

BYPRODUCT MATERIAL LICENSE No. 47-260-2, AMENDMENT NO. 17  
(H66)

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Part 30, Licensing of Byproduct Material, 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. Name	Union Carbide Corporation Union Carbide Olefins Company	3. License number
2. Address	Division 437 Mac Corkle Avenue South Charleston, West Virginia	4. Expiration date
		5. Reference No.
6. Byproduct material (element and mass number)	7. Chemical and/or physical form	8. Maximum amount of radioactivity which licensee may possess at any one time
A. Cesium 137	A. Sealed sources	A. 15 curies total
B. Strontium 90	B. Sealed sources	B. 5 curies total
C. Strontium 90	C. Sealed sources (U. S. Radium Model LAB 369)	C. No single source to exceed 20 millicuries
9. Authorized use		
A. and B. To be used in gauging equipment for measurement of level or density of chemical processes. Evaluation, development, installation, and testing of gauging equipment.		
C. To be used for gas chromatography.		

## CONDITIONS

~~10. Unless otherwise specified, the authorized place of use is the licensee's address stated on Form Z-100.~~

10. Byproduct material may be used at facilities of the licensee at the Technical Center, Kanawha Turnpike, South Charleston, West Virginia; 437 Mac Corkle Avenue, South Charleston, West Virginia; and at the Institute Plant, Institute, West Virginia.
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, H. T. Sessions or M. B. Young.
13. The licensee is further authorized to install and service specific or generally licensed gauges containing byproduct material at Union Carbide Corporation plants throughout the United States, except in Agreement States as defined in Section 30.4(u), Title 10, Code of Federal Regulations, Part 30.

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## Supplementary Sheet

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## Conditions continued:

14. No gauge installed as a generally licensed device shall be installed in such a manner or in such a location that any person could receive more than 0.5 rem in a year under ordinary circumstances of use. After the installation of each generally licensed gauge a radiation survey of the installation shall be made and a copy furnished to the using facility.
15. A. Sealed sources licensed above shall be tested for leakage and/or contamination at intervals not exceeding six months, except that Ohmart Corporation sealed sources contained in Models SHRM and SHRH source holders shall be tested at intervals not exceeding three years. 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.
- B. 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 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 II, Division of Compliance, USAEC, 50 Seventh Street, Northeast, Atlanta, Georgia, 30323.
- 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.
16. 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 dated July 27, 1964; and letter dated June 4, 1965, signed by Michael B. Young.
17. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in Section 20.203(a)(1), Title 10, Code of Federal Regulations, Part 20, the licensee is hereby authorized to label detector cells and cell baths, containing byproduct material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols without a color requirement. For the U. S. Atomic Energy Commission

Original Signed by  
Robert E. BrinkmanDate JUL 7 1965by Isotopes BranchDivision of Materials Licensing  
Washington, D. C. 20545

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