE PRESCRIBED EMERGENCY PROCEDURES SHOULD BE FOLLOWED. (SEE EMERGENCY PROCEDURES FOR RADIOACTIVE SPILLS)

ALL PATIENT DOSES SHALL BE ASSAYED IN THE DOSE CALIBRATOR PRIOR TO ADMINISTRATION. DO NOT USE ANY DOSE THAT DIFFERS FROM THE PRESCIBED DOSE BY MORE THAN 10%.

TC-99m MUST BE TESTED FOR MO-99 BREAKTHROUGH PRIOR TO ADMINISTRATION TO PATIENTS. MAXIMUM CONTAMINATION SHALL NOT EXCEED 1 uCi PER mCi OF TC-99m, OR MORE THAN A TOTAL OF 5 uCi OF MO-99 PER PATIENT DOSE. (SEE PROCEDURES FOR MOLYDENUM BREAKTHROUGH TESTING)

ANY QUESTIONS INVOLVING SAFETY SHOULD BE DIRECTED TO THE RSO.

MANCHESTER MEMORIAL HOSPITAL -- MANCHESTER, CT.
LICENSE NO. 06-03413-01

PROCEDURES FOR MOLYBDENUM BREAKTHROUGH TESTING FOR MO-99/TC-99m GENERATORS

SCOPE

THE USE OF ON SITE MO-99/TC-99m GENERATORS REQUIRES TESTING TO INSURE THE PURITY OF THE TC-99m ELUATE. TC-99m RADIOPHARMACEUTICALS OBTAINED AS UNIT DOSES OR BULK DOSES WILL BE TESTED BY THE RADIOPHARMACEUTICAL SUPPLIER.

FREQUENCY

TESTING MUST BE PERFORMED IMMEDIATELY FOLLOWING EACH ELUTION OF TC-99M FROM A MO-99/TC-99M GENERATOR, PRIOR TO PATIENT ADMINISTRATION.

PROCEDURE

TEST SHALL BE IN ACCORDANCE WITH PROCEDURES SET FORTH BY THE MANUFACTURER OF THE DOSE CALIBRATOR OR TEST KIT.

MAXIMUM ALLOWABLE CONTAMINATION

MEASURED CONCENTRATIONS OF MO-99 IN TC-99m SHALL NOT EXCEED 1 uCi PER mCi (0.1%), AND SHOULD BE OF THE ORDER OF 0.1 UCI PER mCi (0.01%) OR LESS.
EACH PATIENT DOSE MAY NOT EXCEED 1 uCi OF MO-99 PER mCi OF TC-99m, OR MORE THAN A TOTAL OF 5 uCi OF MO-99 AT THE TIME OF ADMINISTRATION.

LOGGING

MEASURED CONCENTRATIONS WILL BE RECORDED AND RECORDS MAINTAINED FOR A MINIMUM OF 3 YEARS.

REPORTING

ANY MEASURED CONCENTRATION EXCEEDING THE ABOVE LIMITS WILL BE REPORTED TO THE RADIATION SAFETY OFFICER. USE OF THE ELUTED TC-99m AND THE GENERATOR WILL BE IMMEDIATELY DISCONTINUED.

EMERGENCY PROCEDURES FOR RADIOACTIVE SPILLS

MINOR SPILLS (uCi AMOUNTS)

NOTIFY: NOTIFY THE PERSONS IN THE AREA THAT A SPILL HAS OCCURRED.

PREVENT THE SPREAD: COVER THE SPILL WITH ABSORBENT PAPER.

CLEAN UP: USE DISPOSABLE GLOVES AND REMOTE HANDLING TONGS. CAREFULLY FOLD THE ABSORBENT PAPER AND PAD. INSERT INTO A PLASTIC BAG AND DISPOSE OF IN THE RADIOACTIVE WASTE CONTAINER. INCLUDE ALL OTHER CONTAMINATED MATERIALS SUCH AS DISPOSABLE GLOVES.

SURVEY: WITH A G-M SURVEY METER, CHECK THE AREA AROUND THE SPILL, YOUR HANDS AND CLOTHING FOR CONTAMINATION.

REPORT: REPORT INCIDENT TO R.S.O. & PHYSICIAN IN CHARGE.

