

DETROIT RECEIVING HOSPITAL AND
UNIVERSITY HEALTH CENTER
4201 ST. ANTOINE
DETROIT, MICHIGAN 48201

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**Detroit
Receiving
at 10**

November 14, 1990

A. Bert Davis,
Regional Administrator
United States
Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

RE: License No. 21-20085-01

Dear Mr. Davis:

We received your DEMAND FOR INFORMATION docket no. 03017944 for our License no. 21-20085-01 sent by certified mail.

I now wish to reply according to section III, paragraph 1 of the DEMAND FOR INFORMATION.

We do not believe that we are subject to 10 C.F.R. 30.35 under our present NRC license.

At present, our license authorizes only prepackaged clinical kits for by-product material identified in 10 CFR 31.11. A photocopy of our present license is enclosed.

Prior to February 28, 1987, Detroit Receiving Hospital had a functional nuclear medicine department and possessed a number of Reference Standards with half-lives greater than 120 days. In February, 1987, we decommissioned this nuclear medicine department and transferred all Reference Standards to the nuclear medicine department in Harper-Grace Hospital. We then applied for a downgraded Category 3P license for our clinical laboratory RIA kits. A copy of our license renewal application containing inventory and disposal records for all the Reference Standards and a closeout survey is enclosed.

I certify, under oath, that this information is correct. I believe that Detroit Receiving Hospital is not subject to 10 C.F.R. 30.35 due to the very low levels of radioactive materials permitted under our present downgraded category 3P license.

RECEIVED

NOV 19 1990

9102140154 910207
REG3 LIC30
21-20085-01 PDR

A SUBSIDIARY OF THE DETROIT HOSPITAL CENTER

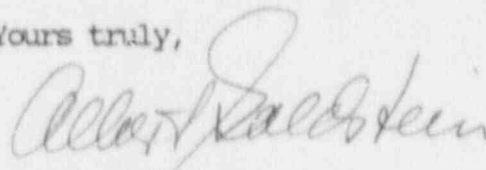
DMC

REGION III

NOV 19 1990

Please contact me directly if you wish any further information in this matter.

Yours truly,

A handwritten signature in cursive script, appearing to read "Albert Goldstein".

Albert Goldstein, Ph.D.,

Radiation Safety Officer
Detroit Receiving Hospital
University Health Center

Associate Professor of
Radiology
Wayne State University
School of Medicine

AG/jp

attachments

MATERIALS LICENSE

Amendment No. 03

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		In accordance with letter dated February 13, 1987	
1. Detroit Receiving Hospital & University Health Center		3. License number 21-20085-01 is amended in its entirety as follows:	
2. 4201 St. Antoine Detroit, MI 48201		4. Expiration date	June 30, 1993
		5. Docket or Reference No.	030-17944
6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license	
A. Any byproduct material identified in 10 CFR 31.11	A. Prepackaged Kits	A. As needed	
9. Authorized Use:			
A. In vitro studies			

CONDITIONS

- 10. Location of Use: 4201 St. Antoine, Detroit, Michigan.
- 11. Radiation Safety Officer: Albert Goldstein, Ph.D.
- 12. Authorized Users:
 - A. B. J. Jenkins, M.D.
 - B. R. J. Thibert, M.D.
 - C. M. Palutke, M.D.
 - D. B. Zak, M.D.

~~8810250034~~

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number	21-20085-01
Docket or Reference number	030-17944
Amendment No. 3	

13. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

- A. Application dated February 13, 1987; and
- B. Letter dated February 13, 1987.

For the U.S. Nuclear Regulatory Commission

Date: April 19, 1988

Original Signed
By Patricia M. Vacherlon
Materials Licensing Section, Region III

COPY



Wayne State University
School of Medicine

Department of Radiology
Detroit Receiving Hospital
University Health Center
4201 St. Antoine
Detroit, Michigan 48201
(313) 745-3430

February 13, 1987

United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

REFERENCE: License Number 21-20085-01
Expiration Date, February 28, 1987

SUBJECT: License Renewal with downgrading to 3P License

Dear Sirs:

We wish to apply for a renewal of our license with a downgrade to a Category 3P License.

