



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

DALO-MAS-I

20 June 1973

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

Gentlemen:

Forwarded for your approval is an application to renew and amend in its entirety USAEC Byproduct Material License No. 29-01022-06 issued to the US Army Electronics Command, Fort Monmouth, New Jersey.

This license is scheduled to expire on 30 September 1973.

Sincerely yours,

Peter M. Baldino
for PETER M. BALDINO
Chief, Support Division

1 Incl
As Stated

REC'D 20 JUN 73
US ARMY ELECTRONICS COMMAND

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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.

<p>1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc.) Department of the Army, US Army Electronics Command, Directorate of Research Development, and Engineering, Fort Monmouth, New Jersey 07703 (See Supplement A)</p>	<p>(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a).) See Supplement A</p>
<p>2. DEPARTMENT TO USE BYPRODUCT MATERIAL See Supplement B</p>	<p>3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.) Renew and amend AEC License No. 29-01022-06 in its entirety.</p>
<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.) See Supplement C</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.) James M. Garner, Jr., RPO Wolfgang J. Ramm - Alternate RPO (See Supplement F for training and experience)</p>
<p>6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.) A. Any byproduct material with atomic Nos. 3-83 inclusive B. Americium 241. C. Americium 241. D. Cesium 137</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.) A. Any form--1000 millicuries of each radionuclide having an atomic number in the range 3 through 83, inclusive. B. Any form 10 millicuries. C. Sealed Sources, 5 curies. D. Sealed Sources, 835,000 millicuries total, no single source to exceed 220,000 millicuries. Both ORNL and commercial sources may be used. New commercial sources to be sealed in metal capsules by welding. (See Fig. D-1, Page D-2 for an example).</p> <p>(Continued in Supplement D)</p>
<p>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.) Byproduct material will be used primarily in research development and testing programs. However, some of the material will be used for calibration and operational checks of instruments, and for teaching. (See Supplement E for additional information.)</p>	

38684

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			Yes No	Yes No
b. Radioactivity measurement standardization and monitoring techniques and instruments	See Supplement F for resumes.		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 Supplement F for resumes.		

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)
See Supplement G instrument information					

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE.

See Supplement H for instrument calibration information

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

See Supplement I

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 Supplement J

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 Supplement K

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. Disposal in accordance with AR755-15.

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.

US Army Elec Command, RD&E Dir.

Applicant named in item 1: Walter S. McAfee

Date 11 May 1973

By: Walter S. McAfee

CG's representative on the USAECOM's

Isotopes and Ionizing Radiation

Title of certifying official
Control Committee

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.

Table of Contents

TABLE OF CONTENTS

License Item No.	Suppl.	Subject	Page No.
-	-	Application for Byproduct Material License	1
-	-	Table of Contents	3
-	-	Special Abbreviations	5
1b	A	Locations Where Byproduct Material Will be Used	A-1
2	B	Departments to Use Byproduct Material	B-1
4	C	Individual Users:	C-1
		Users	C-1
		Qualifications	C-1
		Members of the committee	C-1
6	D	(a) Byproduct Material & (b) Chemical and/or Physical Form and Maximum Number of Millicuries of Each Form	D-1&D-6
		Drawings of sealed sources	D-2&D-5
7	E	I Purpose for Which Byproduct Material Will be Used	E-1
		II Storage Containers for Sealed Sources	E-2
4,5,8 9&14	F	Training and Experience	F-1
		Members of the Ionizing Radiation Control Committee	F-1
		RPO, Alternate RPO, and Technical Staff of RPO	F-2

TABLE OF CONTENTS

License Item No.	Suppl.	Subject	Page No.
		Personnel to Perform Leak Tests	F-2
10	G	Radiation Detection Instruments	G-1
11	H	Instrument Calibration	H-1
12	I	Film Badges, Dosimeters and Bio-Assay Procedures Used	I-1
13	J	Facilities and Equipment	J-1
		Evans Area	J-2
		Building 401	J-2
		Building T-383	J-5
		Building S-45	J-7
		Area "G"	J-7
		Oakhurst Station	J-7
		Accelerator at Fort Hancock	J-11
		Other Remote Locations	J-20
14	K	Radiation Protection Program	K-1
		Leak Tests	K-1
		Individuals to Perform Leak Tests	K-1
		Initial Surveys	K-1
		ECOM Regulation 385-9	Incl 1 to Suppl K

