

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, 37, 39, 40, 70 and 71, 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. Quantel-USA	In accordance with application dated December 20, 2016	4. Expiration Date: January 31, 2020	
2. 601 Haggerty Lane, Suite C Bozeman, MT 59715	3. License number: 25-27639-01 is amended in its entirety to read as follows:	5. Docket No.: 030-35151 Reference No.:	
6. Byproduct, source, and/or special nuclear material A. Americium-241	7. Chemical and/or physical form A. Sealed, Plated, or Foil Sources (Nuclear Radiation Developments, Inc., Model A-001)	8. Maximum amount that licensee may possess at any one time under this license A. 8.35 millicuries per source and 20 millicuries total	9. Authorized use A. For use in research and development as defined in 10 CFR 30.4.

CONDITIONS

10. Licensed material may be used or stored at the licensee's facilities located at:
- A. The Life of Montana Building, 601 Haggerty Lane, Bozeman, Montana, and
 - B. 49 Willow Peak Drive, Bozeman, Montana.
11. Licensed materials may be used by, or under the supervision of, Justin Torgerson, or any individual who have received the training described in the application dated July 15, 2009. The licensee shall maintain records of individuals designated as users for 3 years following the last use of licensed material by the individual.

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12. The Radiation Safety Officer (RSO) for this license is Justin R. Torgerson, Ph.D.
13. A. Foils or plated sources shall be tested for leakage and/or contamination at intervals not to exceed 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. In the absence of a registration certificate, sealed sources shall be tested for leakage and/or contamination at intervals not to exceed 6 months, or at such other intervals as specified.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to primarily 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. Foils or plated 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.
- E. The leak test shall be capable of detecting the presence of 185 becquerels (0.005 microcuries) of radioactive material on the test sample. If the test reveals the presence of 185 becquerels (0.005 microcuries) 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, 1600 East Lamar Boulevard, Arlington, Texas 76011-4511, ATTN: Director, Division of Nuclear Materials Safety. The report shall specify the source involved, the test results, and corrective action taken.

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F. Analysis of leak test samples and/or contamination shall be performed by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services. The licensee is authorized to collect leak test samples but not perform the analysis.

G. Records of leak test results shall be kept in units of becquerels (microcuries) and shall be maintained for 3 years.

14. Foils or plated sources containing licensed material shall not be opened by the licensee.
15. 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 3 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.
16. Maintenance, repair, cleaning, replacement, and disposal of foils or plated sources shall be performed only by the device manufacturer or other persons specifically authorized by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
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."
18. The licensee shall use only foils or plated sources for which a sealed source registration certificate has been issued by the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210(e) or an Agreement State. Possession and use of the foils or plated sources used must adhere to the conditions and limitations of the registration certificate.
19. The licensee shall not use the licensed material in or on humans.
20. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.

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21. 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. Letter dated April 10, 2008 (ML081420562)

B. Application dated July 15, 2009 (ML092330987)

C. Application dated December 20, 2016 (ML17003A435)



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: January 12, 2017

By: /RA/

Roberto J. Torres, M.S., Senior Health Physicist
Nuclear Materials Safety Branch B
Region IV
Arlington, Texas 76011-4511