

FORM NRC-313M (8-78) 10 CFR 35	U.S. NUCLEAR REGULATORY COMMISSION <b>APPLICATION FOR MATERIALS LICENSE – MEDICAL</b>	Approved: GAO R0557
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**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  Franklin Hospital 1 Spruce Street Franklin, PA 16323  TELEPHONE NO.: AREA CODE (814) 437- 7000	1.b. STREET ADDRESS(ES) AT WHICH RADIOACTIVE MATERIAL WILL BE USED (If different from 1.a.) INCLUDE ZIP CODE  SAME  <div style="text-align: right; font-size: 1.5em;"> <del>30-19798</del>  <del>15256</del> </div>
2. PERSON TO CONTACT REGARDING THIS APPLICATION  Charles E. Mason, M.D.  TELEPHONE NO.: AREA CODE (814) 437-7000	3. THIS IS AN APPLICATION FOR: (Check appropriate item) a. <input type="checkbox"/> NEW LICENSE b. <input type="checkbox"/> AMENDMENT TO LICENSE NO. 02120 c. <input checked="" type="checkbox"/> RENEWAL OF LICENSE NO. 37-15256-017 <div style="text-align: right; font-size: 0.8em;">       37-11438-02-0     </div>
4. INDIVIDUAL USERS (Name individuals who will use or directly supervise use of radioactive material. Complete Supplements A and B for each individual.)  SEE SUPPLEMENTAL SHEET #1	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.)  SEE SUPPLEMENTAL SHEET #2

6.a. RADIOACTIVE MATERIAL FOR MEDICAL USE					
RADIOACTIVE MATERIAL LISTED IN:	ITEMS DESIRED	MAXIMUM POSSESSION LIMITS	ADDITIONAL ITEMS:	MARK ITEMS DESIRED	MAXIMUM POSSESSION LIMITS
	"X"	(In millicuries)		"X"	(In millicuries)
10 CFR 31.11 FOR IN VITRO STUDIES			IODINE-131 AS IODIDE FOR TREATMENT OF HYPERTHYROIDISM	X	2000 mCi
10 CFR 35.100, SCHEDULE A, GROUP I	X	AS NEEDED	PHOSPHORUS-32 AS SOLUBLE PHOSPHATE FOR TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA AND BONE METASTASES	X	"
10 CFR 35.100, SCHEDULE A, GROUP II	X	AS NEEDED	PHOSPHORUS-32 AS COLLOIDAL CHROMIC PHOSPHATE FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.	X	"
10 CFR 35.100, SCHEDULE A, GROUP III	X	2000 mCi	GOLD-198 AS COLLOID FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.	X	"
10 CFR 35.100, SCHEDULE A, GROUP IV	X	AS NEEDED	IODINE-131 AS IODIDE FOR TREATMENT OF THYROID CARCINOMA	X	"
10 CFR 35.100, SCHEDULE A, GROUP V	X	AS NEEDED	XENON-133 AS GAS OR GAS IN SALINE FOR BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES.		
10 CFR 35.100, SCHEDULE A, GROUP VI	X	1000 mCi			

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
8510290547 851004 REG1 LIC30 37-11438-02 PDR			
<div style="border: 1px solid black; padding: 5px; display: inline-block;">           License Fee Information  <i>next page</i>            on Reverse Side         </div>		<div style="display: flex; justify-content: space-between; align-items: center;"> <div>           COPIES SENT TO...            INDEXED AND...  <b>"OFFICIAL RECORD COPY"</b> </div> <div style="font-size: 1.5em; font-weight: bold;">ML10</div> <div style="font-size: 1.2em;">17875</div> </div>	

