

**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.

Licensee 1. Hoosier Technical Services, Inc.		In accordance with letter dated February 28, 2022,	4. Expiration Date: February 28, 2025
2. 721 Haddon Road Wilmington, DE 19808		3. License No.: 07-35091-01 is amended in its entirety to read as follows:	5. Docket No.: 030-38670 Reference No.:
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
A. Iron-55	A. Sealed Sources (AEA Technology QSA (Amersham), Model IEC.D2)	A. Not applicable (See License Condition 10).	A. For use and/or possession incident to radiation surveys, routine maintenance, leak test sample collection, source/shutter function tests, shutter repairs, and removal from service of Scienta Oy Ab Model Scienta 7210 gauging device.
B. Cobalt-60	B. Sealed Sources (Amersham Corporation/AEA Technology/QSA, Inc., Model CKC.P4; Berthold Technologies USA, LLC, Model P 2602-100)	B. Not applicable (See License Condition 10).	B. For use and/or possession incident to radiation surveys, routine maintenance, leak test sample collection, source/shutter function tests, shutter repairs, and removal from service of Berthold Technologies GmbH & Co. KG Model LB 7442F CR gauging device.

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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   |
| C. Krypton-85   | C. Sealed Sources (AEA Technology QSA (Amersham), Model KAC.D1; DuPont, Model NER-584; Eckert & Ziegler Isotope Products dba Isotope Products Laboratories, Model KAC.Da Series; Isotope Products Laboratories, Model 3311-2, BFI-90-500, BFI-147; IUT Institut für Umwelttechnologien GmbH, Model T-Series)   | C. Not applicable (See License Condition 10).                                  | C. For use and/or possession incident to radiation surveys, routine maintenance, leak test sample collection, source/shutter function tests, shutter repairs, and removal from service of Scientia Oy Ab and Elena Research, LLC dba Adaptive Technologies Industries Model Scientia 7210 and AT-100K gauging device.   |
| D. Strontium-90                                       | D. Sealed Sources (ABB Inc., Model S-15, S-18; S-18; AEA Technology/QSA, Model SIC.L5; Amersham, Model S1C/W33; Eckert & Ziegler, Model SIF.D1; Eckert & Ziegler Isotope Products, Model SIC.LC1; Eckert & Ziegler Isotope Products (formerly AEA Technology), Model SIF.D1; Eckert & Ziegler Isotope Products dba Isotope Products Laboratories, Model SIF.Da Series) | D. Not applicable (See License Condition 10).                                  | D. For use and/or possession incident to radiation surveys, routine maintenance, leak test sample collection, source/shutter function tests, shutter repairs, and removal from service of ABB Inc., Indev Gauging Systems, Fife Corporation, Metso Automation USA, Inc., and Valmet, Inc. Model TG-2, TG-4, TG-6, TG-7, SHR-1, SHR-1A, BG-III, and BWM-H gauging devices. |

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| E. Cesium-137   | E. Sealed Sources (Thermo MeasureTech (formerly TN Technologies), Model 57157C)   | E. Not applicable (See License Condition 10).                                  | E. For use and/or possession incident to radiation surveys, routine maintenance, leak test sample collection, source/shutter function tests, shutter repairs, and removal from service of Thermo MeasureTech (formerly TN Technologies Model 5210 gauging device).   |
| F. Americium-241                                      | F. Sealed Sources (ABB, Model S-16; ABB Inc., Model S-16; AEA Technology, Model AMC.30; Amersham, Model AMC.19; Amersham Corp., Model AMC.19; BEBIG Trade, Inc., Model Aml.G44; DuPont Merck, Model NER-479C; Eckert & Ziegler, Model CLCL; Isotope Products Laboratories, Inc., Model AM1.P08; Isotope Products Laboratories/BEBIG, Model Am1.G55) | F. Not applicable (See License Condition 10).                                  | F. For use and/or possession incident to radiation surveys, routine maintenance, leak test sample collection, source/shutter function tests, shutter repairs, and removal from service of ABB Inc. (Previously ABB Process Automation Inc.), Tenova Inc. (formerly I2S, LLC, formerly Integrated Industrial Systems), Lockheed Martin Tactical Systems Division, and NDC Technologies Model TG-2, U-4, RSS-06, RSS-12, 5310, and 103X gauging devices. |

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**CONDITIONS**

10. The licensee does not take possession of the radioactive materials and/or sealed sources while at the customer's facility.
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 only be used by, or under the supervision of, Harry Bryant, Robert McKinney, Dan O'Brien, or Terry Rhoades.
13. The Radiation Safety Officer (RSO) for this license is Harry Bryant.
14. Sealed sources containing licensed material shall not be opened or sources removed from source holders or detached from source rods, by the licensee, except as specifically authorized.
15. A. Initial radiation surveys, alignment, shutter repair, removal from service, and routine maintenance shall be performed only by Harry Bryant, Robert McKinney, Dan O'Brien, Terry Rhoades, or Mike Ristaino or other individuals who have completed the training specified in letter dated September 8, 2014, or by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.

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- B. The following services shall not be performed by the licensee: Installation, relocation, dismantling, replacement, disposal of the sealed sources, and non-routine maintenance or repair of components related to the radiological safety of the gauge. These services shall be performed only by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
16. 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. 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.
- 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 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.



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- F. Analysis of leak test samples 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. The licensee is authorized to collect leak test samples but not perform the analysis.
- G. Records of leak test results shall be kept in units of becquerels (microcuries) and shall be maintained for 3 years.
17. A. Each gauge shall be tested for the proper operation of the on-off mechanism (shutter) and indicator, if any, at intervals not to exceed 6 months or at such longer intervals as specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or the equivalent regulations of an Agreement State.
- B. Notwithstanding the periodic on-off mechanism (shutter) and indicator test, the requirement does not apply to gauges that are stored, not being used, and have the shutter lock mechanism in a locked position. The gauges exempted from this periodic test shall be tested before use. Records of test results shall be maintained for 3 years from the date of each test.
18. A. The licensee may maintain, repair, or replace device components that are not related to the radiological safety of the device containing licensed material and that do not result in the potential for any portion of the body to come into contact with the primary beam or result in increased radiation levels in accessible areas.
- B. The licensee may not maintain, repair, or replace any of the following device components: the sealed source, the source holder, source drive mechanism, on-off mechanism (shutter), shutter control, shielding, or any other component related to the radiological safety of the device, except as provided otherwise by specific condition of this license.
19. The licensee shall assure that the shutter mechanism of each device containing licensed material is locked in the closed position during periods when a portion of an individual's body may be subject to the direct radiation beam. The licensee shall review and modify, as appropriate, its "lock-out" procedures whenever a new device is obtained to incorporate the device manufacturer's recommendations.
20. The licensee shall operate each device containing licensed material within the manufacturer's specified temperature and environmental limits such that the shielding and shutter mechanism of the source holder are not compromised.

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21. Prior to initial use and after installation, relocation, dismantling, alignment, or any other activity involving the source or removal of the shielding, the licensee shall assure that a radiological survey is performed to determine radiation levels in accessible areas around, above, and below the gauge with the shutter open. This survey shall be performed only by persons authorized to perform such services by the U.S. Nuclear Regulatory Commission or an Agreement State.
22. 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. Application dated September 8, 2014 (ML14262A388)
  - B. Letter dated November 24, 2014 (ML14349A698)
  - C. Application dated April 1, 2020 (ML20113E928)
  - D. Letter dated May 20, 2020 (ML20147A507)

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: April 19, 2022By: \_\_\_\_\_  
Elizabeth Ullrich  
Region 1