

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 <b>Sinclair Research Laboratories, Inc.</b> 400 East Sibley Boulevard 2. Address <b>Harvey, Illinois</b>		3. License number <b>12-140-4</b>
		4. Expiration date <b>July 31, 1959</b>
		5. Reference No. <b>12-140-2</b> <b>12-140-3</b>
6. Byproduct material (element and mass number)  <b>A. Hydrogen 3 *</b>  (See Page 2)	7. Chemical and/or physical form  <b>A. Any</b>  (See Page 2)	8. Maximum amount of radioactivity which licensee may possess at any one time  <b>A. 100 curies</b>  (See Page 2)
9. Authorized use  <b>RESEARCH AND DEVELOPMENT as defined in Section 11(q) of the Atomic Energy Act of 1954.</b>		

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, Dr. Adolph I. Snow, Chairman.
12. Byproduct materials may be used at any or all Sinclair facilities, owned or leased.
13. THIS LICENSE SUPERSEDES LICENSE NOS. 12-140-2 AND 12-140-3.
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. \* Total amount of Hydrogen 3 (Tritium) procured under this license shall not exceed 100 curies.  
(See Page 2)

For the U. S. Atomic Energy Commission

Date July 10, 1957

by \_\_\_\_\_

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

BC 11/10/57

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## BYPRODUCT MATERIAL LICENSE

Supplementary Sheet

License Number 12-140-4

CONTINUED:

6. Byproduct material (element and mass number)	7. Chemical and/or physical form	8. Maximum amount of radio- activity which licensee may possess at any one time
B. Any byproduct material between Atomic Nos. 3-83, inclusive	B. Any	B. 1,000 millicuries of any byproduct material between Atomic Nos. 3-83, inclusive, except: Cobalt 60 - 25 curies Iridium 192 - 25 curies Strontium 90 - 100 millicuries Total 130 curies

## CONDITIONS

17. 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".
18. 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.
19. 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.
20. Byproduct material shall not be used in or on human beings.

For the U. S. Atomic Energy Commission

Date July 10, 1957by \_\_\_\_\_  
Director, Isotopes Extension  
Division of Civilian Application  
Oak Ridge, Tennessee