

31-2374-1

3/13002

Form AEC-313  
(9-5b)

ATOMIC ENERGY COMMISSION  
APPLICATION FOR BYPRODUCT MATERIAL LICENSE

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

INSTRUCTIONS: Complete Items 1 through 19 if this is a new application. If renewal is requested, complete only Items 1 through 11 provided that with respect to the other items there has been no change in the information previously submitted. Mail two copies to: U. S. Atomic Energy Commission, P. O. Box E, Oak Ridge, Tennessee, Attention: Isotopes Extension, Division of Civilian Application. Upon approval of this application, the applicant will receive an AEC Byproduct Material License. General requirements for issuance of an AEC Byproduct Material License are contained in Title 10, Code of Federal Regulations, Part 30.

1. (a) NAME AND SHIPPING ADDRESS OF APPLICANT  
(Institution, firm, hospital, person, etc.)  
**Corning Nuclear Corp.**  
**Sylvania Electric Products, Inc.**  
**208-20 Willits Point Blvd, Bayside, NY**

(b) ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED  
(If different from shipping address)  
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2. DEPARTMENT TO USE BYPRODUCT MATERIAL  
**Design and Testing Section**

3. INDIVIDUAL USER (Name and title of individual(s) who will use or directly supervise use of byproduct material)  
**N. Grossman**

4. RADIOLOGICAL SAFETY OFFICER (Name of person qualified in radiological safety, if other than individual user)  
**R. D. Early**

5. PREVIOUS LICENSE OR AUTHORIZATION NUMBER (If this is an application for renewal of a license for byproduct material obtained under a prior license or authorization for radioisotope procurement)  
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BYPRODUCT MATERIAL OR IRRADIATION SERVICE DESIRED

6. BYPRODUCT MATERIAL (Element and mass number)  
**Cesium 137**

7. CHEMICAL AND/OR PHYSICAL FORM (Or catalog number)  
**Cesium Chloride**

8. MAXIMUM AMOUNT OF RADIOACTIVITY IN MILLI-CURIES THAT YOU WILL POSSESS AT ANY ONE TIME  
**400 mc**

9. IF IRRADIATION SERVICE IS DESIRED, STATE PERTINENT DETAILS SUCH AS: CHEMICAL COMPOSITION AND WEIGHT IN GRAMS OF TARGET MATERIAL, RADIOACTIVITY, IRRADIATION TIME IN DAYS, AND NEUTRON FLUX  
**no**

STATEMENT OF USE

10. (a) DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED. (If material is for "human use" complete Supplement A in lieu of this item. If material is to be used in or manufactured as a "sealed source" complete Supplement B in addition to this item.)

The radioisotope will be used in a laboratory gauge, manufactured by the Ohmart Corp. of Cincinnati, Ohio, to measure the density of metallic strip. The isotope will be supplied by Ohmart.

(b) DESCRIBE PROCEDURES WHICH WILL BE OBSERVED TO MINIMIZE HAZARD FROM HANDLING, STORAGE, AND DISPOSAL OF THE BYPRODUCT MATERIAL

Actual procedures will be formulated on the basis of a time study and job evaluation. The unit is permanently lead shielded so as to limit the field intensity to less than 2.0 mc/hr at 5 inches.

CERTIFICATE

11. 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 do solemnly swear (or affirm) that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

State of **New York**  
County of **Queens**  
Subscribed and sworn to before me this **15th** day of **October, 1956**  
**Jessie K. Brathers**  
Notary Public

**SYLVANIA ELECTRIC PRODUCTS, INC.**  
Applicant named in Item 1  
**J. M. McTavish**  
Title of Certifying Official  
**SEPTEMBER 25, 1956**  
Date

WARNING

18 U. S. C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willful representation to any department or agency of the United States as to any matter within its jurisdiction.

INSTRUCTIONS: Complete Items 12 through 19 if this is a new application. This information may be omitted from subsequent applications provided there is no change in the information previously submitted, and reference is made in Item 5 to the application on which this information appears.

