

<b>NRC FORM 313M</b> (9-81) 10 CFR 35	<b>U.S. NUCLEAR REGULATORY COMMISSION</b> <b>APPLICATION FOR MATERIALS LICENSE — MEDICAL</b>	Approved by OMB 3150-0041 Expires 9-30-83
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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  <b>Providence Hospital</b> <b>16001 W. Nine Mile Road</b> <b>Southfield, Michigan 48075</b>  TELEPHONE NO.: AREA CODE <b>813</b> ) <b>424</b> <b>3000</b>	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  <b>Ronald Rocchio</b>  TELEPHONE NO.: AREA CODE ( <b>313</b> ) <b>552</b> <b>9002</b>	3. THIS IS AN APPLICATION FOR: (Check appropriate item) a. <input type="checkbox"/> NEW LICENSE b. <input type="checkbox"/> AMENDMENT TO LICENSE NO. _____ c. <input checked="" type="checkbox"/> RENEWAL OF LICENSE NO. <b>21-02802-03</b>
4. INDIVIDUAL USERS (Name individuals who will use or directly supervise use of radioactive material. Complete Supplements A and B for each individual.)  <b>See attached list</b>	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.)  <b>Ronald A. Rocchio, M.Sc.</b>

6.a. RADIOACTIVE MATERIAL FOR MEDICAL USE					
RADIOACTIVE MATERIAL LISTED IN:	ITEMS DESIRED "X"	MAXIMUM POSSESSION LIMITS (In millicuries)	ADDITIONAL ITEMS:	MARK ITEMS DESIRED "X"	MAXIMUM POSSESSION LIMITS (In millicuries)
10 CFR 31.11 FOR IN VITRO STUDIES	X	50	IODINE-131 AS IODIDE FOR TREATMENT OF HYPERTHYROIDISM	X	100
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	50
10 CFR 35.100, SCHEDULE A, GROUP II	X	AS NEEDED	PHOSPHORUS-32 AS COLLOIDAL CHROMIC PHOSPHATE FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.	X	50
10 CFR 35.100, SCHEDULE A, GROUP III	X	4000	GOLD-198 AS COLLOID FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.	X	50
10 CFR 35.100, SCHEDULE A, GROUP IV	X	AS NEEDED	IODINE-131 AS IODIDE FOR TREATMENT OF THYROID CARCINOMA	X	500
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.	X	2000
10 CFR 35.100, SCHEDULE A, GROUP VI	X	1000			

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 USE OF MATERIAL
<b>See Attached List.</b>  <b>8506100752 850522</b> <b>REQ3 LIC30</b> <b>21-02802-03 PDR</b>	Applicant..... Check No. .... Amount / Fee Category..... Type of Fee..... Date Check Rec'd..... Received By.....	12068 8150.78 Rm 96/8.3 [Signature]	<div style="border: 1px solid black; padding: 5px;"> <b>RECEIVED BY LPM</b>          Date.....          Loc.....          [Signature]          [Signature]          [Signature]       </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. 1 Date: Oct. 1980

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

## 24. PERSONNEL MONITORING DEVICES

TYPE <small>(Check appropriate box)</small>		SUPPLIER	EXCHANGE FREQUENCY
a. WHOLE BODY	FILM	R. S. Landauer & Co.	Monthly
	TLD		
	OTHER <i>(Specify)</i>		
b. FINGER	FILM	R. S. Landauer & Co.	Monthly
	TLD		
	OTHER <i>(Specify)</i>		
c. WRIST	FILM		
	TLD		
	OTHER <i>(Specify)</i>		

