

September 23, 1997

U.S. Department of the Interior  
ATTN: Charles W. Naeser, Ph.D.  
Radiation Safety Officer  
U. S. Geological Survey  
National Center, MS 926A  
Reston, VA 22092

SUBJECT: TRANSMITTAL AND EXPLANATION OF AMENDMENT TO LICENSE  
NO. 45-15923-01 (REFERENCE CONTROL 257633; DOCKET NO. 030-10034)

Dear Dr. Naeser:

Enclosed is Amendment No. 31 to License No. 45-15923-01 and Amendment No. 14 terminating License No SNM-1330. This action incorporates materials from License No. SNM-1330 with License No. 45-15923-01 per your request.

Please review the documents carefully and be sure that you understand all conditions. If you have questions or comments, please notify Ms. Diane Heim at (404) 562-4723.

Unless your license has been terminated, you must conduct your program involving byproduct 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 19, "Notice, Instructions and Reports to Workers; Inspections," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
  2. Notify NRC, in writing, within 30 days:
    - a. when an authorized user, Radiation Safety Officer, or Teletherapy Physicist permanently discontinues performance of duties under the license or has a name change; or
    - b. when the licensee's mailing address changes (no fee is required if the location of byproduct material remains the same).
  3. In accordance with 10 CFR 30.36(b) and/or license condition, notify NRC, promptly, in writing, and request amendment or termination of the license:
    - a. when you decide to terminate all activities involving materials authorized under the license; or
-

- b. when you decide to terminate licensed activities in a separate building or outdoor area identified on your license; or
  - c. if you decide not to complete the facility, acquire equipment, or possess and use authorized material.
4. Request and obtain a license amendment before you:
- a. receive or use byproduct material for a clinical procedure permitted under Part 35 but not permitted by your license issued pursuant to this part;
  - b. permit anyone, not authorized under 10 CFR 35, Subpart J, to work as an authorized user under a license for medical use of byproduct material;
  - c. permit anyone, not authorized under 10 CFR 35, Subpart J, to work as a Radiation Safety Officer, Teletherapy Physicist, or Nuclear Pharmacist, under a license for medical use of byproduct material;
  - d. order byproduct material in excess of the amount, or a different radionuclide or form, other than authorized on the license;
  - e. add or change the areas of use or address (or addresses) of use identified in the license application or on the license; or
  - f. change ownership of your organization.
5. Submit a complete renewal application with proper fee or termination request at least 30 days before the expiration date of your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of byproduct material after your license expires is a violation of NRC regulations. Transfer of licensed materials must be consistent with 10 CFR 30.41, 40.51 or 70.42, as applicable. A license will not normally be renewed, except on a case-by-case basis, in instances where licensed material has never been possessed or used.

In addition, applications for NRC licenses (Form 313) must be signed by the licensee or certifying official (not a consultant). By signature, the signing official certifies his/her understanding that the application is true and correct to the best of the signator's knowledge.

You will be periodically inspected by NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a Notice of Violation, or imposition of a Civil Penalty, or an order suspending, modifying or revoking your license as specified in the "General Statement of

Policy and Procedures for NRC Enforcement Actions," NUREG-1600. (7/95). Since serious consequences to employees and the public can result from failure to comply with NRC requirements, prompt and vigorous enforcement action will be taken against those who do not achieve the necessary attention to detail and standard of compliance expected of licensees.

Thank you for your cooperation.

Sincerely,

Earl G. Wright  
 Senior License Reviewer  
 Division of Nuclear Materials Safety

- Enclosures: 1. Amendment No. 31 License No. 45-15923-01  
 2. Amendment No. 14 terminating License No. SNM-1330  
 3. NRC Form 313

SIGNATURE	<i>EGW</i>	<i>J.P.</i>				
NAME	EGWright	JPotter				
DATE	09/24/97	09/24/97	09/ / / 97	09/ / / 97	09/ / / 97	09/ / / 97
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\DNMS\covltr\257633.egw

**OFFICIAL RECORD COPY**

**MATERIALS LICENSE**

Amendment No. 31

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 purposes and at the places designated below, to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Parts. 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 the letter dated September 4, 1997

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. 070-01358 (Superseded)

030-10034

1 U.S. Department of the Interior  
U.S. Geological Survey

2 National Center, MS 926A  
Reston, Virginia 22092

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. Any byproduct material produced from irradiation of geologic samples(rocks...) | B. Neutron activated geologic samples | B. 530 millicuries (19.65 GBq) total                        |
| C. Americium 241  | C. Sealed sources                     | C. 2 sources, not to exceed 40 millicuries (1.48 GBq) total |
| D. Uranium enriched in U-235 isotope  | D. Any                                | D. 200 milligrams of contained U-235 (0.4 microcurie)       |
| E. Thorium enriched in Th-230 isotope   | E. Any                                | E. 30 milligrams of contained TH-230 (0.60 millicurie)      |

9. Authorized Use:

- A. For use in laboratory tracer studies and molecular biology procedures.
- B. For use in laboratory research studies of neutron activated geologic samples.
- C. For storage incident to disposal.
- D. and E. For determination of ages of materials by isotopic dilution of natural uranium and thorium.

**CONDITIONS**

10. Licensed material may be used at the Geological Survey Physics Building, Lot "O" off South Lakes Drive, and the National Center, 12201 Sunrise Valley Drive, Reston Virginia.

