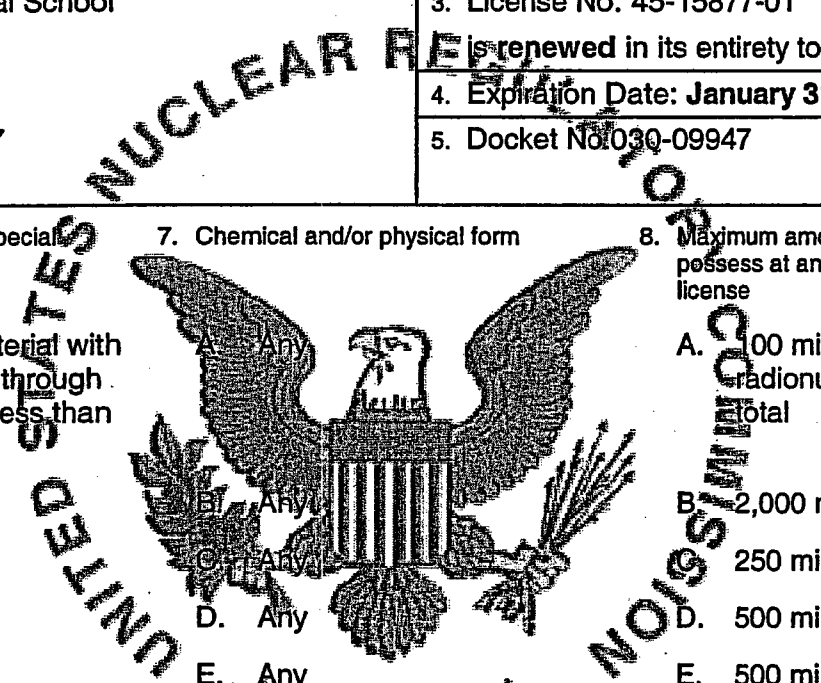


MATERIALS LICENSE

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, 39, 40, and 70, 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. Eastern Virginia Medical School Radiation Safety Office</p> <p>2. 700 West Olney Road Norfolk, Virginia 23507</p>	<p>In accordance with the application dated August 1, 2002</p> <p>3. License No. 45-15877-01</p> <p>is renewed in its entirety to read as follows:</p> <p>4. Expiration Date: January 31, 2013</p> <p>5. Docket No. 030-09947</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Any byproduct material with atomic numbers 1 through 83, with half-lives less than 120 days</p> <p>B. Hydrogen 3</p> <p>C. Carbon 14</p> <p>D. Phosphorus 32</p> <p>E. Phosphorus 33</p> <p>F. Sulfur 35</p> <p>G. Chlorine 36</p> <p>H. Calcium 45</p> <p>I. Chromium 51</p> <p>J. Iodine 125</p> <p>K. Cesium 137</p>	<p>7. Chemical and/or physical form</p> <p>A. Any</p> <p>B. Any</p> <p>C. Any</p> <p>D. Any</p> <p>E. Any</p> <p>F. Any</p> <p>G. Any</p> <p>H. Any</p> <p>I. Any</p> <p>J. Any</p> <p>K. Sealed source (J. L. Shepherd and Associates Model No. 28-5)</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 100 millicuries per radionuclide and 3 curies total</p> <p>B. 2,000 millicuries</p> <p>C. 250 millicuries</p> <p>D. 500 millicuries</p> <p>E. 500 millicuries</p> <p>F. 500 millicuries</p> <p>G. 10 millicuries</p> <p>H. 30 millicuries</p> <p>I. 200 millicuries</p> <p>J. 200 millicuries</p> <p>K. 200 millicuries</p>
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Information in this record was deleted
in accordance with the Freedom of Information
Act, exemptions 2
FOIA- 2005-0293

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9. Authorized Use:

- A. - J. Research and development as defined in 10 CFR 30.4, including animal studies.
- K. To be used for the licensee's radiation detection and survey instrument calibration only.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at
 Norfolk, Virginia; Norfolk, Virginia; ⁶²
 Virginia; and Norfolk, Virginia.
11. A. Licensed material shall be used by or under the supervision of individuals designated in writing by the Radiation Safety Committee, Frank A. Lattanzio Jr., PhD, Chairperson.
- B. The Radiation Safety Officer for this license is LaMar G. Beuther.
12. Licensed material shall not be used on or on human beings.
13. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
14. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.
15. This license does not authorize commercial distribution of licensed material.
16. A. Sealed sources and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed three years.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed three months.
- C. In the absence of a certificate from a transferor indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell receive from another person shall not be put into use until tested.
- D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.