d. OTHER *(Specify)*

## 25. FOR PRIVATE PRACTICE APPLICANTS ONLY

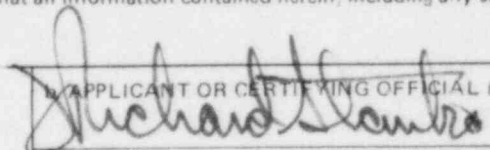
a. HOSPITAL AGREEING TO ACCEPT PATIENTS CONTAINING RADIOACTIVE MATERIAL

NAME OF HOSPITAL  MAILING ADDRESS  CITY _____ STATE _____ ZIP CODE _____	b. ATTACH A COPY OF THE AGREEMENT LETTER SIGNED BY THE HOSPITAL ADMINISTRATOR.  c. WHEN REQUESTING THERAPY PROCEDURES, ATTACH A COPY OF RADIATION SAFETY PRECAUTIONS TO BE TAKEN AND LIST AVAILABLE RADIATION DETECTION INSTRUMENTS.
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## 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 <small>(See Section 170.31, 10 CFR 170)</small>  (1) LICENSE FEE CATEGORY: 107.31 Item 7B  (2) LICENSE FEE ENCLOSED: \$ 150.00	<div style="text-align: center;">   <small>APPLICANT OR CERTIFYING OFFICIAL (Signature)</small> </div> <div style="text-align: center;"> <small>(1) NAME (Type of Print)</small>  <b>J. Richard Stanko</b> </div> <div style="text-align: center;"> <small>(2) TITLE</small>  <b>Executive Vice President</b> </div> <div style="text-align: center;"> <small>c. DATE</small> </div>
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## PRIVACY ACT STATEMENT

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

1. **AUTHORITY** Sections 81 and 161(b) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2111 and 2201(b)).
2. **PRINCIPAL PURPOSE(S)** The information is evaluated by the NRC staff pursuant to the criteria set forth in 10 CFR Parts 30-36 to determine whether the application meets the requirements of the Atomic Energy Act of 1954, as amended, and the Commission's regulations, for the issuance of a radioactive material license or amendment thereof.
3. **ROUTINE USES** The information may be used: (a) to provide records to State health departments for their information and use; and (b) to provide information to Federal, State, and local health officials and other persons in the event of incident or exposure, for their information, investigation, and protection of the public health and safety. The information may also be disclosed to appropriate Federal, State, and local agencies in the event that the information indicates a violation or potential violation of law and in the course of an administrative or judicial proceeding. In addition, this information may be transferred to an appropriate Federal, State, or local agency to the extent relevant and necessary for a NRC decision or to an appropriate Federal agency to the extent relevant and necessary for that agency's decision about you. A copy of the license issued will routinely be placed in the NRC's Public Document Room, 1717 H Street, N.W., Washington, D.C.
4. **WHETHER DISCLOSURE IS MANDATORY OR VOLUNTARY AND EFFECT ON INDIVIDUAL OF NOT PROVIDING INFORMATION** Disclosure of the requested information is voluntary. If the requested information is not furnished, however, the application for radioactive material license, or amendment thereof, will not be processed.
5. **SYSTEM MANAGER(S) AND ADDRESS** Director, Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

ITEM 4.

Ref. Lic.      21-02802-03      Amendment 31

Control No. 7 5 4 9 6



- 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
Carbon 14	any	8	In Vitro Studies
Hydrogen 3	any	8	Same
Sulfur 35	any	1	Same
Krypton 81, 85	gas	50	Human use
Fluorine 18	any	25	Human use
Strontium 90	sealed source	50	Human use
Any byproduct material listed in Section 31.11 (a) of 10 CFR 31	any	8 mCi of each byproduct material authorized	In Vitro Studies

ITEM 7.

The Isotope Committee currently consists of:

P. Perkins, M. D., Radiologist, Chairman  
S. Chen, M. D., Radiologist  
J. Reese, M. D., Radiologist  
B. Silberberg, M. D., Pathologist  
C. Taylor, M. D., Endocrinologist  
Ronald Rocchio, M.Sc., Radiation Physicist  
Lawrence Salwin, Administration

The Technical Subcommittee currently consists of:

Phillip E. Perkins, M. D.  
Ronald Rocchio, M. Sc.  
Thomas Kasza

ITEM 8.