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PDR ADOCK 03010034  
C PDR



Handwritten signature/initials

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
45-15923-01

Tracker Reference Number  
030-10034

Amendment No. 31

(cont.) **CONDITIONS**

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.A through E. **incident to radiation safety duties.**
  - B. **Nancy D. Naeser** For materials listed in Subitem 6.B.
  - C. **Elizabeth J. Jones** For materials listed in Subitem 6.A.
  - D. **Jeffrey N. Grossman** For materials listed in Subitem 6.B.
  - E. **Curtis A. Palmer** For materials listed in Subitem 6.B.
  - F. **Gregory A. Wandless** For materials listed in Subitem 6.B, D, and E.
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, 61 Forsyth Street, Suite 23T85, Atlanta, Georgia 30303. 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.**
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.**

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License Number 45-15923-01

Docket or Reference Number 030-10034

Amendment No. 31

- (cont.)
- CONDITIONS
18. The licensee shall maintain records of information important to safe and effective decommissioning at the U.S. Department of the Interior, Geological Survey, 990 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]
    - (3) September 4, 1997 [Consolidation of License No. SNM-1330 with this license.]
  - B. Letters dated:
    - (1) October 4, 1990
    - (2) July 1, 1994 [Change user names, add authorized user, delete departed users, change rooms]
    - (3) January 30, 1995 [Add authorized users]
    - (4) March 1, 1996 [NRC letter extends expiration date per 10 CFR 30.36]
    - (5) June 14, 1996 [New location of lab]
    - (6) September 10, 1996 [Delete radioisotopes no longer possessed/delete users/increase C-14 possession limit to 15 millicuries/change Radiation Safety Officer]
    - (7) September 18, 1996 [Provides licensee's basis for release to non-radiological use of rooms 3D231 and 3D239 of the John Wesley Powell Building]
    - (8) January 21, 1997 [Additional information in support of amendment application]
    - (9) February 5, 1997 [Clarification of authorized users and adding of sealed sources deleted by amendment No. 29]
    - (10) January 27, 1997 [Final survey report for rooms 3C429 & BC214C, John Wesley Powell Building]

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number	45-15923-01
Docket or Reference Number	030-10034

**Amendment No. 31**

(cont.)

**CONDITIONS**

21. (cont.)
- (11) February 3, 1997 [Final survey report for rooms 107A, 203, 204, 205, 209, and 210, Solid State Physics Building]
  - (12) May 14, 1997 [Transmits Radiation Safety Manual dated April 1997]
  - (13) September 4, 1997 [Incorporate SNM-1330 with 45-15923-01]
  - (14) September 17, 1997 [Additional information and clarification of September 4, 1997 letter]

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

EARL G. WRIGHT

DATE

*SEP 23 1997*

BY

*Earl G. Wright*

Region II, Division of Nuclear Materials Safety  
61 Forsyth Street, S.W., Suite 23T85  
Atlanta, GA 30303

N:\MLICENSE\45-15923.A31

BETWEEN:

License Fee Management Branch, ARM  
and  
Regional Licensing Sections

(FOR LFRS USE)  
INFORMATION FROM LTS

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

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: INTERIOR, DEPARTMENT OF THE  
Received Date: 970912  
Docket No.: 3010034  
Control No.: 257633  
License No.: 45-15923-C1  
Action Type: Amendment

2. FEE ATTACHED

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

3. COMMENTS

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

B. 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 \_\_\_\_\_

License Number SNM-1330

Docket or Reference Number ~~070~~-01358

Amendment No. 14

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

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

In accordance with letter dated September 4, 1997, and in accordance with issuance of Amendment No. 31 to License No. 45-15923-01, License No. SNM-1330 is hereby terminated.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

EARL G. WRIGHT

Date SEP 23 1997

By Earl G. Wright  
Region II, Division of Nuclear Materials Safety  
61 Forsyth Street S.W., Suite 23T85  
Atlanta, GA 30303

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**SUPPLEMENTARY SHEET**

License Number SNM-1330

Docket or Reference Number ~~870~~-01358

Amendment No. 14

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

In accordance with letter dated September 4, 1997, and in accordance with issuance of Amendment No. 31 to License No. 45-15923-01, License No. SNM-1330 is hereby terminated.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

EARL G. WRIGHT

Date SEP 23 1997

By Earl G. Wright

Region II, Division of Nuclear Materials Safety  
61 Forsyth Street S.W., Suite 23T85  
Atlanta, GA 30303

*AK 20*

BETWEEN:

License Fee Management Branch, ARM  
and  
Regional Licensing Sections

(FOR LIMS USE)  
INFORMATION FROM LITS  
Program Code: 22111  
Status Code: 0  
Fee Category: EX 1D 2C  
Exp. Date: 20050531  
Fee Comments:  
Decom Fin Assur Req'd: Y

LICENSE FEE TRANSMITTAL

REGION

1. APPLICATION ATTACHED

Applicant/Licensee: INTERIOR, DEPARTMENT OF THE  
Received Date: 970912  
Docket No: 7001358  
Control No.: 257634  
License No.: SNM-1330  
Action Type: Termination

2. FEE ATTACHED

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

3. COMMENTS

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

B. 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 \_\_\_\_\_