TRAINING AND EXPERIENCE WITH RADIOACTIVITY OF INDIVIDUAL USER NAMED IN ITEM 3

12. TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING	ON THE JOB (Circle answer)		FORMAL COURSE (Circle answer)	
			Yes	No	Yes	No
1. Principles and practices of radiological health safety. . . . .	see attached page -2-		Yes	No	Yes	No
2. Radioactivity measurement standardization and monitoring techniques and instruments . . . . .			Yes	No	Yes	No
3. Mathematics and calculations basic to the use and measurement of radioactivity. . . . .			Yes	No	Yes	No
4. Biological effects of radiation. . .			Yes	No	Yes	No
5. Actual use of radioisotopes in the types and quantities for which application is being made, or equivalent experience . . . . .			Yes	No	Yes	No

13. ISOTOPE HANDLING EXPERIENCE

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
Co <sup>60</sup>	30 mc	Sylvania Electric Products Inc.	1951-present	Research
Ra, assorted isotopes	1 mc			
Fission Prod.	10 mc			

14. If Radiological Safety Officer named in Item 4 is different from individual user named in Item 3, use supplementary sheet to provide equivalent information on "Training and Experience With Radioactivity of Radiological Safety Officer." Supplementary sheet is attached (Circle answer) **see attached page -2-** (Yes) No

PHYSICAL FACILITIES, EQUIPMENT, AND RADIATION INSTRUMENTATION

15. RADIATION DETECTION INSTRUMENTS (Use separate sheet if necessary)

TYPE OF INSTRUMENTS (Include make and model number of each)	NUMBER AVAILABLE	RADIATION DETECTED	SENSITIVITY RANGE (mr/hr)	WINDOW THICKNESS (mg/cm <sup>2</sup> )	USE (Monitoring, surveying, measuring)
Nuclear 2610A	2	β, γ	0-20	30mg/cm <sup>2</sup>	all
Epsy sic-17c	2	α, β, γ	0-5000		all

16. FILM BADGES, DOSIMETERS, AND OTHER PERSONNEL MONITORING DEVICES INCLUDING BIO-ASSAY PROCEDURES

Standard film badge service (w'kly)  
Dosimeters (as needed)

17. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE (For film badges specify method of calibration and processing, or name supplier)

Film badge service - USAEC - NYOO  
Dosimeters & Meters - Nuclear Inst. Inc.

18. (a) DESCRIBE BRIEFLY REMOTE HANDLING EQUIPMENT, STORAGE CONTAINERS, SHIELDING, AND LABORATORY FACILITIES (Working areas, fume hoods, etc.)

Isotope is doubly sealed in monel and permanently shielded.

(b) SKETCHES OF SUCH FACILITIES ARE ATTACHED (Circle answer)

(Yes) No

19. DESCRIBE BRIEFLY RADIATION SURVEYING PROCEDURES AND METHODS OF DISPOSING OF RADIOACTIVE WASTES

Routine radiation surveys are made by the Health & Safety Department.  
Isotope will be removed and replaced by supplier.

DUPLICATED  
FOR DIV. OF INSP.

# SYLVANIA ELECTRIC PRODUCTS INC.

31-2374-1

ATOMIC ENERGY DIVISION  
CANTIAGUE ROAD, P. O. BOX 35  
HICKSVILLE, NEW YORK

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### Training & Experience with Radioactivity of Individual Named in

Item 3 - N. Grossman - User has had no formal <sup>training</sup> in Radiological  
Item 12 Safety

COPY

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in Item 4		<u>D.O.T.</u>	<u>O.T.J.</u>	<u>F.C.</u>
<u>Item 14</u>	- R. D. Early			
1.	Sylvania Electric	4.5 years	yes	no
2.	do	do	yes	no
3.	C.C.N.Y.	6 mos	no	yes
4.	Sylvania Electric	4.5 year	yes	no
5	Sylvania Electric	1952 present periodic usage	yes	no

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