

U.S. NUCLEAR REGULATORY COMMISSION

**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. Widetronix, Inc.</p> <p>2. 950 Danby Road, Suite 139 Ithaca, NY 14850</p>	<p>3. License number 31-35133-01</p> <hr/> <p>4. Expiration date July 31, 2024</p> <hr/> <p>5. Docket No. 03038719 Reference No.</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Hydrogen 3</p> <p>B. Nickel 63</p>	<p>7. Chemical and/or physical form</p> <p>A. Sealed Sources/Plated Foils (prototype) as authorized in Condition 10</p> <p>B. Sealed Sources/Plated Foils (prototype) as authorized in Condition 10</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 20 curies</p> <p>B. 20 curies</p>
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9. Authorized use:

A. and B. Demonstration of betavoltaic batteries in research and development at temporary sites.

**CONDITIONS**

10. Sealed Sources/Plated foils authorized for use are as follows:

<u>Isotope</u>	<u>Maximum Activity per Source</u>	<u>Maximum Activity per Battery</u>
Hydrogen 3	0.25 curies	2.5 curies
Nickel 63	0.04 curies	0.4 curies

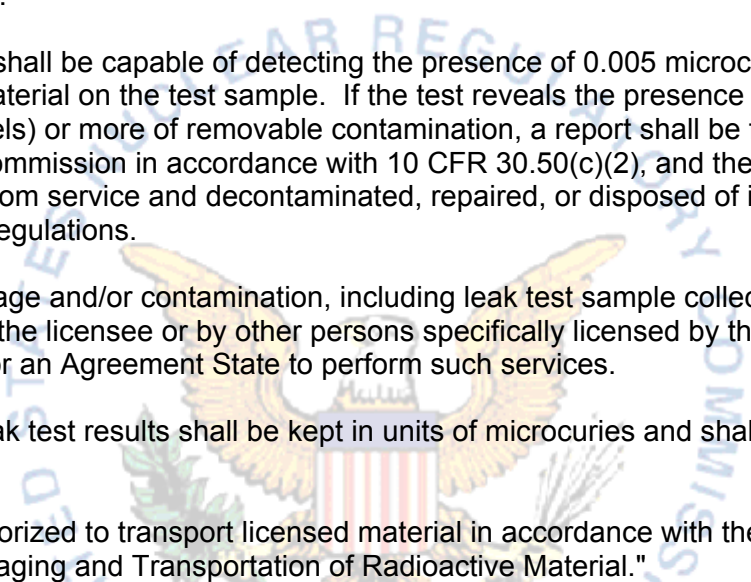
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11. Licensed material may be used only at temporary job sites of the licensee anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material, including areas of exclusive Federal jurisdiction within Agreement States.

If the jurisdiction status of a Federal facility within an Agreement State is unknown, the licensee should contact the Federal agency controlling the job site in question to determine whether the proposed job site is an area of exclusive Federal jurisdiction. Authorization for use of radioactive materials at job sites in Agreement States not under exclusive Federal jurisdiction shall be obtained from the appropriate state regulatory agency.

12. Licensed material shall be used by, or under the supervision of, Jonathan Greene, Jeffrey Leavey, Christopher Thomas, and Samuel Portnoff.
13. The Radiation Safety Officer for this license is Jeffrey Leavey, CHP.
14. Batteries containing licensed material shall not be opened or sources removed from the batteries by the licensee at a temporary job site.
15. This license does not authorize commercial distribution of licensed material.
16. The licensee shall not use licensed material in or on human beings except as provided otherwise by specific condition of this license.
17. 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.
18. 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.
- B. 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.
- C. 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.

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- 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.
19. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
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20. 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. Application dated February 7, 2014 [ML14066A373]  
B. Letter and attachment dated June 23, 2014 [ML14178B224]



For the U.S. Nuclear Regulatory Commission

Date July 11, 2014

By

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