

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License number  
12-00509-07

Docket or Reference number  
030-12102

Amendment No. 02

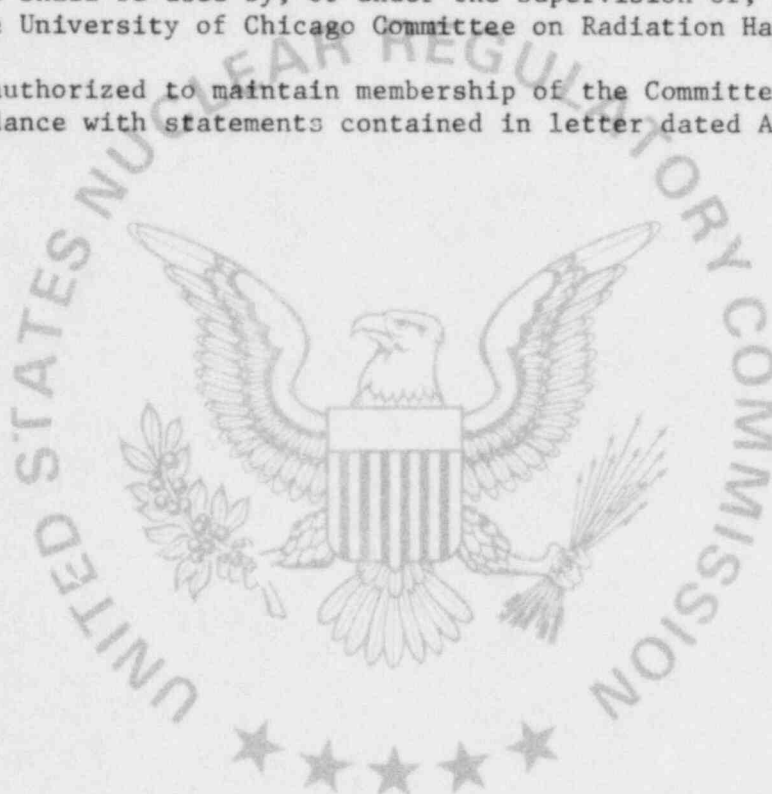
The University of Chicago  
5801 South Ellis Avenue  
Chicago, IL 60637

In accordance with letter dated April 25, 1985, License Number 12-00509-07 is amended as follows:

Condition 12. is amended to read:

12. Licensed material shall be used by, or under the supervision of, individuals designated by the University of Chicago Committee on Radiation Hazards.

The licensee is authorized to maintain membership of the Committee on Radiation Hazards in accordance with statements contained in letter dated April 25, 1985.



For the U.S. Nuclear Regulatory Commission

8506060109 850517  
REG3 LIC30  
12-00509-07 PDR

Date May 17, 1985

Original Signed  
By B.J. Holt  
Materials Licensing Section, Region III

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MAY 17 1985

The University of Chicago  
Radiation Protection Service  
ATTN: E. W. Mason  
Director  
5841 South Maryland Avenue  
P.O. Box 433  
Chicago, IL 60637

Gentlemen:

Per your request, please find enclosed the following amendments to your NRC Licenses:

Amendment No. 42 to License No. 12-00509-03  
Amendment No. 02 to License No. 12-00509-07  
Amendment No. 02 to License No. 12-00509-08  
Amendment No. 07 to License No. SNM-1027

Per our telephone conversation on May 16, please note that we have not authorized your request for monthly surveys of your waste storage area. We will consider this request further if you submit supporting documentation to show that the increased survey frequency will not result in a reduced level of safety.

