EXHIBIT A

NRC FORM 313M (9-78) 10 CFR 35

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIALS LICENSE – MEDICAL

Approved GAO B0557

INSTRUCTIONS - Complete Items 1 through 10 if this is an initial application or an application for renewal of a license. Use supplemental sheets where necessary. Item 28 must be completed on all applications and signed. Retain one copy. Submit original and one copy of entire application to: Director, Office of Nuclear Material 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 License 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 Primary category should be stated in Item 28 and the appropriate fee followed.

1.a. NAME AND MAILING ADDRESS OF APPLICANT (Individual, firm, office, partnership, etc.) INCLUDE ZIP CODE

BRYAN MEMORIAL HOSPITAL
WASHINGTON & WACO STREETS
DURANT, OKLAHOMA 74701
TELEPHONE NO. AREA CODE (405) 924-3080

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

SAME AS 1.a

2. PERSON TO CONTACT REGARDING THIS APPLICATION

MICHAEL D. MORRIS

TELEPHONE NO. AREA CODE (918) 372-4229

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

a. ☐ NEW LICENSE
b. ☐ AMENDMENT TO LICENSE NO.
c. ☒ RENEWAL OF LICENSE NO. 35-17598-01

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

NORMAN DEARNBARGER, M.D. (SEE ADD. 2)
WILLIAM KING, M.D., (SEE ADD. 2)

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

NORMAN DEARNBARGER, M.D., R.S.O.
WILLIAM KING, M.D., ASST. R.S.O.

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	2.0
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
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

8603070085 860116
REG4 LIC30
35-17598-01 PDR

FEE EXEMPT
170.11(a)29)

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FORM NRC 313M (8-78)

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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 ADD. I, PP1-6
X	Duties as in Appendix B, xxx and (Check One)
X	Equivalent Duties Attached " "
8. TRAINING AND EXPERIENCE	
X	Supplements A & B Attached for Each Individual User; and SEE ADDENDUM 2
	Supplement A Attached for RSO.
9. INSTRUMENTATION (Check One)	
X	Appendix C Form Attached; or ADD. I, P-7
	List by Name and Model Number
10. CALIBRATION OF INSTRUMENTS	
X	Appendix D Procedures Followed for Survey Instruments; or ADD. I, PAGE 8 (Check One)
	Equivalent Procedures Attached; and
X	Appendix D Procedures Followed for Dose Calibrator; or ADD I, P-9 (Check One)
	Equivalent Procedures Attached
11. FACILITIES AND EQUIPMENT	
X	Description and Diagram Attached ADD. I, P-10
12. PERSONNEL TRAINING PROGRAM	
X	Description of Training Attached ADD. I, PP-11,12
13. PROCEDURES FOR ORDERING AND RECEIVING RADIOACTIVE MATERIAL	
X	Detailed Information Attached ADD. I, PP-13,14
14. PROCEDURES FOR SAFELY OPENING PACKAGES CONTAINING RADIOACTIVE MATERIALS (Check One)	
X	Appendix F Procedures Followed; or
	Equivalent Procedures Attached

15. GENERAL RULES FOR THE SAFE USE OF RADIOACTIVE MATERIAL (Check One)	
	Appendix G Rules Followed; or
X	Equivalent Rules Attached ADD I, P-15
16. EMERGENCY PROCEDURES (Check One)	
X	Appendix H Procedures Followed; or
	Equivalent Procedures Attached
17. AREA SURVEY PROCEDURES (Check One)	
X	Appendix I Procedures Followed; or
	Equivalent Procedures Attached
18. WASTE DISPOSAL (Check One)	
X	Appendix J Form Attached; or ADD. I, P-16
	Equivalent Information Attached
19. THERAPEUTIC USE OF RADIOPHARMACEUTICALS (Check One)	
	Appendix K Procedures Followed; or N/A
	Equivalent Procedures Attached
20. THERAPEUTIC USE OF SEALED SOURCES	
	Detailed Information Attached; and N/A
	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 N/A
22. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL IN ANIMALS	
	Detailed Information Attached N/A
23. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL SPECIFIED IN ITEM 6.b	
	Detailed Information Attached N/A

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24. PERSONNEL MONITORING DEVICES

