

**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. U.S. Environmental Protection Agency Region 8  2. Mail Stop 8EPR-PS 1595 Wynkoop Street Denver, Colorado 80202-1129	In accordance with letter received June 23, 2011  3. License number 05-14892-02 is amended in its entirety to read as follows:  4. Expiration date July 31, 2015  5. Docket No. 030-08754  Reference No.	
6. Byproduct, source, and/or special nuclear material   A. Nickel-63         B. Americium-241         C. Cesium-137         D. Cobalt-60         E. Strontium-90	7. Chemical and/or physical form   A. Sealed sources (QSA Global (Formerly AEATechnology) Model NBCD (not used after June 2009); Isotope Products Laboratories (Formerly DuPont Merck Pharmaceutical) Model NER-004P; Safety Light Corp. Model LAB 508-3 (formerly U.S. Radium); New England Nuclear Model NER-004; and NRD Model N-1001)  B. Sealed source (XRF portable SPECTRACE analyzer)  C. Calibration or reference sources  D. Calibration or reference sources  E. Calibration or reference sources	8. Maximum amount that licensee may possess at any one time under this license   A. 15 millicuries per source and 200 millicuries         B. 10 microcuries         C. 1 millicuries         D. 5 microcuries         E. 1 microcurie

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**License Number  
05-14892-02Docket or Reference Number  
030-08754

Amendment No. 26

## 9. Authorized Use:

- A. and B. To be used, for analysis of physical properties, in VICI (Valco Instruments Co. Inc) Model SRI 8610-20 GC, Hewlett Packard Model 6890, and Model Agilent Technologies Model 6890N in gas chromatographs and X-Ray fluorescence analyzer devices that have been registered either with NRC under 10 CFR 32.210 or with an Agreement State and have been distributed in accordance with an NRC or Agreement State specific license authorizing distribution to persons specifically authorized by an NRC or Agreement State license to receive, possess, and use the devices.
- C. through E. To be used as calibration or reference sources

## CONDITIONS

10. Licensed material shall be stored or used only at the licensee's facilities located at:
- A. 16194 W. 45<sup>th</sup> Drive, Radiation Preparation Room, B127, Golden, Colorado.
  - B. 555 W. 48<sup>th</sup> Avenue, STE#D, Denver, Colorado.
  - C. Licensed material identified in Items 6.A. and 6.B. shall be used only at temporary job sites of the licensee anywhere in the United States.
11. Licensed material shall be used by or under the supervision of Richard V. Graham, Ph.D.
12. The Radiation Safety Officer for this license is Richard V. Graham, Ph.D.
13. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
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 source s 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. 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.
- A. 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.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**License Number  
05-14892-02Docket or Reference Number  
030-08754

Amendment No. 26

- B. 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.
- 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 (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. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. Records may be disposed of following Commission inspection.
- E. The licensee is authorized to collect leak test samples for analysis by the licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
- F. Records of leak test results shall be kept in units of microcuries and shall be maintained for 3 years.
16. 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.
17. The licensee shall not acquire licensed material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.
18. 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 by the manufacturer and approved by U.S. Nuclear Regulatory Commission.
- B. When in use, detector cells containing a titanium tritide foil or a scandium tritide foil shall be vented to the outside.
19. 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."

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**License Number  
05-14892-02Docket or Reference Number  
030-08754

Amendment No. 26

20. 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 January 25, 2005

[ML050380378]

B. Letter dated July 25, 2005

[ML052060367]

C. Letter received June 23, 2011

[ML11186A999]



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

Date: September 16, 2011

By: \_\_\_\_\_

Lizette Roldán-Otero, Ph.D., Health Physicist  
Nuclear Materials Safety Branch B  
Region IV  
Arlington, Texas 76011-4125