

MATERIALS LICENSE

Amendment No. 57

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, 36, 39, 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.

302088

Licensee

In accordance with letter dated
November 25, 19963. License Number 34-00738-04 is amended in
its entirety to read as follows:

4. Expiration Date September 30, 2005

5. Docket or
Reference No. 030-009026. Byproduct, Source, and/or
Special Nuclear Material7. Chemical and/or Physical
Form8. Maximum Amount that Licensee
May Possess at Any One Time
Under This LicenseA. Any byproduct
material with Atomic
Nos. 3 through 84,
inclusive

A. Any

A. 300 millicuries of
each isotope, not
to exceed 16
curies, total;
except as noted
below and limited
by Condition 16B. Any byproduct
material with Atomic
Nos. 85 through
103, inclusiveB. Sealed sources, foil
sources or targetsB. 10 millicuries of
each isotope

C. Hydrogen-3

C. Any

C. 20 curies

D. Carbon-14

D. Any

D. 2 curies

E. Phosphorus-32

E. Any

E. 4 curies

F. Sulfur-35

F. Any

F. 4.5 curies

G. Strontium-90

G. Foil sources

G. 1 curie

H. Iodine-125

H. Any

H. 2 curies

I. Chromium-51

I. Any

I. 500 millicuries

J. Americium-241:Be

J. Sealed source
(Gammatron AN-HPG)

J. 750 millicuries

K. Any byproduct
material with Atomic
Nos. 85 through 103,
inclusive

K. Any

K. 10 microcuries of
each isotope

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**MATERIALS LICENSE
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9. Authorized Use:

- A. through I. To be used for research and development as defined in 10 CFR Part 30, Section 30.4, including animal studies, student instruction, instrument calibration, and interim storage of waste.
- J. To be used as described in application dated April 28, 1994.
- K. To be used for counting standards; and possession incident to the analysis of environmental samples.

CONDITIONS

10. A. Licensed material shall be used only at the licensee's facilities located at the main campus at 10900 Euclid Avenue, Cleveland, Ohio, University Hospitals, 2065 Adelbert Road, Cleveland, Ohio, and at the University Circle Research Center II, 11001 Cedar Avenue, Cleveland, Ohio.
- B. Licensed material may be received and stored at the Case Western Reserve University Cedar Service Center, 10620 Cedar Avenue, Cleveland, Ohio.
11. Licensed material shall be used by, or under the supervision of, individuals designated by the University's Radiation Safety Committee, Christopher David Town, Ph.D., Chairperson.
12. A. The Radiation Safety Officer for this license is W. David Sedwick, Ph.D.
- B. The Assistant Radiation Safety Officer for this license is Karl Von Ahn.
13. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.

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- C. In the absence of a certificate from a transferor indicating that a leak test has been made within 6 months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- E. Sealed sources need not be leak tested if:
- (i) they contain only hydrogen-3; or
 - (ii) they contain only a radioactive gas; or
 - (iii) the half-life of the isotope is 30 days or less; or
 - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
 - (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- F. The leak test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(b)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region III, ATTN: Chief, Nuclear Materials Safety Branch, 801 Warrenville Road, Lisle, Illinois 60532-4351. The report shall specify the source involved, the test results, and corrective action taken.
- G. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to Perform such services.

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14. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
15.
 - A. Detector cells containing a titanium tritide foil or a scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents the foil temperature from exceeding that specified by the manufacturer and approved by U.S. Nuclear Regulatory Commission.
 - B. When in use, detector cells containing a titanium tritide foil or a scandium tritide foil shall be vented to the outside.
16. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of unsealed licensed material (with half-lives greater than 120 days) to quantities less than 10^5 times the applicable limits in Appendix C of 10 CFR Part 20, per the provisions of 10 CFR 30.35(d).
17. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory, and shall include the quantities and kinds of byproduct material, manufacturer's name and model numbers, location of the sources and/or devices, and the date of the inventory.
18. The licensee is authorized to hold radioactive material with a physical half-life of less than 90 days for decay-in-storage before disposal in ordinary trash provided:
 - A. Radioactive waste to be disposed of in this manner shall be held for decay a minimum of 10 half-lives.
 - B. Before disposal as ordinary trash, byproduct material shall be surveyed at the container surface with the appropriate survey meter set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
 - C. A record of each disposal permitted under this License Condition shall be retained for three years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.

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19. 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 U.S. 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. Applications dated October 15, 1993 and April 28, 1994; and
- B. Letters with attachments dated December 17, 1993, April 28, 1994 (with attached application received May 2, 1994), October 1, 1994, August 1, 1995 (with attachments), July 7, 1995, November 8, 1995, December 28, 1995, March 7, 1996, July 18, 1996, July 31, 1996, and November 25, 1996.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date

January 17, 1997

By

Leticia J. Lee

Nuclear Materials Licensing Branch, Region III

COPY

JAN 21 1997

W. David Sedwick, Ph.D.
Radiation Safety Officer
Case Western Reserve University
10900 Euclid Avenue
Cleveland, OH 44106

Dear Dr. Sedwick:

Enclosed is Amendment No. 57 to your NRC Material License No. 34-00738-04 in accordance with your request.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region III office at (630) 829-9887 so that we can provide appropriate corrections and answers.

