

# OFFICIAL RECORD COPY MATERIALS LICENSE

Amendment No. 29

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, 37, 38, 39, 40, and 70, and in reliance on statements and representations 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.

DL-012497-03

Licensee

1. U.S. Department of the Interior  
Geological Survey  
National Center  
  
2. 12201 Sunrise Valley Drive  
Reston, Virginia 22092

In accordance with the letter dated September 10, 1996

3. License Number 45-15923-01

is amended in its entirety to read as follows:

4. Expiration Date November 30, 2000

5. Docket or Reference No 030-10034

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. Carbon 14	A. Any	A. 15 millicuries (555 MBq) total
B. Nickel 63	B. Foil and/or plated sources contained in compatible detector cells registered pursuant to 10 CFR 32.210 or an equivalent Agreement State regulation	B. Not to exceed 15 millicuries (555 MBq) per sealed or plated source
C. Any byproduct material produced from irradiation of geologic samples (rocks...)	C. Neutron activated geologic samples	C. 530 millicuries (19.65 GBq) total
D. Neptunium 237	D. Any	D. 10 microcuries (370 kBq) total
E. Americium 241	E. Any	E. 0.96 millicurie (35.5 MBq) total

200118

9. Authorized Use:

- A. For use in laboratory tracer studies and molecular biology procedures.
- B. For use in gas chromatographs for sample analysis.
- C. For use in laboratory research studies of neutron activated geologic samples.
- D. and E. For storage incident to disposal.

0/1

ML 20

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

**CONDITIONS**

10. Licensed material may be used at:
- A. Geological Survey Physics Building, Lot "O" off South Lakes Drive, and the National Center, 12201 Sunrise Valley Drive, Reston Virginia.
  - B. U.S. Geological Survey, Stephenson Center, Suite 129, 729 Gracern Road, Columbia, South Carolina.
11. The Radiation Safety Officer (RSO) for this license is Charles W. Naeser, Ph.D.
12. Authorized users:
- A. Charles W. Naeser For materials listed in Subitems 6.C and for 6.A through E incident to radiation safety duties.
  - B. Nancy D. Naeser For materials listed in Subitem 6.B. and C.
  - C. Jeffrey N. Grossman For materials listed in Subitems 6.C.
  - D. Michael J. Kunk For materials listed in Subitem 6.C.
  - E. Curtis A. Palmer For materials listed in Subitems 6.B. and C.
  - F. Elizabeth J. Jones For materials listed in Subitems 6.A. and P.
  - G. John F. Sutter For materials listed in Subitem 6.C.
  - H. James E. Landmeyer For materials listed in Subitems 6.B.
  - I. Francis H. Chapelle For materials listed in Subitems 6.A. and B.
  - J. Paul M. Bradley For materials listed in Subitem 6.B.
13. A.(1) The sealed source(s) specified in Item 7, shall be tested for leakage and/or contamination at intervals not to exceed 6 months. Any sealed source received from another person which is not accompanied by a certificate indicating that a test was performed within 6 months before the transfer shall not be put into use until tested.
- (2) Notwithstanding the periodic leak test required by this condition, any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.
- B. Any source in storage and not being used need not be tested. When the source is removed from storage for use or transfer to another person, it shall be tested before use or transfer.
- C. The 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, the source shall be removed from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the date the leak test result is known with the U. S. Nuclear Regulatory Commission, Region II, Division of Nuclear Materials Safety, Nuclear Materials Licensing/Inspection Branch, 101 Marietta Street, Suite 2900, Atlanta, Georgia 30323. The report shall specify the source involved, the test results, and corrective action taken. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. Records may be disposed of following Commission inspection.
- D. 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.

License Number 45-15923-01

Docket or Reference Number ~~030-10034~~

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

**Amendment No. 29**

**CONDITIONS**

14. Sealed sources containing licensed material shall not be opened by the licensee.
15. Detector cells containing licensed material shall not be opened or the sources removed from the detector cell by the licensee.
16. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under this license.
17. Licensed material shall not be used in or on human beings or in products distributed to the public.
18. The licensee shall maintain records of information important to safe and effective decommissioning at the U.S. Department of the Interior, Geological Survey, 10 National Center, Reston, Virginia, pursuant to the provisions of 10 CFR 30.35(g) until this license is terminated by the Commission.
19. In addition to the possession limits in item 8, the licensee shall further restrict the possession of licensed material as follows:
  - A. For unsealed sources to quantities less than  $10^5$  times the applicable limits in Appendix B, 10 CFR 30 as specified in 10 CFR 30.35(d) and
  - B. For sealed sources, to quantities less than  $10^{10}$  times the applicable limits in Appendix B, 10 CFR 30 as specified in 10 CFR 30.35(d).
20. The licensee may transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
21. 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:
    - (1) June 26, 1990
    - (2) November 28, 1995 [Renewal application which down sizes operations]

License Number 45-15923-01

Docket or Reference No. 45-10034

Amendment No. 29

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

CONDITIONS

21.(cont)

- B. Letters dated:
- (1) October 4, 1990
  - (2) July 1, 1994
  - (3) January 30, 1995
  - (4) March 1, 1996
  - (5) June 14, 1996
  - (6) September 10, 1996
  - (7) September 18, 1996
  - (8) January 21, 1997

[Change user names, add authorized user, delete departed users, change rooms]  
 [Add authorized users]  
 [NRC letter extends expiration date per 10 CFR 30.36]  
 [New location of lab]  
 [Delete radioisotopes no longer possessed/delete users/increase C-14 possession limit to 15 millicuries/change Radiation Safety Officer]  
 [Provides licensee's basis for release to non-radiological use of rooms 3D231 and 3D239 of the John Wesley Powell Building]  
 [Additional information in support of amendment application]

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

EARL G. WRIGHT

DATE JAN 24 1997

BY Earl G. Wright

Region II, Division of Nuclear Materials Safety  
191 Marietta Street, N.W., Suite 2000  
Atlanta, GA 30333-0199

N. LICENSE IS...  
*[Handwritten signature]*

BETWEEN:

License Fee Management Branch, ARM  
and  
Regional Licensing Sections

(FOR LPMS USE)  
INFORMATION FROM LITS

Program Code: 03620  
Status Code: 0  
Fee Category: EX 3M  
Exp. Date: 20001130  
Fee Comments:  
Decom Fin Assur Req'd: Y

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: INTERIOR, DEPARTMENT OF THE  
Received Date: 960920  
Docket No: 3010034  
Control No.: 257207  
License No.: 45-15923-01  
Action Type: Amendment

2. FEE ATTACHED

Amount: \_\_\_\_\_  
Check No.: \_\_\_\_\_

3. COMMENTS

Signed \_\_\_\_\_  
Date \_\_\_\_\_

8. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered / \_\_/)

1. Fee Category and Amount: \_\_\_\_\_

2. Correct fee paid. Application may be processed for:

Amendment \_\_\_\_\_  
Renewal \_\_\_\_\_  
License \_\_\_\_\_

3. OTHER

\_\_\_\_\_

Signed \_\_\_\_\_  
Date \_\_\_\_\_