Abbreviations

ABBREVIATIONS

AEC	Atomic Energy Commission
AEHA	Army Environmental Hygiene Agency
AR	Army Regulations
c or Ci	curie
cm	centimeters
Co	Company
Committee	Ionizing Radiation Control Committee
DA	Department of the Army
DOT	Department of Transportation
ea.	each
ECOM	US Army Electronics Command
Fig.	Figure
h	hour
HP	Health Physics
hr	hour
Hwy	Highway
m	meter(s)
mCi	millicurie(s)
MeV	Million electron Volts
mg	milligram
MPH	Miles Per Hour
ml	milliliter

ABBREVIATIONS

mR	milliroentgen
mr	milliroentgen
mrem	millirem
n	neutron(s)
NA	Not Applicable
NBS	National Bureau of Standards
N.J.	New Jersey
No.	Number
Nos.	Numbers
ORNL	Oak Ridge National Laboratory
Pa	Pennsylvania
P.O.	Purchase Order
R	Radius or Roentgen
RD&E	Directorate of Research, Development and Engineering
REQD	Required
RPO	Radiological Protection Officer
RT	Route
sec	second
ss	stainless steel
Suppl	Supplement
US	United States
μ Ci	microcurie(s)

SUPPLEMENT A

Locations Where Byproduct Material Will be Used

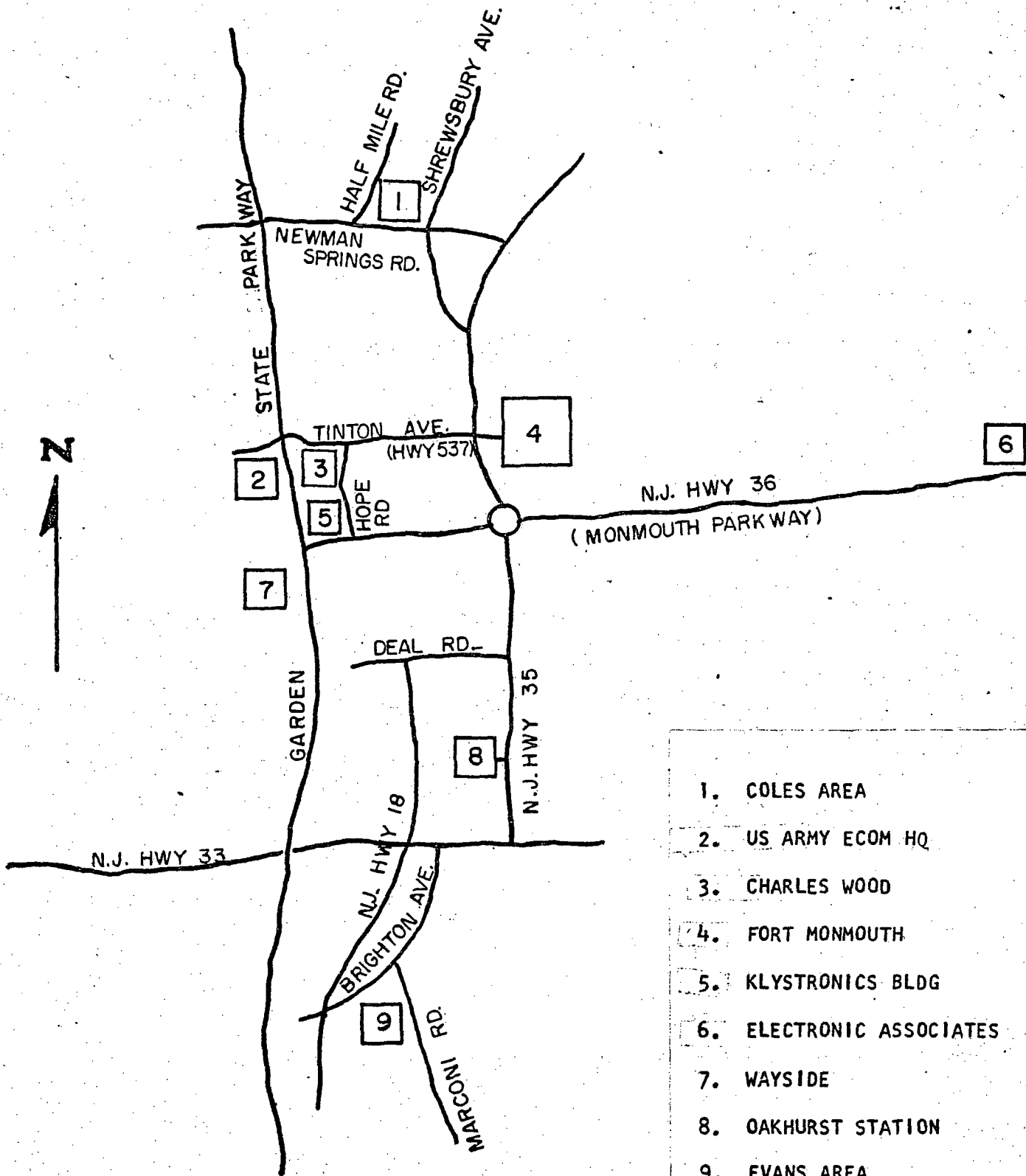
Reference: Form AEC-313, Item 1b.

