

U.S. NUCLEAR REGULATORY COMMISSION

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 letters dated November 30, 2020 and December 14, 2020
1. United States Army Installation Management Command	3. Source Materials License No. SUC-1593 is administratively amended to revise license condition 18 and update references to license documents
2. ATTN: IMSO, Building 2261, 2405 Gun Shed Road, Fort Sam Houston, Texas, 78234-1223	4. Expiration date: March 21, 2026
	5. Docket No. 040-09083 Amendment No. 6

6. Source Material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
Uranium (depleted)	Any	5700 Kg, as distributed below
	Installation	DU mass (Kg)
	A. Fort Benning, GA (Georgia)	A. 1850
	B. Fort Bragg, NC (North Carolina)	B. 810
	C. Fort Campbell, KY (Kentucky)	C. 130
	D. Fort Carson, CO (Colorado)	D. 270
	E. Fort Gordon, GA (Georgia)	E. 30
	F. Fort Hood, TX (Texas)	F. 770
	G. Fort Hunter Liggett, CA (California)	G. 30
	H. Fort Jackson, SC (South Carolina)	H. 30
	I. Fort Knox, KY	I. 760
	J. Fort Polk, LA (Louisiana)	J. 370
	K. Fort Riley, KS (Kansas)	K. 20
	L. Fort Sill, OK (Oklahoma)	L. 120
	M. Donnelly Training Area, Fort Wainwright, AK (Alaska)	M. 20
	N. Joint Base Lewis-McChord/Yakima Training Center, WA (Washington)	N. 340
	O. Joint Base McGuire-Dix-Lakehurst, NJ (New Jersey)	O. 10
	P. Schofield Barracks/PTA, HI (Hawaii)	P. 140
	Total	5700 Kg

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9. Authorized Use:

Activities necessary for the possession and management of depleted uranium (DU) spotting rounds and fragments as a result of previous use of DU at sites located at U.S. Army installations. These activities include:

- A. Activities necessary to maintain the sites in a safe condition and to prevent the unauthorized removal of licensed material from the authorized places of use;
- B. Activities necessary to determine the presence of licensed material at the sites;
- C. Activities necessary to monitor the radiological environmental conditions in and around the authorized places of use to determine if licensed material is being transported in the environment; and
- D. Activities necessary for the packaging, transport, and disposal of incidentally identified licensed material to a licensed/permitted disposal facility.

CONDITIONS

10. The authorized places of use (possession) shall be at U.S. Army installations at Donnelly Training Area, Fort Wainwright, AK, Fort Benning, GA; Fort Bragg, NC; Fort Campbell, KY; Fort Carson, CO; Fort Gordon, GA; Fort Hood, TX; Fort Hunter Liggett, CA; Fort Jackson, SC; Fort Knox, KY; Fort Polk, LA; Fort Riley, KS; Fort Sill, OK; Joint Base Lewis-McChord/Yakima Training Center, WA; Joint Base McGuire-Dix-Lakehurst, NJ; and Schofield Barracks/ PTA, HI.
11. Except as specifically provided otherwise, the licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the following documents:

Operational Documents:

- Programmatic Radiation Safety Plan, "Radiation Safety Plan for IMCOM [Installation Management Command] Ranges Affected by M101 Davy Crockett Spotting Round Depleted Uranium," dated December 6, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20227A010)
- Programmatic Physical Security Plan, "Physical Security Plan for U.S. Army Installation Management Command Ranges Affected by Depleted Uranium in M101 Davy Crockett Spotting Rounds," dated December 31, 2015 (ML21165A014)
- Maps of "M101 Impact Areas," dated February 16, 2018 (ML18064A140), as amended by revised RCA map for Range 14 at Yakima Training Center (ML20031D609)
- Revised Final Programmatic Environmental Radiation Monitoring Plan (ERMP), "Programmatic Approach for Preparation of Installation-specific Environmental Radiation Monitoring Plans", and Site-Specific ERMPs, dated March 18, 2020 (ML21165A013)
- Revised Final Programmatic Quality Assurance Project Plan (QAPP), dated January 2021 (ML21049A065)
- "U.S. Army Decommissioning Funding Plan (DFP) for License Number SUC-1593," dated November 30, 2020 (ML20339A664) including Statement of Intent, dated December 27, 2019
- Letter dated December 15, 2017 (ML18009A456), clarifying sediment sample collection:
 - "The collection of the sediment sample will consist of a discrete sample at each sample location. If necessary, multiple aliquots (no more than 10) will be collected from a 1-meter radius of the sample location in order to collect the required volume from the stream bed."

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Historical License documents and Calculations:

- June 1, 2015 License Amendment Application (Package ML15161A454)
 - Form 313, "Application for Materials License," items 1-7 (ML15161A458)
 - Attachment 5, "Bounding Calculations Using RESRAD 7.0 and RESRAD-OFFSITE 3.1, (ML15161A459)
- September 30, 2015 (Response to NRC RAIs and Attachments 3, 4, 8, 9, 10, 11), (Package ML15294A276)
 - Attachment 3, "Calculation of TEDE [Total Effective Dose Equivalent] to Individual Likely to Receive Highest Dose," (ML15294A278)
 - Attachment 4, "How the Army Determined the M101 DU RCAs [Radiation Control Areas]," (ML15294A278)
 - Attachment 8, "Estimating Public Exposure to Airborne Depleted Uranium Outside the U.S. Army Pohakuloa Training Area, Hawaii," (ML15294A277)
 - Attachment 9, "Examples of Army Range Fires," (ML15294A277)
 - Attachment 10, "Arguments against Air Sampling During HE [High Explosive] Fire into RCAs, Rev. 1," (ML15294A277)
 - Attachment 11, "'Calculation of Public Dose' SOP [Standard Operating Procedure]," (ML15294A277)
- Emails:
 - Email clarifying RCAs at Fort Knox, KY, January 29, 2016 (ML16041A107)
 - Emails clarifying M101 RCAs, February 12, 2016 (ML16048A347), May 24, 2016 (ML16341C807), and December 7, 2016 showing 38 RCAs (ML16351A092)