TYPE (Check appropriate box)		SUPPLIER	EXCHANGE FREQUENCY
a. WHOLE BODY	☐ FILM		
	☒ TLD	Radiation Detection Company	Monthly
	☐ OTHER (Specify)		
b. FINGER	☐ FILM		
	☒ TLD	Radiation Detection Company	Monthly
	☐ OTHER (Specify)		

c. 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, Part 30, 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: Exempt per 10CFR170.11(9)

(2) LICENSE FEE ENCLOSED: $ Exempt

b. APPLICANT OR CERTIFYING OFFICIAL *(Signature)*

(1) NAME *(Type or Print)*: Raymond M. Dunning

(2) TITLE: Administrator

c. DATE: 6/1/82

FORM NRC 313R (7-77) DRAFT

PROGRAM FOR MAINTAINING OCCUPATIONAL RADIATION EXPOSURES ALARA

I. Management Commitment

A. We, the management of this hospital, are committed to the program described in this paper for keeping exposures (individual and collective) As Low As is Reasonably Achievable (ALARA). In accord with this commitment, we hereby describe an administrative organization for radiation safety and have developed the necessary written policies, procedures, and instructions to foster the ALARA concept within our institution. The organization includes a Radiation Safety Committee (RSC) and a Radiation Safety Officer (RSO).

B. We will perform a formal annual review of the radiation safety program including ALARA considerations. This shall include reviews of operating procedures and past exposure records, inspections, etc., and consultations with the radiation physics consultant and with the radiation protection staff.

C. modification to operating and maintenance procedures and to equipment and facilities will be made where they will reduce exposures unless the cost, in our judgement, is considered to be unjustified. We will be able to demonstrate, if necessary that modifications have been considered; and that they have been implemented where reasonable. Where modifications have been recommended but not implemented, we will be prepared to describe the reasons for not implementing them.

D. In addition to maintaining doses to individuals as far below the limits as is reasonably achievable, the sum of the doses received by all exposed individuals will also be maintained at the losest practicable level. It would not be desirable, for example, to hold the highest doses to individuals to some fraction of the applicable limit if this involved exposing additional people and significantly increasing the sum of radiation doses received by all involved individuals.

II. Radiation Safety Committee (RSC)

A. Review of Proposed Users and Uses

1. The RSC will thoroughly review the qualifications of each applicant with respect to the types and quantities of materials and uses for which he has applied to ensure that the applicant will be able to take appropriate measures to maintain exposure ALARA.
2. When considering a new use of byproduct material, the RSC will review the efforts of the applicant to maintain exposure ALARA. The user should have systematized procedures to ensure ALARA and shall have incorporated the use of special equipment such as syringe shields, rubber gloves, etc., in his proposed use.
3. The RSC will ensure that the user justifies his procedures and that doses will be ALARA (Individual and collective).

B. Delegation of Authority

1. The RSC will delegate authority to the RSO for enforcement of the ALARA concept.
2. The RSC will support the RSO in those instances where it is necessary for the RSO to assert his/her authority. Where the RSO has been overruled, the Committee will record the basis for its action in the minutes of the Committee's quarterly meeting.

C. Review of ALARA Program

1. The RSC will encourage all users to review current procedures and develop new procedures as appropriate to implement the ALARA Concept.
2. The RSC will perform a quarterly review of occupational radiation exposure with particular attention to instance where Investigational Levels in Table 1 below are exceeded. The principal purpose of this review is to assess trends in occupational exposure as an index of the ALARA program quality and to decide if action is warranted when Investigational Levels are exceeded (See Section VI).
3. The RSC Will evaluate our institution's overall efforts for maintaining exposures ALARA on an annual basis. This review will include the efforts of the RSO, authorized users, and workers as well as those of management.

ADDENDUM I

III. Radiation Safety Officer (RSO)

A. Annual and Quarterly Review

1. The RSO will perform an annual review of the radiation safety program for adherence to ALARA concepts. Reviews of specific procedures may be conducted on a more frequent basis.
2. The RSO will review at least quarterly the external radiation exposures of authorized users and workers to determine that their exposures are ALARA in accordance with the provision of Section VI of this program.
3. The RSO will review radiation levels in unrestricted and restricted areas to determine that they were at ALARA levels during the previous quarter.

B. Education Responsibilities for ALARA Program

1. The RSO will schedule briefings and educational sessions to inform workers of ALARA program efforts.
2. The RSO will ensure that authorized users, workers, and ancillary personnel who may be exposed to radiation will be instructed in the ALARA philosophy and informed that management, the RSC, and RSO are committed to implementing the ALARA concept.