Sincerely,

Original Signed By
Patricia J. Pelke
Nuclear Materials Licensing Branch

License No.: 34-00738-04
Docket No.: 030-00902

Enclosure: Amendment No. 57

DOCUMENT NAME: M:\03000902.CL7

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

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DATE	01/19/97								

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302088



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

December 3, 1996

W. David Sedwick, Ph.D.
Radiation Safety Officer
Case Western Reserve University
10900 Euclid Avenue
Cleveland, OH 44106

SUBJECT: ACKNOWLEDGEMENT OF CORRESPONDENCE
(Letter Dated 11/25/96)

Dear Licensee:

In response to your request, we have completed the initial processing, which is an administrative review of your application for a(n):

☐ New License ☒ Amendment ☐ Renewal
☐ Termination ☐ Auth User (Amendment not required)
☐ Other _____

No administrative deficiencies were identified during this initial review. However, it should be noted that a technical review may identify omissions in the submitted information.

It appears that your request is routine (see 1-3 below, as applicable).

1. New and amendment actions are normally processed within 90 days, unless we find major deficiencies, or policy issues requiring central program office assistance.
2. Renewal actions are normally processed within 180 days, however, under timely filing (before expiration), you may continue to operate under your existing license.
3. Termination actions are normally processed within 90 days, unless confirmatory surveys following decontamination/decommissioning activities are involved.

A copy of your correspondence has been forwarded to our Licensing Fee and Debt Collection Branch (301/415-6097) for approval of the fee category and amount, if required.

If you have a compelling safety or business-related reason for requesting expedited review, please contact the Materials Licensing Branch at (630) 829-9887. We will try to complete your request as soon as practicable. Any correspondence about this request should reference the control number.

Nuclear Materials Support Branch

Mail Control No. 302088
License No. 34-00738-04

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

(FOR LFMS USE)
INFORMATION FROM LTS

36

Program Code: 0:100
Status Code: 0
Fee Category: EX 3L
Exp. Date: 20050930
Fee Comments: 170.11(A)(4) EFF 7/2/
Decom Fin Assur Req'd: Y

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: CASE WESTERN RESERVE UNIVERSITY
Received Date: 961127
Docket No: 3000902
Control No.: 302088
License No.: 34-00738-04
Action Type: Amendment

2. FEE ATTACHED

Amount: _____
Check No.: Ø

3. COMMENTS

Signed _____
Date 12-3-96

D. Hersey

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered / /)

1. Fee Category and Amount:

EX 3L 170.11(A)(4)

2. Correct Fee Paid Application may be processed for:

Amendment ✓
Renewal _____
License _____

3. OTHER

Signed _____
Date 12/9/96

SC

RECEIVED BY LFDCB	
Date	<u>Dec. 9 1996</u>
Log	<u>Dec 3 III</u>
By	<u>SC</u>
Date Completed	<u>12/9/96</u>

1996 DEC -9 PM 2:16



CASE WESTERN RESERVE UNIVERSITY

November 25, 1996

Materials Licensing Branch
U.S. NRC Region III
801 Warrenville Road
Lisle, IL 60532-4351

RE: Amendment for CWRU License # 34-00738-04

Dear Sir,

We request approval to amend our broadscope license to allow possession and use of radionuclides as follows:

Any byproduct material with atomic numbers 85 through 103 inclusively in any chemical or physical form that is not a sealed source or foil source in quantities up to 10 microcuries of each isotope.

The use of these materials will be to produce counting standards for instrument calibration in research. Sealed sources cannot be economically purchased to recreate required sample counting geometries.

The needs for the standards include, but are not limited to, soil and water environmental counting analysis.

All safety procedures and practices for the handling of these materials will be conducted in accordance with the broadscope license requirements.

Sincerely yours,

W. David Sedwick, Ph.D., RSO

170.11(A)(4)
FEE EXEMPT

xc: C. Town, RSC Chair
K Von Ahn, Asst. RSO
K Basch, Asst. Treasurer
N Sutterfield, VP of Finance & Administration

Department of Occupational & Environmental Safety

MAILING ADDRESS
Case Western Reserve University
2220 Circle Drive, First Floor
Cleveland, Ohio 44106-7227

VISITORS AND DELIVERIES
Service Bldg. First Floor

Phone 216-368-2906
Fax 216-368-2236

RECEIVED

NOV 27 1996

REGION III

Pm: 11-26-96

NOV 27 1996 302088