

**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 align="center"><b>Licensee</b></p> <p>1. General Dynamics Land Systems</p> <p>2. 38500 Mound Road Sterling Heights, MI 48310</p>		<p>In accordance with letter dated October 9, 2017.</p> <p>3. License No.: 21-21068-01 is amended in its entirety to read as follows:</p>	<p>4. Expiration Date: December 31, 2025</p> <p>5. Docket No.: 030-19731 Reference No.:</p>
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Hydrogen-3</p>	<p>7. Chemical and/or physical form</p> <p>A. Gas ((in sealed glass ampules (MB-Microtec or Self-Powered Lighting, Ltd.))</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. No single source to exceed 10.2 Ci per assembly. Total not to exceed 8,000 Ci.</p>	<p>9. Authorized use</p> <p>A. To be used in light source cell assembly Model P/N 12304725, to be installed or removed component of M1A1 infinity collimator used as a muzzle reference sensor on military equipment (Abrams Tank Weapon System) for redistribution to the Department of Defense or contractors of the Department of Defense possessing a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State.</p>

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6. Byproduct, source,  
and/or special nuclear  
material

B. Nickel-63

C. Americium-241

D. Krypton-85

7. Chemical and/or physical form

B. Plated sources

C. Sealed sources (Amersham  
Corp. Foil, Model AMM)D. Gas (Source Stick (MIL. SPEC,  
Model MIL-R-51305 (MU))8. Maximum amount that licensee  
may possess at any one time  
under this licenseB. 15 millicuries per source  
and 30 curies totalC. 250 microcuries per  
source and 30 millicuries  
totalD. 5 millicuries per source  
and 15 millicuries total

9. Authorized use

B. For possession incident to installation, receipt, removal, storage, use and transfer of CAM and M88 ACADA/GID-3 chemical agent detectors. Detectors may be directly redistributed as individual units or as part of integrated systems to the Department of Defense or contractors of the Department of Defense possessing a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State.

C. For possession incident to installation, receipt, removal, storage, use and transfer of M43A 1 chemical agent detectors. Detectors may be directly redistributed as individual units or as part of integrated systems to the Department of Defense or contractors of the Department of Defense possessing a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State.

D. For possession and use incident to the testing of the ANNDR2 Radiac meter to verify proper system integration of the Control Data Processing Unit (CDPU) for use on the FOX Nuclear Biological Chemical Reconnaissance System (NBCRS).

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**CONDITIONS**

10. A. Licensed material may be used or stored at the licensee's facilities located at:

1. General Dynamics Land Systems, Central Office, 38500 Mound Rd., Sterling Heights, Michigan, 48310
2. General Dynamics Land Systems, Logistics & Engineering Facility, 6000 E. 17 Mile Rd., Sterling Heights, Michigan, 48313
3. General Dynamics Land Systems, Joint Systems Manufacturing Center, 1161 Buckeye, Lima, Ohio, 45804
4. General Dynamics Anniston Operations, Anniston Army Depot, Buildings 134 & 414, 7 Frankford Ave., Anniston, Alabama, 36206
5. General Dynamics Land Systems, Joint Base Lewis-McChord, Building R3754 South 17th St., Joint Base Lewis-McChord, Washington, 98433

B. Licensed material in devices which have been installed on military equipment may be used for purposes of display, demonstration, promotion, maintenance or operational testing at temporary jobsites anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction. Authorized areas of use within Agreement States shall be areas under exclusive Federal jurisdiction.

11. The Radiation Safety Officer (RSO) for this license is Boyd H. Rose.

12. Licensed material shall only be used by, or under the supervision of, Boyd H. Rose.

13. The licensee shall conduct a physical inventory every six 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 three 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.

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

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15. A. Sealed sources and detector cells 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 six months, or at such other intervals as specified.
- 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 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.
- D. 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.
- 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. Analysis of leak test samples and/or contamination shall be performed by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services. The licensee is authorized to collect leak test samples but not perform the analysis.
- G. Records of leak test results shall be kept in units of becquerels (microcuries) and shall be maintained for three years.

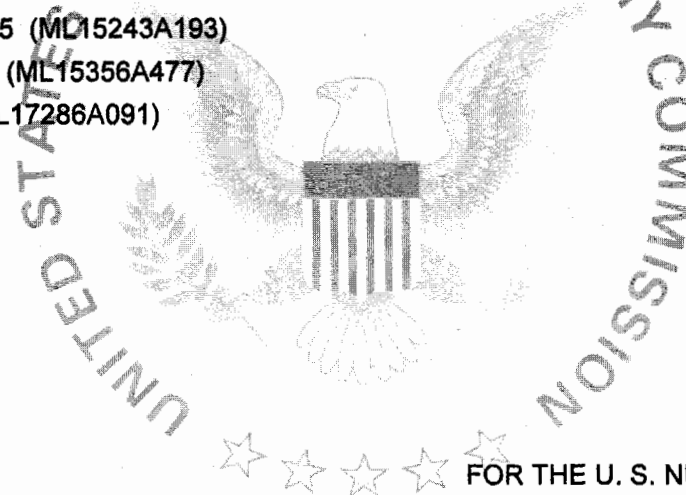
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16. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. This license 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 August 26, 2015 (ML15243A193)
- B. Letter dated December 18, 2015 (ML15356A477)
- C. Letter dated October 9, 2017 (ML17286A091)



FOR THE U. S. NUCLEAR REGULATORY COMMISSION

Date: JAN 09 2018By: BAPhBryan A. Parker  
Region III