C. Cooperative Efforts for Development of ALARA Procedures

Radiation workers will be given opportunities to participate in formulation of the procedures that they will be required to follow.

1. The RSO will be in close contact with all users and workers in order to develop ALARA procedures for working with radioactive materials.
2. The RSO will establish procedures for reviewing and evaluating the suggestions of individual workers for improving health physics practices and will encourage the use of those procedures

D. Reviewing Instances of Deviation from Good ALARA Practices

The RSO will investigate all known instances of deviation from good ALARA practices and if possible, will determine the causes. When the cause is known, the RSO will require changes in the program to maintain exposures ALARA.

ADDENDUM I

IV. Authorized Users

A. New Procedures Involving Potential Radiation Exposures

1. The authorized user will consult with, and receive the approval of, the RSO and/or RSC during the planning stage before using radioactive materials for a new procedure.
2. The authorized user will evaluate all procedures before using radioactive materials to ensure that exposures will be kept ALARA. This may be enhanced through the application of trial runs.

B. Responsibility of Authorized User to Persons Under His/Her Supervision

1. The authorized user will explain the ALARA concept and his/her commitment to maintain exposures ALARA to all persons under his/her supervision.
2. The authorized user will ensure that persons under his/her supervision who are subject to occupational radiation exposure are trained and educated in good heath physics practices and in maintaining exposures ALARA.

V. Persons Who Receive Occupational Radiation Exposure

A. The worker will be instructed in the Alara concept and its relationship to working procedures and work conditions.

B. The worker will know what recourses are available if he/she feels that ALARA is not being promoted on the job.

VI. Establishment of Investigational Levels In Order to Monitor Individual Occupational External Radiation Exposures

This institution hereby extablishes Investigational Levels for occupational external radiation exposure which, when exceeded, will initiate a review or investigation by the RSC and/or the RSO. The Investigational levels that we have adopted are listed in Table 1 below. These levels apply to the exposure of individual workers.

The Radiation Safety Officer will review and record on Form NRC-5. "Current Occupational External Radiation Expsoures" or an equivalent form results of personnel monitoring not less than once in any calendar quarter as required by 20.401 of 10 CFR Part 20. The following actions will be taken at the Investigational Levels at stated in Table 1;

VI. A. Quarterly exposure of individuals to less than Investigational Level 1.

Except when deemed appropriate by the RSO, no further action will be taken in those cases where an individual's exposure is less than Table 1 values for the Investigational Level 1.

B. Personnel exposures equal to or greater than Investigational Level 1, but less than Investigational Level II.

The RSO will review the exposure of each individual whose quarterly exposures equal or exceed investigational Level I and will report the results of the reviews at the first RSC meeting following the quarter when the exposure was recorded. If the exposure does not equal or exceed Investigational Level II, no action related specifically to the exposure is required unless deemed appropriate by the Committee. The Committee will, however, consider each such exposure in comparison with those of others performing similar tasks as an index of ALARA program quality and will record the review in the Committee minutes.

C. Exposure equal to or greater than Investigational Level II.

The RSO will investigate in a timely manner the cause(s) of all personnel exposures equaling or exceeding Investigational Level II, and, if warranted, will take action. A report of the investigation, actions taken, if any, and a copy of the individual's Form NRC-5 or its equivalent will be presented to the RSC at the first RSC meeting following completion of the investigation. The details of these reports will be recorded in the RSC minutes. Committee minutes will be sent to the management of this institution for review. The minutes, containing details of the investigation, will be made available to the NRC inspectors for review at the time of the next inspection.

D. Reestablishment of an individual occupational worker's Investigational Level II to a level above that listed in Table 1

In cases where a worker's or a group of workers' exposures need to exceed Investigational Level II, a new, higher Investigational Level II may be established on the basis that it is consistent with good ALARA practices for that individual or group. Justification for a new Investigational Level II will be documented.

VI. D. The RSC will review the justification for, and will approve or disapprove, all revisions of Investigational Level II. In such cases, when the exposure equals or exceeds the newly established Investigational Level II, those actions listed in paragraph VI.C. above will be followed.

