

U. S. ATOMIC ENERGY COMMISSION
BYPRODUCT MATERIAL LICENSE

License No. 29-04459-01

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Amendment No. 14

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Parts 30, 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 or hereafter in effect and to any conditions specified below.

<p>Licensee</p> <p>1. Name Signalite, Incorporated</p> <p>2. Address 1933 Heck Avenue Neptune, New Jersey 07753</p>		<p>In accordance with application dated March 24, 1967,</p> <p>3. License number 29-04459-01 is amended in its entirety to read as follows:</p> <p>4. Expiration date April 30, 1969</p> <p>5. Reference No.</p>	
6. Byproduct material (element and mass number)	7. Chemical and/or physical form	8. Maximum amount of radioac- tivity which licensee may pos- sess at any one time	
A. Krypton 85	A. Gas	A. 4 curies	
B. Nickel 63	B. Any	B. 300 millicuries	
C. Americium 241	C. Foil (U. S. Radium type LAB 204-1A)	C. 250 microcuries	
D. Cesium 137	D. Any	D. 400 millicuries	
E. Cesium 137	E. Sealed sources (Fabricated by Tracerlab)	E. 200 microcuries	
F. Promethium 147	F. Sealed Sources (Glass tubes coated with radioactive phosphor and sealed with white reflective paint and plastic)	F. 34 curies No single source to exceed 7 millicuries	
G. Hydrogen 3	G. Paint applied to glass envelopes	G. 6 curies	
H. Hydrogen 3	H. Any	H. 100 millicuries	

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9. Authorized use

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- A., B., and D. To be used for research, development, and manufacture of sealed spark gap and electronic tubes. Tubes containing not more than 5 microcuries of Krypton 85 or Cesium 137 or 0.2 microcuries of Nickel 63 per tube may be distributed to persons licensed pursuant to Section 31.3(b), 10 CFR 31.
- C. Laboratory studies of ionization sources in neon glow lamps.
- E. Calibration of instruments.
- F. Testing and distribution of glow lamps.
- G. Ionization tests.
- H. Development of spark gap, glow lamps and electronic tubes.

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, Part 20, Code of Federal Regulations, Chapter 1, "Standards for Protection Against Radiation."
12. Byproduct material shall be used by, or under the supervision of, Keith Olson, Peter A. Odde, Harry Parker, John Cawley, John Johnstone, or Herb Comins.
13. The distribution of tubes, containing byproduct material as generally licensed items pursuant to Section 31.3(b), 10 CFR 31, shall be subject to the following conditions:
- A. Each tube, tube package, or an accompanying packing slip with each tube shall contain a statement of the radioisotope present, amount in microcuries per tube, and authority for distribution to persons generally licensed pursuant to Section 31.3(b), 10 CFR 31.
- B. Each tube, or tube package, containing in excess of a total of 0.1 microcurie of Krypton 85 or 1 microcurie of Nickel 63 or Cesium 137 shall exhibit a label containing the radiation symbol and the words, "CAUTION (OR DANGER) RADIOACTIVE MATERIALS."

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CONDITIONS

14. A(1) 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. 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. 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 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.
- C. If the test 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, 376 Hudson Street, New York, New York, 10014.

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CONDITIONS

D. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an agreement State to perform such services.

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 his applications dated November 12, 1958, October 26, 1960, October 10, 1962, March 17, 1965, September 24, 1965, October 7, 1965, March 29, 1966, and March 24, 1967; and his letters dated August 20, 1960, March 31, 1959, from Herman Altschule, and letter dated July 12, 1963, signed by Jack Cawley.

For the U. S. Atomic Energy Commission

APR 5 1967

Date _____

by Isotopes Branch

Division of Materials Licensing
Washington, D. C. 20545

WCH, CJB REB 4/5/67