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Form AEC-313  
8-64  
10 CFR 30

UNITED STATES ATOMIC ENERGY COMMISSION  
SUPPLEMENTARY APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved.  
Budget Bureau No. 38-R027

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.

<p>1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc. Include ZIP Code.)</p> <p>Melpar, Inc. 7700 Arlington Blvd. Falls Church, Virginia 22046</p>	<p>(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a). Include ZIP Code.)</p>
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<p>2. DEPARTMENT TO USE BYPRODUCT MATERIAL</p> <p>Research Division</p>	<p>3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)</p> <p>#15-7548-1 (including amendments) (G67)</p>
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<p>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.)</p> <p>ADD to list of individual users of: Carbon 14 (6A), Phosphorus 32 (6B), Hydrogen 3 (6D) - Dr. G.B.Gori, Sr. Scientist, and Mr. J.L. Carney, Sr. Microbiologist. Silver 110, 111 (6C), Sulfur 35 (6L) - Mr. J.L. Carney.</p>	<p>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.)</p> <p>No change</p>
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<p>6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.)</p> <p>No change</p>	<p>(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.)</p> <p>No change</p>
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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.)

No change

Information in this record was deleted in accordance with the Freedom of Information Act, exemptions 6  
FDIA- 1009-0221

B-5

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	See attached sheets #1 & #2		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
		See attached sheets #1 and #2		

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 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.

No change

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 13 January 1966

By MELPAR, INC.  
Applicant named in item 1

Dr. P. E. Ritt, Vice President  
 Research & Engineering  
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.

Data with Respect to the Training and Experience of

DR. GIO BATTÀ GORI

(Reference: Items 8 & 9, Form AEC-313)

Item 8. Dr. Gio Batta Gori, Senior Scientist

Ph.D. University of Camerino, Italy, Ex-6

Ex 6

<u>Type of Training</u>	<u>Where</u>	<u>Duration</u>	<u>On the Job</u>	<u>Formal Course</u>
a) Principles.....	Univ. of Pennsylvania	2 yrs.	yes	no
b) Radioactivity....	Univ. of Pennsylvania	2 yrs.	yes	no
c) Mathematics.....	Univ. of Rome, Italy	3 yrs.	no	yes
d) Biological.....	Univ. of Pennsylvania	2 yrs.	yes	no

Item 9. Experience with Radiation

<u>Isotope</u>	<u>Max. Amt.</u>	<u>Where</u>	<u>Duration</u>	<u>Type of Use</u>
H <sup>3</sup>	10 mc	University of Pennsylvania	2 yrs.	Metabolic Studies
H <sup>3</sup>	5 mc	Microbiological Associates, Bethesda, Maryland	2 yrs.	Metabolic Studies
C <sup>14</sup>	5 mc	University of Pennsylvania	2 yrs.	Metabolic Studies



Data with Respect to the Training and Experience of

JOSEPH L. CARNEY

(Reference: Items 8 & 9, Form AEC-313)

Item 8. Joseph L. Carney, Senior Microbiologist

M.S. in Bacteriology, University of Pittsburgh, [Ex. 6]

Ex 6

M.S. in Radiation Health, University of Pittsburgh, [Ex. 6]

<u>Type of Training</u>	<u>Where</u>	<u>Duration</u>	<u>On the Job</u>	<u>Formal Course</u>
a) Principles.....	Univ. of Pittsburgh	2 yrs.	yes	yes
b) Radioactivity.....	Univ. of Pittsburgh	2 yrs.	yes	yes
c) Mathematics & calculations.....	Univ. of Pittsburgh	2 yrs.	yes	yes
d) Biological.....	Univ. of Pittsburgh	2 yrs.	yes	yes

Item 9. Experience with Radiation

<u>Isotope</u>	<u>Max. Amt.</u>	<u>Where</u>	<u>Duration</u>	<u>Type of Use</u>
<sup>15</sup>				
<sup>14</sup> C	10 mc	University of Pittsburgh	2 yrs.	Metabolic Studies
<sup>14</sup> C	15 mc	University of Pittsburgh	2 yrs.	Metabolic Studies
<sup>3</sup> H	50 mc	University of Pittsburgh	2 yrs.	Metabolic Studies
<sup>60</sup> Co	---	University of Pittsburgh	2 yrs.	Instrument Calibration
<sup>131</sup> I	1 mc	University of Pittsburgh	2 yrs.	Metabolic Studies
<sup>55</sup> S	5 mc	University of Pittsburgh	2 yrs.	Metabolic Studies