On December 1, 1984 our nuclear medicine section was permanently closed. A close out survey was performed and all but two rooms were declared cleared for nonradioactive use. All of our nuclear medicine equipment has subsequently been sold. Recently all of the remaining radionuclide reference sources were disposed of and the last two rooms cleared for nonradioactive use. A full record of these transactions are appended to the enclosed CERTIFICATE OF DISPOSITION OF MATERIALS form 314.

I have spoken with our individual users of RIA kits and they all assure me that all of their research projects involving radionuclides will be performed in their laboratories in Wayne State University buildings and will be covered under Wayne State University License 21-00741-08. The only planned use for radionuclides of Detroit Receiving Hospital/University Health Center is in the clinical laboratories in RIA kit form.

We thus propose to eliminate all in-vivo portions of our original license and keep only the 10 CFR 31.11 in-vitro part. According to Glenda Jackson, NRC, Washington, DC, this means a change from a category 7C to a Category 3P License.

~~8810250066~~

United States Nuclear Regulatory Commission
Page 2

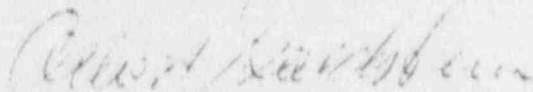
On our renewal application in item 4, form 313M, only the clinical laboratories individual users are listed. All radiology in-vivo individual users will be removed from the license. With regards to items 7 through 23 on form 313M, page 2, we will adhere to all requirements for radiation safety applicable to 10 CFR 31.11.

Since there will be no in-vivo uses of radionuclides, we will no longer have a research (isotopes) committee to oversee in-vivo usage.

Attached is the \$120. license renewal fee specified by Glenda Jackson.

Thank you very much for your attention to our renewal application. Please contact me if there is any further information you desire.

Very truly yours,



Albert Goldstein, Ph.D.
Radiation Safety Officer

AG/sls
attachment

U.S. NUCLEAR REGULATORY COMMISSION
APPLICATION FOR MATERIALS LICENSE - MEDICAL

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.

<p>1.a. NAME AND MAILING ADDRESS OF APPLICANT (institution, firm, clinic, physician, etc.) INCLUDE ZIP CODE Detroit Receiving Hospital and University Health Center 4201 St. Antoine Detroit, MI 48201 TELEPHONE NO.: AREA CODE (313) 745-3430</p>	<p>1.b. STREET ADDRESS(ES) AT WHICH RADIOACTIVE MATERIAL WILL BE USED (if different from 1.a.) INCLUDE ZIP CODE N/A</p>
<p>2. PERSON TO CONTACT REGARDING THIS APPLICATION Albert Goldstein, Ph.D. TELEPHONE NO.: AREA CODE (313) 745-3430</p>	<p>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. <u>21-20085-01</u></p>
<p>4. INDIVIDUAL USERS (Name individuals who will use or directly supervise use of radioactive material. Complete Supplements A and B for each individual.) See Attachment 1</p>	<p>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.) Albert Goldstein, Ph.D.</p>

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	100	IODINE-131 AS IODIDE FOR TREATMENT OF HYPERTHYROIDISM		
10 CFR 35.100, SCHEDULE A, GROUP I		AS NEEDED	PHOSPHORUS-32 AS SOLUBLE PHOSPHATE FOR TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA AND BONE METASTASES		
10 CFR 35.100, SCHEDULE A, GROUP II		AS NEEDED	PHOSPHORUS-32 AS COLLOIDAL CHROMIC PHOSPHATE FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.		
10 CFR 35.100, SCHEDULE A, GROUP III			GOLD-198 AS COLLOID FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.		
10 CFR 35.100, SCHEDULE A, GROUP IV		AS NEEDED	IODINE-131 AS IODIDE FOR TREATMENT OF THYROID CARCINOMA		
10 CFR 35.100, SCHEDULE A, GROUP V		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					

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

80/0250078

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: _____
 For items 7 through 23 we will adhere to all requirements for radiation safety applicable to 10 CFR 31.11.