TABLE I

INVESTIGATIONAL LEVELS
(mRems per calendar quarter)

	LEVEL I	LEVEL II
1. Whole body, head and trunk; active blood-forming organs; lens of eyes; and gonads	125	375
2. Hands and forearms; feet and ankles	1875	5625

VII. Membership of the Radiation Safety Committee is:

1. Norman Dearnbarger, M.D., Radiation Safety Officer
2. Darrell Berryhill, Chief of Radiology
3. Michael Morris, Certified Health Physicist
4. Ray Dunning, Administrator
5. Paul Lovan, Director of Laboratory
6. William King, M.D., Assistant R.S.O.
7. Jackie Harms, R.N., Director of Nurses

VIII. Signature of Certifying Official

I hereby certify that this institution has implemented the ALARA program set forth above.

Signature

RAY DUNNING

Name (print or type)

ADMINISTRATOR

Title

Institution: Name and address

BRYAN MEMORIAL HOSPITAL

WASHINGTON & WACO STREETS
DURANT, OKLAHOMA 74729

APPENDIX C

INSTRUMENTATION

1. Survey meters

a. Manufacturer's name: VICTOREEN

Manufacturer's model number: 6A

Number of instruments available: ONE(1)

Minimum range: 0 mR/hr to 0.5 mR/hr

Maximum range: 0 mR/hr to 50 mR/hr

b. Manufacturer's name: _____

Manufacturer's model number: _____

Number of instruments available: _____

Minimum range: _____ mR/hr to _____ mR/hr

Maximum range: _____ mR/hr to _____ mR/hr

2. Dose calibrator

Manufacturer's name: RADX

Manufacturer's model number: ASSAYER I

Number of instruments available: ONE(1)

3. Instruments used for diagnostic procedures

Type of Instrument	Manufacturer's Name	Model No.
GAMMA CAMERA	PICKER	DYNA CAMERA 2C

4. Other (e.g., liquid scintillation counter, area monitor, velometer)

IONIZATION WELL COUNTER	PICKER	COMPAC 120

ITEM 9

CALIBRATION OF SURVEY INSTRUMENTS

Survey meters will be calibrated annually and following repair by Radiation Services and Consultants, Inc., P. O. Box 2985 Ripley, Oklahoma. That company uses an approved procedure by the NRC and is on file as license No. 35-19631-01.

Each survey meter is also checked with a long halflife reference source before each use. The same geometry is used each time. Allowable deviation within $\pm$20% of the reference reading taken immediately after calibration is acceptable. Reading outside that range will constitute sufficient justification for the meter to be recalibrated or repaired.

Records of all calibrations and constancy checks will be maintained.

