



HEADQUARTERS
DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS
WASHINGTON 25, D.C.

LOG/PE-IFB

14 JUL 1966

U. S. Atomic Energy Commission
Division of Materials Licensing
Isotopes Branch
Washington, D. C. 20545

Gentlemen:

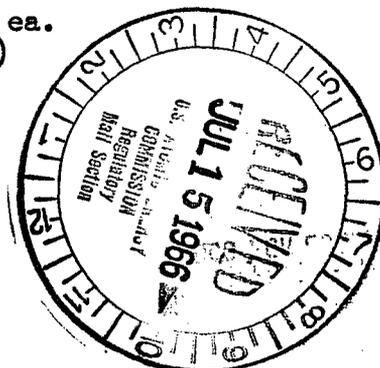
It is recommended that the attached applications for amendment to the following AEC Byproduct Material Licenses be approved:

- a. 20-315-3 - U. S. Army Natick Laboratories, Natick, Mass.
- b. 45-953-9 - U. S. Army Engineer Research and Development Laboratories, Fort Belvoir, Virginia
- c. 29-1022-6(L67) - U. S. Army Electronics Command, Fort Monmouth, New Jersey.

Sincerely yours,

T. L. McCRARY
Acting Chief
PEMA Execution Division

3 Incls.
as (in tripl, ea.
license)



RECEIVED

00/31

6144 NB

Form AEC-313
(5-58)

ATOMIC ENERGY COMMISSION
APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved.
Budget Bureau No. 38-R027.3

INSTRUCTIONS.—Complete Items 1 through 16 if this is an initial application. If application is for renewal of a license, complete only Items 1 through 7 and indicate new information or changes in the program as requested in Items 8 through 15. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail three copies to: U. S. Atomic Energy Commission, Washington 25, D. C. Attention: Isotopes Branch, Division of Licensing and Regulation. Upon approval of this application, the applicant will receive an AEC Byproduct Material License. An AEC Byproduct Material License is issued in accordance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30 and the Licensee is subject to Title 10, Code of Federal Regulations, Part 20.

<p>1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc.)</p> <p>U. S. Army Electronics Command Fort Monmouth, New Jersey 07703</p>	<p>(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a).)</p> <p>Amend as in Inclosure 1.</p>
---	--

<p>2. DEPARTMENT TO USE BYPRODUCT MATERIAL</p> <p>NO CHANGE</p>	<p>3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)</p> <p>29-1022-6 (L67)</p>
---	---

<p>4. INDIVIDUAL USER(S). (Name and title of individual(s) who will use or directly supervise use of byproduct material. Give training and experience in Items 8 and 9.)</p> <p>NO CHANGE</p>	<p>5. RADIATION PROTECTION OFFICER (Name of person designated as radiation protection officer if other than individual user. Attach resume of his training and experience as in Items 8 and 9.)</p> <p>NO CHANGE</p>
---	--

<p>6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.)</p>	<p>(b) CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM NUMBER OF MILLICURIES OF EACH CHEMICAL AND/OR PHYSICAL FORM THAT YOU WILL POSSESS AT ANY ONE TIME. (If sealed source(s), also state name of manufacturer, model number, number of sources and maximum activity per source.)</p> <p>Amend as in Inclosure 2.</p>
---	--

7. DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED. (If byproduct material is for "human use," supplement A (Form AEC-313a) must be completed in lieu of this item. If byproduct material is in the form of a sealed source, include the make and model number of the storage container and/or device in which the source will be stored and/or used.)

7a (Use) NO CHANGE

7b (Containers) See Inclosure 3.