SUPPLEMENT A

SUBJECT: Locations Where Byproduct Material Will be Used

1. Reference: Form AEC-313, Item 1b.
2. Fort Monmouth is made up of a number of sub-posts or areas located in Monmouth County, New Jersey. Byproduct material is primarily used in the Evans and Charles Wood Areas; however, occasionally it is used in other areas.
3. The following is a list of the areas and locations that combine to form Fort Monmouth.
 - a. Coles Area -- Intersection of Half Mile Road and Newman Springs Road (RT 320), Red Bank, N.J.
 - ✓ b. US Army Electronics Command Headquarters Bldg -- Tinton Avenue and Garden State Parkway, New Shrewsbury, N.J.
 - c. Charles Wood Area -- Intersection of Tinton Avenue (Hwy 537) and N.J. Hwy 35, Eatontown, N.J.
 - d. Fort Monmouth -- Entrance at intersection of Tinton Avenue (Hwy 537) and N.J. Hwy 35, Eatontown, N.J.
 - e. Klystronics Bldg -- Mid-Monmouth Industrial Park, intersection of Hope Road and N.J. Hwy 36.
 - f. A portion of Electronic Associates, Inc., -- 185 Monmouth Parkway (N.J. Hwy 36).
 - g. Wayside Area Earle Ammunition Depot -- Wayside Road and Wyckoff Road.
 - h. Oakhurst Station (Tower) -- Wilson Avenue off Hwy 35, South of Eatontown.
 - i. Evans Area -- Intersection of Marconi Road and Brighton Avenue Neptune, N.J.

4. Fig. A-1 shows the approximate relative locations of the areas listed in para. 3 above.
5. In addition to the areas listed above sealed sources containing not more than 220 curies may be used at Fort Hancock, N.J.; Lakehurst Naval Air Station, N.J.; Tobyhanna Army Depot, Tobyhanna, Pa.; Fort Huachuca, Arizona; Fort Hood, Texas; and the Nevada Test Site.
6. One target replenishing cartridge containing not more than 90 curies of hydrogen 3 and one tritiated accelerator target containing not more than 20 curies to be used in the Kaman Nuclear Corporation Model A-1001, Neutron Generator at Fort Hancock, N.J. During target or replenishing cartridge replacement, two cartridges and/or two targets may be located at Fort Hancock for a short period of time.



- | | |
|----|-----------------------|
| 1. | COLES AREA |
| 2. | US ARMY ECOM HQ |
| 3. | CHARLES WOOD |
| 4. | FORT MONMOUTH |
| 5. | KLYSTRONICS BLDG |
| 6. | ELECTRONIC ASSOCIATES |
| 7. | WAYSIDE |
| 8. | OAKHURST STATION |
| 9. | EVANS AREA |

FIG. A-1 FORT MONMOUTH AREA

SUPPLEMENT B

Departments to Use Byproduct Material

Reference: Form AEC-313, Item 2.

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