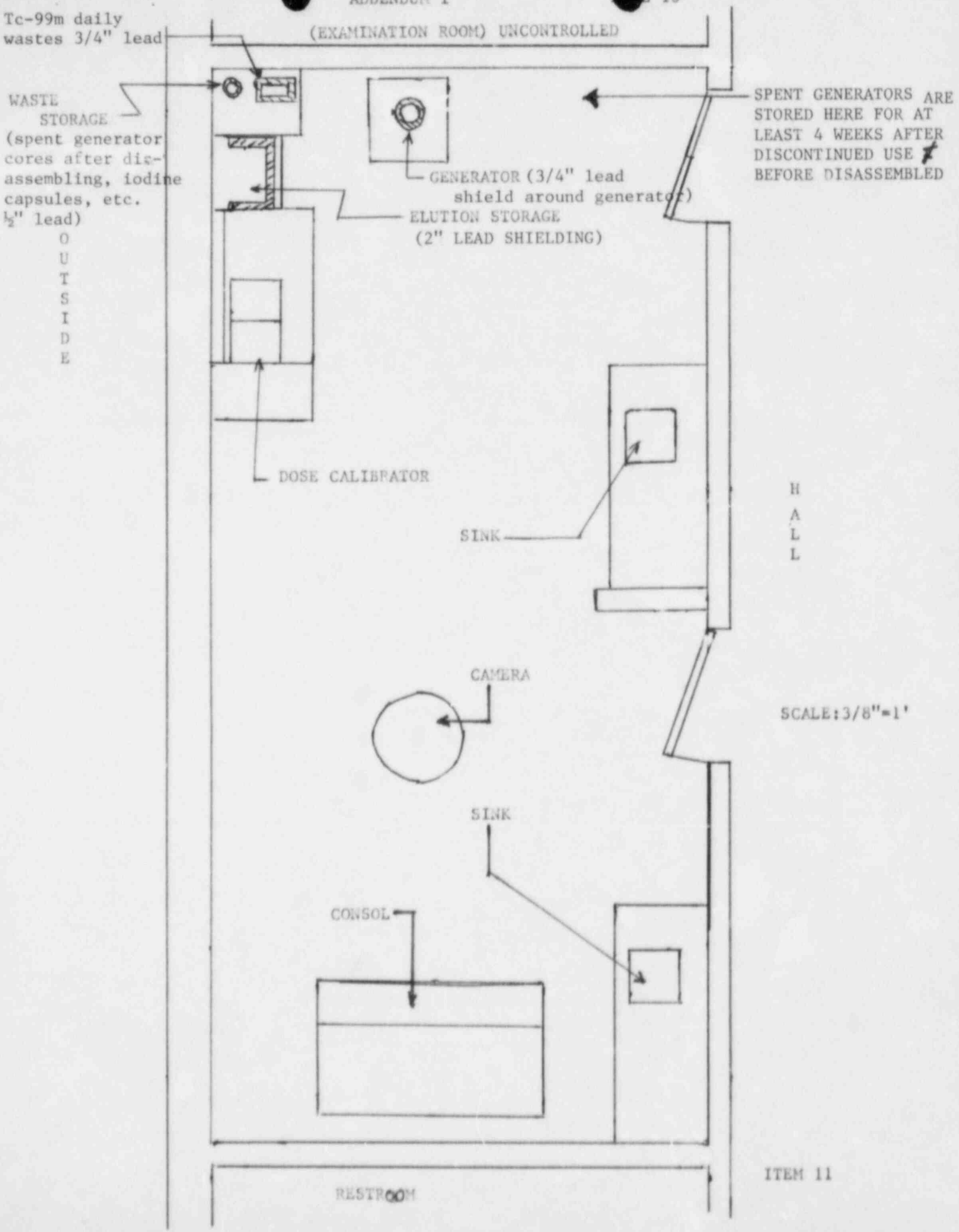
CALIBRATION OF DOSE CALIBRATOR

The dose calibrator will be checked quarterly by Radiation Services and Consultants for instrument linearity over the entire range of activities employed. The test will be performed using the first elution from a new Mo-99/Tc-99m generator. An accuracy of 5% from a predicted curve will indicate the need for repair of the instrument.

The dose calibrator will be checked annually by Radiation Services and Consultants for activities measured as a function of sample volume. Activity variations of >2% will be given correction factors to convert the measured activities to true activities.

The dose calibrator will be checked for accuracy on a quarterly basis by Radiation Services and Consultants by using three reference standards whose activities are traceable to the NBS.

A reference Cs-137 source will be assayed daily to confirm instrument constancy. The source will be assayed on the Cs-137 and the Tc-99m settings by the nuclear medicine technologist. Variations of >5% from the predicted activities will indicate the need for instrument repair or adjustment.


Tc-99m daily wastes 3/4" lead
(EXAMINATION ROOM) UNCONTROLLED
WASTE STORAGE (spent generator cores after disassembling, iodine capsules, etc. ½" lead)
OUTSIDE
SPENT GENERATORS ARE STORED HERE FOR AT LEAST 4 WEEKS AFTER DISCONTINUED USE BEFORE DISASSEMBLED
GENERATOR (3/4" lead shield around generator)
ELUTION STORAGE (2" LEAD SHIELDING)
DOSE CALIBRATOR
SINK
HALL
CAMERA
SCALE:3/8"=1'
SINK
CONSOL
RESTROOM

ITEM 11

PERSONNEL TRAINING

This institution will provide the nuclear medicine technologists with ample opportunity to attend regional and national nuclear medicine meetings and workshops in an effort to maintain proficiency and to keep abreast of developments in the field of nuclear medicine technology.

This institution will have a consultant Health Physicist whose partial responsibilities are to provide assistance in the institution's continual in-service training program for the nuclear medicine staff regarding applicable regulations, compliance, and radiation safety. His part of the training will be no less than four hours in duration per year, spread out in quarterly classes.

Records of training will be maintained by the Chief Nuclear Medicine Technologist.