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16. E. Sealed sources and detector cells need not be leak tested if:
- (i) they contain only hydrogen-3; or
 - (ii) they contain only a radioactive gas; or
 - (iii) the half-life of the isotope is 30 days or less; or
 - (iv) they contain not more than 3.7 megabecquerels [100 microcuries (uCi)] of beta and/or gamma emitting material or not more than 370 kilobecquerels (10 uCi) of alpha emitting material; or
 - (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer 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 or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- F. The leak test shall be capable of detecting the presence of 185 becquerels (Bq) (0.005 uCi) of radioactive material on the test sample. If the test reveals the presence of 185 Bq (0.005 uCi) or more of removable contamination, a report shall be filed with the U. S. Nuclear Regulatory Commission and the source or detector cell shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within five days of the date the leak test result is known with the U. S. Nuclear Regulatory Commission, Region II, ATTN: Director, Division of Nuclear Materials Safety, 61 Forsyth Street, SW, Suite 23T85, Atlanta, Georgia 30303-8931. The report shall specify the source or detector cell involved, the test results, and corrective action taken.
- G. The licensee is authorized to collect leak test samples for analysis by the licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
17. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
18. The licensee shall not acquire licensed material in a sealed source or device unless the source or device has been registered with the U. S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.
19. The licensee shall conduct a physical inventory every six months to account for all sealed sources and devices containing licensed material received and possessed under the license.
20. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the Commission or an Agreement State to perform such services.

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21. A. Detector cells containing a titanium tritide foil or a scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents the foil temperatures from exceeding that specified in the certificate of registration referred to in 10 CFR 32.210.
- B. When in use, detector cells containing a titanium tritide foil or a scandium tritide foil shall be vented to the outside.
22. Pursuant to 10 CFR 20.2002 and 10 CFR 20.2005, the licensee is authorized to dispose of licensed material by incineration in accordance with the application dated August 1, 2002, provided the gaseous effluent from incineration does not exceed the limits specified for air in Appendix B, Table 2, 10 CFR Part 20.
23. The licensee is authorized to hold radioactive material with a physical half-life of less than 120 days for decay-in-storage before disposal in ordinary trash, provided:
- A. Waste to be disposed of in this manner shall be held for decay a minimum of ten half-lives.
- B. 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.
- C. A record of each such disposal permitted under this license Condition shall be retained for three 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.
24. The licensee is authorized to transport licensed material only in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
25. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material as follows:
- A. For unsealed sources to quantities less than 10^4 times the applicable limits in Appendix C, 10 CFR 20 as specified in 10 CFR 30.35(d), and
- B. For sealed sources, to quantities less than 10^{10} times the applicable limits in Appendix C, 10 CFR 20 as specified in 10 CFR 30.35(d).

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26. Notwithstanding the requirements of License Condition 27, the licensee is authorized to make program changes and changes to procedures specifically identified in the application dated August 1, 2002, which were previously approved by the commission and incorporated into the license without prior Commission approval as long as:

- (A) the proposed revision is documented, reviewed, and approved by the licensee's Radiation Safety Committee in accordance with established procedures prior to implementation;
- (B) the revised program is in accordance with regulatory requirements, will not change the license conditions, and will not decrease the effectiveness of the Radiation Safety Program;
- (C) the licensee's staff is trained in the revised procedures prior to implementation; and
- (D) the licensee's audit program evaluates the effectiveness of the change and its implementation.

27. 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 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 1, 2002
- B. Letters dated:
 - 1) August 5, 2002 [renewal application]
 - 2) January 8, 2002 [add'l information for renewal]

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

DATE January 9, 2003

BY /RA/

Richard Gibson, Jr.
Region II, Division of Nuclear Materials Safety
61 Forsyth Street, S.W., Suite 23T85
Atlanta, Georgia 30303-8931