# **INFORMATION REQUIRED FOR ITEMS 7 THROUGH 23**

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

<b>7. MEDICAL ISOTOPES COMMITTEE</b>		<b>15. GENERAL RULES FOR THE SAFE USE OF RADIOACTIVE MATERIAL (Check One)</b>	
<input checked="" type="checkbox"/>	SEE SUPPLEMENTAL SHEET #3 Names and Specialties Attached; and	<input checked="" type="checkbox"/>	Appendix G Rules Followed; or
<input checked="" type="checkbox"/>	Duties as in Appendix B; or Revision 1, 10/80 (Check One)		Equivalent Rules Attached
	Equivalent Duties Attached	<b>16. EMERGENCY PROCEDURES (Check One)</b>	
<b>8. TRAINING AND EXPERIENCE</b>		<input checked="" type="checkbox"/>	Appendix H Procedures Followed; or
<input checked="" type="checkbox"/>	Supplements A & B Attached for Each Individual User; and		Equivalent Procedures Attached
<input checked="" type="checkbox"/>	Supplemental Sheet #4 Supplement A Attached for RSO.	<b>17. AREA SURVEY PROCEDURES (Check One)</b>	
<b>9. INSTRUMENTATION (Check One)</b>		<input checked="" type="checkbox"/>	Appendix I Procedures Followed; or
<input checked="" type="checkbox"/>	Appendix C Form Attached; or Supplemental #5		Equivalent Procedures Attached
	List by Name and Model Number	<b>18. WASTE DISPOSAL (Check One)</b>	
<b>10. CALIBRATION OF INSTRUMENTS</b>		<input checked="" type="checkbox"/>	Appendix J Form Attached; or SUPPLEMENTAL SHEET #10
<input checked="" type="checkbox"/>	Appendix D Procedures Followed for Survey Instruments; or (Check One)		Equivalent Information Attached
	Equivalent Procedures Attached; and	<b>19. THERAPEUTIC USE OF RADIOPHARMACEUTICALS (Check One)</b>	
<input checked="" type="checkbox"/>	Appendix D Procedures Followed for Dose Calibrator; or (Check One)	<input checked="" type="checkbox"/>	Appendix K Procedures Followed; or
	Equivalent Procedures Attached SUPPLEMENTAL SHEET #6		Equivalent Procedures Attached
<b>11. FACILITIES AND EQUIPMENT</b>		<b>20. THERAPEUTIC USE OF SEALED SOURCES</b>	
<input checked="" type="checkbox"/>	Description and Diagram Attached SUPPLEMENTAL SHEETS #7		Detailed Information Attached; and
<b>12. PERSONNEL TRAINING PROGRAM</b>		<input checked="" type="checkbox"/>	Appendix L Procedures Followed; or (Check One)
<input checked="" type="checkbox"/>	Description of Training Attached SUPPLEMENTAL SHEET #8		Equivalent Procedures Attached
<b>13. PROCEDURES FOR ORDERING AND RECEIVING RADIOACTIVE MATERIAL</b>		<b>21. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE GASES (e.g., Xenon - 133)</b>	
<input checked="" type="checkbox"/>	Detailed Information Attached SUPPLEMENTAL SHEET #9		Detailed Information Attached
<b>14. PROCEDURES FOR SAFELY OPENING PACKAGES CONTAINING RADIOACTIVE MATERIALS (Check One)</b>		<b>22. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL IN ANIMALS</b>	
<input checked="" type="checkbox"/>	Appendix F Procedures Followed; or		Detailed Information Attached
	Equivalent Procedures Attached	<b>23. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL SPECIFIED IN ITEM 6.b</b>	
			Detailed Information Attached

## 24. PERSONNEL MONITORING DEVICES

TYPE (Check appropriate box)		SUPPLIER	EXCHANGE FREQUENCY
a. WHOLE BODY	FILM	R. S. Landauer, Jr., & Company	Bi-weekly
	TLD		
	OTHER (Specify)		
b. FINGERS	FILM	R. S. Landauer, Jr., & Company	Bi-weekly
	TLD		
	OTHER (Specify)		
c. WRIST	FILM		
	TLD		
	OTHER (Specify)		

d. OTHER (Specify)