MAJOR SPILLS:

CLEAR THE AREA: NOTIFY ALL PERSONS NOT INVOLVED IN THE SPILL TO VACATE THE ROOM.

PREVENT THE SPREAD: COVER THE SPILL WITH ABSORBENT PADS, BUT DO NOT ATTEMPT TO CLEAN IT UP. TURN OFF FAN AND/OR VENTILATION SYSTEM. CONFINE THE MOVEMENT OF ALL PERSONNEL POTENTIALLY CONTAMINATED TO PREVENT THE SPREAD.

SHIELD THE SOURCE: IF POSSIBLE, THE SPILL SHOULD BE SHIELDED, BUT ONLY IF IT CAN BE DONE WITHOUT FURTHER CONTAMINATION OR WITHOUT SIGNIFICANTLY INCREASING YOUR RADIATION EXPOSURE.

CLOSE THE ROOM: LEAVE THE ROOM AND LOCK THE DOOR(S) TO PREVENT ENTRY.

CALL FOR HELP: NOTIFY THE R.S.O. & PHYSICIAN IN CHARGE IMMEDIATELY.

PERSONNEL DECONTAMINATION: CONTAMINATED CLOTHING SHOULD BE REMOVED AND STORED FOR FURTHER EVALUATION BY THE RADIATION SAFETY OFFICER. IF THE SPILL IS ON THE SKIN, FLUSH THOROUGHLY AND THEN WASH WITH MILD SOAP AND LUKEWARM WATER.

RADIATION SAFETY OFFICER: WALTER G. HEIMANN, M.D.
OFFICE PHONE:646-1222 HOME PHONE: 649-7204

REF: NRC GUIDE 10.8 REV 1 11/1/77 APP. H

RADIATION SAFETY PROCEDURES IN CASE OF DEATH OF A RADIOACTIVE PATIENT

IN CASE A PATIENT CONTAINING THERAPY QUANTITIES OF RADIOACTIVE MATERIAL DIES, THE RADIATION SAFETY OFFICER MUST BE CONTACTED BEFORE DISPOSITION OF THE BODY.

IF THE BODY CONTAINS RADIUM OR CESIUM SOURCES, THESE WILL BE REMOVED BY THE RADIATION THERAPIST AS SOON AFTER DEATH OCCURS AS POSSIBLE. AFTER THE SOURCES HAVE BEEN REMOVED, THE BODY WILL NO LONGER PRESENT A RADIATION HAZARD AND MAY BE PROCESSED IN THE USUAL MANNER.

IF AN AUTOPSY IS TO BE PERFORMED ON A BODY CONTAINING THERAPY QUANTITIES OF A RADIONUCLIDE, THIS WILL ONLY BE CARRIED OUT AFTER CONSULTATION WITH THE RADIATION SAFETY OFFICER. IF NO AUTOPSY IS TO BE PERFORMED, THE RADIATION SAFETY OFFICER WILL FILL OUT A RADIOACTIVITY REPORT WHICH WILL BE ATTACHED TO THE DEATH CERTIFICATE BEFORE THE BODY IS RELEASED TO THE FUNERAL DIRECTOR.

THESE PROCEDURES DO NOT APPLY TO PATIENTS WHO HAVE RECEIVED A DIAGNOSTIC DOSE OF A RADIONUCLIDE SINCE THE QUANTITY AND HALF-LIFE OF THESE MATERIALS PRESENT NO SIGNIGICANT HAZARD.

ANY QUESTIONS SHOULD BE DIRECTED TO THE RADIATION SAFETY OFFICER.

R.S.O.: WALTER G. HEIMANN, M.D. OFFICE: 646-1222
HOME: 649-7204

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LICENSE NO. 06-03413-01

AREA SURVEY PROCEDURES FOR LABS USING GAMMA EMITTING ISOTOPES

EACH LABORATORY UTILIZING RADIOACTIVE MATERIAL IS REQUIRED TO CONDUCT ROUTINE SURVEYS OF THE AREA. THE FOLLOWING REPRESENT THE MINIMUM SURVEY REQUIREMENTS AND SHOULD BE SUPPLEMENTED WITH ADDITIONAL SURVEYS IF A SPILL HAS OCCURRED OR A RADIATION HAZARD IS SUSPECTED:

SURVEY TYPE	NUC. MED. LAB. MINIMUM FREQUENCY	IN VITRO LAB. MINIMUM FREQUENCY	RECORD
RADIATION LEVELS	DAILY	N/A	YES
CONTAMINATION	WEEKLY	MONTHLY	YES

RECORDS OF SURVEYS

RESULTS SHALL BE RECORDED AND MAINTAINED ALONG WITH THE FOLLOWING:

A DRAWING OF THE FACILITY SHOWING FEATURES SUCH AS THE "HOT SINK", STORAGE AREAS, ACTIVE WASTE AREAS, ETC. FOR REFERENCE TO REPORT FORM.