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

24. PERSONNEL MONITORING DEVICES

TYPE <i>(Check appropriate box)</i>		SUPPLIER	EXCHANGE FREQUENCY
a. WHOLE BODY	<input checked="" type="checkbox"/> FILM	R.S. Landauer, Jr., and Co.	Monthly
	<input type="checkbox"/> TLD		
	<input type="checkbox"/> OTHER <i>(Specify)</i>		
b. FINGER	<input type="checkbox"/> FILM		
	<input type="checkbox"/> TLD		
	<input type="checkbox"/> OTHER <i>(Specify)</i>		
c. WRIST	<input type="checkbox"/> FILM		
	<input type="checkbox"/> TLD		
	<input type="checkbox"/> 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.

26. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 1a certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Parts 30 and 35, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

a. LICENSE FEE REQUIRED
(See Section 170.31, 10 CFR 170)

(1) LICENSE FEE CATEGORY:
3P

(2) LICENSE FEE ENCLOSED: \$ 120.

b. APPLICANT OR CERTIFYING OFFICIAL *(Signature)*

Edward S. Thomas

(1) NAME *(Type of Print)*

Edward Thomas

(2) TITLE

President DRH/UHC

c. DATE

2-13-87

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.

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

Approved by OML
3150-0041
Expires 9-30-86

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER Albert Goldstein, Ph.D.	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE
---	--

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
American Board of Radiology	Diagnostic Radiological Physics	June, 1980

4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

FIELD OF TRAINING A	LOCATION AND DATE(S) OF TRAINING B	TYPE AND LENGTH OF TRAINING	
		LECTURE/ LABORATORY COURSES (Hours) C	SUPERVISED LABORATORY EXPERIENCE (Hours) D
a. RADIATION PHYSICS AND INSTRUMENTATION	Nuclear Medicine Section Bronx VA Hospital Roselyn Yalow, Ph.D.,		30
b. RADIATION PROTECTION	Supervisor February-April, 1972		15
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY			10
d. RADIATION BIOLOGY			10
e. RADIOPHARMACEUTICAL CHEMISTRY			10

5. EXPERIENCE WITH RADIATION. (Actual use of Radioisotopes or Equivalent Experience)

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
		Please refer to attached letter of November 12, 1984		

ATTACHMENT 1

Item 4, Form 313M, Individual Users

INDIVIDUAL USERS AND USE RESTRICTIONS

1. B. J. Jenkins, M.D. In Vitro Studies Only
2. R. J. Thibert, M.D. In Vitro Studies Only
3. M. Palutke, M.D. Licensed material of the types quantities, and forms specified in section 31.11(a) of 10 CFR 31 in accordance with provisions of paragraphs (a), (c), and (d) of Section 31.11, 10 CFR 31.

4. B. Zak, M.D. Licensed material of the types quantities, and forms specified in section 31.11(a) of 10 CFR 31 in accordance with provisions of paragraphs (a), (c), and (d) of Section 31.11, 10 CFR 31.

CERTIFICATE OF DISPOSITION OF MATERIALS

(All items MUST be completed, please print)

LICENSEE NAME AND ADDRESS Detroit Receiving Hospital and University Health Ctr. 4201 St. Antoine Detroit, MI 48201	LICENSE NUMBER 21-20085-01
	LICENSE EXPIRATION DATE 2/28/87

THE LICENSEE OR ANY INDIVIDUAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE LICENSEE CERTIFIES THAT: (Check and/or complete the appropriate item(s) below.)

A. MATERIALS DATA (Check one and complete, as necessary)

1. NO MATERIALS HAVE EVER BEEN POSSESSED OR PROCURED BY THE LICENSEE UNDER THIS LICENSE.

OR

2. ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSEE UNDER THE LICENSE NUMBER CITED ABOVE HAVE BEEN TRANSFERRED ON

DATE 2/10/87	TO Harper Grace Hospital	WHICH HAS NRC LICENSE NUMBER 21-04127-02
Please see attached transfer forms		

OR

3. ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSEE UNDER THE LICENSE NUMBER CITED ABOVE HAVE BEEN TRANSFERRED ON

DATE	TO	WHICH HAS LICENSE NUMBER	ISSUED BY THE STATE OF
------	----	--------------------------	------------------------

AN AGREEMENT STATE PURSUANT TO SECTION 274 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED, AND THE ENERGY REORGANIZATION ACT OF 1974.

