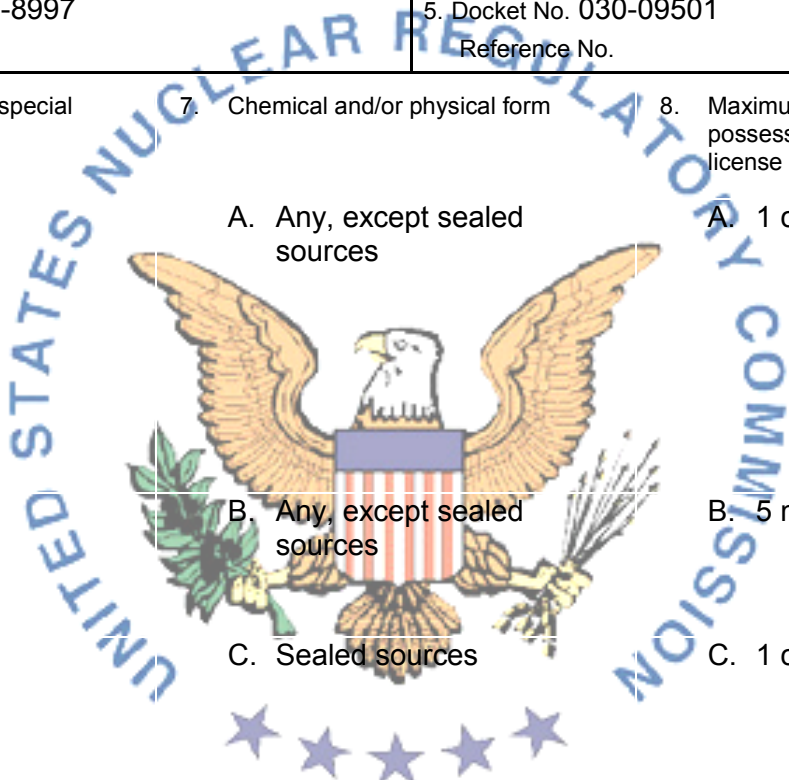


MATERIALS LICENSE

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.

Licensee 1. Montana Tech of The University of Montana 2. 1300 West Park Street Butte, Montana 59701-8997	In accordance with letters received and dated January 8, and January 28, 2010, respectively 3. License number 25-15640-01 is amended in its entirety to read as follows: 4. Expiration date August 31, 2011 5. Docket No. 030-09501 Reference No.
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6. Byproduct, source, and/or special nuclear material A. Hydrogen-3 B. Carbon-14 C. Hydrogen-3 D. Cesium-137 E. Americium-241 F. Hydrogen-3	7. Chemical and/or physical form A. Any, except sealed sources B. Any, except sealed sources C. Sealed sources D. Sealed sources E. Sealed sources F. Titanium tritide foils	8. Maximum amount that licensee may possess at any one time under this license A. 1 curie B. 5 millicuries C. 1 curie D. 1 curie E. 1 curie F. 200 millicuries per foil
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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
G. Americium-241	G. Sealed neutron source (CPN International, Inc. Model CPN-131)	G. 50 millicuries per source and 50 millicuries total.
H. Americium-241	H. Liquid	H. 1 microcurie
I. Chlorine-36	I. Liquid	I. 1 microcurie
J. Phosphorus-32	J. Any, except sealed sources	J. 10 millicuries
K. Sulfur-35	K. Any, except sealed sources	K. 10 millicuries

9. Authorized Use:

- A. through E. Research and development as defined in 10 CFR 30.4; teaching and training of students; and calibration of licensee's survey instruments.
- F. Custom source for use in Rydock Scientific Company Model RSECD-01 Continuous SF6 Microanalyzer.
- G. through I. For storage only incident to disposal.
- J. and K. Research and development as defined in 10 CFR 30.4.

CONDITIONS

10. Licensed material shall be stored or used only at the licensee's facilities located at 1300 West Park Street, Butte, Montana.
11. A. Licensed material identified in Items 6.A. through 6.F. shall be used by, or under the supervision of, Holly Peterson or Mary Rivenes.
- B. Licensed material identified in Item 6.G., shall be used by, or under the supervision of Fred Schmidt.

