

U. S. ATOMIC ENERGY COMMISSION
BYPRODUCT MATERIAL LICENSE

2/15/68

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.

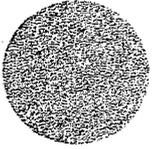
Licensee		
1. Neutron Products, Incorporated		3. License number 19-12667-01
2. P. O. Box 95 Dickerson, Maryland 20753		4. Expiration date February 28, 1973
5. Reference No.		
6. Byproduct material (element and mass number)	7. Chemical and/or physical form	8. Maximum amount of radioac- tivity which licensee may possess at any one time
A. Cobalt 60 (and small quantities of activation products formed in the zircaloy tubing and stainless steel capsules)	A. NPI singly encapsulated sealed sources	A. 2,000,000 curies

9. Authorized use

A. To be received, unloaded from shipping casks, decanned, leak tested, calibrated, stored, and loaded into shipping casks for distribution to authorized recipients. A portion of the sources may be used in a shielded irradiation cell constructed for a pilot plant study of liquid phase radiation polymerization processing. In-pool irradiation of materials is authorized.

CONDITIONS

10. The licensee shall comply with the provisions of Title 10, Part 20, Code of Federal Regulations, Chapter 1, "Standards for Protection Against Radiation."



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BYPRODUCT MATERIAL LICENSING

Supplementary Sheet

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11. Byproduct material shall be used by, or under the supervision of, J. J. Hairston, J. A. Ransohoff, M. M. Turkanis, or H. W. Calley, Jr.
12. A. Each sealed source containing byproduct material 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 used until tested.
 - B. The tests are to be performed in accordance with the procedures described in Section II. C. of the supplemental information to application received December 27, 1967. 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 0.05 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 five 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.
 - 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.

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- 13. Byproduct material may only be used at the Neutron Products, Inc. plant complex located on Sugarloaf Road in Dickerson, Maryland.
- 14. 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 application received December 27, 1967 and letters dated February 6, 1968 and February 14, 1968, signed by J. A. Ransohoff.
- 15. After installation of the irradiator and the Cobalt 60 source and prior to initiation of the irradiation program, a radiation survey shall be conducted to determine the maximum radiation levels in each area adjoining the irradiation room. A detailed report of the results of this survey shall be sent to the Isotopes Branch, Division of Materials Licensing, U. S. Atomic Energy Commission, Washington, D. C., 20545, not later than thirty days following installation of the source. 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.

FEB 15 1968

Date _____

For the U. S. Atomic Energy Commission

Original Signed by
Gail R. Prohman

by Isotopes Branch
Division of Materials Licensing
Washington, D. C. 20545

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