

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>Licensee</p> <p>1. Smiths Detection, Inc.</p> <p>2. 21 Commerce Drive Danbury, Connecticut 06810-4131</p>	<p>In accordance with the application dated October 2, 2013,</p> <p>3. License number 06-31431-01 is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration date March 31, 2021</p> <hr/> <p>5. Docket No. 030-38416 Reference No.</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Nickel 63</p> <p>B. Sodium 22</p> <p>C. Californium 252</p> <p>D. Californium 252</p>	<p>7. Chemical and/or physical form</p> <p>A. Sealed Sources (Models IONSCAN Series, IONSCAN DT Series, Sabre Series, Sabre Centurion Series, and Sentinel Series)</p> <p>B. Sealed Sources (Eckert & Ziegler Isotopes Model SKRB 18147 and SKRB 17540)</p> <p>C. Sealed Sources (Eckert & Ziegler Isotopes Model 3004,3014, N252 series)</p> <p>D. Sealed Sources (Eckert & Ziegler Isotopes Model HEG-XXX series)</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 7500 millicuries total and no single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear regulatory Commission or an Agreement State</p> <p>B. 10 microcuries</p> <p>C. 5 microcuries</p> <p>D. 5 microcuries</p>
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9. Authorized use:
- A. For training and demonstration of Smiths Detection explosive detection equipment and for removal and replacement of Ion Mobility Spectrometer detector assemblies; for testing, repair manufacturing, and distribution; research and development as defined in 10 CFR 30.4; and for training and demonstration of Smiths Detection explosive detection equipment at customer facilities, trade shows

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and other temporary job sites.

- B. For possession incident to installation in RadSeeker devices; demonstration, testing, repair manufacturing, and repair; and research and development as defined in 10 CFR 30.4.
C. and D. For testing of neutron detectors.

CONDITIONS

10. Licensed material may be used or stored only at the licensee's facilities located at 21 Commerce Drive, Danbury, Connecticut. Licensed material listed in Item 6.A. and 6.B. may be used 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.

11. Licensed material shall be used by, or under the supervision of, Ron Bottino, Greg Genna, Vito Sheehan or Gary Shelton.
12. The Radiation Safety Officer for this license is Gary Shelton.
13. The licensee shall not use licensed material in or on human beings.
14. This license does not authorize distribution to persons licensed pursuant to 10 CFR 32.72 or 32.74; to persons exempt from licensing; or to general licensees.
15. The licensee shall not use licensed material in field applications where it is released except as provided otherwise by specific condition of this license.
16. 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. 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 under equivalent regulations of an Agreement State, prior to

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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.
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. 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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19. 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 3, 2011 (ML110380198)
 - B. Letter dated October 14, 2011 (ML112971513)
 - C. Letter dated December 16, 2011 (ML113530377)
 - D. Letter dated March 28, 2012 (ML12093A027)
 - E. Facsimile dated April 10, 2012 (ML12103A153)
 - F. Letter dated July 5, 2012 (ML12206A070)
 - G. Letter dated May 30, 2013 (ML 13163A299)
 - H. Letter dated June 21, 2013 (ML13184A111)
 - I. Application dated October 2, 2013 (ML13298A597)
 - J. Letter dated October 29, 2013 (ML13318A104)

For the U.S. Nuclear Regulatory Commission

Date November 26, 2013

By

Original signed by Thomas K. Thompson

Thomas K. Thompson
Commercial and R&D Branch
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406