4. MATERIALS HAVE BEEN DISPOSED OF IN THE FOLLOWING MANNER. (Describe specific disposal procedures—if additional space is needed, use the reverse of this form, or provide attachments)

All radionuclides whose activity has decayed below the exempt levels (10 CFR, Part 20, Appendix C) have been transferred to the DRH/UHC radioactive waste room and will be disposed of using standard procedures. Please see attached memo to T. Gallagher, 2/12/87.

B. OTHER DATA

1. OUR LICENSE HAS NOT YET EXPIRED; PLEASE TERMINATE IT.

2. WAS A RADIATION SURVEY CONDUCTED TO CONFIRM THE ABSENCE OF LICENSED RADIOACTIVE MATERIALS AND TO DETERMINE WHETHER ANY CONTAMINATION REMAINS ON THE PREMISES COVERED BY THE LICENSE? (Check one)

NO

YES. THE RESULTS (Check one)

ARE ATTACHED, OR

WERE FORWARDED TO NRC ON (Date)

3. THE PERSON TO BE CONTACTED REGARDING THE INFORMATION PROVIDED ON THIS FORM

NAME Albert Goldstein, Ph.D., RSO	TELEPHONE NUMBER 313 745-3430
--------------------------------------	----------------------------------

4. MAIL ALL FUTURE CORRESPONDENCE REGARDING THIS LICENSE TO
Albert Goldstein, Ph.D., RSO

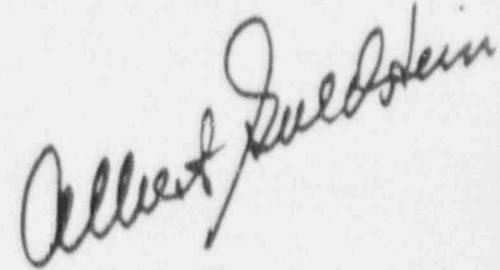
RETURN TO:
DIRECTOR, DIVISION OF FUEL CYCLE AND MATERIAL SAFETY
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555

CERTIFYING OFFICIAL	
SIGNATURE <i>Albert Goldstein</i>	DATE 2/3/87
PRINTED NAME AND TITLE RSO DRH/UHC	

83-10250082

MEMORANDUM

DATE: December 3, 1984
TO: Thomas Gallagher, Director, Radiology
FROM: Albert Goldstein, Ph.D.
RE: RSO, DRH/UHC
Nuclear Medicine Closeout Survey



At their meeting of November 14, 1984, the Medical Executive Committee of of Detroit Receiving Hospital approved the closing of the Section of Nuclear Medicine, Department of Radiology effective December 1, 1984. All patient nuclear medicine procedures will be performed by Harper-Grace Hospital under their NRC License #21-04127-02.

I have performed a closeout survey to prepare the Nuclear Medicine area for general departmental use.

The radionuclides used for in-vivo patient procedures have been received from Syncor, Royal Oak, Michigan, in unit dose form. Since our order with them has been closed, we no longer have any radionuclides present in the Nuclear Medicine Section.

All radionuclide reference sources have been inventoried. They are being stored in room 3L-14.1 which is a locked radioactive waste room at the rear of the Hot Lab, room 3L-14. The reference sources are in lead pigs and stored in lead drawers. A copy of the inventory is appended to this memo.

A survey of all Nuclear Medicine Section rooms has been performed. The survey was performed with a geiger counter Victoreen Thyac III calibrated on October 10, 1984. The background reading was first determined to be 20 cpm. hereafter this reading will be referred to as B. All geiger counter measurements at the background reading will simply be listed as B.