*Rec I*

RECEIVED BY TLD

Date: *7/26/82*

Log: *JULY PG 6*

By: *Osborn*

Date To: *7/28/82*

*37-11438-02*

Applicant: *911026*

Check No. *911026*

Amount for Category *#150/7B*

Type of Fee *Renewal*

Date check rec'd *7/26/82*

Received by: *Osborn*

## 25. FOR PRIVATE PRACTICE APPLICANTS ONLY

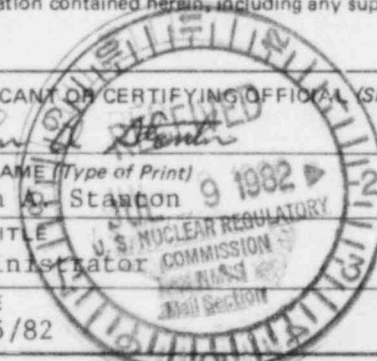
a. HOSPITAL AGREEING TO ACCEPT PATIENTS CONTAINING RADIOACTIVE MATERIAL		b. ATTACH A COPY OF THE AGREEMENT LETTER SIGNED BY THE HOSPITAL ADMINISTRATOR.	
NAME OF HOSPITAL <i>Franklin Hospital</i>		c. WHEN REQUESTING THERAPY PROCEDURES, ATTACH A COPY OF RADIATION SAFETY PRECAUTIONS TO BE TAKEN AND LIST AVAILABLE RADIATION DETECTION INSTRUMENTS.	
MAILING ADDRESS <i>1 Spruce Street</i>			
CITY <i>Franklin</i>	STATE <i>PA</i>		

## 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.

26. LICENSE FEE REQUIRED (See Section 170.31, 10 CFR 170)	b. APPLICANT OR CERTIFYING OFFICIAL (Signature)
	(1) NAME (Type of Print) <i>John A. Stanton</i>
(1) LICENSE FEE CATEGORY:	(2) TITLE <i>Administrator</i>
(2) LICENSE FEE ENCLOSED: \$ <i>150.00</i>	c. DATE <i>6/25/82</i>



## 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.

SUPPELEMENTAL SHEET #1

Frank E. Carroll, Jr., M.D.

Thomas A. Gardner, M.D.

Charles E. Mason, M.D.

Robert C. Milsovic, M.D.

John V. O'Connor, M.D.

Supplements A and B have been completed on all of these authorized users in the previous license #37-15256-01.

SUPPLEMENTAL SHEET #2

- A. Charles E. Mason, M.D. - Supplement A has been completed in a previous application for the currently held license.
  
- B. The Radiation Safety Officer is assisted by a Radiation Health Physicist with a Masters Degree, Richard Granke, Agreement State of Maryland License #MD 31-046-01, 1311 Downs Drive, Silver Springs, MD 20904, (301) 622-1235. He calibrates equipment and instruments as well as conducts the appropriate surveys and renders written reports describing his findings as well as makes recommendations for any defects which are detected. He spends on the average of one (1) day per month accomplishing his duties.

SUPPELEMENTAL SHEET #3

Medical Isotopes Committee

Charles E. Mason, M.D. - Certified in Radiology

Frank E. Carroll, Jr., M.D. - Certified in Diagnostic Radiology

R. Scott Liebl, M.D. - Certified in General Surgery

Robert Wagner, M.D. - Certified in OB/GYN

Daniel Hamilton - Associate Hospital Administrator

SUPPELEMENTAL SHEET #4

A. Frank E. Carroll, Jr., M.D.

Thomas A. Gardner, M.D.

Charles E. Mason, M.D.

Robert C. Milsovic, M.D.

John V. O'Connor, M.D.

The information in Supplements A and B detailing training and experience in Medical Radioisotopes have been previously submitted for our current License #37-15256-01.

B. Training and experience in Medical Radioisotopes have been previously submitted for our current License #37-15256-01.

SUPPLEMENTAL SHEET #5

APPENDIX C

INSTRUMENTATION

1. Survey meters

a. Manufacturer's name: Elscint Manufacturing

Manufacturer's model number: OCDM-Item #CDV-700 Model 5, Serial #30494

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: Victoreen, Incorporated

Manufacturer's model number: Victoreen Model 692 Unit

Number of instruments available: One (1)

Minimum range: 0 mR/hr to 10 mR/hr

Maximum Range: 0 mR/hr to 10,000 mR/hr

c. Manufacturer's name: Victoreen, Incorporated

Manufacturer's model number: Victoreen Model 491

Number of instruments available: One (1)

Minimum range: 0.1 mR/hr to 1 mR/hr

Maximum range: 1 mR/hr to 100 mR/hr

2. Dose calibrator

Manufacturer's name: Squibb

Manufacturer's model number: CRC17, Serial Number 17015

Number of instruments available: One (1)