78780

Incl 17

TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)

8. TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING	ON THE JOB (Circle answer)		FORMAL COURSE (Circle answer)	
	a. Principles and practices of radiation protection	NO CHANGE		Yes	No	Yes
b. Radioactivity measurement standardization and monitoring techniques and instruments			Yes	No	Yes	No
c. Mathematics and calculations basic to the use and measurement of radioactivity			Yes	No	Yes	No
d. Biological effects of radiation			Yes	No	Yes	No

9. EXPERIENCE WITH RADIATION. (Actual use of radioisotopes or equivalent experience.)

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
NO CHANGE				

10. RADIATION DETECTION INSTRUMENTS. (Use supplemental sheets if necessary.)

TYPE OF INSTRUMENTS (Include make and model number of each)	NUMBER AVAILABLE	RADIATION DETECTED	SENSITIVITY RANGE (mr/hr)	WINDOW THICKNESS (mg/cm ²)	USE (Monitoring, surveying, measuring)
NO CHANGE					

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE.

NO CHANGE

12. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED. (For film badges, specify method of calibrating and processing, or name of supplier.)

NO CHANGE

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

13. FACILITIES AND EQUIPMENT. Describe laboratory facilities and remote handling equipment, storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached. (Circle answer) Yes No **See Inclosure 4**

14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source.

NO CHANGE

15. WASTE DISPOSAL. If a commercial waste disposal service is employed, specify name of company. Otherwise, submit detailed description of methods which will be used for disposing of radioactive wastes and estimates of the type and amount of activity involved.

NO CHANGE

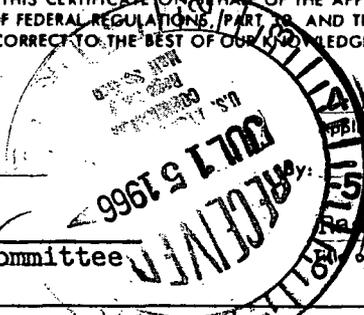
CERTIFICATE (This item must be completed by applicant)

16. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART 20, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

Date June 8, 1966

Wolfgang J. Ramm
Biological Protection Officer
of certifying official

Robert Madson
Chairman, ECOM Isotopes Committee



WARNING.—18 U. S. C., Section 1001, Act of June 25, 1948, 62 Stat. 742, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

3
INCLOSURE 1 (Item 1b of AEC-313)

In addition to the locations given in 1 (a) and (b) of the 16 July 1965 application for renewal of our present license, authorization for using isotopes in the following locations is requested:

1. Two sealed tritium light sources containing not more than 250 millicuries each to be used in Fort Huachuca, Arizona and the Yuma Test Station in Yuma, Arizona.
2. One target replenishing cartridge containing not more than 140 curies of Hydrogen 3 and one tritiated titanium target containing not more than 10 curies to be used in the Kaman Nuclear Corp. Model A-1001 Neutron Generator at Fort Hancock New Jersey. During target or replenishing cartridge replacement, two (2) cartridges or two (2) targets may be located at Fort Hancock for a short period of time.



4
INCLOSURE 2 (Item 6 (a) and (b) of AEC-313)

In addition to the by-product material authorized under the present license # 29-1022-6 and amendments, authorization for the following additional materials and sources is requested:

1. (a) Material - Hydrogen 3

(b) Form - Tritiated titanium targets, no one source greater than 10 curies, total number to be increased to allow a maximum activity of 100 curies.

2. (a) Material - Hydrogen 3

(b) Form - Two Isolite Standard Light Sources containing not more than 250 mc each of sealed tritium gas, manufactured by U. S. Radium Corp. under license # 37-30-2, their drawing # LAB 706, making a total of 500 millicuries.

3. (a) Material - Hydrogen 3

(b) Form - Two target replenishing cartridges for the Kaman Nuclear Neutron Generator Model A-1001, containing nominally 100 curies but not more than 140 curies of titanium tritide powder hermetically sealed in a 1/16 inch diameter cylinder, .003 inch wall thickness. A total of 280 curies required, one on accelerator, one spare.

78780

INCLOSURE 3 (Item 7b of AEC-313)

In addition to the containers listed in IX of Inclosure 8, 16 July 1965 application for renewal, a drawing for the source container of the U. S. Radium Isolite Standard Light Source is included. (See drawing # LAB 706).

This source container and source was manufactured by the U. S. Radium Corp. under AEC License # 37-30-2.