The results of the survey were:

Room 3L-12 - Counter Room

Floor near counting instruments	B
Sink	R
Walls behind counting instruments	B
Counter top	B
All drawers and cabinets	R

Room 3L-13 (and 3L-13.1) Laboratory

Floor in 3L-13	B
Sink in 3L-13	B
Counter tops in 3L-13	B
Drawers and cabinets in 3L-13	B
Hood where xenon bags are stored	B
Sink in hood	B
Walls near hoods and sinks 3L-13	B
Floor in 3L-13.1 (office in rear)	B

Room 3L-14 (and 3L-14.1) Hot Lab

Two sinks in 3L-14	B
Floor in 3L-14	B
Hood in 3L-14	B
Sink in hood 3L-14	B
Small hood on counter 3L-14	B
Counter tops in 3L-14	B
Drawers and cabinets in 3L-14	B
All calibrators	B
Walls near Hoods and sinks 3L-14	B
Floor in 3L-14.1	R
Counter top in 3L-14.1	B
Wall behind counter top in 3L-14.1	B

Room 3L-15 - Janitors room

Walls	B
Floor	B

Room 3L-16 - Storage room

Sink	B
Counter top	B
Walls	B
Floor	B

Room 3L-17 -
Ohio Nuclear Scanning Gamma Camera Room

Scanning Gamma Camera	B
Stretcher	B
Sink	B
Floor	B
Wall behind scanner	B

Room 3L-18 -
Ohio Nuclear Multi-image Camera Room

Multi-image Camera	B
Stretcher	B
Sink	B
Floor	B
Wall behind scanner	B

Room 3L-2 - Searle Gamma Camera

Gamma Camera	B
Stretcher	B
Sink	B
Floor	B
Wall behind scanner	B
Zenon trap	B

Room 3L-3 - Computer Room

Floor	B
-------	---

Room 3L-4 - Picker Uptake Room

Uptake probe	B
Sink	B
Floor	B
Wall	B

Room 3L-5 - G.E. Portable Gamma Camera

Gamma Camera	B
Stretcher	B
Sink	B
Floor	B
Wall	B

All Other Office Rooms

Floors	B
Entrances	B

Conclusions of Survey:

All of the Nuclear Medicine Section rooms are free of contamination. Rooms 3L-13 (and 3L-13.1) and 3L-14 and (3L-14.1) are still to be considered controlled areas. They will be used by me in my ultrasound research program. The radioactive reference sources are stored in 3L-14.1.

All other rooms are cleared for non-radioactive use. All nuclear medicine equipment is free of contamination and is cleared for sale or transfer.

AG:mk

MEMORANDUM

DATE: December 3, 1984
 TO: Thomas Gallagher, Director, Radiology
 FROM: Albert Goldstein, Ph.D.
 RE: RSO, DRH/UHC
 Radionuclide Reference Source Inventory

Albert Goldstein

As part of the Nuclear medicine Section closeout survey I have inventoried the Radioactive Reference Sources stored in the lead drawers in Room 3L-14.1.

The results of the inventory are:

Radionuclide	Activity	Reference Date	Activity on 12/3/84
Co-57	0.95 μ Ci	2/26/79	4.26×10^{-3} μ Ci
Co-57	5.5 mCi	7/28/80	93.14 μ Ci
Co-57	9.5 μ Ci	9/15/76	4.29×10^{-3} μ Ci
Co-57	9.5 μ Ci	9/15/76	4.29×10^{-3} μ Ci
Co-57	9.5 μ Ci	9/15/76	4.29×10^{-3} μ Ci
Co-57	5.072 mCi	9/13/82	631.03 μ Ci
Co-57	5.4 mCi	12/21/77	7.98 μ Ci
Co-57	4.9 mCi	8/12/77	5.18 μ Ci
Co-57	5 mCi	8/71	0.02 μ Ci
Cs-137	0.11 μ Ci	4/66	0.07 μ Ci
Cs-137	0.095 μ Ci	5/31/83	0.096 μ Ci
Cs-137	0.8-1 μ Ci	unknown	unknown
Cs-137	0.8-1 μ Ci	unknown	unknown
Cs-137	193 μ Ci	4/29/81	177.61 μ Ci
Cs-137	31 μ Ci	1/29/79	27.08 μ Ci
Cs-137	unknown		unknown
(25-1313)			
Ba-133	0.11 μ Ci	2/25/82	0.08 μ Ci
Ba-133	259 μ Ci	3/19/81	181.23 μ Ci
Eu-152-154	0.5 μ Ci	- - - - -	unknown
Eu-152-154	0.5 μ Ci	- - - - -	unknown
Ra-226	15.2 μ Ci	4/1/74	15 μ Ci
Co-60	7.4 μ Ci	2/13/71	1.2 μ Ci
Co-57	12.2 μ Ci	9/8/70	1.95×10^{-5} μ Ci
Cs-137	10.6 μ Ci	2/71	7.70 μ Ci
Na-22	10.4 μ Ci	2/15/70	0.25 μ Ci
Mn-54	7.7 μ Ci	8/2/71	1.11×10^{-4} μ Ci
Cs-137	unknown		
Siml ¹³¹	2.3 μ Ci	5/70	0

