

**MELPAR, INC.** 3000 ARLINGTON BOULEVARD, FALLS CHURCH, VIRGINIA · JEFFERSON 4-6000

3 June 1964

Atomic Energy Commission  
Washington 25, D. C.

Re: Byproduct Material License  
No. 45-7548-1 (G65)

Attn: Mr. Robert E. Brinkman, Isotopes Branch  
Division of Licensing and Regulation

Gentlemen:

Enclosed herewith find supplementary application in triplicate, requesting an amendment to the above license permitting the use of Cesium-137, with Dr. Robert C. McIlhenny as sole user.

If there is any further information you desire, we will be pleased to furnish it.

Very truly yours,

MELPAR, INC.



Austin G. Roe  
House Counsel

Encls.



ACKNOWLEDGED

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## APPLICATION FOR BYPRODUCT MATERIAL LICENSE

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.

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

Melpar, Inc.  
Arlington Blvd.  
Falls Church, Va.

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

No change

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

Research Division

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

#45-7548-1 (including amendments)  
(G65)

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.)

ADD as sole user of Cesium-137

Dr. R. C. McIlhenny

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.)

No Change

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

ADD as new Subitem I. of Item 6. of existing license:

I. Cesium-137

(b) CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM NUMBER OF MILLCURIES 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.)

ADD as new Subitem I. of Item 7. of existing license:

I. Sealed Sources. Radioisotope-Modified version of Standard CES-I-RAD 1000 unit American Nuclear Corporation; loaded with two 1000 curie Cesium-137 sources - sources to be double encapsulated in stainless steel capsules and leak tested before loading.

ADD as new Subitem I. of Item 8. of existing license:

I. 2000 curies.

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.)

ADD as new subitem I. of Item 9. of existing license:

I. To be used for experimental programs in radiation chemistry and radiation-damage to electronic components and circuits. The materials to be used are neither explosive nor highly toxic, and no explosive or toxic radiolytic products are anticipated.

ACKNOWLEDGED

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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)	
			Yes	No	Yes	No
a. Principles and practices of radiation protection	No change					
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						

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

ISOPOE	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 <sup>2</sup> )	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 Supplemental Sheet #1

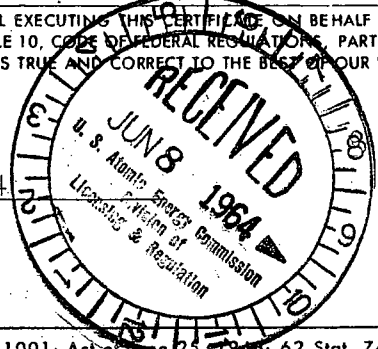
14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source.  
 See Supplemental Sheet #1

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 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 2 June 1964



MELPAR, INC.

Applicant named in item 1

By: [Signature]  
Dr. P. E. Ritt  
 Vice President - Research  
 Title of certifying official

WARNING.—18 U. S. C., Section 1001, Act of October 3, 1962, 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.