LOCATION, DATE, TYPE OF EQUIPMENT USED, AND SURVEYOR'S INITIALS.

FOR WIPE TESTS, THE PULSE HEIGHT ANALYZER SETTINGS AND THE RADIOACTIVE STANDARD, ACTIVITY, AND DATE SHOULD BE NOTED.

IF AN UNACCEPTABLE LEVEL IS MEASURED, THE INITIAL READINGS, CORRECTIVE ACTIONS TAKEN, AND SUBSEQUENT READINGS WILL BE RECORDED.

SURVEY PROCEDURES AND MAXIMUM LIMITS

RADIATION LEVELS ---- AREA MONITORING IS CONDUCTED WITH A CALIBRATED SURVEY METER SUFFICIENTLY SENSITIVE TO DETECT 0.05 MR/HR. A MAXIMUM LIMIT OF 0.06 MR/HR. IN NON-CONTROLLED AREAS AND 2.5 MR/HR. IN CONTROLLED AREAS IS ALLOWED, BUT SHOULD BE KEPT AS LOW AS PRACTICAL.

CONTAMINATION ---- A SERIES OF WIPES IS TAKEN IN AREAS WHERE ACTIVITY IS HANDLED IN UNSEALED FORM, WITH EACH WIPE ENCOMPASSING APPROXIMATELY 10 X 10 CM. A GAMMA-SCINTILLATION WELL COUNTER IS USED, WITH THE ANALYZER THRESHHOLD SET BELOW THE LOWEST GAMMA ENERGY USED IN THE LABORATORY, AND THE UPPER LEVEL SET AT MAXIMUM. THE FOLLOWING MEASUREMENTS ARE THEN PERFORMED AND RECORDED:

TAKE A 1 MIN. BACKGROUND COUNT & RECORD BKGD COUNTS PER MIN. (CPM).

TAKE A 1 MIN. COUNT ON A LONG-LIVED STANDARD AND RECORD NET CPM (GROSS CPM - BKGD CPM). THIS IS A CONSTANCY CHECK ON THE COUNTER.

TAKE A 1 MIN. COUNT ON ALL SAMPLES AND RECORD NET CPM.

AREAS WITH A REMOVABLE ACTIVITY OF 0.001 uCi/100sq cm. OR MORE WILL REQUIRE DECONTAMINATION, AND REPEAT TESTING.

NOTIFICATION

ANY LEVELS WHICH ROUTINELY EXCEED THE PERMITTED LIMITS SHOULD BE BROUGHT TO THE ATTENTION OF THE RADIATION SAFETY OFFICER (RSO).

RADIOACTIVE WASTE DISPOSAL

RADIOACTIVE WASTE IS DISPOSED OF AS FOLLOWS:

1. RADIOACTIVE MATERIAL SUPPLIED BY SYNCOR INTERNATIONAL CORP. (RADIOPHARMACY), WHICH REMAINS AFTER USE IS RETURNED TO SYNCOR PER THEIR INSTRUCTIONS. SYNCOR IS LOCATED AT:
   53-B HURLBUT STREET
   WEST HARTFORD, CT. 06110

2. IF MO-99/TC-99M GENERATORS ARE USED, THEY WILL EITHER BE RETURNED TO THE MANUFACTURER, OR HELD FOR DECAY.(SEE PROCEDURES FOR ORDINARY WASTE DISPOSAL)

3. A SMALL AMOUNT OF LIQUID WASTE USED IN THE IN VITRO LAB. WILL BE DISPOSED INTO THE SANITARY SEWER IN ACCORDANCE WITH 20.303 OF 10 CFR PART 20.

