

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.)</p> <p>Monsanto Co. 800 North Lindbergh Blvd. St. Louis, Missouri 63166</p>	<p>(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a).)</p> <p>800 North Lindbergh Blvd. St. Louis, Missouri 63166</p>
<p>2. DEPARTMENT TO USE BYPRODUCT MATERIAL</p> <p>Research Center & General Offices</p>	<p>3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)</p> <p>—</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.)</p> <p>Frank Modica Willi Reckel L. C. Weger</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>L. C. Weger</p>

<p>6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.)</p> <p>Americium 241</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>Sealed source U.S. Radium Corp., Foil Lab 204-1A (Rev. 2) using Americium Oxide 241. Small sections of this foil are mounted within the body of the detectors with a total activity as follows:— F5A-130, F5B-80, F3.5A-80 microcuries. Maximum detectors to be possessed and/ or installed at any one time - 800 or 104 millicuries.</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.)

1. Receive, possess and return to supplier the Americium 241 contained within the fire detection devices manufacturer pursuant to Pyrotronics, Inc., License GL-133 (1-64).
2. Install such devices on our premises.
3. Perform the service specified in 10 CFR 30.21 (c) (4) (111).
4. Adjust sensitivity, test electrically, clean and perform approved emergency procedures in order to maintain devices in proper operating condition.

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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)
L. C. Weger				
a. Principles and practices of radiation protection	Oak Ridge, Tenn.	2 years	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

See also supplemental sheet

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 supplemental sheets				

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)
Applicants' functions do not include use of Radiation Detection Instruments. Therefore, No., 10, 11, and 12 are not applicable.					

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

NOT APPLICABLE

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

NOT APPLICABLE

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 SUPPLEMENTAL SHEET

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 SUPPLEMENTAL SHEET

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.

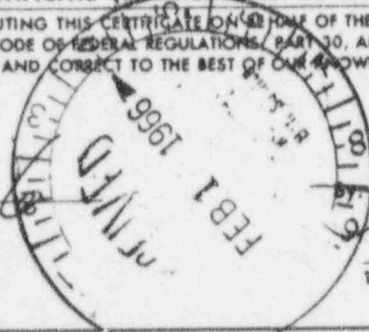
All devices will be returned to the supplier

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

7-28-68



Applicant named in item 1

Title of certifying official

MONSANTO COMPANY
 Safety Manager
 (Signature)

WARNING.—1: 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.

SUPPLEMENTAL SHEET FOR SECTIONS 8, 9, 13, 14 & 15.

8. TYPE OF TRAINING:-

The functions involved in handling and installing the fire detectors containing source material are quite simple and limited. These are described in detail in Part 5 of the attached "RADIATION TRAINING MANUAL - B-166".

The training of the individuals named in Item 4 specifically designed to provide competence in these functions. The training program was prepared by the manufacturer of the devices, Pyrotronics, Inc., It was conducted by authorized Pyrotronics' representatives. Trainees were required to have a minimum of a high school education or its equivalent, and in addition be qualified to install and service the electrical and electronic equipment required for operation of a complete fire alarm system. The training course consisted of a half day formal classroom session on "Basic Principles of Radiation Protection" and included information regarding "Biological Effects of Radiation". Detailed study of device, demonstration and practice in disassembly, reassembly, testing, adjustment and cleaning; leak testing procedure; methods of storage and packing and required record keeping are also included. Records of personnel who have satisfactorily completed the above described course of training and who have been certified by Pyrotronics, Inc., to install, maintain, test and service Pyr-A-Larm Smoke and Fire Detection Systems are maintained in our files.

9. EXPERIENCE WITH RADIATION:-

All individual users have successfully completed the Pyrotronics radiation training program prepared for supervisors and technicians submitted to Atomic Energy Commission July 29, 1964. (See excerpts of memo W.K.G. to W.E.K. attached).

13. FACILITIES AND EQUIPMENT:-

The functions to be performed by Monsanto at its facilities are the storage of detectors in their shipping containers as received from the factory, installation of the devices. Normally all devices for a complete installation are shipped from the Pyrotronics' factory directly to the manufacturers representative. However, in some cases, in order to minimize damage and inconvenience that might occur, shipment may be made to applicants' storage facility.

A storage space is reserved in our Research Center for storage of detectors containing source material. This space is located at T-Building, ground floor. Locked doors and cabinets serve loss or misplacement. Records maintained in our files indicating dates of receipt of shipments, dates of re-shipment, and number of detectors on hand. Detectors are counted each month and comparison made with records to verify possession.

14. RADIATION PROTECTION PROGRAM:-

Details of the Radiation Protection Program are included in "Radiation Training Manual - B-166" attached.

15. WASTE DISPOSAL:-

Procedure for disposal of detectors containing source material is included in "Radiation Training Manual - B-166" attached.

LICENSE CONTROL FORM

Applicant Monsanto Co. 800 North Lindbergh Blvd. St. Louis, Mo. 63166	License No.	Amend No.	Expiration Date	Control No.
	7-1111	None	5-3	74305
	Date Received	Date Issued	PLUS	REG
	02/01/66	MAR 24 1966	614 4	74305

() Letter (☒) Application Dated: _____

<u>BYPRODUCT</u>	<u>CHEMICAL OR PHYSICAL FORM</u>	<u>POSS. LIMIT</u>
Asbestos		10-4 ft -
Locusts, etc.		
10. See methanoid glass jar in bag		

to the extent the features of the
Monasanto Company, except in agreement
states as defined in Section 30.4(c) of Title
10 of the Federal Regulations, Part 30. (This
condition does not ~~not~~ prohibit use in agreement
states under reciprocity privileges which may
be granted by those states.)

Mail To: L. C. Wegner	Date Mailed: 1	Reviewer: Wom	Date Completed: 3-16-66
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