

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Parts 32, 33, 34, and 35, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, own, possess, transfer and import byproduct material listed below; and to use such byproduct material for the purpose(s) and at the place(s) designated below. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission now hereafter in effect and to any conditions specified below.

<b>Licensee</b>		
1. <b>United States Radium Corporation</b>		3. License number <b>37-00030-08</b>
2. <b>4150 Old Berwick Road Bloomsburg, Pennsylvania 17815</b>		4. Expiration date <b>August 31, 1974</b>
		5. Reference No.
6. Byproduct material (element and mass number)	7. Chemical and/or physical form	8. Maximum amount of radioac- tivity which licensee may possess at any one time
A. Hydrogen 3	A. Any	A. 100,000 curies
B. Promethium 147	B. Any	B. 100 curies
C. Carbon 14	C. Any	C. 50 millicuries
D. Krypton 85	D. Light sources	D. 5 curies total
E. Any byproduct material	E. Any	E. 1 millicurie total

**9. Authorized use**

- A. through C. Processing for distribution to authorized recipients.  
Research and development as defined in 10 CFR 30.4(q).  
D. and E. To be used as radioactivity or light standards.

**CONDITIONS**

10. Byproduct material may only be used at the licensee's address stated in Item 2 above.
11. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 20, "Standards for Protection Against Radiation."
12. Byproduct material shall be used by, or under the supervision of, D. B. Cowan, I. W. Allam, G. E. Widger, or J. D. McGraw.

## Supplementary Sheet

License Number 37-00030-

## CONDITIONS

(Continued)

13. A(1) Each sealed source acquired from another person and containing byproduct material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for contamination and/or leakage prior to use. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, the sealed source shall not be put into use until tested.
- (2) Notwithstanding the periodic leak test required by the preceding paragraph, any licensed sealed source containing byproduct material is exempted from periodic leak tests provided the quantity of byproduct material contained in the source does not exceed ten times the quantity specified for the byproduct material in Column II, Schedule A, Section 31.100, 10 CFR 31.
- (3) Except for alpha sources, the periodic leak test required by this condition does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another person unless they have been leak tested within six months prior to the date of use or transfer.
- B. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to use or transfer as a sealed source. If the inspection or test reveals any construction defects or 0.005 microcurie or greater of contamination, the source shall not be used or transferred as a sealed source until it has been repaired and decontaminated.
- C. Each sealed source containing byproduct material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed three months.

## Supplementary Sheet

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## 13. continued

## CONDITIONS

- D. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently or semipermanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission.
- E. If the test required by Subsection A. or C. of this condition reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the test with the Director, Division of Materials Licensing, U. S. Atomic Energy Commission, Washington, D. C., 20545, describing the equipment involved, the test results, and the corrective action taken. A copy of such report shall also be sent to the Director, Region I, Division of Compliance, USAEC, 970 Broad Street, Newark, New Jersey, 07102.
- 74510  
14. A. Tritium shall not be used in such a manner as to cause the individual to receive a radiation exposure such that urinary excretion rates exceed 28 microcuries of tritium per liter when averaged over a calendar quarter.
- B. A report of an average concentration in excess of the limit specified in A above for any individual shall be filed, in writing, within thirty (30) days of the end of the calendar quarter with the Director, Division of Compliance, U.S. Atomic Energy Commission, Washington, D. C. 20545, with a copy to the Director, Region I, Division of Compliance, U. S. Atomic Energy Commission, 970 Broad Street, Newark, New Jersey, 07102. The report shall contain the results of all urinalyses for the individual during the calendar quarter, the cause of the excessive concentrations, and the corrective steps taken or planned to assure against a recurrence.

Supplementary Sheet

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14. continued

- C. Any single urinalysis which discloses a concentration of greater than 50 microcuries per liter shall be reported, in writing, within seven (7) days of the licensee's receipt of the results, to the Director, Division of Compliance, U. S. Atomic Energy Commission, Washington, D. C. 20545, with a copy to the Director, Region I, Division of Compliance, U. S. Atomic Energy Commission, Newark, New Jersey.
15. Except as specifically provided otherwise by this license, the licensee shall possess and use byproduct material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in applications dated March 13, 1969 and April 24, 1969; letters dated April 24, 1969, and July 23, 1969, signed by O. L. Olson; and letter dated July 15, 1969, signed by J. David McGraw.

Date AUG 5 1969

For the U. S. Atomic Energy Commission

Original Signed by 1

Robert E. Brinkman

by Isotopes Branch

Division of Materials Licensing  
Washington, D. C. 20545

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