

APPLICATION FOR BYPRODUCT MATERIAL LICENSE  
INDUSTRIAL

a. NEW LICENSE

b. AMENDMENT TO:  
LICENSE NUMBER

X c. RENEWAL OF:  
LICENSE NUMBER  
45-13356-02

See attached instructions for details.

Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.

2. APPLICANT'S NAME (Institution, firm, person, etc.)  
Drug Enforcement Administration  
Special Testing and Research Laboratory  
TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION  
703-557-1495

3. NAME OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION  
Dr. A.R. Sperling  
TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION  
703-557-1495

4. APPLICANT'S MAILING ADDRESS (Include Zip Code)  
7704 Old Springhouse Road  
McLean, VA 22102

5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED  
(Include Zip Code)  
Same as No. 4

(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)

6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL  
(See Items 16 and 17 for required training and experience of each individual named below)

FULL NAME	TITLE
a. Albert R. Sperling	Research Chemist
b. James M. Moore	Research Chemist
c. Charles Harper	Research Chemist

7. RADIATION PROTECTION OFFICER  
Dr. A.R. Sperling

Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.

B. LICENSED MATERIAL

LINE NO.	ELEMENT AND MASS NUMBER A	CHEMICAL AND/OR PHYSICAL FORM B	NAME OF MANUFACTURER AND MODEL NUMBER (If Sealed Source) C	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME D
(1)	Nickel 63	Foils - sealed source	New England Nuclear Corp. Model NER-002	Three sources of 15 millicuries each (45 millicuries total)
(2)			In Perkin Elmer Detector Cells Model 009-0282	
(3)	Nickel 63	Plated source	Hewlett Packard Model 18803-60520	Two sources of 15 millicuries each (30 millicuries total)
(4)		Sealed source		

DESCRIBE USE OF LICENSED MATERIAL  
E

- (1) For use in Perkin Elmer Gas Chromatographs for sample analysis
- (2) For use in Hewlett Packard Gas Chromatographs for sample analysis
- (3)
- (4)

FEE EXEMPT

99842

7906130467

**9. STORAGE OF SEALED SOURCES**

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED. A.	NAME OF MANUFACTURER B.	MODEL NUMBER C.
(1)	Perkin Elmer Gas Chromatograph	Perkin Elmer	3920
(2)	Hewlett Packard Gas Chromatograph	Hewlett Packard	5840A
(3)			
(4)			

**10. RADIATION DETECTION INSTRUMENTS**

LINE NO.	TYPE OF INSTRUMENT A	MANUFACTURER'S NAME B	MODEL NUMBER C	NUMBER AVAILABLE D	RADIATION DETECTED (alpha, beta, gamma, neutron) E	SENSITIVITY RANGE (milliroentgens/hour or counts/minute) F
(1)	Plutonium Gamma Probe	Eberline Instrument Co.	PG-1	1	Gamma-Beta X-Rays	0-500,000 CPM
(2)	Probe	Victoreen	495	1	Alpha-Beta Gamma	0-500,000 CPM
(3)						
(4)						

**11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10**

<input checked="" type="checkbox"/> <b>a. CALIBRATED BY SERVICE COMPANY</b> NAME, ADDRESS, AND FREQUENCY  Victoreen Instrument Division Cleveland, Ohio	<input type="checkbox"/> <b>b. CALIBRATED BY APPLICANT</b> Attach a separate sheet describing method, frequency and standards used for calibrating instruments.
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**12. PERSONNEL MONITORING DEVICES**

TYPE (Check and/or complete as appropriate.) A	SUPPLIER (Service Company) B	EXCHANGE FREQUENCY C
<input type="checkbox"/> (1) FILM BADGE  <input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD)  <input type="checkbox"/> (3) OTHER (Specify): _____ _____ _____		<input type="checkbox"/> MONTHLY  <input type="checkbox"/> QUARTERLY  <input type="checkbox"/> OTHER (Specify): _____ _____

**13. FACILITIES AND EQUIPMENT** (Check where appropriate and attach annotated sketch(es) and description(s).)

- a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC.
- b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC.
- c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC.
- d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

**14. WASTE DISPOSAL**

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED Packard Instrument Co., Inc.  
2200 Warrenville Road Downers Grove, Illinois 60515

b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE.

**INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17**

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:


15. **RADIATION PROTECTION PROGRAM.** Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures *(if needed)*, day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.
  