4. ALL OTHER MATERIAL IS HELD FOR COMPLETE DECAY.(SEE PROCEDURES FOR ORDINARY WASTE DISPOSAL)

PROCEDURES FOR "ORDINARY WASTE DISPOSAL"(OWD) OF RADIOACTIVE WASTE FOR THE NUCLEAR MEDICINE LABORATORY

I. GENERAL

ALL FORMS OF DISPOSAL MUST BE APPROVED BY THE RAD. SAFETY OFFICER (RSO) & CONFORM TO APPROPRIATE LOCAL, STATE, AND FEDERAL REGULATIONS.

RADIOACTIVE MATERIAL MUST BE HELD FOR DECAY UNTIL RADIATION LEVELS, AS MEASURED WITH A LOW-LEVEL CALIBRATED G-M SURVEY METER AND WITH ALL SHIELDING REMOVED, HAVE REACHED BACKGROUND. THIS DECAY PERIOD IS USUALLY A MINIMUM OF 10 HALF LIVES BEFORE DISPOSAL AS OWD.

ALL RADIATION LABELS MUST BE REMOVED OR DEFACED AND PACKAGING MATERIAL MUST BE SURVEYED TO INSURE NO CONTAMINATION BEFORE DISPOSAL.

ANY QUESTIONS SHOULD BE DIRECTED TO THE RSO.

II. STORAGE OF WASTE MATERIAL

ALL RADIOACTIVE WASTE MATERIAL WILL BE STORED IN THE DESIGNATED SHIELDED ENCLOSURES.

RADIOACTIVE WASTE MATERIAL AND CONTAMINATED SYRINGES WILL BE SEGREGATED INTO TC-99M AND NON TC-99M CONTAINERS. THE CONTAINERS WILL BE LINED WITH POLY BAGS AND LABELED WITH AN IDENTIFYING SERIAL NUMBER.

THE DATE THE CONTAINER IS SEALED FOR FURTHER DECAY WILL ALSO BE PLACED ON THE CONTAINER AT THAT TIME.

MOLY-99 GENERATORS TO BE DISPOSED AS OWD, WILL BE STORED INTACT FOR AT LEAST 10 HALF LIVES (APPROX. 4 WEEKS) BEFORE BEING BROKEN DOWN. THE COLUMNS CAN THEN BE PLACED IN THE NON TC-99M CONTAINER.

ISOTOPES WITH HALF LIVES GREATER THAN 8 DAYS SHOULD BE STORED SEPARATELY IN INDIVIDUAL CONTAINERS.

RUBBER GLOVES, ALCOHOL SWABS, ABSORBENT BENCH TOP LINERS, ETC., WILL BE PLACED IN THE POLY-LINED STEP ON TRASH CONTAINERS PROVIDED. THESE CONTAINERS WILL BE LABELED WITH A "RADIOACTIVE MATERIAL -- DO NOT REMOVE" LABEL. WHEN THE BAG IS FULL, IT WILL BE TAPED CLOSED AND SURVEYED WITH A G-M SURVEY METER. IF NO READINGS ABOVE BACKGROUND ARE MEASURED, IT MAY BE DISPOSED OF AS OWD, OTHERWISE IT WILL BE PLACED IN STORAGE FOR FURTHER DECAY.

III. RECORDS FOR DISPOSAL

RECORDS OF DISPOSAL WILL INCLUDE THE FOLLOWING INFORMATION:

THE DATE PLACED IN STORAGE FOR DECAY AND THE CONTAINER SERIAL NUMBER IF APPLICABLE(MOLY-99 GENERATORS OR ISOTOPES WITH HALF LIVES GREATER THAN 8 DAYS CAN BE STORED SEPARATELY)

APPROXIMATE TOTAL ACTIVITY AND VOLUME (OR NUMBER OF SOURCES FOR CAPSULES, SEEDS, COLUMNS, ETC.) AT THE TIME PLACED IN STORAGE.

DATE DISPOSED AS OWD AND SURVEY METER READING (BACKGROUND).

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PROCEDURES FOR USE OF GROUPS IV AND V (IODINE-131)
FOR TREATMENT OF PATIENTS
PAGE 1

. ALL PATIENTS RECEIVING A DOSE OF 30 mCi IODINE-131 OR MORE MUST BE HOSPITALIZED UNTIL THE ACTIVITY REMAINING IN THE PATIENT IS BELOW 30 mCi AND PREFERABLY BELOW 8 mCi.

