L&R:IB:GWK(52091)

Sinclair Research, Inc.
400 East Sibley Boulevard
Harvey, Illinois

Attention: Dr. Adolph I. Snow

Gentlemen:

Enclosed is Amendment Number 7 to Byproduct Material License Number 12-140-4 issued in response to your application dated June 14, 1963.

You will note that this license does not authorize your use of byproduct material (radioisotopes) in Agreement States. An Agreement State is a state which has entered into an agreement with the Atomic Energy Commission to assume certain regulatory authority of the Commission over radioactive materials, pursuant to Section 274 of the Atomic Energy Act.

Agreements with Kentucky, Mississippi, California, New York, and Texas became effective March 26, July 1, September 1, October 15, 1962, and March 1, 1963, respectively. We have enclosed copies of the AEC regulation, Part 150, under which the transfer of regulatory authority to Agreement States is made. Announcements will be made as additional agreements are completed.

You will note that Section 150.20 of the enclosed regulation provides recognition by the AEC of Agreement State licenses for temporary use of byproduct material in non-Agreement States. It is our understanding that Agreement States will provide similar recognition of AEC licenses. With respect to the use of byproduct material within an Agreement State, you should write to the State Regulatory Agency responsible for the regulation of byproduct materials. We have enclosed a list of the responsible agencies to contact within each of the Agreement States.

Sincerely yours,

Robert E. Brinkman
Isotopes Branch
Division of Licensing
and Regulation

bcc: Compliance Region III

Enclosures:
1. Amend 7
2. Form AEC 313
3. 10 CFR 150 w/list

OFFICE ▶		L&R:IB	L&R:IB			
SURNAME ▶		Kerr/vk	Brinkman			
DATE ▶		6/24/63	6/28/63			

Form AEC-318 (Rev. 9-53) U. S. GOVERNMENT PRINTING OFFICE 16—62761-3

FORM AEC-374 (12-57)

U. S. ATOMIC ENERGY COMMISSION

BYPRODUCT MATERIAL LICENSE No. 12-140-4 Amendment No. 7 (G65)

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 Sinclair Research, Inc.	3. License number In accordance with application dated June 14, 1963, 12-140-4 is amended in its entirety to read as follows:
2. Address 400 East Sibley Boulevard Harvey, Illinois	4. Expiration date July 31, 1965
	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. Hydrogen 3	A. Any	A. 100 curies
(See Page 2)		

9. Authorized use

A. and B. Research and Development as defined in Section 30.4 (k) of 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. Byproduct material shall only be used at facilities owned or leased by subsidiaries of the licensee throughout the United States except in Agreement States as defined in Section 30.4(u) of Title 10, Code of Federal Regulations, Part 30.

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

13. Byproduct material shall be used by, or under the supervision of, individuals designated by the local isotope committee, Dr. Adolph I. Snow, Chairman.

14. A. Each sealed source acquired from another person and containing byproduct material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for contamination and/or leakage prior to use. 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.

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Continued from page one

Amendment Number 7

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
B. Any byproduct material with Atomic Nos. between 3 and 83, inclusive	B. Any	B. 1 curie of each byproduct material with Atomic Nos. between 3 and 83, inclusive, except as below:

Cobalt 60	25 curies
Iridium 192	25 curies
Strontium 90	100 millicuries
Total	130 curies

CONDITIONS

14. continued

B. Each sealed source fabricated by the licensee shall be tested for contamination and/or leakage immediately after fabrication. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall repair and/or decontaminate and retest the source. Sealed sources fabricated for distribution and containing byproduct material (with the exception of byproduct material with a half-life not exceeding thirty days, byproduct material in the form of gas, and Iridium 192) shall, in addition to an initial test upon fabrication, be stored for a period of seven days and retested prior to transfer to another person or as otherwise specifically provided for in this license.

C. Each sealed source containing byproduct material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas, shall be tested for leakage and/or contamination at intervals not to exceed six months except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed three months.

D. 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 or semipermanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in

(See Page 3)

Continued from page two

14. D. continued

units of microcuries and maintained for inspection by the Commission.

E. If the test required by Subsection A or C of this condition 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 Licensing and Regulation, U. S. Atomic Energy Commission, Washington 25, D. C., 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 III, Division of Compliance, USAEC, Oakbrook Professional Building, Oak Brook, Illinois.

15. Pursuant to Section 20.302 of Title 10, Code of Federal Regulations, Part 20, the licensee may incinerate the following amounts and types of byproduct material wastes per year, provided the concentrations in the incinerator effluent do not exceed the limits specified for air in Appendix B, Table II of 10 CFR 20: 500 millicuries of Hydrogen 3, 5 millicuries of Carbon 14, 2 millicuries of Cobalt 60, 12 millicuries of Iron 55 and 4 microcuries of Iron 59.

16. Pursuant to Section 30.24(h) of Title 10, Code of Federal Regulations, Part 30, the licensee is authorized to transfer possession and control of gasoline containing Carbon 14 at a concentration not to exceed 3.3×10^{-7} microcuries per milliliter as a product containing an exempt concentration of byproduct material. The concentration of byproduct material in the product shall be controlled in accordance with application dated September 18, 1959. The licensee shall report such transfers in accordance with Section 30.24(h)(2), 10 CFR 30.

17. Pursuant to Section 30.24(h) of Title 10, Code of Federal Regulations, Part 30, the licensee is authorized to transfer possession and control of gasoline containing Hydrogen 3 at a concentration not to exceed 8×10^{-5} microcuries per milliliter as a product containing an exempt concentration of byproduct material. The concentration of byproduct material in the product shall be controlled in accordance with letter from Dr. A. I Snow dated July 5, 1960. The licensee shall report such transfers in accordance with Section 30.24(h)(2), 10 CFR 30.

(See Page 4)

License Number 12-140-4
(G65)

Continued from page three

Amendment Number 7

CONDITIONS

18. 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 applications dated May 16, 1957; September 18, 1959; and June 14, 1963 and letters dated August 5, 1959; July 5, 1960; and September 8, 1960 from A. I. Snow.

JUN 2 8 1963

Date

DUPLICATED
FOR DIV. OF COMPLIANCE

For the U. S. Atomic Energy Commission

Original Signed by
Robert E. Brinkman

by Isotopes Branch
Division of Licensing and Regulation
Washington 25, D. C.

I. SWK/VK

REB 6/28/63

* U. S. GOVERNMENT PRINTING OFFICE: 1962 O - 648267