

U. S. ATOMIC ENERGY COMMISSION

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BYPRODUCT MATERIAL LICENSE 37-7653-2 AMENDMENT NO. 1  
(1962)

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.

<p align="center"><b>Licensee</b></p> <p>1. Name <b>Aluminum Company of America</b> <b>Alcoa Research Laboratories</b></p> <p>2. Address <b>Froopart Road</b> <b>New Kensington, Pennsylvania</b></p>		<p><b>In accordance with application dated March 16, 1960,</b></p> <p>3. License number <b>37-7653-2 is amended in its entirety to read as follows:</b></p> <p>4. Expiration date <b>April 30, 1962</b></p> <p>5. Reference No.</p>
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<p>6. Byproduct material (element and mass number)</p> <p align="center"><b>(See Page 2)</b></p>	<p>7. Chemical and/or physical form</p> <p align="center"><b>(See Page 2)</b></p>	<p>8. Maximum amount of radioactivity which licensee may possess at any one time.</p> <p align="center"><b>(See Page 2)</b></p>
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9. Authorized use

**A through C: Research and Development as defined by Section 30.4(k), Title 10, Code of Federal Regulations, Part 30, "Licensing of Byproduct Material".**

**CONDITIONS**

10. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.
11. The licensee shall comply with the provisions of Title 10, Code of Federal Regulations, Part 20, Chapter 1, "Standards for Protection Against Radiation."
12. Byproduct material shall be used by, or under the direct supervision of, individuals approved by the Isotopes Committee, John E. Lewis, Chairman.
13. Byproduct material as sealed sources shall not be opened by the licensee.
14. Each sealed source of licensed material to be used outside of a shielded exposure device shall be acquired from the supplier with a durable, legible and visible tag permanently attached. The tag shall be attached directly to the source or attached by a durable chain or leader. The tag shall be at least 1 inch square, shall bear a conventional radiation symbol and a minimum of the following instructions: "Danger - Radioactive Material, Do Not Handle, Notify Civil Authorities if Found". Repair or replacement of tags shall be accomplished by returning the source to the manufacturer.

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Supplementary Sheet

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6. Byproduct material (element & mass number)	7. Chemical and/or physical form	8. Maximum amount of radio- activity which licensee may possess at any one time
A. Any byproduct material between Atomic Nos. 3 and 83, inclusive.	A. Any	A. 2 curies each of any byproduct material between Atomic Nos. 3 and 83, inclusive, except Strontium 90 10 millicuries. Total possession limit 10 curies.
B. Hydrogen 3	B. Any	B. 50 curies
C. Strontium 90	C. Sealed Source (Tracerlab, Inc., Model No. S-2A)	C. 1 source of 13.5 millicuries

CONDITIONS

15. Sealed sources containing byproduct material shall be tested for external contamination and/or leakage upon receipt from another person, except where the licensee receives certification from the supplier that the sources have been tested within 30 days prior to transfer and found free of surface contamination. Sources shall be tested for contamination and/or leakage at intervals of not more than 6 months thereafter. Sources semipermanently or permanently mounted in a device may be tested by checking accessible surfaces of the device for removable radioactive material. The test shall be sufficiently sensitive to detect 0.05 microcuries of radioactive material on the surface of sources or devices. Records of test results shall be maintained by the licensee.

If the test reveals removable radioactive material, the licensee shall take immediate action to prevent spread of contamination, initiate corrective action and shall notify the Manager of the nearest Atomic Energy Commission Operations Office listed in Appendix B of Title 10, Code of Federal Regulations, Part 20 within 10 days. The report shall include a statement of corrective action taken.

Leak tests shall be performed by the licensee in accordance with procedure described in letter from John E. Lewis dated April 21, 1958; or by other persons specifically licensed by the Commission to perform such tests.

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**CONDITIONS**

16. Byproduct material shall not be used in or on human beings, in products distributed to the public or in field applications where such activity is released.
17. 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 application dated March 16, 1960 and letter from John E. Lewis dated April 21, 1958, and in related documents and amendments as follows:
- A. Administrative instructions entitled "Radiation Protection Procedures, Alcoa Research Laboratories" submitted with application dated March 16, 1960.
18. Written administrative instructions referenced in Condition 17 A. covering radiological protection, control, and security of byproduct material shall be followed and a copy of instructions shall be supplied to each individual using or having responsibility for use of such material. Any changes in the administrative instructions shall have the prior approval of the Isotopes Branch, Division of Licensing and Regulation.

For the U. S. Atomic Energy Commission

Original Signed By  
James R. Mason

by Chief, Isotopes Branch

Division of Licensing and Regulation  
Washington 25, D. C.

Date APR 4 1960

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