

MATERIALS LICENSE

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.

SL 03225

316406

Licensee

In accordance with letter dated **July 26, 2007, and facsimile dated October 24, 2007,**

- 1. Severn Trent Laboratories-St. Louis
- 2. 13715 Rider Trail North
Earth City, MO 63045

3. License number 24-24817-01 is amended in its entirety to read as follows:

4. Expiration date August 31, 2012

5. Docket No. 030-29601
Reference No.

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. Any byproduct material listed in 10 CFR 33.100, Schedule A., except as specified below

A. Any

A. As specified in 10 CFR Part 33, Schedule A., Column II

B. Strontium-90

B. Any

B. 100 millicuries

C. Cesium-137

C. Any

C. 100 millicuries

D. Cobalt-60

D. Any

D. 100 millicuries

E. Hydrogen-3

E. Any

E. 3 curies

F. Plutonium

F. Any

F. 2 grams

G. Uranium-233

G. Any

G. 2 grams

H. Uranium-235

H. Any

H. 340 grams

I. Any byproduct material with Atomic Numbers between 84-103, inclusive

I. Any

I. 5 millicuries each radionuclide with a total possession limit of 100 millicuries

J. Natural Uranium

J. Any

J. 136 kilograms (300 pounds)

K. Barium-133

K. Sealed sources

K. 4 sources, not to exceed 20 microcuries per source

L. Nickel-63

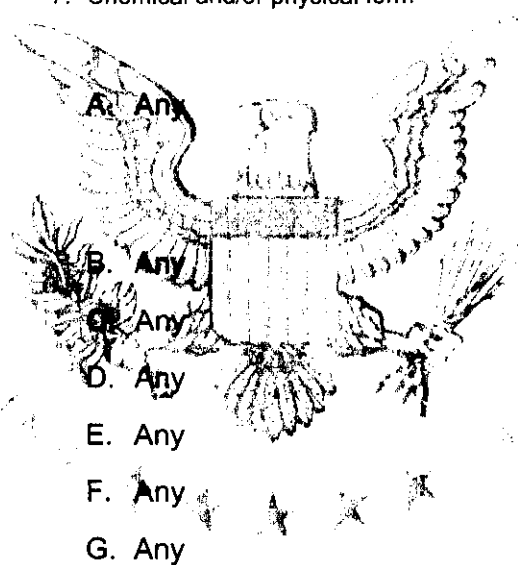
L. Plated sources

L. 21 sources, not to exceed 15 millicuries per source

M. Natural Thorium

M. Any

M. 200 millicuries



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9. Authorized Use:

- A. through J. and M. To be used incident to the performance of chemical and radiochemical analysis of samples and as calibration standards for calibration of instruments.
- K. To be used as internal calibration sources for liquid scintillation counters.
- L. To be used in gas chromatograph devices for sample analysis.

CONDITIONS

10. Licensed material shall be used only at the licensee's facilities located at 13715 Rider Trail North, Earth City, Missouri.
11. The Radiation Safety Officer for this license is Michael Ridenhower.
12. Licensed material shall be used by, or under the supervision of, James M. Kleszczewski and Michael Ridenhower.
13. In addition to the possession limits in Item 6, the licensee shall further restrict the possession of licensed material to quantities below the limits specified in 10 CFR 90.72 which require consideration of the need for an emergency plan for responding to a release of licensed material.
14. A. Sealed sources 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. 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.
- C. Sealed sources need not be leak tested if:
- (i) they contain not more than 100 microcuries of beta and/or gamma emitting material;
 - (ii) 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.

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- (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.

D. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.

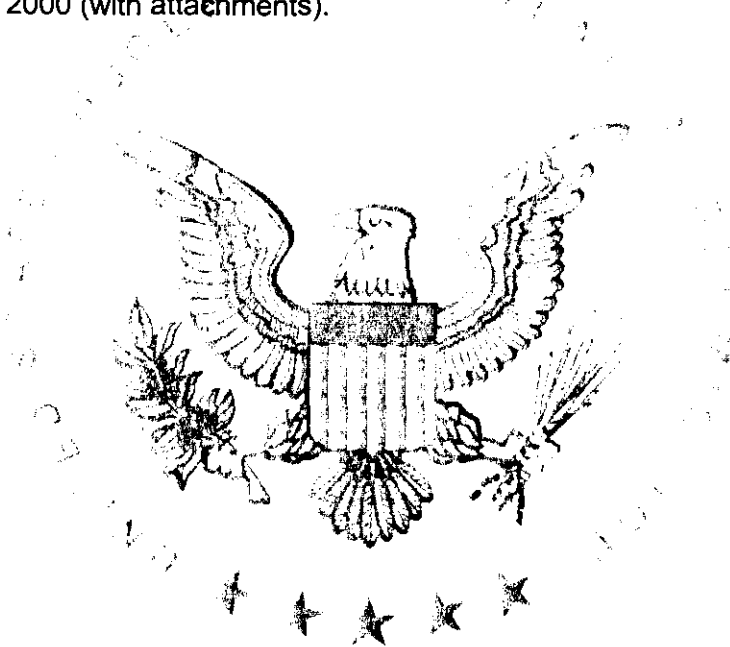
E. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to perform such services.

- 15. 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.
- 16. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
- 17. The licensee is authorized to transport licensed material only in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

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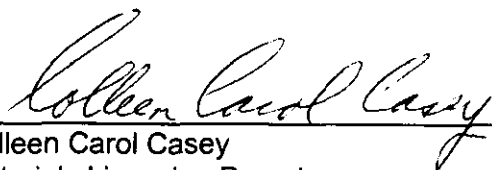
18. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Applications dated December 20, 1991 (with attachments) and February 7, 2002 (with attachments).
- B. Letters dated May 14, 1992, December 20, 1996 (with attachments, excluding procedure EHS 150), and February 29, 2000 (with attachments).



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date OCT 25 2007

By


Colleen Carol Casey
Materials Licensing Branch
Region III