

UNITED STATES ATOMIC ENERGY COMMISSION  
**APPLICATION FOR BYPRODUCT MATERIAL LICENSE**

**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.

"OFFICIAL RECORD COPY"

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.)	
Glen Ridge High School 200 Ridgewood Ave., Glen Ridge, N. J. 07028			
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.)	
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.)		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.)	
Mr. James Buckley Science Coordinator		Mr. James Buckley Navy course Rad. Protection Newport Naval Base	
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.)	
Cesium-137		1 sealed source, 400 curies, Model ANC-CS-380, shielded and contained within Radiation Machinery Corporations Model Gammator-50B	
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.)			
Device is a gamma irradiator containing a sealed source completely shielded and contained and designated Radiation Machinery Corp. Model Gammator-50B. It will be used as a gamma irradiator for educational demonstrations and laboratory experiments in biology and general science. The manufacturers recommendations and Operating Instructions will be followed.			
8407110111 830626 NMS LIC30 29-12952-02 PDR			

TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)

B. 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	Newport Naval Base	5 weeks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Radioactivity measurement standardization and monitoring techniques and instruments	" " "	"	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Mathematics and calculations basic to the use and measurement of radioactivity	" " "	"	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Biological effects of radiation	" " "	"	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
<sup>23</sup> N9	10 microcuries	Glen Ridge High		
<sup>60</sup> Co	1 " "	" " "		
<sup>65</sup> Zn	10 " "	" " "		
<sup>14</sup> C	50 " "	" " "		

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)
Classmaster Model 1613A Nuclear Chicago Dosimeter	1	Beta Gamma	—	—	Counting
Berthel Model #1700 Geiger Counter	10	Gamma	—	—	Detection
Geiger Counter Model #500	3	Gamma	—	—	Detection
Rivory Scale x Rayon	1	Beta	—	—	Counting

11. METHOD, FREQUENCY AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE  
 Not calibrated on regular basis by any outside company.

12. FILM BADGES, DOSIMETERS, AND BIO ASSAY PROCEDURES USED (For film badges, specify method of calibrating and processing, or name of supplier.)

Not required or necessary at radiation levels involved.

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. **Isotopes completely contained within manufacturers device.**

14. RADIATION PROTECTION PROGRAM Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, address and telephone number of person responsible for the program. **Radiation Machinery Corp. will perform initial survey and leak test. Future surveys & leak tests will be carried out by above listed personnel following suppliers instructions.**

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 radioactive waste 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 Aug 19, 1968

By: Glen Ridge High School  
 Applicant named in item 1

By: Melvin F. Pluis  
 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.