The approved license application is hereby incorporated by reference, except where superseded by license condition(s) below:

12. If the licensee identifies information indicating that Davy Crockett-related DU may be present at a U.S. Army installation not identified in License Condition 10 or included on another U.S. Nuclear Regulatory Commission (NRC) license, then the licensee will notify the NRC in writing within 15 calendar days of the identification of this information and this notice must include a schedule for evaluating the presence of DU. The evaluation schedule should not exceed 90 calendar days from the date of the notification letter.
13. If it is determined that Davy Crockett-related DU is present at a U.S. Army installation not listed in License Condition 10 or included on another NRC license, the licensee shall submit a request to include the installation in this license within 60 calendar days of the determination. The request will address radiation safety, environmental radiation monitoring, physical security, decommissioning financial assurance, and the name of the Garrison RSO. Any additional procedures necessary to ensure compliance with License Conditions 9A - 9D that are not included in the licensee's application referenced in License Condition 11 will also be included in the request.
14. The licensee shall submit an updated site-specific decommissioning cost estimate and financial assurance instrument for each U.S. Army installation listed in License Condition 10 on a triennial basis, by December 31st of each year or, if applicable, in accordance with the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) 40.36(c)5.
15. The licensee shall post "Caution - Radioactive Material" signs at a sufficient number of locations around

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each the RCA to ensure that individuals entering the RCA are aware of the presence of DU. The signs may be placed at the perimeter of the range impact areas if posting them at the RCA boundary is unsafe due to the presence of unexploded ordnance.

16. Decommissioning is not authorized without NRC approval:
- a. The licensee shall not perform any decommissioning or ground disturbing activities to collect or remove DU fragments or contaminated soil that is identified during routine range activities at any of the RCAs without prior authorization from the NRC. Picking up incidental pieces of DU that the licensee finds during training exercises would be allowed without NRC approval, if it does not involve ground disturbing activities;
 - b. NRC or Agreement State licensed contractors may undertake decommissioning or ground disturbing activities to collect or remove DU fragments or contaminated soil that is identified during routine range activities at any RCA consistent with the conditions and commitments of their license(s); and
 - c. When the licensee engages an NRC or Agreement State licensed contractor to undertake decommissioning or ground disturbing activities to collect or remove DU fragments or contaminated soil that is identified during routine range activities at any of the RCAs, the licensee will notify NRC in accordance with the requirements of 10 CFR 40.42(g)(1). The licensee shall provide NRC with the contractor's site-specific decommissioning plans and all other documents associated with radiation safety and environmental monitoring associated with the proposed decommissioning or ground disturbing activities in accordance with the requirements of 10 CFR 40.42 prior to the commencement of the activity. If issues are identified by NRC that could impact radiological health and safety, they will be resolved prior to the commencement of the activity.
17. When analytical sampling results from locations outside of the RCA indicate that the uranium-238 to uranium-234 ratio (U-238/U-234) activity ratio exceeds 3, the licensee shall notify NRC within 30 calendar days and collect additional environmental samples within 30 calendar days of the notification of NRC, unless prohibited by the absence of the sampling media (e.g., lack of well water).
18. The Army will sample sediment and surface water semiannually at all installations listed on this license in accordance with the ERMPs and QAPP referenced in License Condition 11. The QAPP includes requirements for the timing of semiannual surface water sampling (i.e., capture lower and higher flow rates) and surface water analytical protocols (i.e., samples preserved in the original sample containers, reported total uranium includes both particle-associated, and dissolved uranium).
- 19.
- a. Licensed materials shall be kept under the supervision of the Radiation Safety Officer (RSO). The RSO for this license is Robert N. Cherry, Ph.D., U.S. Army Installation Management Command, IMSO Building 2261, 2450 Gun Shed Road, JBSA Fort Sam Houston, Texas 78234-1223. Letter dated February 24, 2010 (ADAMS Accession No. ML120950352).
 - b. The certifying official on this license is the U.S. Army Installation Management Command (IMCOM) Commander. The U.S. Army shall notify the NRC within 30 days of any change in the name of the IMCOM Commander by letter to Document Control Desk, Deputy Director, Division of Decommissioning, Uranium Recovery, and Waste Programs, Office of Nuclear Materials

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Safety and Safeguards, Mailstop T5A10, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001.

20. All written notices and reports to NRC required under this license shall be addressed to: ATTN: Document Control Desk, Deputy Director, Division of Decommissioning, Uranium Recovery, and Waste Programs, Office of Nuclear Material Safety and Safeguards, Mailstop T5A10, U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by express delivery to 11545 Rockville Pike, Two White Flint North, Rockville, MD 20852-2738. Required telephone notification shall be made to the NRC Operations Center at (301) 816-5100 for emergencies, or to the NRC License Project Manager.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

June 15, 2021 _____



Signed by Koenick, Stephen
on 06/15/21

Stephen Koenick, Branch Chief
Low-Level Waste and Projects Branch
Division of Decommissioning, Uranium Recovery,
and Waste Programs
Office of Nuclear Material Safety
and Safeguards