DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS
WASHINGTON, D.C. 20310

LOG/PE-ISB

2 JUL 1969

U.S. Atomic Energy Commission
Division of Materials Licensing
Isotopes Branch
Washington, D. C. 20545

Gentlemen:

It is recommended that the attached application for amendment of BML No. 29-01022-06 issued to Fort Monmouth be approved.

An amendment is necessary in order to allow the possession of 50 sealed self-luminous tritium sources of 1.5 curies each. These sources will support an urgent project in Southeast Asia. Expeditious handling is requested.

Sincerely yours,

Chas. F. Haas

CHARLES F. HAAS
Chief, Industrial Support Branch
PEMA Execution Division

1 Incl
As stated

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Form AEC-313
(5-58)

ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved.
Budget Bureau No. 38-R027.4.

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.)*

Department of the Army
US Army Electronics Command
Fort Monmouth, New Jersey 07703

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

No Change

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

No Change

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

29-01022-06

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.)*

No Change

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.)*

0. - Tritium
(Hydrogen - 3)

(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.)*

0.- 50 Betalights, sealed self-luminous sources. 0.- 75 curies total with no single source to exceed 1.5 curies. Sealed glass capsules, internally coated with phosphor, and filled with Tritium gas. The glass is impervious to Tritium and completely absorbs any beta radiation not already absorbed in the phosphor. The unit is a completely sealed source and as such does not present any external radiation hazard. The capsule is a type R02/G/1300 pressurized and sealed off on the side instead of at the end as the drawing shows. Same characteristics of type R02/G/380 shown. Mfg. by Conrad Precision Industries, Inc. 629 5th Ave., Pelham, N.Y. 10803 under N.Y State License 1308-1611.

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.)*

To be used in ground experiments for possible use in aircraft. Experiments will be conducted in the helicopter Test Area of the Evans Laboratory, ~~unless~~ under a S.E.A. 02 priority. All safety rules will be observed and necessary instruments, badges, and dosimeters will be used. Devices when not in use will be stored in the Radiological Vault T 383 Evans Area.

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(Continued on reverse side)

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)
a. Principles and practices of radiation protection	No Change		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

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MAIL SECTION

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

ISOTOPE	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/cm²)*	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

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.

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.

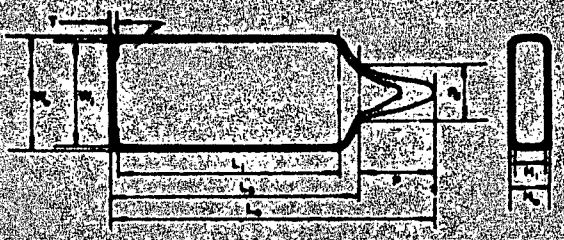
Date: Wolfgang J. B[signature]
Chairman, Isotopes Committee

Applicant named in item 1
By: Wolfgang J. B[signature]
Radiological Protection Officer
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.

* U.S. GOVERNMENT PRINTING OFFICE : 1961 O—615963

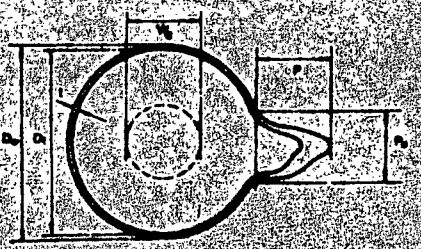
TYPE R — RECTANGULAR TUBE



Type No.	L_o	L_s	L_l	W_o	W_l	H_o	H_l	T	P	Pd	Standard brightness	Maximum brightness
R01/G/250	15·0	11·5	8·0	10·0	8·0	5·0	3·0	1·5	5·0	—	250	750
R02/G/380	±1·5	±0·5	—	±0·5	±0·1	±0·5	±0·1	—	—	—	380	1300
R03/G/200	23·0	19·5	16·0	10·0	8·0	5·0	3·0	1·5	5·0	—	200	NA
R04/G/420	±1·5	±0·5	—	±0·5	±0·1	±0·5	±0·1	—	—	—	420	NA
R05/G/290	29·0	25·5	22·0	10·0	8·0	5·0	3·0	1·5	5·0	—	290	NA
R06/G/425	±1·5	±0·5	—	±0·5	±0·1	±0·5	±0·1	—	—	—	425	NA
R09/G/200	21·0	15·0	12·5	15·0	13·0	4·5	2·0	2·0	6·0	—	200	NA
R10/G/425	±1·5	±0·5	—	±0·5	±0·1	±0·5	±0·1	—	—	—	425	NA

Tube ordered type R02/G/1300 same dimensions as type R02/G/380 shown above with following exceptions: (1) Sealed off on side instead of at end. (2) Tube is pressurized.

TYPE S — SPHERE



Type No.	D_o	D_l	P	Pd	t	Wd	Standard brightness	Maximum brightness
S01/G/210	8·0 ±0·2	6·0 ±0·25	5·0	4·0	1·0 ±0·05	—	210	700
S02/G/180	7·0 ±0·2	—	5·0	4·0	1·0 ±0·05	—	180	650
S03/G/700	7·0 ±0·2	—	5·0	4·0	1·0 ±0·05	3·0 ±0·05	700	1300
S07/G/250	11·0 ±0·2	—	6·0	5·0	1·0 ±0·05	—	250	NA
S10/G/1000	11·0 ±0·2	—	6·0	5·0	1·0 ±0·05	6·0 ±0·05	1000	NA
S12/G/800	12·0 ±0·2	10·5 ±0·5	6·0	5·0	0·75 ±0·05	10·0 ±0·1	800	NA

All dimensions are in mm.
1mm = 0.03937 inch