Please review the enclosed document carefully and be sure that you understand all conditions. You must conduct your program involving radioactive materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, note that you must:

1. Operate in accordance with NRC regulations 10 CFR Part 19, "Notices, Instructions and Reports to Workers; Inspections," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
2. Possess radioactive material only in the quantity and form indicated in your license.
3. Use radioactive material only for the purpose(s) indicated in your license.
4. Notify NRC in writing of any change in mailing address.
5. Request and obtain appropriate amendment if you plan to change ownership of your organization, change locations of radioactive material, or make any other changes in your facility or program which are contrary to your license conditions or representations made in your license application and any supplemental correspondence with NRC. Any amendment request should be accompanied by the appropriate fee specified in 10 CFR Part 170.

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6. Submit a complete renewal application with proper fee or termination request at least 30 days before the expiration date on your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of radioactive material after your license expires is a violation of NRC regulations.
7. Request termination of your license if you plan to permanently discontinue activities involving radioactive material prior to your expiration date.

You will be periodically inspected by NRC. Failure to conduct your program in accordance with NRC regulations, license conditions and representations in your license application will result in enforcement action against you in accordance with the General Policy and Procedures for NRC Enforcement Actions, 10 CFR Part 2, Appendix C.

If you have any questions or require clarification of any of the above stated information, contact us at (312) 790-5625.

Sincerely,

Original Signed By  
B. J. Holt  
Materials Licensing Section

Enclosure(s):

1. Amendment No. 42 (License No. 12-00509-03)
2. Amendment No. 02 (License No. 12-00509-07)
3. Amendment No. 02 (License No. 12-00509-08)
4. Amendment No. 07 (License No. SNM-1027)
5. Incineration Guidelines

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THE UNIVERSITY OF CHICAGO

RADIATION PROTECTION SERVICE

5241 SOUTH MARYLAND AVENUE

CHICAGO · ILLINOIS 60637

(312) 962-6299

U. S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

April 25, 1985

Gentlemen:

This is a request to amend byproduct material license 12-509-3 to provide for an increase in half lives of materials that can be stored for decay, and to change the frequency of surveying the storage facility. Also, we are updating the membership of our committee.

Amendment number 38 to license 12-509-3, dated Feb 2, 1981, permits storage for decay of isotopes with half lives of 60 days or less. We respectfully request approval to store for decay all licensed material with half lives of 90 days or less. A copy of Kenneth Dam's letter, dated January 16, 1981, describing the facility and procedures is enclosed. We also request approval to increase the interval for monitoring the storage facility from weekly to monthly. The type of materials stored and the level of activity do not require weekly surveys.

Also, with respect to all the university's NRC licenses, 12-509-3, 12-509-7, 12-509-8, SNM 1027, and 12-1721-2, please update the membership of the University Committee on Radiation Hazards with the addition of Dr. Frank Fitch, Eugene Goldwasser, and Lucia Rothman-Denes. A brief biography for each of these new members is attached. The following names should be deleted from the previous list of committee members: William B. Cannon, Dr. John Fennessy, and Roy Mackal. The current members are as follows:

Nathan Sugarman, Chairman	Dept of Chemistry
Isaak D. Abella	Dept of Physics
Dr. Leslie DeGroot	Dept of Medicine
Dr. Frank Fitch	Dept of Pathology
Eugene Goldwasser	Dept of Biochemistry
Dr. Clifford Gurney	Dept of Medicine
Lucia Rothman-Denes	Dept of Biophysics
Samuel D. Golden, ex officio	Office of Legal Council
Edward W. Mason, ex officio	Radiation Protection
Walter E. Massey, ex officio	Office of the President
Norman H. Nachtrieb, ex officio	Dept of Chemistry

We will be glad to provide any further information you may need to approve this request. A check (#780929) in the amount of \$120 is enclosed to cover the license amendment fee for category 7C.

encl

RECEIVED BY LFMB	
Date	5/19/85
Log	Mazg
By	[Signature]
Orig. To	[Signature]
Action Compl.	[Signature]

Sincerely,

E. W. Mason  
Director

RECEIVED  
APR 29 1985

REGION III

170-11(a)(a) EX  
FEE EXEMPT 385

CONTROL NO. 78902



Frank W. Fitch, M.D., Ph.D.