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- C. Licensed material identified in Items 6.H. and 6.I. shall be used by, or under the supervision of, Marilyn Cameron.
- D. Licensed material identified in Items 6.J. and 6.K. shall be used by, or under the supervision of, Marisa Pedulla.
- E. The Radiation Safety Officer for this license is Marilyn Cameron.
12. Licensed material shall not be used in or on humans except as provided otherwise by specific condition of this license.
13. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
14. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, 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 radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.
15. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
16. 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 and detector cells 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 the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by 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.
- D. Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material.
- E. 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.

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- F. 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. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region IV, 612 E. Lamar Blvd., Suite 400, Arlington, Texas 76011, ATTN: Director, Division of Nuclear Materials Safety. The report shall specify the source involved, the test results, and corrective action taken.
- G. Tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services. In addition, the licensee is authorized to collect leak test samples but not perform the analysis; analysis of leak test samples must be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
- H. Records of leak test results shall be kept in units of microcuries and shall be maintained for 5 years.
17. Each portable gauge shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The gauge or its container must be locked when in transport, storage, or when not under the direct surveillance of an authorized user.
18. Except for maintaining labeling as required by 10 CFR Part 20 or 71, the licensee shall obtain authorization from NRC before making any changes in the sealed source, device, or source-device combination that would alter the description or specifications as indicated in the respective certificates of Registration issued either by the Commission pursuant to 10 CFR 32.210 or by an Agreement State.
19. Any cleaning, maintenance, or repair of the gauges that requires detaching the source or source rod from the gauge shall be performed only by the manufacturer or other persons specifically licensed by the Commission or an Agreement State to perform such services.
20. A. If the licensee uses unshielded sealed sources extended more than 3 feet below the surface, the licensee shall use surface casing that extends from the lowest depth to 12 inches above the surface and other appropriate procedures to reduce the probability of the source or probe becoming lodged below the surface. If it is not feasible to extend the casing 122 inches above the surface, the licensee shall implement procedures to ensure that the cased hole is free of obstruction before making measurements.
- B. If a sealed source or a probe containing sealed sources becomes lodged below the surface and it becomes apparent that efforts to recover the sealed source or probe may not be successful, the licensee shall notify the U.S. Nuclear Regulatory Commission and submit the report required by 10 CFR 30.50(b)(2) and (c). The licensee shall not abandon the sealed source or probe without obtaining the Commission's prior written consent.
21. 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.

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22. A. Detector cells containing a titanium tritide foil or a scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents the foil temperature from exceeding that specified in the certificate of registration issued by NRC pursuant to 10 CFR 32.210 or the equivalent regulations from an Agreement State.
- B. When in use, detector cells containing a titanium tritide foil or a scandium tritide foil shall be vented to the outside.
23. The licensee is authorized to hold byproduct material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal without regard to its radioactivity if the licensee:
- A. Monitors byproduct material at the surface before disposal and determines that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding; and
- B. Removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee; and
- C. Maintains records of the disposal of licensed materials for 3 years. The record must include the date of the disposal, the survey instrument used, the background radiation level, the radiation level measured at the surface of each waste container, and the name of the individual who performed the disposal.
24. 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."
25. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d) for establishing decommissioning financial assurance.

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26. 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. Application dated February 22, 2001
 - B. Letter dated August 6, 2001
 - C. Letter dated August 21, 2001
 - D. Letter dated July 1, 2003
 - E. Letter dated September 15, 2005
 - F. E-mails dated October 20, 2005
 - G. Letter dated December 2, 2005
 - H. E-mail w/ attachments dated January 28, 2010 (ML100331913)
 - I. Letter dated January 28, 2010 (ML100331913)



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: April 7, 2010

By: _____

*/RA/*Jacqueline D. Cook, Senior Health Physicist
Nuclear Materials Safety Branch B
Region IV
Arlington, Texas 76011-4125