16. **FORMAL TRAINING IN RADIATION SAFETY.** Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.
  - a. Principles and practices of radiation protection.
  - b. Radioactivity measurement standardization and monitoring techniques and instruments.
  - c. Mathematics and calculations basic to the use and measurement of radioactivity.
  - d. Biological effects of radiation.
  
17. **EXPERIENCE.** Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

**18. CERTIFICATE**

*(This item must be completed by applicant)*

*The applicant and any official executing this certificate on behalf of the applicant named in Item 2, 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.*

**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.

a. LICENSE FEE REQUIRED (See Section 170.31, 10 CFR 170)  NONE	b. CERTIFYING OFFICIAL (Signature) 
	c. NAME (Type or print) Stanley P. Sobol
(1) LICENSE FEE CATEGORY:	d. TITLE Laboratory Director
(2) LICENSE FEE ENCLOSED: \$	e. DATE May 8, 1979

**FEE EXEMPT**

15. RADIATION PROTECTION PROGRAM

Operators will be advised as to proper techniques in handling the materials. Periodic monitoring shall be performed. Leak tests will be performed according to instructions provided with leak test kit.

Leak test kits for Perkin Elmer detectors are supplied by Nuclear Sources and Services Inc., Houston, Texas, model number LT-1 (PE number 009-1667). Leak test kits for the Hewlett Packard detector are supplied by Hewlett Packard Co., Avondale Pennsylvania, model number 18713-60050.

16. TRAINING RESUME FOR PERSONNEL USING LICENSED MATERIAL

Albert R. Sperling, Ph.D.

Civil Defense Course (formal course) - trained by  
U.S. Food and Drug Administration - 1 week.

James M. Moore

Baltimore, Maryland - on the job training - 1 week.

Charles Harper

U.S. Navy course (formal course) - 1970

17. EXPERIENCE RESUME FOR PERSONNEL USING LICENSED MATERIAL

Albert R. Sperling, Ph.D.

Ni <sup>63</sup>	15 mc.	DEA (formerly BNDD)	11 years	GLC
H <sup>3</sup>	150 mc.	DEA (formerly BNDD)	11 years	GLC

James M. Moore

Ni <sup>63</sup>	15 mc.	DEA (formerly BNDD)	11 years	GLC
H <sup>3</sup>	160 mc.	DEA (formerly BNDD)	13 years	GLC

Charles Harper

Ni <sup>63</sup>	15 mc.	DEA	1 year	GLC
H <sup>3</sup>	150 mc.	DEA	1 year	GLC

**CERTIFICATE OF DISPOSITION OF MATERIALS**

(All Blocks MUST BE Completed)

<b>LICENSEE NAME AND ADDRESS</b> Mr. Stanley P. Sobol, Laboratory Director Special Testing and Research Laboratory 7704 Old Springhouse Road McLean, VA 22102	<b>LICENSE NUMBER</b> 45-13356-02
	<b>LICENSE EXPIRATION DATE</b> June 30, 1979

The licensee or any individual executing this certificate on behalf of the licensee certify that: (Check and/or complete appropriate item(s) below.)

- 1. No materials have been procured by licensee.
- 2. All materials procured and/or possessed by licensee under license number shown above, have been transferred to: \_\_\_\_\_

which has NRC license number: \_\_\_\_\_

- 3. All materials procured and/or possessed by licensee under license number shown above have been transferred to: \_\_\_\_\_

which has license number: \_\_\_\_\_ issued by \_\_\_\_\_

an Agreement State pursuant to Section 274 of the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974.

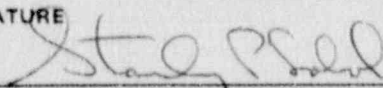
- 4. Materials have been disposed of in the following manner. (Describe specific disposal procedures -- if additional space is needed, use reverse side.)

Other materials on previous license have been disposed. Material was sent to:

Packard Instrument Company  
 2200 Warrenville Road  
 Downers Grove, Illinois 60515

Description of disposed material:

<u>Byproduct Material</u>	<u>Physical Form</u>	<u>Amount of Radioactivity</u>
A. Hydrogen 3	Foil	250 millicuries
B. Nickel 63	Foil	15 millicuries
C. Hydrogen 3	Foil	150 millicuries

PLEASE RETURN TO: U.S. Nuclear Regulatory Commission Office of Nuclear Material Safety and Safeguards Washington, D.C. 20555	<b>CERTIFYING OFFICIAL</b>	
	SIGNATURE 	99842
	DATE May 8, 1979	