ADDENDUM 1

INSTRUCTIONS TO WORKERS

All personnel, including housekeeping, security, and nursing personnel, will receive instruction in accordance with 10 CFR Part 19.12. All personnel will receive training before beginning work and annually thereafter, or after a significant change in the licence.

All individuals working in or frequenting any portion of a restricted area shall be kept informed of the areas where radioactive material is used and stored. They shall be instructed in the hazards associated with exposure to radioactive materials or radiation, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed. They shall be instructed in, and be instructed to observe, the applicable provisions of NRC regulations and this licence for the protection of personnel from exposures to radiation or radioactive materials occurring in restricted areas. They shall be instructed of their responsibility to report promptly to the Nuclear Medicine Technologist any conditions which may lead to or cause a violation of the NRC license or cause unnecessary exposure to radiation or to radioactive material. They shall be instructed in the appropriate response to warnings made in the event of any unusual occurrence or malfunction that may involve exposure to radiation or radioactive materials. They shall be advised of their right to be informed of their radiation exposure and bioassay results.

Item 12

PROCEDURES FOR ORDERING AND RECEIVING RADIOACTIVE MATERIAL

1. The Nuclear Medicine Supervisor places all orders for radioactive material and ensures that the requested materials and quantities are authorized by the license and that possession limits are not exceeded.

2. A system for ordering and recieving radioactive materials has been established and is maintained. The system consists minimally of the following:

   A. Ordering of routinely used materials.
      1. A written record that identifies the isotope, compound, activity levels, and supplier is used.
      2. The location in the written record will be referenced when opening and storing radioactive shipments.

   B. Ordering of specially used materials such as Tl-201.
      1. A written request is obtained from the physician who will perform the procedure.
      2. Persons ordering the materials will reference the physician's written request when placing the order. The physician's request indicates isotope, compound, activity level, etc.
      3. The physician's written request will be referenced when receiving, opening, or storing the radioactive material.

   C. Written records are maintained for all ordering and receipt procedures.

3. During normal working hours, carriers must be instructed to deliver radioactive packages directly to the Nuclear Medicine Department.

4. During off-duty hours, the duty security officer must accept delivery of radioactive packages in accordance with the procedures outlined in the memorandum below.

MEMORANDUM

MEMORANDUM FOR: DUTY SECURITY OFFICER

FROM: RADIATION SAFETY OFFICER

SUBJECT: RECEIPT OF PACKAGES CONTAINING RADIOACTIVE MATERIAL

Any packages containing radioactive material that arrives between 4:30 P.M. and 7 A.M. or on weekends, shall be signed for by the Duty Security Officer and taken directly to the Nuclear Medicine Department. The door is unlocked, the package placed on the floor immediately to the left of the door, and the door relocked.

If the package is wet or appears to be damaged, immediately contact the hospital Radiation Safety Officer. Ask the carrier to remain at the hospital until it can be determined that neither he nor the delivery vehicle is contaminated.

RADIATION SAFETY OFFICER NORMAN DEARNBARGER, M.D.
OFFICE PHONE: (405) 924-3080
HOME PHONE: (405) 924-7744

RADIOACTIVE SHIPMENT RECEIPT REPORT

1. P.O. # _____ Survey Date _____ Time _____

   Surveyor _____

2. CONDITION OF PACKAGE:

   _____ O.K. _____ Punctured _____ Status _____ Wet

   _____ Crushed _____ Other

3. RADIATION UNITS OF LABEL: _____ Units (mRem/hr)

4. MEASURED RADIATION LEVELS:

   a. Package surface _____ mRem/hr

   b. 3 feet or 1 meter from surface _____ mRem/hr

5. DO PACKING SLIP AND VIAL CONTENTS AGREE?

   a. Radionuclide _____ yes _____ no, difference _____

   b. Amount _____ yes _____ no, difference _____

   c. Chem Form _____ yes _____ no, difference _____

6. WIPE RESULTS FROM:

   a. Outer _____ CPM = _____ DPM

      eff = ( )

   b. Final source container _____ CPM = _____ DPM

      eff = ( )

8. SURVEY RESULTS OF PACKING MATERIAL AND CARTONS _____ mRem/hr, CPM

9. DISPOSITION OF PACKAGE AFTER INSPECTION _____

10. IF NRC/CARRIER NOTIFICATION REQUIRED, GIVE TIME, DATE, AND PERSONS NOTIFIED.

_____ Signature _____ Date

ITEM 13
5/8/81

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GENERAL RULES FOR THE SAFE USE OF RADIOACTIVE MATERIAL

1. Wear laboratory coats, or other protective clothing at all times in areas where radioactive materials are used.

2. Wear disposable gloves at all times while handling radioactive materials.

3. Monitor hands and clothing for contamination after each procedure or before leaving the area. Record the monitoring results at the end of each work day.