See Lic. 21-02802-03 for Dr. Perkins

See Lic. 21-12166-01 and 21-02802-03 for Dr. Chen

See Lic. 21-02802 for Dr. James

See Lic. 21-02802-03, amendment 29 for Dr. Vaughn

See Lic. 21-02802-03, amendment 28 for Dr. Silberberg

See Lic 21-02802-02 for R. Rocchio, M. Sc.; Radiation Safety Officer



## ITEM 9

Type of Instrument	Number Available	Radiation Detection	Range	Window	Use
Control No. Victoreen 666, integrating, portable, ionization chamber	1	$\gamma$	.001 to 300 R/Hr	Thick	Survey, measuring
Picker Labmonitor 642 081	1	$\beta, \gamma$	300 to 30 K CPM Full Scale	10 mg/cm <sup>2</sup>	Monitoring, surveying
Picker GM Survey Meter	1	$\beta, \gamma$	300 to 30K CPM	10 mg/cm <sup>2</sup>	Survey
Anton Electronic Survey Meters, Civil Defense Type	2	$\beta, \gamma$	300 to 30K CPM	10 mg/cm <sup>2</sup>	Survey
Victoreen Vamp	2	$\gamma$	1. to 100 mr/hr	Thick	Monitoring
Victoreen 740	1	$\beta, \gamma$	1 mr to 2.5R/Hr	10 mg/cm <sup>2</sup>	Survey
Victoreen R. Meter	1	$\gamma$	1 to 100R	Thick	Measuring

ITEM 9.

## CURRENT EQUIPMENT LIST

Type of Instrument	Number Available	Radiation Detection	Range	Window	Use
Victoreen VIP Model 885	2	$\gamma$	1 to 99 mr	Thick	Monitoring
Nuclear Chicago 1195 Na I auto well counter	1	$\gamma$			Measuring
Searle Isocap 300 Liquid Scintillation Counter	1	$\beta, \gamma$			Measuring
Mini Instrument Model 510E GM Type	1	$\beta, \gamma$	0 to 2 KCPS	1.5 to 2.5 mg/cm <sup>2</sup>	Survey
Victoreen Survey Meter Model 740	1	$\alpha, \beta, \gamma$	3 mR/hr to 25 R/hr	0.00025"	Survey
Texas Nuclear GM Meter Model 2650	1	$\alpha, \beta, \gamma$	0.3 mR/hr to 30 mR/hr	2660 Probe: 30 mg/cm <sup>2</sup> 2661 Probe: 1.5 mg/cm <sup>2</sup>	Survey
Squibb Capintec Calibrator Isotope Model CRC - 16	1	$\beta, \gamma$	0.1 mCi to 3 Ci	Thinwall	Measure

