

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and the applicable parts of Title 10, Code of Federal Regulations, Chapter I, Parts 19, 20, 30, 31, 32, 33, 34, 35, 36, 39, 40, 51, 70, and 71, and in reliance on statements and representations heretofore made by the licensee, a licensee 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. Department of Army	3.	License Number
			SUB-1435
2.	Rock Island Arsenal 1 Rock Island Arsenal Rock Island, IL 61299-5000	4.	Expiration Date
			September 25, 2039
		5.	Docket or Reference Number
			040-08838
6.	Byproduct, Source, and/or Special Nuclear Material: Source	7.	Chemical and/or Physical Form: Any
	Uranium	8.	Maximum Amount that Licensee May Possess at Any One Time Under This License:
			80,000 kilograms

9. Authorized Use: For possession only. "Possession only" means residual radioactive material exists in place and administrative controls are maintained to minimize exposure to the public and the environment.

CONDITIONS

10. Authorized place of use: The licensed material shall be kept onsite for future decommissioning in the restricted area known as the "Depleted Uranium Impact Area". This area is located north of the firing line, at Jefferson Proving Ground, Madison, Indiana 47250.
11. 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.
- B. The licensee, without prior NRC approval, may appoint a RSO provided: a) the licensee maintains documentation demonstrating that the requirements of condition 11C are met; and b) the NRC is informed of the name of the new RSO within 30 days of the appointment by letter to Document Control Desk, Deputy Director, Division of Decommissioning, Uranium Recovery, and Waste Programs, Office of Nuclear Materials Safety and Safeguards, Mailstop T5A10, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001.
- C. The RSO shall have the following education, training, and experience:
1. Education: A Bachelor's degree in the physical sciences, industrial hygiene, or engineering from an accredited college or university or an equivalent combination of training and relevant experience in radiological protection. Two years of relevant experience is generally considered equivalent to 1 year of academic study.
 2. Health physics experience: At least 1 year of work experience in applied health physics, industrial hygiene, or similar work relevant to radiological hazards

MATERIALS LICENSE**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number: SUB-1435

Docket or Reference Number:
040-08838

Amendment No. 20

associated with site remediation. This experience should involve actually working with radiation detection and measurement equipment, not strictly administrative or "desk" work.

3. Specialized knowledge: A thorough knowledge of the proper application and use of all health physics equipment used for depleted uranium and its daughters, the chemical and analytical procedures used for radiological sampling and monitoring, methodologies used to calculate personnel exposure to depleted uranium and its daughters, and a thorough understanding of how the depleted uranium was used at the location and how the hazards are generated and controlled.
- D. The certifying official on this license is the Garrison Commander of Rock Island Arsenal. The U.S. Army shall notify the NRC within 30 days of any change in the name of the Garrison Commander by letter to Document Control Desk, Deputy Director, Division of Decommissioning, Uranium Recovery, and Waste Programs, Office of Nuclear Materials Safety and Safeguards, Mailstop T5A10, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001.
12. 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 NRC regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulation.
- A. Items A through C from Amendment 19 are deleted.
- D. Radiation Safety Plan dated May 22, 2018, that replaces the JPG Security Plan of December 10, 2003 (ML18156A002).
- E. Items E through I from Amendment 19 are deleted.
- J. Renewal application dated December 21, 2016 (ML17004A186), as amended by responses to NRC Requests for Additional Information dated May 25, 2018. (ML18156A002), including:
- i. Environmental Radiation Monitoring Plan for the DU Impact Area at Jefferson Proving Ground, Indiana, dated December 21, 2016 (ML17004A186), as amended by responses to NRC Requests for Additional Information dated May 25, 2018. (ML18156A002)
13. Deleted.
14. The licensee is hereby granted an exemption from the NRC's decommissioning timeliness rule in 10 CFR 40.42(h)(1). This exemption is for a 20-year period. The U.S. Army must determine at that time if any technological developments have made decommissioning of the site feasible prior to

MATERIALS LICENSE**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number: SUB-1435

Docket or Reference Number:
040-08838

Amendment No. 20

requesting another exemption. One year prior to the end of the 20-year period, the U.S. Army must submit a timely license renewal application.

15. Groundwater and surface water samples will be collected semi-annually and analyzed for total/isotopic uranium using ASTM Method D3972-90M (alpha spectrometry).
- A. When analytical sampling results indicate that the U-238/U-234 activity ratio exceeds 3.0, the U.S. Army will notify NRC within 30 days. The U.S. Army will then reanalyze the samples using Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and calculate the weight percentage of U-235 to determine if the sample results are indicative of totally natural uranium (at or about 0.711 weight percent U-235) or DU mixed with natural uranium (obviously less than 0.711 weight percent U-235). The U.S. Army will notify NRC of these ICP-MS results within 30 days of the reanalysis. The notification will be by letter to the Document Control Desk, Deputy Director, Division of Decommissioning, Uranium Recovery, and Waste Programs, Office of Nuclear Materials Safety and Safeguards, Mailstop T5A10, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001.
- B. When analytical sampling results indicate that the total concentration of uranium exceeds 5.5 Bq/L (150 pCi/L), the U.S. Army will notify NRC within 30 days and collect additional samples within 30 days of the notification to NRC, unless prohibited by the absence of the sampling media. The U.S. Army will notify NRC of these additional sample results within 30 days of the reanalysis. All notifications will be by letter to the address in condition 15A.
16. Maintenance of the site conditions, fencing, postings, and security are the responsibility of the U.S. Army. However, U.S. Fish and Wildlife Service and the U.S. Air Force may meet these requirements on behalf of the U.S. Army in accordance with current Memorandums of Agreement (MOA), which the U.S. Army will provide to the NRC.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

Date: September 26, 2019

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