4. Use syringe shields for preparation of patient doses and administration to patients except in circumstances, such as pediatric cases, where their use would compromise the patient's well-being.

5. Do not eat, drink, smoke or apply cosmetics in any area where radioactive material is stored or used.

6. Assay each elution for Tc-99m activity/concentration and for Mo-99 activity/concentration. Evaluate the suitability of Mo-99 concentration for patient doses all day. If Mo-99 concentration may exceed 1 uCi Mo-99 per 1 mCi of Tc-99m or if the total Mo-99 activity may exceed 5 uCi Mo-99 in a single dose during the day, do NOT use the elution for any patient doses until it is assured those limits are not exceeded. Record all assays.

7. Assay each patient dose in the dose calibrator prior to administration. Do not use any doses that differ from the prescribed dose by more than 10%.

8. Wear personnel monitoring devices at all times while in areas where radioactive materials are used or stored. These should be worn at chest or waist level.

9. Wear TLD finger badges during elution of generator and preparation, assay and injection of radiopharmaceuticals.

10. Dispose of radioactive waste only in specially designated receptacles.

11. NEVER pipette by mouth.

12. Survey generator, kit preparation, and injection areas for contamination after each procedure or at the end of the day. Decontaminate if necessary. Record the results of surveys.

13. Confine radioactive solutions in covered containers that are plainly identified and labeled with name of compound, radionuclide, date, activity, and radiation level, if applicable.

14. Always transport radioactive material in shielded containers.

15. Perform wipe survey of generator and kit preparation areas after suspected spills and at least once each week. Record the results.

WASTE DISPOSAL PROCEDURES

All liquid wastes and trash are contained in a shielded bulk waste container in a restricted access area until radioactive decay had reduced the activity to background. The waste will then be disposed in normal trash after removal or destruction of radiation labels. A measurement to assure that activity of the waste is adequate for disposal will be made as follows:

1. The chief nuclear medicine technologist will make the measurement wearing disposable gloves, a lab coat and body and finger dosimeters.
2. After the material has decayed at least 10 halflives, it will be removed from any shielding container. The material will be measured at surface contact with an appropriately calibrated GM survey meter with the window open and on its lowest scale in a low background area.
3. The material will be considered to have only background activity if no activity above background is noted on the survey meter.

Mo-99/Tc99m generators will be held for decay until radiation levels have reached background. A measurement to assure that activity of the waste is adequate for disposal will be made as follows:

1. The chief nuclear medicine technologist or the consultant physicist will make the measurement wearing disposable gloves, a lab coat, and a body dosimeter.
2. After the generators have been stored at least 30 days, the generator cores can be removed from shipping containers and stored in a shielded bulk waste container in a restricted access area.
3. After the generator cores have been stored an additional 60 days, all lead shielding is removed from the cores and the material measured at surface contact with an appropriately calibrated GM survey meter with the window open and on its lowest scale in a low background area.
4. The material will be considered to have only background activity if no activitiy above background is noted on the the survey meter.
5. Generator cores that measure background in the above manner will be disposed in normal trash.

Unused Iodine capsules will be held for decay for a minimum of 180 days(6 months). After that decay time, the capsules will be removed from shipping containers, checked with an open-window GM survey meter as above and disposed as normal trash.

RADIOACTIVE MATERIAL USERS

1. Norman Dearnbarger, M.D., was prevously licensed as a radioactive material user and as the Radiation Safety Officer with this license.

2. William King, M.D., is licensed with the agreement state of Texas for the Fanner County Hospital in Bonham, Texas, Texas license number 7-1960.

   NOTE: Doctor Dearnbarger is the radiologist normally present at this facility. There will be some days that Dr. King will be the only licensed radioactive material user at this facility. Dr. Dearnbarger is the radiation safety officer. However, Dr. King will be acting as the R.S.O. whenever Dr. Dearnbarger is not here.

Item 5,6
June 1, 1982