

Corrected 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, 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.

DL-021397-03

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
F. Americium 241	F. Sealed sources	F. 20 sources, not to exceed 40 millicuries (1.48 GBq) total

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.-/
- E.-> For storage incident to disposal.
- F.-/

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**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

Corrected Copy

License Number 45-15923-01

Docket or Reference Number 88-10034

Amendment No. 29

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:

<ol style="list-style-type: none"> A. Charles W. Naeser B. Nancy D. Naeser C. Jeffrey N. Grossman D. Curtis A. Palmer E. Elizabeth J. Jones F. James E. Landmeyer G. Francis H. Chapelle H. Paul M. Bradley 	<ol style="list-style-type: none"> For materials listed in Subitems 6.C and for 6.A through F incident to radiation safety duties. For materials listed in Subitem 6.C. For materials listed in Subitems 6.C. For materials listed in Subitems 6.B. and C. For materials listed in Subitems 6.A. and B. For materials listed in Subitems 6.B. For materials listed in Subitems 6.A. and B. For materials listed in Subitem 6.B.
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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.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

Corrected Copy

License Number 45-15923-01

Docket or Reference Number 880-10034

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, 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]

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

Corrected Copy

License Number 45-15923-01

Docket or Reference Number ~~80~~-10034

Amendment No. 29

CONDITIONS

21.(cont)

- | | | |
|-------------------|------------------------|--|
| B. Letters dated: | (1) October 4, 1990 | [Change user names, add authorized user, delete departed users, change rooms] |
| | (2) July 1, 1994 | [Add authorized users] |
| | (3) January 30, 1995 | [NRC letter extends expiration date per 10 CFR 30.36] |
| | (4) March 1, 1995 | [New location of lab] |
| | (5) June 14, 1996 | |
| | (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] |

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

EARL G. WRIGHT

DATE FEB 13 1997

BY Earl G. Wright

Region II, Division of Nuclear Materials Safety
101 Marietta Street, N.W., Suite 2900
Atlanta, GA 30323-0199

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30333-0199

FEB 13 1997

INFORMATION FOR NRC MATERIAL LICENSEES

- Please find enclosed:
- Your NRC material license
 - Amendment to your NRC material license
 - Amendment renewing your NRC material license
 - Amendment terminating your NRC material license
 - Notice for Radiographer Quality Assurance Approval Program

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify this office (ATTN: Ms. Diane Heim at (404) 331-4673) so that we can provide appropriate corrections and answers.

Please be advised that your license expires at the end of the day in the month and year stated in the license. 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. Not possess and use materials authorized in Items 6, 7, and 8, on the license until:
 - a. you have constructed the facilities and obtained the equipment described in the license application and supporting documentation; and
 - b. you have notified the U. S. Nuclear Regulatory Commission, Region II, ATTN: Materials Licensing/Inspection Branch, in writing, that activities authorized by the license will be initiated.
 - c. you have submitted & certified implementation of a Quality Management Program (10 CFR 35.32) for radiotherapy, or for administering > 30 uCi of I-125 or I-131.
3. 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).
4. In accordance with 10 CFR 30.36(b) and/or license condition, notify NRC, promptly, in writing, and request termination of the license:
 - a. when you decide to terminate all activities involving materials authorized under the license; or
 - b. if you decide not to complete the facility, acquire equipment, or possess and use authorized material.

5. 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.
6. 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, please note that NRC Form 313 requires the applicant, by his/her signature, to verify that the applicant understands that all statements contained in the application are true and correct to the best of the applicant's knowledge. The signatory for the application should be the licensee or certifying official rather than a consultant.

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.

Enclosures:

1. NRC License
2. Category Marked Below for:
 - New licenses: NUREG-1600 (7/95); 19; 20; 30; 40 or 70, as appropriate; 71; 170; NRC Form 3; Agreement State list; and NRC Form 313.
 - New radiography licenses: Parts 34; 150.
 - New medical and teletherapy licenses: Part 35.
 - Amendments and renewals: NRC Form 313.

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