

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>Licensee</p> <p>1. National Physics Consultants</p>	<p>In accordance with letter dated December 15, 2016</p>	<p>4. Expiration Date: August 31, 2019</p>	
<p>2. 5589 Cardinal Dr. Mentor, OH 44060</p>	<p>3. License number: 34-26653-02 is amended in its entirety to read as follows:</p>	<p>5. Docket No.: 030-35055 Reference No.:</p>	
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Any byproduct material with Atomic Numbers 1 through 83; 88; and 95</p> <p>B. Cesium-137</p> <p>C. Barium-133</p>	<p>7. Chemical and/or physical form</p> <p>A. Analytical Samples</p> <p>B. Sealed Sources (New England Nuclear, Model NES-356, NES-360, or NES-367)</p> <p>C. Sealed Sources (New England Nuclear, Model NES-358 or NES-367)</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 100 microcuries per radionuclide and 1 millicurie total</p> <p>B. 250 microcuries per source and 1 millicurie total</p> <p>C. 300 microcuries per source and 1 millicurie total</p>	<p>9. Authorized use</p> <p>A. For use and/or possession incident to radiation surveys, including incident to performance of leak tests and/or contamination on sealed sources and devices containing licensed material, including leak test sample analysis and including as a service for other persons as defined in 10 CFR 30.4.</p> <p>B. For use in calibration and testing of instruments.</p> <p>C. For use in calibration and testing of instruments.</p>

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SUPPLEMENTARY SHEET**

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Docket or Reference Number
030-35055

Amendment No. 3

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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 |
| D. Technetium-99m | D. Any | D. 500 millicuries total | D. For use in calibration and testing of instruments and for shielding evaluations. |
| E. Cobalt-57 | E. Sealed Sources (IPL, Model RV-057-5M) | E. 5 millicuries per source and 20 millicuries total | E. For use in calibration and testing of instruments. |

CONDITIONS

10. Licensed material may be used at temporary job sites 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.

11. Licensed material shall only be used by, or under the supervision of authorized users:

David Close

Sharon L. Long

Michael W. Lairmore

C. Kelly Stoneberg

Jim Fisher

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12. The Radiation Safety Officer (RSO) for this license is Sharon L. Long.
13. A. Sealed sources 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 6 months, or at such other intervals as specified.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
- 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 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.
- 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.
- E. 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.
- F. 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.

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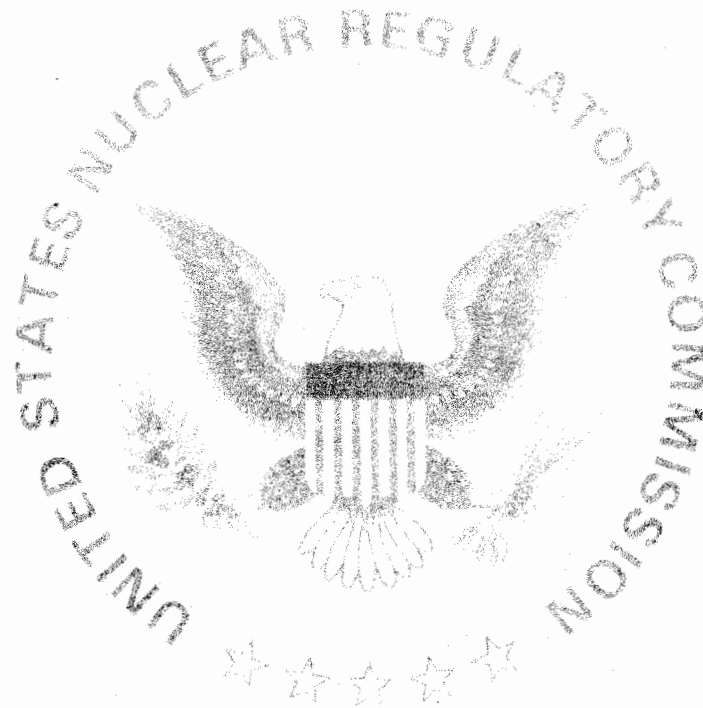
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- G. The leak test shall be capable of detecting the presence of 185 becquerels (0.005 microcuries) of radioactive material on the test sample. If the test reveals the presence of 185 becquerels (0.005 microcuries) or more of removable contamination, 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.
- H. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- I. Records of leak test results shall be kept in units of becquerels (microcuries) and shall be maintained for 3 years.
14. 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.
15. Sealed sources containing licensed material shall not be opened or sources removed from source holders by the licensee.
16. In addition to the possession limits in Item 8, as specified in 10 CFR 30.35(d), the licensee shall further restrict the possession of unsealed byproduct material listed in Item 6.A. to quantities less than 10,000 times the applicable limits in Appendix B of 10 CFR Part 30.
17. 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. Letter dated July 23, 2009 (ML092380520)
- B. Letter dated December 15, 2016 (ML16362A444)
- C. Letter received March 16, 2017 (ML17075A158)

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D. Letter dated March 22, 2017 (ML17081A448)



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

By: Sara A. Forster
Sara A. Forster
Region IIIDate: March 24, 2017