Professor of Pathology, University of Chicago, 1967 to present; Associate Dean for Academic Affairs, the Division of the Biological Sciences, 1981 to present; Member Cancer Preclinical Program Project Review Committee, National Cancer Institute, 1983 to present; Research related to regulation of immune responses, 1959 to present. (Research has included radiation effects on immune responses; radioisotopes including  $^{125}\text{I}$ ,  $^3\text{H}$ ,  $^{32}\text{P}$ ,  $^{35}\text{S}$  have been used in this research). More than 200 publications on these and related studies.

Eugene Goldwasser, PhD

Professor of Biochemistry and Molecular Biology, The University of Chicago, Chairman of Department 1984; Over thirty years of laboratory experience with radioactive isotopes; Some experimental work on the effect of ionizing radiation on hemopoiesis.

Lucia B. Rothman-Denes, PhD

Professor, Departments of Molecular Genetics and Cell Biology and of Biochemistry and Molecular Biology - 7/84 to present; Professor, Departments of Biophysics and Theoretical Biology and of Biochemistry 7/83 - 6/84; Associate Professor, Departments of Biophysics and Theoretical Biology 1/80-6/83. Member, Committees on Virology and Genetics, 7/74 to present; Assistant Professor, Department of Biophysics and Theoretical Biology 7/74-1/79; Postdoctoral fellow, Department of Biophysics and Theoretical Biology 8/70-7/74; Visiting fellow, Laboratories of Molecular Biology and of Biochemistry and Metabolism, NIAMD, NIA 9/67-7/70. Member NIH Microdial Genetics Study Section 1980-1983. Chairman-elect Bacteriophage Biology Division, American Society of Microbiology - 1984. Society memberships: American Society of Biological Chemists, American Society of Microbiology, American Society of Virology. Research interests: nucleic-protein interactions in transcriptions and replications.

January 16, 1981

U.S. Nuclear Regulatory Commission  
Region III Licensing Branch  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Gentlemen:

Approval is requested to amend byproduct license 12-509-3 to permit disposal of certain radioactive materials by the "decay in storage" method as outlined in the NRC letter to licensees dated June 25, 1980. The information required in enclosure 1 to the letter is as follows.

1. Very short-lived isotopes decay in the laboratories in which they are used. This decay takes place in fume hoods or shielded caves or the lead shipping containers in which the materials are received from the suppliers. The laboratories are monitored regularly by the users and also by the Radiation Protection Service. Other short-lived materials with half lives up to and including 60 days would be stored in a central facility. A drawing of the facility is attached. The floor is two feet reinforced concrete with an additional three inches of wearing surface, the walls are constructed of four inches stone plus eight inches concrete block, and the area above is open. Since this is a one-story building, there are no occupied areas above. The space below is occupied by Radiation Therapy and the 50MeV linear accelerator. Note that the shielding is more than adequate to provide for the levels of activity commonly used under the University's license.
2. Security for the storage facility is provided by locked doors.
3. Radiation levels of the waste area will be monitored weekly.
4. Waste will be monitored to assure that it has decayed to background levels prior to disposal according to the following procedure:  
a) waste will be monitored in a low background area. b) a low level Geiger-Mueller type survey instrument will be used for monitoring I-125. c) all shielding will be removed prior to monitoring. d) a record of these surveys will be maintained as required pursuant to 10CFR20.
5. Used Tc-99m generators will not be disposed of in this manner.

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Enclosed please find University of Chicago check for \$40.00 to cover the license amendment fee specified in 10CFR170. We will be glad to provide additional information concerning this license amendment request.

Sincerely,

Kenneth W. Dam

Enc. NRC encl #1  
Drawing dated 1/16/81  
Check

bcc: Mr. Edward Mason ✓  
Mr. Norman Nachtrieb  
Mr. Nathan Sugarman

