



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

December 27, 2006

Docket No. 03009947
Control No. 139831

License No. 45-15877-01

William Wasilenko, Ph.D.
Associate Dean of Research
Eastern Virginia Medical School
Environmental Health and Safety Office
700 West Olney Road
Norfolk, VA 23501

SUBJECT: EASTERN VIRGINIA MEDICAL SCHOOL, LICENSE AMENDMENT, CONTROL
NO. 139831

Dear Dr. Wasilenko:

This refers to your license amendment request. Enclosed with this letter is the amended license.

Please note that the license lists the source models as identified by the manufacturer in the Registry of Sealed Sources and Devices. The source number EE-256, Catalog No. BFR-090-25U corresponds to Model No. BF-90-SS, and the source number C4-422, Catalog No. SR0320300100U currently corresponds to Model No. PHI-XXX GFS Series.

Please review the enclosed document carefully and be sure that you understand and fully implement all the conditions incorporated into the amended license. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5239, so that we can provide appropriate corrections and answers.

An environmental assessment for this action is not required, since this action is categorically excluded under 10 CFR 51.22(c)(14).

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Medical, Academic, and Industrial Uses of Nuclear Material**; then **Toolkit Index Page**. Or you may obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-888-293-6498. The GPO is open from 7:00 a.m. to 8:00 p.m. EST, Monday through Friday (except Federal holidays).

W. Wasilenko
Eastern Virginia Medical School

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Thank you for your cooperation.

Sincerely,

Original signed by Elizabeth Ullrich

Betsy Ullrich
Senior Health Physicist
Commercial and R&D Branch
Division of Nuclear Materials Safety

Enclosure:
Amendment No. 39

cc:
Courtney Kerr, Radiation Safety Officer

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SUNSI Review Complete: EUllrich

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NAME	EUllrich / <i>BU</i> /							
DATE	12/27/06							

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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 Environmental Health and Safety Office</p> <p>2. 700 West Olney Road Norfolk, Virginia 23501</p>	<p>In accordance with the letter dated December 8, 2006,</p> <p>3. License number 45-15877-01 is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration date January 31, 2013</p> <hr/> <p>5. Docket No. 030-09947 Reference No.</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 and half life 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. Strontium 90</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 Sources (Isotope Products Laboratories Models BF-90-SS and PHI-XXX GFS Series)</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 curies</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. 100 microcuries per source and 200 microcuries total</p>
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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 |
| L. Cesium 137 | L. Sealed Sources
(J. L. Shepherd Model No. 28-5) | L. 200 millicuries |

9. Authorized use:

- A. through K. Research and development as defined in 10 CFR 30.4; animal studies; teaching and training of students.
- L. Calibration of the licensee's instruments.

CONDITIONS

10. Licensed material may be used or stored only at the licensee's facilities located at Lewis Hall, 700 West Olney Road, Norfolk, Virginia; Jones Institute of Reproductive Medicine, 601 Colley Avenue, Norfolk, Virginia; Strelitz Diabetes Institutes and Center for Pediatric Research, 855 West Brambelton Avenue, Norfolk, Virginia; and Central Utility Plant, Children's Lane, Norfolk, Virginia.
11. A. Licensed material shall only be used by, or under the supervision of, individuals designated, in writing, by the Radiation Safety Committee. The licensee shall maintain records of individuals designated as users for 3 years following the last use of licensed material by the individual.
- B. The Radiation Safety Officer for this license is Courtney Kerr.
12. The licensee shall not use licensed material in or on human beings except as provided otherwise by specific condition of this license.
13. The licensee shall not use licensed material in field applications where it 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. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months or at the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.

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- 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 under equivalent regulations of 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 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) 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. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- G. Records of leak test results shall be kept in units of microcuries and shall be maintained for 5 years.
16. 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 sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 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.
17. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
18. 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 U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.

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19. 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.
20. The licensee is authorized to hold byproduct material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal without regard to its radioactivity if the licensee:
- A. Monitors byproduct material at the surface before disposal and determines that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding; and
- B. Removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee; and
- C. Maintains records of the disposal of licensed materials for 3 years. The record must include the date of disposal, the survey instrument used, the background radiation level, the radiation level measured at the surface of each waste container, and the name of the individual who performed the disposal.
21. Pursuant to 10 CFR 20.1302(c) and 10 CFR 20.2002, the licensee is authorized to dispose of licensed material by incineration, provided the gaseous effluent from incineration does not exceed the limits specified for air in Appendix B, Table II, 10 CFR Part 20.
22. Pursuant to 10 CFR 20.2002, the licensee may dispose of incinerator ash containing radioactive materials with atomic numbers 1 through 83, except as identified below, as ordinary waste in a landfill provided that the concentration of radionuclides (in microcuries per gram of ash) at the time of disposal are no greater than the values of Table II, Column 2, 10 CFR Part 20, Appendix B. For hydrogen-3, carbon-14, aluminum-26, chlorine-36, silver-108m, niobium-94, iodine-129, technetium-99, and thallium-204, the concentration can be no greater than one-tenth of the value in Table II, Column 2, 10 CFR Part 20, Appendix B. If more than one radionuclide is present in the ash, then the sum of fractions rule applies.
23. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
24. Notwithstanding the requirements of License Condition 25, the licensee is authorized to make program changes and changes to procedures specifically identified in the condition, which were previously approved by the U.S. Nuclear Regulatory Commission and incorporated into the license without prior Commission approval as long as:

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- 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.
- D. The licensee's audit program evaluates the effectiveness of the change and its implementation.
25. 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 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. Letter dated August 5, 2002, with application dated August 1, 2002 [ML022210426]



For the U.S. Nuclear Regulatory Commission

Date December 27, 2006

By **Original signed by Elizabeth Ullrich**
Elizabeth Ullrich
Commercial and R&D Branch
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406