Amendment No. 9

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	In accordance with letter dated May 24, 2017,	4. Expiration Date: August 31, 2026
1. Department of the Army 20th Command (CBRNE)		5. Docket No.: 030-37133 Reference No.:
2. 2400 21st Street Aberdeen Proving Ground, MD 21010-5424	3. License number: 19-31127-01 is amended in its entirety to read as follows:	

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	9. Authorized use
A. Californium-252	A. Sealed Sources (Frontier Technology Corporation, Model FTC Model 100)	A. 2.7 millicuries per source and 135 millicuries total	A. In Portable Isotopic Neutron Spectrometer for non-intrusive analysis, training of authorized users, training exercises, operational checks of instruments, and for storage of sources for the conduct of military operations including contingency purposes or emergency response
B. Sodium-22	B. Sealed Sources (Eckert & Ziegler Isotope Products Laboratores, Model HEG-022 and GF Type D Series)	B. 12.022 millicuries total and no single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State.	B. For use in training exercises, instrument operational checks, and calibration and/or reference standards.

MATERIALS LICENSE SUPPLEMENTARY SHEET

License Number: 19-31127-01
Amendment No. 9
Docket or Reference Number: 030-37133

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	9. Authorized use
C. Cobalt-57	C. Sealed Sources (Eckert & Ziegler Isotope Products, Model HEG-1)	C. 54 millicuries per source and 54 millicuries total	C. For use in training exercises, instrument operational checks, and calibration and/or reference standards.
D. Cobalt-60	D. Sealed Sources (Eckert & Ziegler Isotope Products, Model GF Type D Series)	D. 30 microcuries per source and 30 microcuries total	D. For use in training exercises, instrument operational checks, and calibration and/or reference standards.
E. Barium-133	E. Sealed Sources (Eckert & Ziegler Isotope Products, Model HEG-133 and GF Type D Series)	E. 1352 microcuries per source and 1352 microcuries total	E. For use in training exercises, instrument operational checks, and calibration and/or reference standards.
F. Cesium-137	F. Sealed Sources (Eckert & Ziegler Isotope Products, Model GF Type D Series)	F. 100 microcuries per source and 100 microcuries total	F. For use in training exercises, instrument operational checks, and calibration and/or reference standards.
G. Europium-152	G. Sealed Sources (Eckert & Ziegler Isotope Products, Model GF Type D Series)	G. 40 microcuries per source and 40 microcuries total	G. For use in training exercises, instrument operational checks, and calibration and/or reference standards.
H. Thorium-230	H. Sealed Sources	H. 30 nanocuries per source and 150 nanocuries total	H. For use in training exercises, instrument operational checks, and calibration and/or reference standards.
I. Uranium-238	I. Sealed Sources	I. 30 nanocuries per source and 150 nanocuries total	I. For use in training exercises, instrument operational checks, and calibration and/or reference standards.
J. Americium-241	J. Sealed Sources (Amersham, Model AMR-1151; DuPont, Model NES-128S; Eckert & Ziegler Isotope Products, Model AMRB 3135, GF Type D Series, and PHI GFS series)	J. 724 microcuries total and no single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State.	J. For use in training exercises, instrument operational checks, and calibration and/or reference standards.

MATERIALS LICENSE SUPPLEMENTARY SHEET	License Number 19-31127-01	Docket or Reference Number 030-37133
	Amendment No. 9	

CONDITIONS

10. Licensed material may be used or stored at the licensee's facilities located at:
    A. US Army 20th CBRNE Command, Analytical and Remediation Activity (CARA), Aberdeen Proving Ground, Maryland
    B. US Army 20th CBRNE Command, Nuclear Disablement Team (NDT), Aberdeen Proving Ground, Maryland
    C. CARA-Rapid Remediation West (RRW), Pline Bluff, Arkansas
    D. US Army 110th Chemical Battalion (CM BN), Joint Base Lewis-McChord, Washington
    E. US Army 759th Ordnance Company (OD CO), Explosive Ordnance Disposal (EOD), Fort Irwin, California
    F. US Army 705th Ordnance Company (OD CO), Explosive Ordnance Disposal (EOD), Fort Polk, Louisana
    G. US Army 2D CM BN, 68th Chemical Company (CM CO) (TEU), Fort Hood, Texas
    H. 22D CM BN, 46th CM CO (TEU), Fort Bliss, Texas
    I. US Army 83D CM BN, 25th CM Co (TEU), Fort Stewart, Georgia
    J. CARA-RRW, Redstone Arsenal, Alabama
    and temporary job sites of the licensee anywhere in the United States.

11. Licensed material shall only be used by, or under the supervision of, individuals who have received the training described in the March 10, 2016, and the letter dated June 13, 2016, and have been designated in writing by the Radiation Safety Officer. The licensee shall maintain records of individuals designated as users for 3 years following the last use of licensed material by the individual.

12. The Radiation Safety Officer for this license is Walter D. Wyatt, Jr.

13. A. Sealed 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.

MATERIALS LICENSE SUPPLEMENTARY SHEET	License Number 19-31127-01	Docket or Reference Number 030-37133
	Amendment No. 9	

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 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.

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. 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. 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.

F. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.

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

14. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders or foil sources removed from detector cells by the licensee, except as specifically authorized.

MATERIALS LICENSE SUPPLEMENTARY SHEET	License Number 19-31127-01	Docket or Reference Number 030-37133
	Amendment No. 9	

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 sealed 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. 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. This license condition applies only to those procedures that are required to be submitted in accordance with the regulations. 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 March 10, 2016 (ML16085A076)
    B. Letter dated June 13, 2016 (ML16180A211)

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: June 19, 2017

By: John Miller
John Miller
Region 1