

<b>NRC Form 313 I</b> (12-81) 10 CFR 30		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>		<b>1. APPLICATION FOR:</b> <i>(Check and/or complete as appropriate)</i>	
<b>APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL</b>				<b>a. NEW LICENSE</b>	
<i>See attached instructions for details.</i>  Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.				<b>b. AMENDMENT TO:</b> LICENSE NUMBER 20-02082-02	
				<b>c. RENEWAL OF:</b> LICENSE NUMBER	
<b>2. APPLICANT'S NAME</b> <i>(Institution, firm, person, etc.)</i>  Eye Research Institute of Retina Foundation  TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION (617) 742-3140			<b>3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION</b>  Richard L. Pharo, Sc.D.  TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION (617) 742-3140 X400		
<b>4. APPLICANT'S MAILING ADDRESS</b> <i>(Include Zip Code)</i> <i>(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)</i>  20 Staniford Street Boston, Massachusetts 02114			<b>5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED</b> <i>(Include Zip Code)</i>  20 Staniford Street Boston, Massachusetts 02114		
(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)					
<b>6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL</b> <i>(See Items 16 and 17 for required training and experience of each individual named below)</i>					
FULL NAME			TITLE		
a. All authorized users remain the same as indicated in current license					
b. Applicant <i>July 12</i>					
c. Check No. <i>20076-6120</i>					
<b>7. RADIATION PROTECTION OFFICER</b> Amount: Fee Category: <i>3. Manual</i> Robert U. Johnson Type of Fee: <i>3. Manual</i>					
Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.					
<b>8. LICENSED MATERIAL</b>					
LINE NO.	ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	NAME OF MANUFACTURER AND MODEL NUMBER <i>(If Sealed Source)</i>	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME	
(1)	Na-22	Any		1 millicurie	
(2)	Cl-36	Any		1 millicurie	
(3)	I-125	Any		20 millicuries	
(4)					
<b>DESCRIBE USE OF LICENSED MATERIAL</b> E					
(1)	The two new radioisotopes, Na-22 and Cl-36, will be used in tracer amounts				
(2)	for laboratory studies of cell metabolism.				
(3)	The I-125 is an increase in the allowable amounts (currently at 10 millicuries)				
(4)	for tracer work and for iodination of proteins. All safeguards will continue				

NRC FORM 313 I (12-81) to be followed.

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 REG1 LIC30  
 20-02082-02 PDR

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"OFFICIAL RECORD COPY"

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 JUL 26 1985  
 U.S. NRC  
 LIC. FEE MGMT. BRANCH

### 9. STORAGE OF SEALED SOURCES

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED.	NAME OF MANUFACTURER	MODEL NUMBER
	A.	B.	C.
(1)			
(2)			
(3)			
(4)			

### 10. RADIATION DETECTION INSTRUMENTS

LINE NO.	TYPE OF INSTRUMENT	MANUFACTURER'S NAME	MODEL NUMBER	NUMBER AVAILABLE	RADIATION DETECTED (alpha, beta, gamma, neutron) E	SENSITIVITY RANGE (milliroentgens/hour or counts/minute) F
	A	B	C	D		
(1)	As per current license					
(2)						
(3)						
(4)						

### 11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

☐ a. CALIBRATED BY SERVICE COMPANY

NAME, ADDRESS, AND FREQUENCY

As per current license

☐ b. CALIBRATED BY APPLICANT

Attach a separate sheet describing method, frequency and standards used for calibrating instruments.

### 12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A	SUPPLIER (Service Company) B	EXCHANGE FREQUENCY C
<input type="checkbox"/> (1) FILM BADGE <input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD) <input type="checkbox"/> (3) OTHER (Specify): _____ _____ _____	As per current license	<input type="checkbox"/> MONTHLY <input type="checkbox"/> QUARTERLY <input type="checkbox"/> OTHER (Specify): _____ _____ _____

### 13. FACILITIES AND EQUIPMENT (Check where appropriate and attach annotated sketch(es) and description(s).)

☐ a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC.

☐ b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC.

☐ c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC.

As per current license

☐ d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

### 14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED

As per current license

b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE.

# INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:

15. RADIATION PROTECTION PROGRAM. Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures *(if needed)*, day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.
16. FORMAL TRAINING IN RADIATION SAFETY. Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.
  - a. Principles and practices of radiation protection.
  - b. Radioactivity measurement standardization and monitoring techniques and instruments.
  - c. Mathematics and calculations basic to the use and measurement of radioactivity.
  - d. Biological effects of radiation.
17. EXPERIENCE. Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

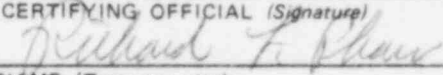
All matters in items 15, 16, and 17 as per current license

## 18. CERTIFICATE

*(This item must be completed by applicant)*

*The applicant and any official executing this certificate on behalf of the applicant named in Item 2, 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.*

**WARNING.**—18 U.S.C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

a. LICENSE FEE REQUIRED <i>(See Section 170.31, 10 CFR 170)</i>	b. CERTIFYING OFFICIAL <i>(Signature)</i> 
	c. NAME <i>(Type or print)</i> Richard L. Pharo, Sc.D.
(1) LICENSE FEE CATEGORY:      3.B	d. TITLE Director of Research Administration
(2) LICENSE FEE ENCLOSED: \$    120.00	e. DATE 7/10/85



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

BETWEEN: William O. Miller, Chief  
License Fee Management Branch  
Office of Administration

Regional License Section  
Material Licensing Branch  
FCMS, Office of Nuclear Material  
Safety & Safeguards

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee:

Application Dated:

Control No.:

License No.:

Exp. Rev. Inst. of Return  
7/10/85  
19110  
20 - 02082 - 02

2. FEE ATTACHED

Amount:

Check No.:

20076  
\$120

3. COMMENTS

03620

Signed

Date

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount:

2. Correct Fee Paid. Application may be processed for:

Amendment

Renewal

License

3m

\$120

4/90

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\_\_\_\_\_

Signed

Date

Cap

7/31/85