

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. Hecla Greens Creek Mining Company</p> <p>2. P.O. Box 32199 Juneau, AK 99803</p>		<p>In accordance with letter dated January 29, 2017.</p> <p>3. License number: 50-23276-01 is amended in its entirety to read as follows:</p>	<p>4. Expiration Date: January 31, 2024</p>
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Cesium-137</p> <p>B. Americium-241/ Beryllium</p> <p>C. Americium-241/ Beryllium</p>		<p>7. Chemical and/or physical form</p> <p>A. Sealed Sources (AEA Technology/QSA, Inc., Model CDCW556; Isotope Products Laboratories, Model HEG-137)</p> <p>B. Sealed Neutron Source (AEA Technology/QSA, Inc., Model AMNV.997; Isotope Products Laboratories, Model AM1.N02, 3021, 3027)</p> <p>C. Sealed Neutron Source (CPN International, Inc., Model CPN-131)</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 9 millicuries per source and 9 millicuries total</p> <p>B. 44 millicuries per source and 44 millicuries total</p> <p>C. 50 millicuries per source and 50 millicuries total</p> <p>9. Authorized use</p> <p>A. For use in Troxler Electronic Laboratories Model 3430 portable gauging devices for measuring physical properties of materials.</p> <p>B. For use in Troxler Electronic Laboratories Model 3430 portable gauging devices for measuring physical properties of materials.</p> <p>C. For use in CPN International, Inc. Model 503 portable gauging devices for measuring physical properties of materials.</p>
<p>5. Docket No.: 030-20447</p> <p>Reference No.:</p>			

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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. Cesium-137 | D. Sealed Sources (Kay-Ray/Sensall Source Series, Model 7700-Y; TN Technologies, Model 57157C) | D. 100 millicuries per source and 400 millicuries total | D. For use in Kay-Ray/Sensall, Inc. (Thermo MeasureTech) Model 7062BP fixed gauging devices to perform measurements of physical properties of material. |
| E. Cesium-137 | E. Sealed Sources (VEGA Americas (Ohmart/Vega), Model A-2102, A-2104, A-57878, A-58804, or A-58755) | E. Two sources: 80 millicuries and 50 millicuries for a total of 130 millicuries | E. For use in VEGA Americas (Ohmart/Vega) Model SR Series (D-3450 and D-3430) fixed gauging devices to perform measurements of physical properties of material. |

CONDITIONS

10. A. Licensed material identified in Items 6.A. through 6.C. may be used and/or stored only at the licensee's facilities located at Environmental Storage Trailer #4 at the Hawk Inlet facility on Admiralty Island, Alaska.
- B. Licensed material identified in Items 6.D. and 6.E. may be used only at the licensee's facilities located at Greens Creek Mine/Mill site on Admiralty Island, 18 air miles southwest of Juneau, Alaska and will be stored in the Environmental Storage Trailer #4 at the Hawk Inlet facility on Admiralty Island, Alaska.
- C. Licensed material identified in Items 6.A. through 6.C. 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 materials may be used by, or under the supervision and in the physical presence of, individuals who have received the training described in the application dated July 19, 2013, and letter dated January 9, 2014.

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12. A. The Radiation Safety Officer (RSO) for this license is Eugene Laughlin.
- B. Before assuming the duties and responsibilities as RSO for this license, the individual shall have successfully completed one of the training courses described in Criteria in Section 8.7.1 of NUREG 1556, Volume 4, dated October 1998.
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 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 test 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. 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.
- E. 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.
- F. Records of leak test results shall be kept in units of becquerels (microcuries) and shall be maintained for 3 years.

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14. Sealed sources or source rods containing licensed material shall not be opened or sources removed or detached from source rods or gauges by the licensee, except as specifically authorized.
15. 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.
16. Except for maintaining labeling as required by 10 CFR Part 20 or 71, the licensee shall obtain authorization from the U.S. Nuclear Regulatory Commission before making any changes in the sealed source, device, or source-device combination that would alter the description or specifications as indicated in the respective Registration Certificates issued either by the Commission pursuant to 10 CFR 32.210 or by an Agreement State.
17. Each portable nuclear gauge shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The gauge or its container must be locked when in transport or storage, or when not under the direct surveillance of an authorized user.
18. Any cleaning, maintenance, or repair of the gauges that requires detaching the source or source rod from the gauge shall be performed only by the manufacturer or other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
19. 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.

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- 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.
20. A. Installation, initial radiation surveys, relocation, or removal from service shall be performed only by Eugene Laughlin, Carl Tenney, or by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- B. The following services to fixed gauges shall not be performed by the licensee: dismantling, alignment, replacement, disposal of the sealed source and non routine maintenance or repair of components related to the radiological safety (i.e., the sealed source, the source holder, source drive mechanism, on off mechanism (shutter), shutter control, shielding). 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.
21. The licensee may initially mount a gauge, if permitted by the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State, and under the following conditions:
- A. The gauge must be mounted in accordance with written instructions provided by the manufacturer;
- B. The gauge must be mounted in a location compatible with the Conditions of Normal Use and Limitations and/or Other Considerations of Use in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State;
- C. The on-off mechanism (shutter) must be locked in the off position, if applicable, or the source must be otherwise fully shielded;
- D. The gauge must be received in good conditions (e.g., the package was not damaged); and
- E. The gauge must not require any modification to fit in the proposed location.

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Mounting does not include electrical connection, activation or operation of the gauge. The source must remain fully shielded and the fixed gauge may not be used until it is installed and made operational by a person specifically licensed by the U.S. Regulatory Commission or an Agreement State to perform such operations.

22. A. The licensee may maintain, repair, or replace device components that are not related to the radiological safety of the fixed gauge containing byproduct material and that do not result in the potential for any portion of the body to come into contact with the primary beam or 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, or shielding, or any other component related to the radiological safety of the fixed gauge, except as provided otherwise by specific condition of this license.
23. 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.
24. The licensee shall assure that the shutter mechanism of each device 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.

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25. 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 July 19, 2013 (ML13226A555)
 - B. Letter dated January 9, 2014 with enclosures (ML14010A418)
 - C. Letter dated January 19, 2016 (ML16025A184)



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: June 1, 2017By: R/A
Michelle M. Hammond
Region IV