NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 60

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. JCO 3620 317648

Licensee	In accordance with letter dated **October 30, 2008,**
1. Midwest Research Institute	3. License number 24-02564-02 is amended in its entirety to read as follows:
2. 425 Volker Blvd. Kansas City, MO 64110-2299	4. Expiration date December 31, 2010
	5. Docket No. 030-05083 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. Hydrogen-3	A. Any	A. 500 Curies
B. Carbon-14	B. Any	B. 100 Curies
C. Phosphorus-32	C. Any	C. 100 millicuries
D. Phosphorus-33	D. Any	D. 30 millicuries
E. Nickel-63	E. Foil/Plated Sources (which have been registered with the NRC pursuant to Section 32.210 of 10 CFR Part 32 or equivalent Agreement State Regulations)	E. 15 millicuries per foil, 450 millicuries total
F. Americium-241	F. Foil source (Nycomed Amersham Plc Model AMM.1001	F. 1 source not to exceed 50 microcuries per square centimeter

9. Authorized Use:

A. through D. To be used for research and development as defined in 30.4 of 10 CFR Part 30, including animal studies and for instrument calibration.

E. To be used as ionization sources in gas chromatographs for sample analysis.

F. To be used for research and development as defined in 30.4 excluding animal studies.

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CONDITIONS

10. A. Licensed material shall be used only at the licensee's facilities located at 425Volker Blvd., Kansas City, Missouri.

B. Licensed material listed in Subitem 6.K. may also be used at temporary jobsites of the licensee anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.

11. A. Radiation Safety Officer: James M. McHugh.

B. Licensed material listed in Item 6 above is authorized for use by, or under the supervision of, the following individual(s) for the materials and uses indicated:

Michael Fischer	Nickel-63 foil or plated sources.
David McCampbell	Nickel-63 foil or plated sources.
H. Michael Molloy	Nickel-63 foil or plated sources
Scott Klamm	Nickel-63 foil or plated sources.
Frank Pendleton	Nickel-63 foil or plated sources.
Kelly L. Brown, Ph.D.	Hydrogen-3, carbon-14, phosphorus-32, phosphorus-33 and sulfur-35.
Shirley J. Ireland	Nickel-63 foil or plated source.
Linda G. Seimann	Nickel-63 foil or plated source.
Ya-Ching Alice Shan	Nickel-63 foil or plated source.
James M. McHugh.	Americium-241 foil source.
Mingcheng Han, Ph.D.	Carbon-14 and hydrogen-3.
Panna L. Cole, Ph.D.	Carbon-14 and hydrogen-3.
Joseph Algaier, Ph.D.	Carbon-14, hydrogen-3 and phosphorus-32.
Peter Deardorff	**Carbon-14 and hydrogen-3**

12. 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.

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13. A. Sealed sources shall be tested for leakage and/or contamination at intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.

    B. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.

    C. Sealed sources need not be tested if they 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 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 of radioactive material on the test sample. If the test reveals the presence of 0.005microcurie 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, including leak test sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to perform such services.

    F. Records of leak test results shall be kept in microcuries and shall be maintained for 3 years.

14. Detector cells containing licensed material shall not be opened or the sources removed from the detector cell by the licensee.

15. The licensee shall not use licensed material in or on human beings or in field applications where activity is released except as provided otherwise by specific condition of this license.

16. Experimental animals administered licensed materials or their products shall not be used for human consumption.

17. The licensee shall maintain a funding plan or certificate of financial assurance for decommissioning per the provisions of 10 CFR Part 30.35 and this license.

18. The licensee is authorized to hold radioactive material with a physical halflife of less than 120 days for decay-in-storage before disposal in ordinary trash provided:

    A. Before disposal as ordinary trash, byproduct material shall be surveyed at the container surface with the appropriate survey meter set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.

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B. A record of each disposal permitted under this License Condition shall be retained for three years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.

19. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the manufacturer or other persons specifically licensed by the Commission or an Agreement State to perform such services.

20. The licensee shall conduct a physical inventory of all sealed and/or foil sources at intervals not to exceed 3 months.

21. In addition to the possession limits in Condition 8, the licensee shall further restrict the possession of unsealed licensed material to quantities less than or equal to 10^6 times the applicable limits in Appendix to Part 30 as specified in 10 CFR 30.35(d).

22. 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 applcation and correspondence are more restrictive than the regulations.

A. Applications dated July 12, 2000, July 9, 2001, April 27, 2005;

B. Letters dated July 13, 2001, April 15, 2002, June 11, 2002, March 30, 2004, July 18, 2005, **October 30, 2008;** and

C. Three Facsimiles dated August 23, 2002, **and facsimile dated December 8, 2008.**

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date DEC 16 2008

By James Mullauer
James R. Mullauer, M.H.S.
Materials Licensing Branch
Region III