

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.

PL 03123
Licensee

319609

In accordance with application dated **October 15, 2008**,
 3. License number 24-11263-01 is amended in its entirety to read as follows:
 4. Expiration date August 31, 2013
 5. Docket No. 030-05125
 Reference No.

- 1. St. Louis County Department of Health
Environmental Health Laboratories
- 2. 111 South Meramec
Clayton, MO 63105

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 with Atomic Nos. 1 through 83, inclusive	A. Any	A. 5 millicuries total
B. Uranium (natural)	B. Any	B. 0.1 microcurie
C. Americium-241	C. Any	C. 15 microcuries
D. Radium-226	D. Sealed source (Nucleus Inc. Model Ra-226-SC; NMC Gold Standard Series Ra-226 disc)	D. 5 sources, total not to exceed 0.1 microcuries
F. Radium-228	F. Bound/non-volatile/liquid	F. 0.01 microcuries
G. Radium-226	G. Bound/non-volatile/liquid	G. 0.4 microcuries
H. Nickel-63	H. Foil source (Tracor Detector cell Model 114800-3201 or Model 111019)	H. 3 cells not to exceed 15 millicuries each

9. Authorized Use:
- A. through G. Preparation of and use as analytical samples or standards and for instrument calibration.
 - H. To be used in gas chromatograph for sample analysis.

CONDITIONS

- 10. Licensed material shall be used only at the licensee's facilities located at 111 South Meramec, Clayton, Missouri.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**License Number
24-11263-01Docket or Reference Number
030-05125

Amendment No. 19

11. Licensed material shall be used by, or under the supervision of, Robert A. Nicolotti, Ph.D. or **Jennifer Western**. Licensed material listed in Subitem 6.H. may also be used by Wayne Wilhelm.
12. The Radiation Safety Officer for this license is Robert A. Nicolotti Ph.D.
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.
- 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. 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.
- E. 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 (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.
- F. 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 or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
15. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the Commission or an Agreement State to perform such services.

**MATERIALS LICENSE
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Amendment No. 19

16. Except as otherwise specified in this license, the licensee shall have available and follow the instructions contained in the manufacturer's instruction manual for the chromatography device.
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 transport licensed material only in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."**
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 May 28, 2003 and **October 15, 2008.**

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date DEC 23 2008By *Toye L. Simmons*
Toye L. Simmons
Materials Licensing Branch
Region III