Two each unquenched standards set Amersham/Searle, C-14 & H-3
activity unknown.

One each quenched standards set H-3, activity unknown.

One each quenched standards set C-14, activity unknown.

AG:mk

MEMORANDUM

DATE: January 29, 1987
 TO: Thomas Gallagher, Director, Radiology
 FROM: Albert Goldstein, Ph.D., Radiation Safety Officer, DRHUHC
 RE: Radionuclide Inventory

Albert Goldstein

Prior to renewing our NRC License I have inventoried the radionuclides stored in the lead drawers in room 3L-14.1. These radionuclides will either be transferred to another NRC License or put in our radionuclide waste storage and disposed of.

Inventory

<u>Radionuclide</u>	<u>Activity</u>	<u>Reference Data</u>	<u>Activity on 1/29/87</u>
Co-57	0.95 μ Ci	2/26/79	6.56×10^{-4} μ Ci
Co-57	5.5 mCi	7/28/80	12.36 μ Ci
Co-57	9.5 μ Ci	9/15/76	5.69×10^{-4} μ Ci
Co-57	9.5 μ Ci	9/15/76	5.69×10^{-4} μ Ci
Co-57	9.5 μ Ci	9/15/76	5.69×10^{-4} μ Ci
Co-57	5.072 mCi	9/13/82	83.71 μ Ci
Co-57	5.4 mCi	12/21/77	1.06 μ Ci
Co-57	4.9 mCi	8/12/77	0.69 μ Ci
Co-57	5 mCi	8/71	2.45×10^{-3} μ Ci
Cs-137	0.11 μ Ci	4/66	0.07 μ Ci
Cs-137	0.099 μ Ci	5/31/83	0.0091 μ Ci
Cs-137	0.8-1 μ Ci	unknown	<1 μ Ci
Cs-137	0.8-1 μ Ci	unknown	<1 μ Ci
Cs-137	193 μ Ci	4/29/81	168.99 μ Ci
Cs-137	31 μ Ci	1/29/79	25.77 μ Ci
Cs-137	unknown		
Be-133	0.11 μ Ci	2/25/82	0.07 μ Ci
Ba-133	259 μ Ci	3/19/81	147.29 μ Ci
Eu 152-154	0.5 μ Ci	- - - - -	0.5 μ Ci
Eu 152-154	0.5 μ Ci	- - - - -	0.5 μ Ci
Ra 226	15.2 μ Ci	4/1/74	15.12 μ Ci
Co-60	7.4 μ Ci	2/13/71	0.9 μ Ci
Co-57	12.2 μ Ci	9/8/70	2.59×10^{-6} μ Ci
Cs-137	10.6 μ Ci	2/71	7.33 μ Ci
Na-22	10.4 μ Ci	2/15/70	0.14 μ Ci
Mn-54	7.7 μ Ci	8/2/71	1.84×10^5 μ Ci
Cs-137	unknown		
simI ¹³¹	2.3 μ Ci	5/70	0

Two each unquenched standards Amorsham/Searle set, C-14 & H3 activity unknown.

One each quenched standards set H3 activity unknown.
One each quenched standards set C-14, activity unknown.