2. ALL PATIENTS WHO MUST BE HOSPITALIZED, MUST BE SCHEDULED BY THE NUCLEAR MEDICINE DEPARTMENT.

3. IODINE-131 WILL BE ADMINISTERED IN CAPSULE FORM ONLY, BY THE RESPONSIBLE LICENSED PHYSICIAN IN THE PATIENT'S ROOM.

4. ALL PATIENTS TREATED WITH RADIOACTIVE MATERIAL WILL BE PLACED IN A CORNER PRIVATE ROOM WITH A TOILET.

5. FOR PATIENTS WITH IODINE-131, THE LARGE SURFACES IN THE ROOM AND TOILET AREAS THAT ARE MORE LIKELY TO BE CONTAMINATED WILL BE COVERED WITH ABSORBENT PADS OR PROTECTIVE MATERIAL AS APPROPRIATE TO THE AMOUNTS OF CONTAMINATION TO BE EXPECTED. ATTENTION SHOULD BE GIVEN TO OBJECTS LIKELY TO BE TOUCHED BY THE PATIENT, E.G., TELEPHONES, DOORKNOBS AND OTHER ITEMS THAT WOULD BE DIFFICULT TO DECONTAMINATE. PLASTIC BAGS OR WRAPPINGS THAT ARE DISPOSABLE SHOULD BE USED ON SMALLER ITEMS.

6. RADIOACTIVE PRECAUTION TAGS SHALL BE ATTACHED TO THE BED,DOOR, AND THE PATIENT'S WRIST BAND AND CHART IN ACCORDANCE WITH SECTION 20.203, 10 CFR PART 20 (SEE ATTACHED). REMOVAL OF TAGS SHALL ONLY BE AUTHORIZED BY THE RESPONSIBLE DEPARTMENT (I.E. RADIATION THERAPY OR NUCLEAR MEDICINE).

7. THE BED WILL BE ARRANGED SO AS TO MINIMIZE THE EXPOSURE RATE IN THE HALL AND ANY ADJACENT ROOM.

8. RADIATION MEASUREMENTS IN AND SURROUNDING THE PATIENT'S ROOM WILL BE RECORDED ON THE "RADIATION SURVEY RECORD" FORM (SEE ATTACHED). RADIATION LEVELS IN ALL AREAS SURROUNDING THE PATIENT'S ROOM WILL BE MAINTAINED LESS THAN LIMITS SPECIFIED IN SECTION 20.105(B), 10 CFR PART 20.(i.e. THESE LEVELS SHALL NOT EXCEED EITHER A RATE OF 2 mR/hr OR A CUMULATIVE OF 100 mR IN ANY WEEK).

9. THE FORM, "NURSING INSTRUCTIONS FOR PATIENTS TREATED WITH GROUP IV AND V (IODINE-131)", WILL BE COMPLETED IMMEDIATELY AFTER ADMINISTRATION OF THE TREATMENT DOSE. A COPY WILL BE POSTED IN THE PATIENT'S CHART.

10. VISITORS WILL NORMALLY BE RESTRICTED AS FOLLOWS, UNLESS THE MEASUREMENTS INDICATE ADDITIONAL RESTRICTIONS ARE REQUIRED:
    A. NO PREGNANT VISITORS OR CHILDREN UNDER 18 YEARS OLD ALLOWED.
    B. VISITORS MUST REMAIN AT LEAST 6 FEET FROM THE PATIENT.
    C. EACH VISITOR MAY REMAIN NO LONGER THAN 30 MINUTES PER DAY.

11. THE FORM, "RADIATION SURVEY RECORD" WILL BE COMPLETED AT THE DESIGNATED TIMES. THIS WILL BE KEPT IN THE NUCLEAR MEDICINE DEPT.

12. NURSES CARING FOR THESE PATIENTS WILL BE ASSIGNED FILM OR TLD BADGES.

13. THESE RADIATION PRECAUTIONS WILL NO LONGER BE REQUIRED FOR ANY OF THE FOLLOWING REASONS:
    A. PATIENT DISCHARGE
       NO PATIENT CONTAINING IODINE-131 MAY DISCHARGED UNLESS THE REMAINING ACTIVITY IS LESS THAN 30 mCi (APPROX. 7 mR/hr AT 1 METER), AND PREFERABLY LESS THAN 8 mCi (APPROX. 2 mR/hr AT 1 METER).
    B. IF THE PATIENT REMAINS HOSPITALIZED AND THE EXPOSURE RATE AT 1 METER IS 0.5 mR/hr OR LESS.

