

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 05

**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. *500322* *576390*

Licensee	In accordance with letter dated <b>January 30, 2012,</b>
1. Nuclear Measurements Corporation  2. 2460 North Arlington Avenue Indianapolis, IN 46218	3. License number 13-03341-03 is amended in its entirety to read as follows:
	4. Expiration date January 31, 2012
	5. Docket No. 030-28752 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. Cesium-137	A. Sealed sources (Isotope Products, Inc.)	A. 500 microcuries
B. Carbon-14	B. Sealed sources	B. 200 microcuries
C. Chlorine-36	C. Sealed sources	C. 150 microcuries
D. Krypton-85	D. Sealed sources	D. 500 microcuries
E. Strontium-90	E. Sealed sources	E. 10 microcuries
F. Hydrogen-3	F. Sealed sources	F. 1000 microcuries
G. Barium-133	G. Sealed sources	G. 300 microcuries
H. Cobalt-60	H. Sealed sources	H. 150 microcuries
I. Xenon-133	I. Sealed sources	I. 500 microcuries
J. Uranium-235	J. Sealed sources	J. 0.01 microcurie
K. Americium-241	K. Sealed sources	K. 10 microcuries
L. Lead-210	L. Sealed source	L. 0.0043 microcuries
M. Thorium-230	M. Sealed sources	M. 0.119 microcuries
N. Uranium-238	N. Sealed sources	N. 0.010 microcuries
O. Plutonium-239	O. Sealed sources	O. 0.452 microcuries
P. Lead-210	P. Liquid sources	P. 49.835 microcuries
Q. Lead-210	Q. Sealed sources	Q. 0.5577 microcuries

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## 9. Authorized Use

A. To be used for instrument calibration and redistribution to individuals authorized to receive, possess, and use the byproduct material pursuant to a specific license issued by the Nuclear Regulatory Commission or an Agreement State.

B. through K. For instrument calibration and manufacture of instrumentation containing check sources.

L. To be used for instrument calibration.

M. through Q. For storage only incident to disposal.

CONDITIONS

10. Licensed material shall be used only at the licensee's facilities located at 2460 North Arlington Avenue, Indianapolis, Indiana.

11. The Radiation Safety Officer for this license is Donald L. DeMoss.

12. Licensed material shall be used by, or under the supervision of, Donald L. DeMoss, or Pravin Patel.

13. A. (1) Each sealed source containing licensed material, other than Hydrogen-3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months; except those sealed sources as specified by the manufacturer and specifically authorized by the Commission or an Agreement State may be leak tested at intervals not to exceed three years.

(2) In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source received from another person shall not be put into use until tested.

(3) Notwithstanding the periodic leak test required by this condition, any licensed sealed source is exempt from such leak test 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. 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 appropriate U.S. Nuclear Regulatory Commission, Regional Office referenced in Appendix D of 10 CFR Part 20. The report shall specify the source involved, the test results, and corrective action taken.**

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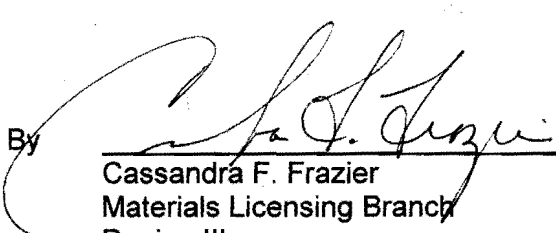
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- C. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to perform such services. Licensed material shall not be used in or on humans except as provided otherwise by specific condition of this license.
14. Sealed sources containing licensed material shall not be opened
15. The licensee shall conduct a physical inventory every six (6) months to account for all sealed sources received and possessed under the license. The records of the inventories shall be maintained for two (2) years from the date of the inventory for inspection by the Commission, and shall include the quantities and kinds of byproduct material, manufacturer's name and model numbers, location of sealed sources and the date of the inventory.
16. 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 October 29, 2001,
- B. Facsimile dated January 21, 2002, and
- C. Letters dated January 30, 2012 and February 14, 2012.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date FEB 15 2012

By

  
Cassandra F. Frazier  
Materials Licensing Branch  
Region III