AG:ss

**DETROIT RECEIVING HOSPITAL
RADIONUCLIDE TRANSFER FORM**

Radionuclides Transferred

from: Detroit Receiving Hospital
Nuclear Medicine Section
Radiology Department
NRC#: 21-20085-01

to: Holy Grace Hospital
Nuclear Medicine
NRC#: 21-20127-22

Date of Transfer 2/10/87

Item	Radionuclide	Form	Present Activity	Original Ref. & Date
1	Co-57	Reference Standard	12.36 μ Ci	7/28/80
2	Co-57	" "	83.7 μ Ci	9/13/82
3	Cs-137	" "	169 μ Ci	4/29/81
4	Cs-137	" "	26 μ Ci	1/29/79
5	Cs-137	" "	unknown	Picker 25-1313
6	RA-133	" "	147 μ Ci	3/19/81
7	RA-226	" "	15 μ Ci	4/1/74
8	Co-60	" "	0.9 μ Ci	2/13/71
9	Co-57	" "	2.6 $\times 10^{-3}$ μ Ci	9/8/70
10	Cs-137	" "	7.33 μ Ci	2/71

Method of Transfer Carry by Dr. Galdesem

Radionuclides
Transferred by: Alfred Galdesem
Accepted by: Arman M. K... M.D.

DETROIT RECEIVING HOSPITAL RADIONUCLIDE TRANSFER FORM

Radionuclides Transferred

from: Detroit Receiving Hospital
Nuclear Medicine Section
Radiology Department
NRC#: 21-20085-01

to: _____

NRC#: 21-04127-22

Date of Transfer 2/10/87

Item	Radionuclide	Form	Present Activity	Original Ref. & Date
11	NA-22	Reference Standard	0.14 μ Ci	12/15/70
12	MW-54	" "	1.8 $\times 10^5$ μ Ci	8/2/71
13	Cs-137	" "	unknown	
14	Sm I ¹⁵¹	" "	0	5/70
15	C-14, H-3	" "	unknown	
16	C-14, H-3	"quenched"	unknown	
17	H-3	"quenched"	unknown	
18	C-14	"quenched"	unknown	

Method of Transfer Cart by Goldstein

Radionuclides
Transferred by: Albert Goldstein
Accepted by: Thomas M. Reynolds M.D.

MEMORANDUM

DATE: February 12, 1987
 TO: Thomas Gallagher, Director, Radiology
 FROM: Albert Goldstein, Ph.D., Radiation Safety Officer, DRHUHC
 RE: Radionuclide Disposal

Albert Goldstein

The following radionuclides have activities below the exempt levels (10 CFR, Part 20, Appendix C). Please put them in our clinical labs radionuclide waste storage and dispose of them with the other radionuclide waste.

Inventory

<u>Radionuclide</u>	<u>Activity</u>	<u>Reference Date</u>	<u>Activity on 1/29/87</u>
Co-57	0.95 μ Ci	2/26/79	6.56×10^{-4} μ Ci
Co-57	9.5 μ Ci	9/15/76	5.69×10^{-4} μ Ci
Co-57	9.5 μ Ci	9/15/76	5.69×10^{-4} μ Ci
Co-57	9.5 μ Ci	9/15/76	5.69×10^{-4} μ Ci
Co-57	5.4 mCi	12/21/77	1.06 μ Ci
Co-57	4.9 mCi	8/12/77	0.69 μ Ci
Co-57	5 mCi	8/71	2.45×10^{-3} μ Ci
Cs-137	0.11 μ Ci	4/66	0.07 μ Ci
Cs-137	0.099 μ Ci	5/31/83	0.0091 μ Ci
Cs-137	0.8-1 μ Ci	- - - - -	< 1 μ Ci
Cs-137	0.8-1 μ Ci	- - - - -	< 1 μ Ci
Ba-133	0.11 μ Ci	2/25/82	0.07 μ Ci
Eu 152-154	0.5 μ Ci	- - - - -	0.05 μ Ci
Eu 152-154	0.5 μ Ci	- - - - -	0.05 μ Ci

AG:es

MEMORANDUM

DATE: February 12, 1987
 TO: Thomas Gallagher, Director, Radiology
 FROM: Albert Goldstein, Ph.D., Radiation Safety Officer, DRHUHC
 RE: Closeout Survey
 Rooms 3L-13 and 3L-14

Albert Goldstein

We have transferred some of our radioactive reference sources to Harper-Grace Hospital, Harper Division, NRC License #21-C-127-02. Copies of the transfer form are attached. The remaining radioactive reference sources have been put with our clinical labs radioactive waste for disposal.