14. WHEN RADIATION PRECAUTIONS ARE NO LONGER REQUIRED:
    A. ALL PLASTIC BAGS AND COVERS WILL BE REMOVED TO THE NUCLEAR MEDICINE DEPT FOR MONITORING AND/OR DECAY WHERE NECESSARY.
    B. THE ROOM MUST BE SURVEYED TO ASSURE NO RADIATION LEVELS ABOVE BACKGROUND EXIST IN THE ROOM.
    C. THE RADIATION PRECAUTIONS TAGS AND NURSING INSTRUCTIONS ARE REMOVED.
    D. THE NURSING STATION IS NOTIFIED THAT RADIATION PRECAUTIONS ARE NO LONGER IN EFFECT.

INSTRUCTIONS TO PATIENT UPON RELEASE FROM HOSPITAL

THE PATIENT MAY NOT BE RELEASED UNLESS THE REMAINING ACTIVITY IS LESS THAN 30 mCi AND PREFERABLY LESS THAN 8 mCi.

A. IF THE REMAINING ACTIVITY IS LESS THAN 8 mCi:
   FEMALE PATIENTS SHOULD BE INSTRUCTED TO AVOID BECOMING PREGNANT FOR AT LEAST 2 MONTHS AFTER THE ACTIVITY HAS REACHED BACKGROUND.

B. IF THE REMAINING ACTIVITY IS BETWEEN 8 AND 30 mCi:
   PREGNANT WOMEN, CHILDREN, AND PERSONS UNDER 45 YEARS OF AGE SHALL NOT BE ALLOWED IN THE SAME ROOM, NOR AT A DISTANCE OF LESS THAN 9 FEET FROM THE PATIENT FOR MORE THAN 15 MINUTES PER DAY. PERSONS OLDER THAN 45 YEARS OF AGE SHOULD REMAIN AT A DISTANCE OF AT LEAST 3 FEET FROM THE PATIENT EXCEPT FOR BRIEF PERIODS OF CLOSER CONTACT SUCH AS SHAKING HANDS OR KISSING.
   THESE PRECAUTIONS WILL NO LONGER BE REQUIRED WHEN THE REMAINING ACTIVITY IS LESS THAN 8 mCi. HOWEVER FEMALE PATIENTS SHOULD BE INSTRUCTED TO AVOID BECOMING PREGNANT FOR AT LEAST 2 MONTHS AFTER THE ACTIVITY HAS REACHED BACKGROUND.

RADIATION SURVEY RECORD -- RADIATION THERAPY PATIENT ROOM SURVEY
GROUP IV & V (IODINE-131, GOLD-198, PHOSPHOROUS-32)

PATIENT NAME ..... NUMBER .....
ISOTOPE ..... DOSE ..... TIME & DATE ADMIN .....
ROOM NUMBER .....

PATIENT MONITORING (EXPOSURE RATE IN mR/hr. AT 1 METER FROM PATIENT)

NOTE: PATIENT INSTRUCTED NOT TO URINATE FROM TIME OF ADMINISTRATION UNTIL THE MEASUREMENT MADE AT 1 HOUR POST ADMINISTRATION.

INITIAL EXPOSURE RATE	.....
1 HOUR POST ADMINISTRATION	.....
1 DAY POST ADMINISTRATION	.....
2 DAYS POST ADMINISTRATION	.....
3 DAYS POST ADMINISTRATION	.....
4 DAYS POST ADMINISTRATION	.....
5 DAYS POST ADMINISTRATION	.....
.....	.....

DATE OF DISCHARGE ..... EXPOSURE RATE AT 1 METER .....
ESTIMATED ACTIVITY REMAINING AT TIME OF DISCHARGE (mCi) .....

AREA SURVEY (PERFORMED IMMEDIATELY POST ADMINISTRATION)

CORRIDOR OUTSIDE PATIENT'S ROOM	.....	mR/hr MAXIMUM
ADJACENT ROOM	.....	mR/hr MAXIMUM
OTHER	.....	mR/hr MAXIMUM
.....	.....	mR/hr MAXIMUM
.....	.....	mR/hr MAXIMUM

ROOM SURVEYED AND CLEARED FROM RADIOACTIVE PRECAUTIONS CATEGORY

SURVEY TIME & DATE .....

