

1 Apr 29 1965

MELPAR, INC.

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3990 ARLINGTON BOULEVARD, FALLS CHURCH, VIRGINIA 22046

AREA CODE 703 JEFFERSON 4-6000

26 April 1965

Atomic Energy Commission
Washington 25, D. C.

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

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


Gentlemen:

Enclosed herewith find supplementary application in duplicate, requesting an amendment to the above license permitting the use of Americium (241) and Polonium (210), and permitting their use by Morton Kagan, Research Physicist, and Dr. Robert C. McIlhenny, Radiochemist.

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

Enclosures

DUPLICATED
FOR DIV. OF COMPLIANCE

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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.)		(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a). Include ZIP Code.)	
Melpar, Inc. 7700 Arlington Blvd. Falls Church, Virginia		No change	
2. DEPARTMENT TO USE BYPRODUCT MATERIAL		3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)	
Research Division		#45-7548-1 (G65) - present license (including amendments)	
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.) <u>Add to existing license as sole individual users of Americium (²⁴¹) and Polonium (²¹⁰):</u> Morton Kagan - Research Physicist Dr. Robert C. McIlhenny - Radiochemist (qualifications filed 2/12/62)		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.)		(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.)	
Add as new Subitems I. and J. of Item 6 of existing License I. Americium (²⁴¹) J. Polonium (²¹⁰)		Add as new Subitem I. of Item 7 of existing license: I. Deposited on gold or platinum backing with gold overlay to seal source (Item 6A of Monsanto Research Catalog (10-20 microcuries each)). Add as new Subitem J. of Item 7 of existing license: J. Deposited on gold or platinum backing with gold overlay to seal source (Item 1B of Monsanto Research Catalog (10-20 microcuries each)). Add as new Subitem I. of Item 8 of existing license: I. Maximum amount: 0.2 millicuries. Add as new Subitem J. of Item 8 of existing license: J. Maximum amount: 0.2 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.)			
Add as new Subitems I. and J. of Item 9 of existing license: I. and J. To be used to ionize air and other gases in negative ion mobility chamber for research in detection studies.			

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TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)					
8. TYPE OF TRAINING	Re: <u>Morton Kagan</u> WHERE TRAINED	DURATION OF TRAINING	ON THE JOB (Circle answer)	FORMAL COURSE ¹ (Circle answer)	
a. Principles and practices of radiation protection	Case Inst. of Technology Univ. of Md.	2 yrs. 1 yr.	Yes No	<input checked="" type="radio"/> Yes <input type="radio"/> No	
b. Radioactivity measurement standardization and monitoring techniques and instruments	Case Inst. of Technology Univ. of Md.	2 yrs. 1 yr.	Yes No	<input checked="" type="radio"/> Yes <input type="radio"/> No	
c. Mathematics and calculations basic to the use and measurement of radioactivity	Case Inst. of Technology Univ. of Md.	2 yrs. 1 yr.	Yes No	<input checked="" type="radio"/> Yes <input type="radio"/> 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	
Tritium	Several microcuries	Case Inst. of Tech.	1 yr.	Experimental investigation in lab to determine properties	
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)
		No change			
14. Radiation Protection Program - Leak testing on the Americium and Polonium will be made at least once every three months. This will be accomplished by holding a filter paper or tissue approximately 1/4" away from the surface of the source overnight (13-14 hours) and then counting with a thin window gas-flow counter.					
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 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					
No change					
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 14, above.					
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					
16. THE APPLICANT AND ANY OFFICIAL PREPARING 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.					
<div style="display: flex; justify-content: space-between;"> <div> <p>RECEIVED 1965 APR 27 U.S. A. TOMIC ENERGY COM. REGULATORY DIVISION MAIL ROOM</p> </div> <div> <p>MELPAR, INC. Applicant named in item 1</p> </div> </div> <p>Date <u>April 27 1965</u></p> <p>By: <u>Dr. P. E. Ritt</u> Dr. P. E. Ritt, Vice President Research and Engineering Title of certifying official</p>					
<p>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.</p>					