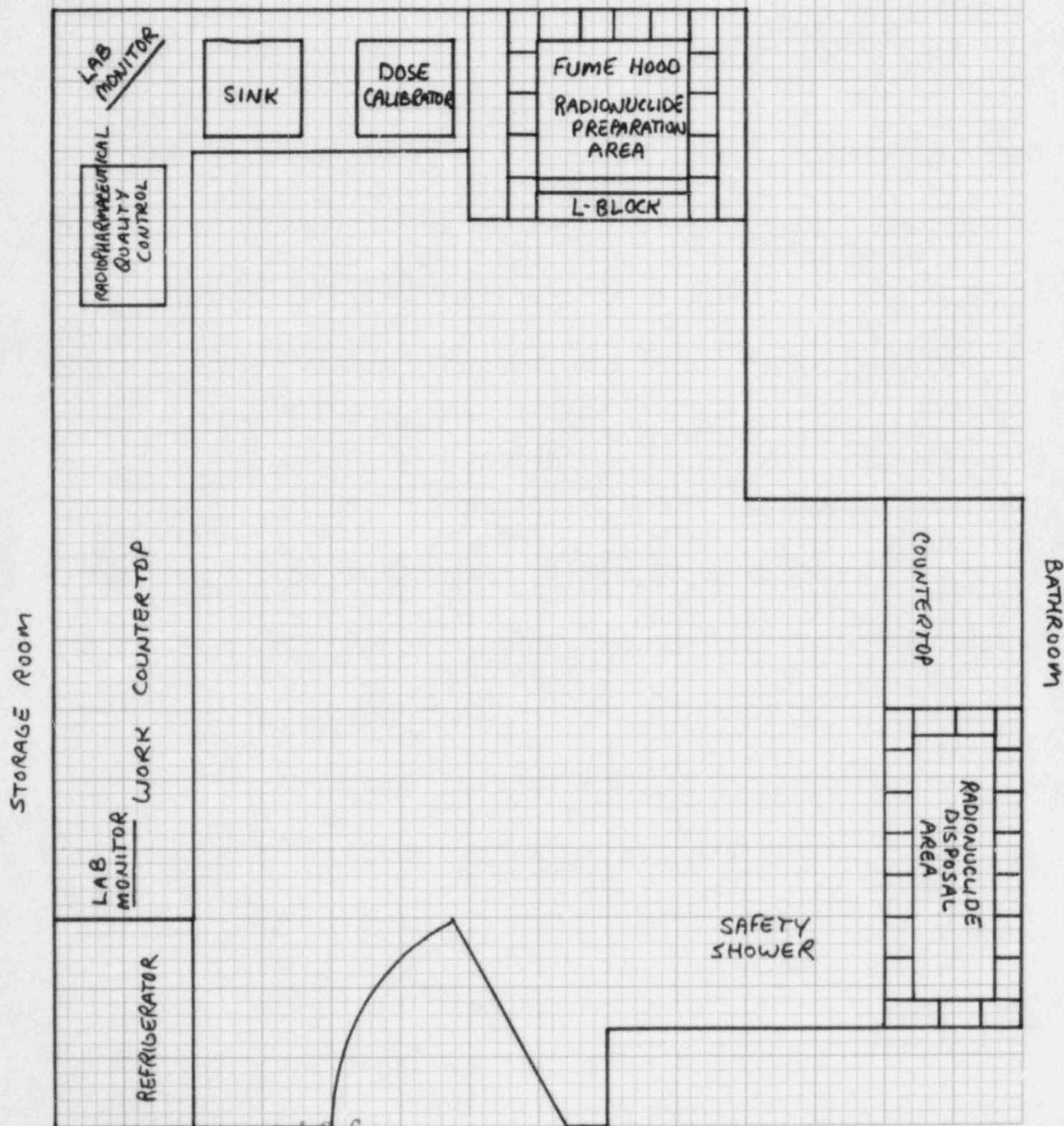
Control No. 75496

ITEM 10.

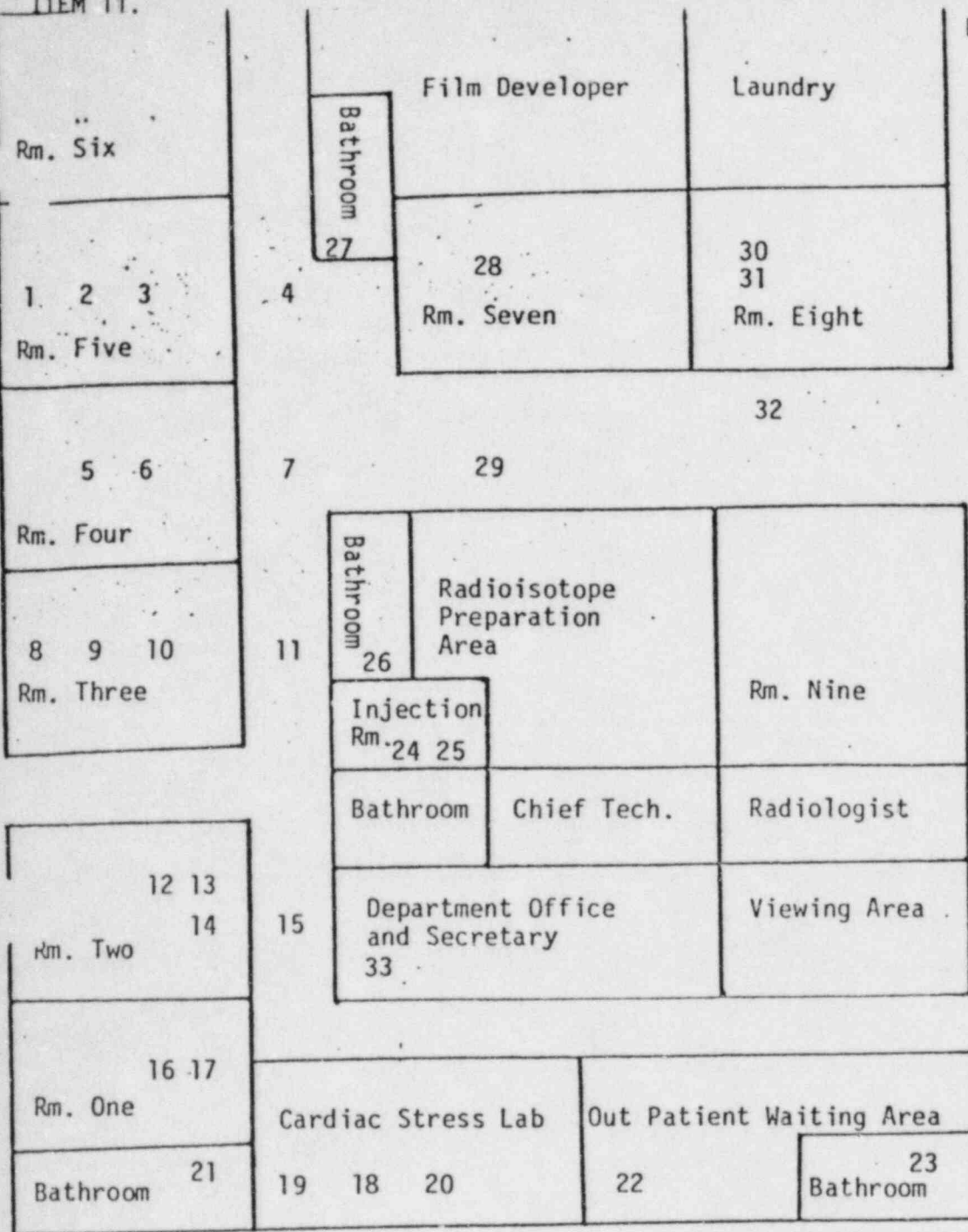
Ref. Lic.      21-02802-03      Amendment 31