3. Instruments used for diagnostic procedures

<u>Type of Instrument</u>	<u>Manufacturer's Name</u>	<u>Model No.</u>
Gamma Camera	General Electric	1-H25034
Gamma Camera	General Electric	46-401501G2
Rectilinear Camera Dual Probe 5 Inch Crystals	General Electric	220 Serial #326032144

SUPPLEMENTAL SHEET #6 - A

CALIBRATION OF INSTRUMENTS

Instrument calibration will be done by Mr. Richard Granke, licensed by Agreement State Maryland, #MD-13-046-01. Appendix "D" procedures will be followed for calibration of survey meters and dose calibrators and diagnostic instruments. OK

SUPPLEMENTAL SHEET #7 - A

A self-explanatory diagram of the areas in which radioactive material is present is included. As is seen in the diagram, the areas consist of a room with two (2) gamma cameras, separate room with one 5" dual probe scanner, a separate hot lab and storage closet for radioactive waste on a separate floor. Remote handling equipment consists of long-handled forceps. Shielding consists of two L-shaped shields with a half inch lead and leaded glass. One of the L-shaped glass shields is used in the area for preparing individual doses and mixing radiopharmaceuticals. The other is used by the Mo-Tc99m generator. An additional inch and a half lead surrounds the generator making it a total of 2" of lead in addition to the shielding that comes with the generator from the manufacturer.

Radioactive material is received and stored in the hot lab behind 2" thick lead block shields. Refrigeration is available and any radioactive material is stored behind 2" thick lead blocks. Radioactive waste including spent generators is stored in a separate closet (see Diagram). It is monitored prior to storage and kept behind 2" thick lead block shields for at least 10 half lives and is kept locked. The area is surveyed at least weekly.

Group 3 kit radiopharmaceuticals are prepared with adequate shielding consisting of a total of 2" of lead for eluting the generator from extra lead shielding and a lead glass L-block. The radiopharmaceuticals are prepared in a fume-hood with a lead glass L-block. Disposable gloves, long-handled tongs, syringe and vile shields are used.

Adjacent areas across the walls have been labeled on the enclosed diagram. These are surveyed weekly to insure radiation levels do not exceed the limits specified in Paragraph 20.105D of 10CFR Part 20.

The hot lab and scanning rooms are in a newly remodeled part of the hospital and shielding requirements have been computed by Mr. Richard Granke, our consultant Radiologic Health Physicist.

Radiologic waste is stored in a separate closet as diagramed on three (3) separate shelves each behind 2" thick lead shielding for at least 10 half lives prior to disposal. The material is monitored prior to storage and prior to disposal. The door is kept locked and has the appropriate radioactive material labels. The hallway and surrounding storeroom are monitored weekly.

HALL

LOCKED  
DOOR

Radioactive waste stored  
behind 2" Pb blocks.