MAXIMUM EXPOSURE RATES IN ROOM (mR/hr)

BATHROOM	.....
TELEPHONE	.....
BED	.....
TABLE	.....
OTHER	.....
.....	.....

LINEN BAGS, UTENSIL BAGS, ETC REMOVED AS REQUIRED? .....

COMMENTS .....
.....
.....

SIGNATURE .....

NURSING INSTRUCTIONS FOR PATIENTS TREATED WITH PHOSPHOROUS-32, GOLD-198, OR IODINE-131

PATIENT NAME ..... DATE.....
ROOM NO. ..... PHYSICIAN'S NAME.....
RADIOISOTOPE ADMINISTERED ..... DOSE RECEIVED.....
DATE & TIME ADMINISTERED ..... METHOD OF ADMIN.....

EXPOSURE RATES IN mR/hr.

DATE	3 FEET FROM PATIENT	10 FEET FROM PATIENT
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

COMPLY WITH ALL CHECKED ITEMS

..... 1. VISITING TIME PERMITTED -- 30 MINUTES PER DAY.

..... 2. VISITORS MUST REMAIN 6 FEET FROM PATIENT.

..... 3. PATIENT MAY NOT LEAVE ROOM.

..... 4. VISITORS UNDER 18 OR PREGNANT VISITORS NOT PERMITTED.

..... 5. PERSONNEL MUST WEAR FILM OR TLD BADGES.

.....6. NO PREGNANT PERSONNEL ALLOWED.

..... 7. SUPPLEMENTARY POCKET CHAMBERS TO BE WORN.

..... 8. DOOR, BED, CHART AND PATIENT'S WRIST TAGGED.

..... 9. DISPOSABLE GLOVES MUST BE WORN WHILE ATTENDING PATIENT.

..... 10. PATIENT MUST USE DISPOSABLE UTENSILS.

..... 11. ALL ITEMS MUST REMAIN IN ROOM UNTIL CLEARED BY R.S.O.

..... 12. SMOKING IS NOT PERMITTED.

..... 13. ROOM IS NOT TO BE RELEASED UNTIL CLEARED BY R.S.O.

..... 14. OTHER INSTRUCTIONS .....

.....

.....

IN CASE OF EMERGENCY CONTACT RADIATION THERAPY OR NUCLEAR MEDICINE DEPARTMENT, AND/OR THE RADIATION SAFETY OFFICER (R.S.O.).

R.S.O.: WALTER G. HEIMANN, M.D. PHONE: 646-1222

XENON-133 DOCUMENTATION

HOSPITAL: MANCHESTER MEMORIAL HOSPITAL
ADDRESS: 71 HAYNES STREET
: MANCHESTER CT. 06040

DATE:2/21/85
RAD. MT'L LICENSE
06-03413-01

THE XENON DOCUMENTATION DATED 3/5/83 SUBMITTED AT THE TIME OF THE XENON AMENDMENT REQUEST REMAINS SUBSTANTIALLY THE SAME.

HOWEVER, WE WISH TO STORE THE XENON IN THE HOT LAB AREA, AND WE ARE PRESENTLY WAITING FOR THE VENT MEASUREMENT REPORT. UPON RECEIPT, WE WILL SEND THE COMPLETE DOCUMENTATION TO INCLUDE THIS HOT LAB AREA.

IODINE-125 SEALED SOURCES FOR LIXISCOPE DOCUMENTATION

HOSPITAL: MANCHESTER MEMORIAL HOSPITAL
ADDRESS: 71 HAYNES STREET
: MANCHESTER CT. 06040

DATE:2/21/85
RAD. MT'L LICENSE
06-03413-01

THE REQUEST FOR AN AMENDMENT FOR I-125 SEALED SOURCES IN THE LIXISCOPE EXTREMITY IMAGING DEVICE WAS RECENTLY SUBMITTED.

ON FEB. 15, 1985, WE RECEIVED A REQUEST FOR ADDITIONAL INFORMATION (REF DOCKET # 030-01253 & MAIL CONTROL # 03326). WE WILL SUBMIT THE INFORMATION AS SOON AS WE CAN.