We are no longer storing any radioactive reference sources in room 3L-14.1. My research is only in ultrasound so I don't use any radionuclides for research. I have performed a closeout survey so that rooms 3L-13 (and 3L-13.1) and 3L-14 (and 3L-14.1) can be considered cleared for general use. (Even though they will continue to be used for my ultrasound research program.)

The survey was performed with a geiger counter Victoreen Thyac III, calibrated on December 18, 1986. The background reading was first determined to be 20 cpm. (All geiger counter readings at background level will be listed as B.)

The results of the survey were:

Room 3L-13 (and 3L-13.1) Laboratory

Floor in 3L-13	B
Sink in 3L-13	B
Counter tops in 3L-13	B
Drawers and cabinets in 3L-13	B
Hood in 3L-13	B
Sink in Hood in 3L-13	B
Walls in 3L-13	B
Floor in 3L-13.1	B

Room 3L-14 (and 3L-14.1) Old Hot Lab

Two sinks in 3L-14	B
Floor in 3L-14	B
Hood in 3L-14	B
Sink in Hood in 3L-14	B
Small hood on counter in 3L-14	B
Counter tops in 3L-14	B
Drawers and cabinets in 3L-14	B
Floor in 3L-14.1	B
Counter top in 3L-14.1	B
Walls in 3L-14.1	B

Conclusions of Survey

The two rooms are free of contamination. They are cleared for non-radioactive use in the future.

AG:ss

**DETROIT RECEIVING HOSPITAL
RADIONUCLIDE TRANSFER FORM**

Re: Radionuclides Transferred

from: Detroit Receiving Hospital
Nuclear Medicine Section
Radiology Department
NRC#: 21-20085-01

to: Harbor Grace Hospital
Nuclear Medicine
NRC#: 21-24127-02

Date of Transfer 2/10/87

Item	Radionuclide	Form	Present Activity	Original Ref. Date
1	Co-57	Reference Standard	12.36 μ Ci	7/28/80
2	Co-57	" "	83.7 μ Ci	9/13/82
3	Cs-137	" "	169 μ Ci	4/29/81
4	Cs-137	" "	26 μ Ci	1/29/79
5	Cs-137	" "	unknown	Picker 25-1313
6	BA-133	" "	147 μ Ci	3/19/81
7	RA-226	" "	15 μ Ci	4/1/74
8	Co-60	" "	0.9 μ Ci	2/13/71
9	Co-57	" "	2.6 $\times 10^{-3}$ μ Ci	9/8/70
10	Cs-137	" "	7.33 μ Ci	2/71

Method of Transfer Carry by Dr. Galdstein

Radionuclides
Transferred by: Albert Galdstein
Accepted by: Arnold M. Kuper M.D.

**DETROIT RECEIVING HOSPITAL
RADIONUCLIDE TRANSFER FORM**

Radionuclides Transferred

from: Detroit Receiving Hospital to: _____
 Nuclear Medicine Section _____
 Radiology Department _____
 NRC#: 21-20085-01 NRC#: 21-04127-02

Date of Transfer 2/10/67

Item	Radionuclide	Form	Picocurie Activity	Original Ref. Date
11	NA-22	Reference Standard	0.14 μ Ci	12/15/70
12	MN-54	" "	1.8 x 10 ⁵ μ Ci	8/2/71
13	Cs-137	" "	unknown	
14	Su I ¹³¹	" "	0	5/70
15	C-14, H-3	" "	unknown	
16	C-14, H-3	"quenched"	unknown	
17	H-3	"quenched"	unknown	
18	C-14	"quenched"	unknown	

Method of Transfer Cart by Dr. Goldstein

Radionuclides
 Transferred by: Albert Goldstein
 Accepted by: Francis M. Ryan M.D.