3 feet 6 inches

STORAGE

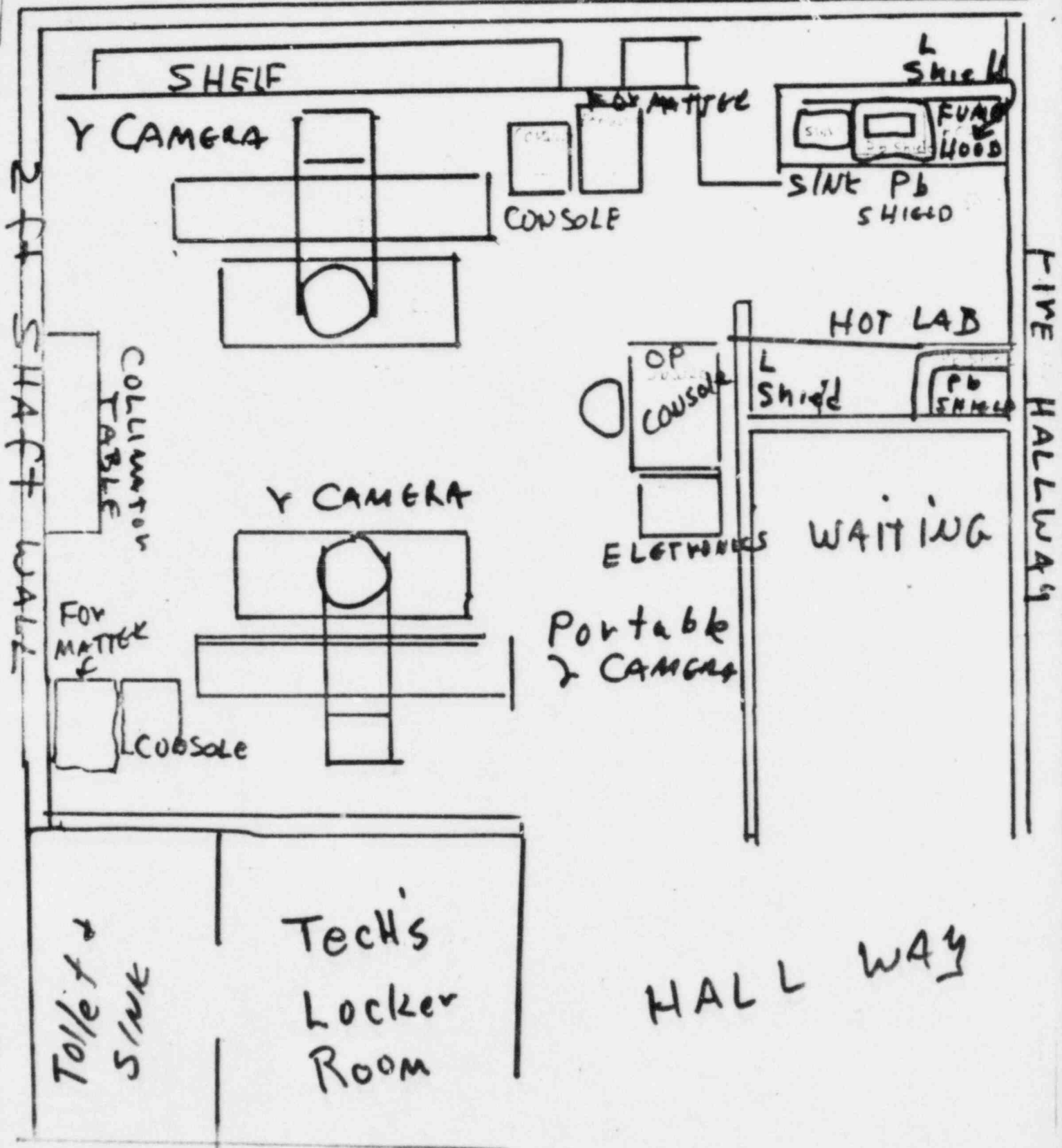
STORE ROOM

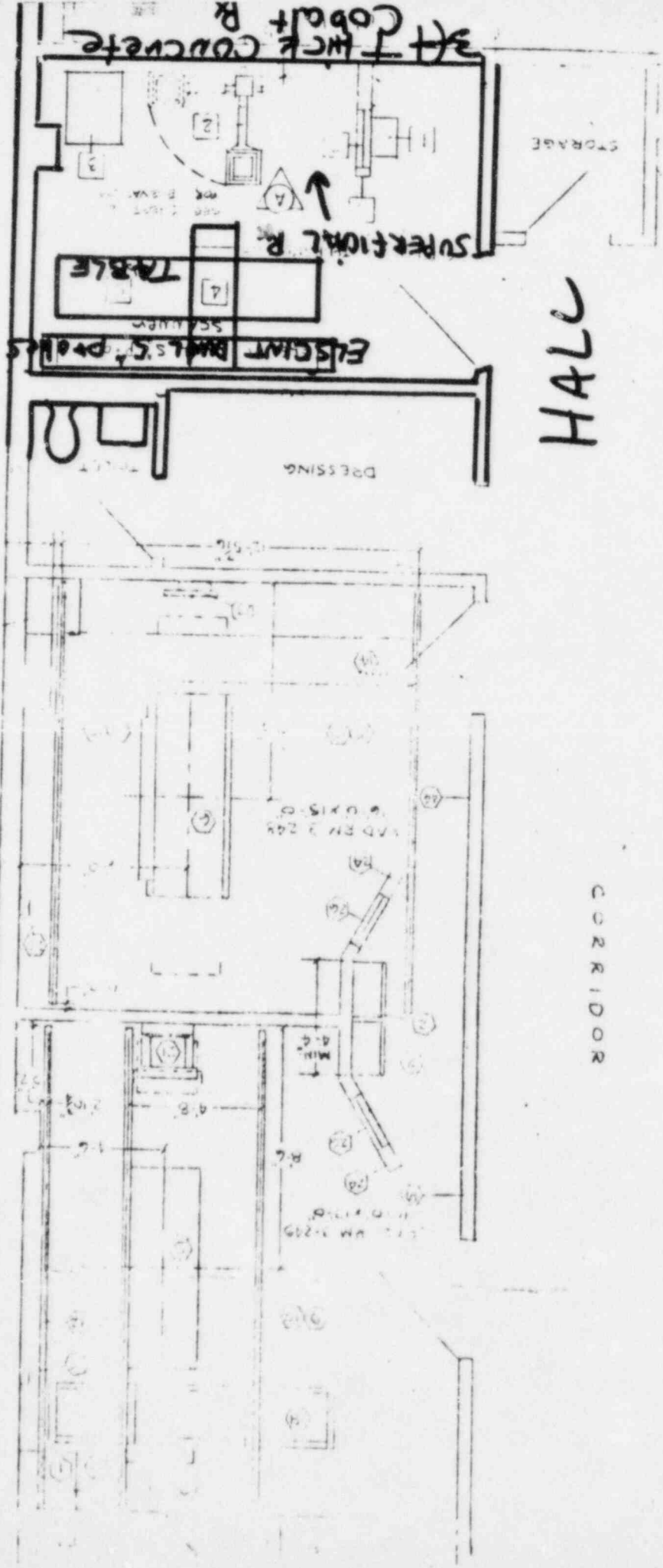
4 FEET 4 INCHES

STORE ROOM

● EXTERIOR

● SCALE 1/4" = 1 ft





HALL

CORRIDOR

STORAGE

DRESSING

SUPERFICIAL R.

TABLE

SEALING

ELISANT BUILT S. PROPS

EXTERIOR

SCALE  
1/4" = 1' 0"  
1/4" = 1' 0"

3/4" T. WICK CONCRETE  
Cobalt R

SUPPLEMENTAL SHEET #8

Margaret R. Heffernan, R.T., N.M.T. - certified by the American Registry of Radiologic Technologists in Radiology in 1966 and Nuclear Medicine in 1976, #52273 as well as by the Nuclear Medicine Technology Certification Board in 1978.

Karen Gruber Nelms, R.T., N.M.T. - certified by the American Registry of Radiologic Technologists in Radiology in 1974 and in Nuclear Medicine in 1978, #102420 as well as by the Nuclear Medicine Technology Certification Board in 1978.

Carol McKay Jones, R.T. - certified by the American Registry of Radiologic Technologists in Radiology in 1981, #169477 and is currently receiving OJT in Nuclear Medicine under the supervision of the authorized users on the current license and the two certified technologists.

Ancillary personnel whose duties require them to work in the vicinity of radioactive material are informed about radiation hazards and appropriate precautions by periodic in-service education programs consisting of lectures and practical demonstrations. Each session is one to two hours in length and are held prior to assuming duties in the vicinity of radioactive material as well as annual refresher training. Performance is continually monitored and additional refresher training is given when needed such as whenever a change in duties, regulations or the terms of the license or whenever deficiencies are detected. Instructions include radiation safety, areas where radioactive material are present either being used or stored, potential