

**U.S. NUCLEAR REGULATORY COMMISSION**

Amendment No. 14

**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 style="text-align: center;">Licensee</p> <p>1. Department of Commerce NOAA/PMEL</p> <p>2. 7600 Sand Point Way NE Building 3 Seattle, Washington 98115</p>	<p>In accordance with application dated September 16, 2015</p> <p>3. License number 46-23463-01</p> <p>4. Expiration date March 31, 2026</p> <p>5. Docket No. 030-22218 Reference No.</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Nickel-63</p>	<p>7. Chemical and/or physical form</p> <p>Sealed sources or foils (Agilent Technologies, Inc. (previously Hewlett-Packard) Model 18713A; Eckert &amp; Ziegler Isotope Products Models NER-004 or NBC; QSA Global Inc. Model NBC; Safety Light Corp. Model 508-3; NRD Model N-1001)</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 15 millicuries per source and 180 millicuries total</p>
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9. Authorized use:

A. To be used for sample analysis in compatible gas chromatography devices that have been registered either with NRC under 10 CFR 32.210 or with an Agreement State and have been distributed in accordance with an NRC or Agreement State specific license authorizing distribution to persons specifically authorized by an NRC or Agreement State license to receive, possess, and use the devices.

**CONDITIONS**

10. Licensed material may be used or stored only at the licensee's facilities located at
- A. 7600 Sand Point Way NE, Seattle, Washington;
  - B. The University of Hawaii Marine Center, #1 Sand Island, Honolulu, Hawaii;
  - C. On board NOAA or UNOLS research vessels at temporary job sites of the licensee at sea

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11. A. Licensed materials may be used by, or under the supervision, John Bullister, Ph.D., Bonnie Chang, Ph.D., Kevin Roe, Rolf Sonnerup, Ph.D., David Wisegarver, and Eric Wisegarver. .
- B. The Radiation Safety Officer (RSO) for this license is Kevin Roe.
12. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other 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.
- 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 U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested and the results received.
- C. 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.
- D. Sealed sources and detector cells 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.
- 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. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region IV, 1600 East Lamar Boulevard, Arlington, Texas 76011-4511, ATTN: Director, Division of Nuclear Materials Safety. The report shall specify the source involved, the test results, and corrective action taken.

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- F. Tests for leakage 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. In addition, the licensee is authorized to collect leak test samples but not perform the analysis; analysis of leak test samples must be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
- G. Records of leak tests results shall be kept in units of microcuries and shall be maintained for 3 years.
13. Detector cells containing licensed material shall not be opened or the foil sources removed from the detector cell by the licensee.
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 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.
15. 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.
16. 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."
17. 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 temperature from exceeding that specified by the manufacturer and approved by U.S. Nuclear Regulatory Commission.
- B. When in use, detector cells containing a titanium tritide foil or a scandium tritide foil shall be vented to the outside.

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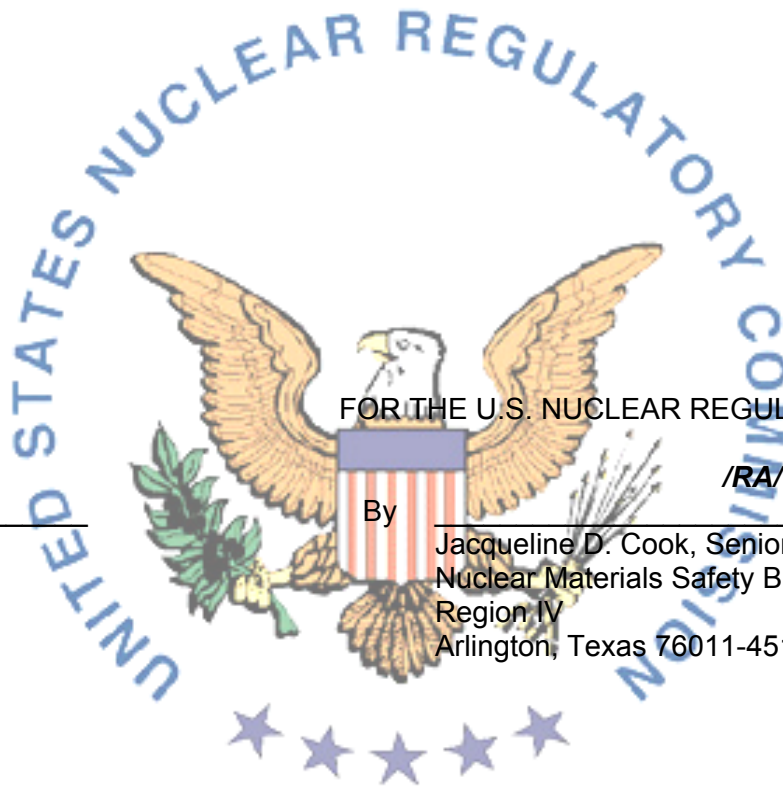
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18. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear 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 September 16, 2015 (ML15307A593)
- B. Application dated February 17, 2016 (ML16063A345)



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

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Date March 18, 2016

By

Jacqueline D. Cook, Senior Health Physicist  
Nuclear Materials Safety Branch B  
Region IV  
Arlington, Texas 76011-4511