Control No. 75496

# DIAGRAM OF RADIOPHARMACEUTICAL PREPARATION LAB SCALE: 0.5" = 1.0 FOOT (APPROXIMATELY)



ITEM 11.



DATE: \_\_\_\_\_

Exposure (mR/hr)      Activity (CPM)

1. Camera \_\_\_\_\_
2. Floor \_\_\_\_\_
3. Counter \_\_\_\_\_
4. Floor \_\_\_\_\_
5. Computer \_\_\_\_\_
6. Floor \_\_\_\_\_
7. Floor \_\_\_\_\_
8. Camera \_\_\_\_\_
9. Floor \_\_\_\_\_
10. Counter \_\_\_\_\_
11. Floor \_\_\_\_\_
12. Camera \_\_\_\_\_
13. Floor \_\_\_\_\_
14. Counter \_\_\_\_\_
15. Floor \_\_\_\_\_
16. Floor \_\_\_\_\_
17. Counter \_\_\_\_\_
18. Computer \_\_\_\_\_
19. Treadmill \_\_\_\_\_
20. Camera \_\_\_\_\_
21. Floor \_\_\_\_\_
22. Door \_\_\_\_\_
23. Floor \_\_\_\_\_
24. Table \_\_\_\_\_
25. Floor \_\_\_\_\_
26. Floor \_\_\_\_\_
27. Floor \_\_\_\_\_
28. Floor \_\_\_\_\_
29. Floor \_\_\_\_\_
30. Camera \_\_\_\_\_
31. Floor \_\_\_\_\_
32. Floor \_\_\_\_\_

## PROVIDENCE HOSPITAL NUCLEAR MEDICINE MONTHLY DEPARTMENT SURVEY.

Nuclide Standard: \_\_\_\_\_ Activity: \_\_\_\_\_

Counting Instrument: \_\_\_\_\_ Counting Time: \_\_\_\_\_

Window Setting: \_\_\_\_\_ Bkg: \_\_\_\_\_

Any radiation exposure greater than 0.01 mR/hr ?

Any contamination greater than 0.005uCi?

Describe any corrective measures taken.

Control No. 75496

Initials: \_\_\_\_\_



ITEM 12 thru 23.

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Control No. 7 5 4 9 6