hazards associated with radioactive material, and safety procedures appropriate to their respective duties. NRC regulations including Rules and Regulations of the Licensee are covered as well as the employee's obligation to report perceived unsafe conditions to the RSO as well as appropriate responses to emergencies or perceived unsafe conditions. Radiation exposure records are freely available and posted, and the location of the postings are made available as well as posted notices, pertinent regulations, licenses and license condition are available.

SUPPLEMENTAL SHEET #9

The supervisory Nuclear Medicine Technologist will place all orders for radioactive material and will insure that requested materials and quantities authorized by the license and possession limits are not exceeded. Written records are kept identifying the isotope, its chemical form or compound, activity level, supplier and shipper. The written records are referenced when opening or storing radioactive shipments. Specially used material such as therapeutic doses require a written request by the physician performing the procedure. The written request will be referenced when placing the order and will include indication of isotope compound, activity level, and route of administration. The physician's written request will be referenced when receiving, opening, or storing the radioactive material. Written records will be maintained for all ordering and receipt procedures. During normal working hours, shippers will be instructed to deliver the radioactive-containing packages directly to Nuclear Medicine and security personnel trained in the appropriate procedures will accept delivery of radioactive-containing materials during off-hours. The procedures contained in the sample memorandum in Appendix E of the Regulatory Guide 10.8 Revision 1, October 1980, will be followed.

