Am#4 37-909-4

| Form AEC-313 (5-58) | ATOMIC ENERGY COMMISSION<br>**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 ac[illegible]dance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30 and the Licensee is subje[illegible] Title 10, Code of Federal Regulations, Part 20.

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

Mellon Institute
4400 Fifth Avenue
Pittsburgh 13, Pa.

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

Radiation Research Laboratories
Delmont, Pa.

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

Radiation Research Laboratories

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

cf. 37-909-4 (Amendment No. 3)

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.)*

Robert H. Schuler, Head
Radiation Research Laboratories

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.)*

Same

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

$Sr^{90}$

(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.)*

10 millicuries - source for Model 600-3 ionization detector as furnished by Research Specialties Co. (Richmond, California)

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.)*

to be used in ionization detector of gas chromatographic apparatus



26519 A/115

(Continued on reverse side)

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## 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 | | | Yes No | Yes No |
| 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 |
|---|---|---|---|---|
| | | | | |

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/cm²) | USE (Monitoring, surveying, measuring) |
|---|---|---|---|---|---|
| | | | | | |

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

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

## INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

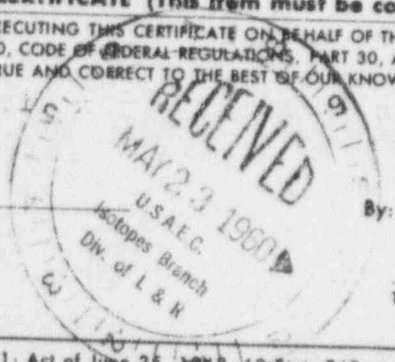
13. FACILITIES AND EQUIPMENT. Describe laboratory facilities and remote handling equipment, storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached. *(Circle answer)* Yes No

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.

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.




Date May 18, 1960

Mellon Institute
Applicant named in item 1

By: [signature]

Director of Administration
Title of certifying official

**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 as to any matter within its jurisdiction.

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