

U. S. ATOMIC ENERGY COMMISSION  
BYPRODUCT MATERIAL LICENSE

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	Curtiss-Wright Corporation Research Division	3. License number 37-2416-2
2. Address	Nuclear Power Department Quehanna, Pennsylvania	4. Expiration date July 31, 1959
		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. Polonium 210  (See Page 2)	A. Sealed Sources  (See Page 2)	A. 30 curies ✓  (See Page 2)

9. Authorized use

- A. RESEARCH AND DEVELOPMENT as defined in Section 11(q) of the Atomic Energy Act of 1954.
- B. RESEARCH AND DEVELOPMENT as defined in Section 11(q) of the Atomic Energy Act of 1954.
- C. In connection with AEC contract AT(30-3)-220.

CONDITIONS

- 10. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.
- 11. Byproduct materials to be used by, or under the supervision of, individuals designated by the radioisotope committee, C. J. Roberts, Chairman.
- 12. THIS LICENSE SUPERSEDES LICENSE NO. 37-2416-1.
- 13. Sealed sources licensed above shall not be opened.
- 14. Written administrative instructions covering appropriate radiological protection phases of operational procedures and establishing responsibility for radiological protection, control, and security of the byproduct material shall be supplied individuals using or having responsibility for use of such material.
- 15. A curie of Iridium 192 is defined as that quantity of activity which presents a radiation intensity of 0.55 roentgens per hour at a distance of one meter.
- 16. Leak testing of sealed sources containing beta and/or gamma emitting byproduct material, except those containing Iridium 192, Tantalum 182, and plated Cobalt 60 in discrete metallic form, shall be carried out at intervals of six months and records of the leak test results shall be furnished the Atomic Energy Commission upon request.

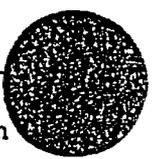
(See Page 2)

For the U. S. Atomic Energy Commission

Date July 18, 1957

by *PCA/TJB 7-19-57*

Director, Isotopes Extension  
Division of Civilian Application  
Oak Ridge, Tennessee



*6-A*

*BC | WRM*

*amend # 5 7/21/57 WRM*

CONTINUED:

<p>6. Byproduct material (element and mass number)</p> <p>B. Any byproduct material between Atomic Nos. 3-83, inclusive</p> <p>C. Any byproduct, source or special nuclear material</p> <p><i>why?</i></p>	<p>7. Chemical and/or physical form</p> <p>B. Any, except where otherwise specified in application dated July 1, 1957</p> <p>C. Irradiated U-238</p>	<p>8. Maximum amount of radioactivity which licensee may possess at any one time</p> <p>B. 100 millicuries of any byproduct material between Atomic Nos. 3-83, inclusive, except: Cobalt 60 - 110 curies <i>✓</i> Iridium 192 - 10 curies <i>✓</i> Total 170 curies</p> <p>C. Material produced by irradiation of 20 grams of U-238 with <math>10^{17}</math> nvt</p>
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CONDITIONS

17. Leak testing of sealed sources containing alpha emitting byproduct material shall be carried out at intervals of three months and records of the leak test results shall be furnished the Atomic Energy Commission upon request.
18. Each sealed source container (capsule) of licensed material to be used outside of a shielded exposure device shall have permanently attached to it a durable, legible and visible tag. The tag shall be attached directly to the container (capsule), or by the use of a durable chain or leader. The tag shall have no dimensions smaller than one inch except in thickness and shall bear a radiation caution symbol in conventional colors, magenta or purple on a yellow background, and a minimum of the following instructions: "Danger - Radioactive Material - Do Not Handle - Notify Civil Authorities if Found".

*Amend't #1 11/14/57 by*

For the U. S. Atomic Energy Commission

Date July 18, 1957

by \_\_\_\_\_  
Director, Isotopes Extension  
Division of Civilian Application  
Oak Ridge, Tennessee