

TREASURY DEPARTMENT

BUREAU OF CUSTOMS

BALTIMORE, MD.



June 23, 1966

REFER TO

Mr. Richard E. Cunningham
Chief, Isotopes Branch
Division of Materials Licensing
Atomic Energy Commission
Washington, D.C. 20545

Dear Mr. Cunningham:

Enclosed is application for renewal of Byproduct
Material (Radioisotopes) License No. 19-8654-1
(G66), in accordance with your letter of June 1,
1966 (DML:IB:37).

Sincerely yours,

Melvin Lerner
Chief Chemist

Enclosure
(duplicate)

REPLY TO: THE CHIEF CHEMIST, U.S. CUSTOMS LABORATORY, 103 S. GAY STREET, BALTIMORE, MARYLAND, 21202

UNITED STATES ATOMIC ENERGY COMMISSION
APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved.
Budget Bureau No. 38-R027

INSTRUCTIONS.—Complete Items 1 through 16 if this is an initial application or an application for renewal of a license. Information contained in previous applications filed with the Commission with respect to Items 8 through 15 may be incorporated by reference provided references are clear and specific. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail two copies to: U.S. Atomic Energy Commission, Washington, D.C., 20545, Attention: Isotopes Branch, Division of Materials Licensing. 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.

1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc. Include ZIP Code.)

**The Treasury Department
U.S. Customs Laboratory
103 S. Gay Street - Room 704
Baltimore, Md. 21202**

(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a). Include ZIP Code.)

2. DEPARTMENT OR USE OF BYPRODUCT MATERIAL

**Chief Chemist, U.S. Customs Lab.
103 S. Gay Street - Room 704
Baltimore, Md. 21202**

3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)

19-8654-1 (G66)

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.)

Melvin Lerner, Chief Chemist

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.)

Melvin Lerner, Chief Chemist

6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.)

A. Strontium 90

B. Xenon 133

(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.)

**A. Sealed sources, not to exceed 3 in number.
U.S. Radium Cat. # Lab. 369 containing 24
millicuries of Sr 90.**

B. Sealed source (Tracerlab) - 100 millicuries

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.)

**A. Gas chromatography unit - Electronic Instruments for Research, Inc.
AU-18-2000.**

B. To be used in the evaluation of a narrow band x-ray gold detector.

78431

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	U.S. Customs Laboratory	6 yrs.	(Yes) No	Yes No
b. Radioactivity measurement standardization and monitoring techniques and instruments	U.S. Customs Laboratory	6 yrs.	(Yes) No	Yes No
c. Mathematics and calculations basic to the use and measurement of radioactivity	U.S. Customs Laboratory	6 yrs.	(Yes) No	Yes No
d. Biological effects of radiation	U.S. Customs Laboratory	6 yrs.	(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
Experience with exempt quantities of the following radioactive sources: Cobalt 60; Polonium 210; Carbon 14. Six years' experience in the use of equipment for monitoring uranium and thorium ores. On-the-job study of radiation practices and principles.				

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)
Mark II	1	C L A S S I F I E D			
Navy Radiac 27E	1	beta and gamma	.01-500	Navy types BS1 & BS2	Monitoring
NRD Scaler	1	beta and gamma	.01-500	3-4	Measuring

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

Calibrated by Naval Research Laboratory once a year; Radioactive Test Sample MX-1083B available.

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

NONE

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS IN DUPLICATE

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 **Fume hoods**

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. **See attached sheet.**

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.

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 30, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

**The Treasury Department
U.S. Customs Laboratory**

Applicant named in item 1

Melvin Lerner, Chief Chemist

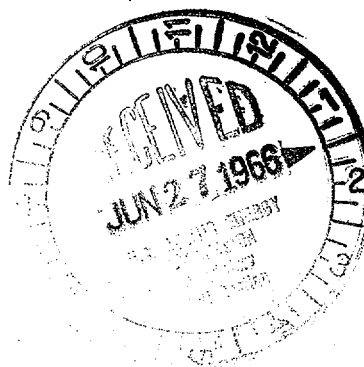
Title of certifying official

Date **June 23, 1966**

WARNING.—18 U. S. C., Section 1001; Act of June 25, 1948, 62 Stat. 749, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States or to any officer within its jurisdiction.

14. Shall be tested for leakage at no longer than six month intervals by Melvin Lerner, Chief Chemist, using NRD Scaler; source to be repaired, if necessary, by original supplier.

A "wipe" test will be made of the sealed source with filter paper and the paper will be counted with a thin window geiger tube and/or a windowless flow counter for several hours to detect any rise above background. The test will be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample.



78431