SUPPLEMENTAL SHEET #10

WASTE DISPOSAL

1. Liquid waste will be disposed of in the sanitary sewer system in accordance with P20.303 of 10 CFR Part 20.
2. Mo-99/Tc99m generators will be held for decay until radiation levels, as measured in a low background area with a low-level survey meter and with all shielding removed, have reached background levels. All radiation labels will be removed or obliterated, and the generators will be disposed of as normal trash.
3. Other solid waste will be held for decay until radiation levels, as measured in a low background area with a low-level survey meter and with all shielding removed, have reached background levels. All radiation labels will be removed or obliterated, and the waste will be disposed of in normal trash.

## APPENDIX O

### MODEL PROGRAM FOR MAINTAINING OCCUPATIONAL RADIATION EXPOSURES AT MEDICAL INSTITUTIONS ALARA

FRANKLIN HOSPITAL

August 15, 1980

#### 1. MANAGEMENT COMMITMENT

- a. We, the management of the Franklin 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 will develop the necessary written policy, procedures, and instructions to foster the ALARA concept within our institution. The organization will include 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 protection staff or outside consultants.
- 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 judgment, is considered to be unjustified. We will be able to demonstrate, if necessary, that improvements have been sought, 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 lowest 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.

#### 2. 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.

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- (3) The RSC will ensure that the user justifies his procedures and that dose will be ALARA (individual and collective).

b. Delegation of Authority.

(The judicious delegation of RSC authority is essential to the enforcement of an ALARA program.)

- (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 instances where Investigational Levels in Table 0-1 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.
- (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.

3. RADIATION SAFETY OFFICER (RSO)

a. Annual and Quarterly Review

- (1) Annual review of the radiation safety program. 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) Quarterly review of occupational exposures. 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 provisions of Section 6 of this program.
- (3) Quarterly review of records of radiation level surveys. The RSO will review radiation levels in unrestricted and restricted areas to determine that they were at ALARA levels during the previous quarter.
- (4) Copies of the Radiation Safety Committee minutes will be made available to all named users on the license.

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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 the 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 receiving 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.

4. 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 Supervision

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

5. 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 feels that ALARA is not being promoted on the job.

6. ESTABLISHMENT OF INVESTIGATIONAL LEVELS IN ORDER TO MONITOR INDIVIDUAL OCCUPATIONAL EXTERNAL RADIATION EXPOSURES

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

TABLE O-1

	Investigational Levels (mrems per calendar quarter)	
	<u>LEVEL I</u>	<u>LEVEL II</u>
1. Whole body; head and trunk; active blood-forming organs; lens of eyes; or gonads.	125	375
2. Hands and forearms; feet and ankles	1875	5625
3. Skin of whole body*	750	2250

The Radiation Safety Officer will review and record on Form NRC-5, "Current Occupational External Radiation Exposures," or an equivalent form (e.g., dosimeter processor's report), results of personnel monitoring not less than once at any calendar quarter as required by 20.401 of 10 CFR Part 20. The following actions will be taken at the Investigational Levels as stated in Table O-1.

- a. Quarterly exposure of individuals to less than Investigational Level I.

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 O-1 values for the investigational Level I.

- b. Personnel exposures equal to or greater than Investigational Level I, 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 NRC inspectors for review at the time of the next inspection.

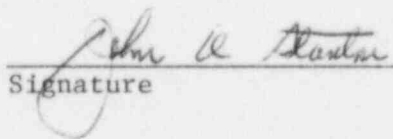
## d. Re-establishment of an individual occupational worker's Investigational Level II to a level above that listed in Table 0-1.

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.

The RSC will review the justification for, and will approve, 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 6.c above will be followed.

## 7. SIGNATURE OF CERTIFYING OFFICIAL.

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

  
Signature

John A. Stanton  
Name (print or type)

Administrator  
Title

Institutional Name and Address:

Franklin Hospital  
One Spruce Street  
Franklin, PA 16323

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