

**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.

<p style="text-align: center;">Licensee</p> <p>1. Department of the Army Corps of Engineers</p> <p>2. 3909 Halls Ferry Road Vicksburg, MS 39180-6199</p>	<p>In accordance with letter dated October 29, 2021,</p>	<p>4. Expiration Date: July 31, 2023</p>
	<p>3. License No.: 23-01544-10 is amended in its entirety to read as follows:</p>	<p>5. Docket No.: 030-05062 Reference No.:</p>

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. Hydrogen-3	A. Any	A. 50 millicuries total	A. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.
B. Carbon-14	B. Any	B. 100 millicuries total	B. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.
C. Phosphorus-32	C. Any	C. 20 millicuries total	C. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.
D. Phosphorus-33	D. Any	D. 25 millicuries total	D. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.
E. Sulfur-35	E. Any	E. 25 millicuries total	E. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.

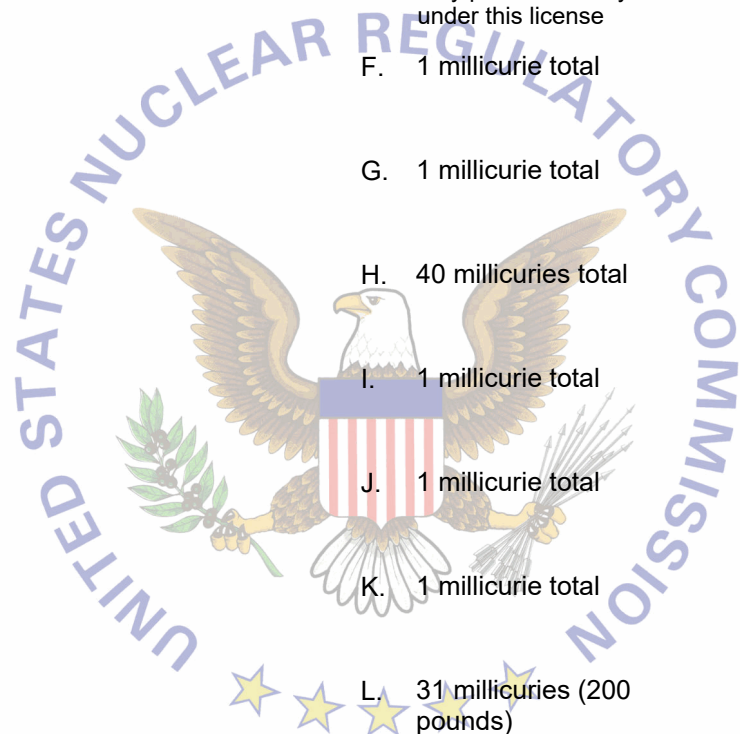
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6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license	9. Authorized use
F. Chromium-51	F. Any	F. 1 millicurie total	F. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.
G. Iron-59	G. Any	G. 1 millicurie total	G. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.
H. Nickel-63	H. Any	H. 40 millicuries total	H. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.
I. Zinc-65	I. Any	I. 1 millicurie total	I. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.
J. Cadmium-109	J. Any	J. 1 millicurie total	J. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.
K. Tin-113	K. Any	K. 1 millicurie total	K. For research and development as defined in 10 CFR 30.4; in laboratory tracer studies.
L. Uranium- depleted in Uranium-235	L. Any	L. 31 millicuries (200 pounds)	L. For research and development as defined in 10 CFR 30.4.



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**CONDITIONS**

10. Licensed material may be used or stored only at the licensee's facilities located at 3909 Halls Ferry Road, Vicksburg, Mississippi.
11. A. Licensed material in items 6.A. through 6.K. shall be used by or under the supervision of John H. Ballard, Anthony Bednar, Ph.D., Sandra M. Brasfield, Ph.D., Mark A. Chappell, Ph.D., Deborah R. Felt, John S. Furey, Cynthia L. Price, and Jeffrey A. Stevens, Ph.D.
- B. Licensed material in item 6.L shall be used by or under the supervision of John H. Ballard, Anthony Bednar, Ph.D., Mark A. Chappell, Ph.D., Deborah R. Felt, John S. Furey, and Cynthia L. Price.
- C. The Radiation Safety Officer (RSO) for this license is Darrell W. Wright.
12. The licensee is authorized to hold radioactive material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal in ordinary trash provided:
- A. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated, except for radiation labels on materials that are within containers and that will be managed as biohazard waste after they have been released from the licensee.
- B. A record of each such disposal permitted under this license condition shall be retained for 3 years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.
13. Radioactive waste possessed under this license shall be stored in accordance with the statements, representations, and procedures included with the licensee's waste storage plan described in the licensee's application dated January 16, 2013.

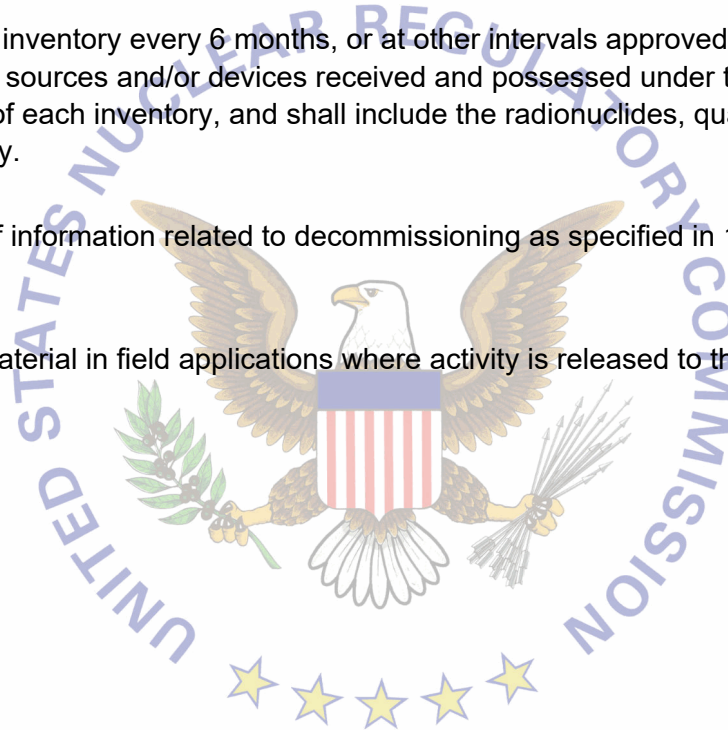
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14. The licensee shall not use licensed material in or on human beings except as provided otherwise by specific license condition.
15. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear 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. The licensee shall maintain records of information related to decommissioning as specified in 10 CFR 30.35(g) until this license is terminated by the Commission.
17. The licensee shall not use licensed material in field applications where activity is released to the environment except as provided otherwise by specific condition of this license.



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18. 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 January 16, 2013 (ML13112A769)



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: June 16, 2022By: \_\_\_\_\_  
for Casey Alldredge  
Region IV