

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: Materials Branch, Directorate of 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, and the license fee provisions of Title 10, Code of Federal Regulations, Part 170. The license fee category should be stated in item 16 and the appropriate fee enclosed. (See Note in Instruction Sheet).

1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital person, etc. Include ZIP Code and telephone number.)

MONSANTO CO.  
800 N. Lindbergh B.vd. (Q3F)  
St. Louis, Mo. 63144  
(314)694-4976

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

Same as 1 (a)  
030-14582  
03120

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

Enviro Chem, Equipment Dept.

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.)

B. M. Kocatas, Senior Research  
Group Leader  
A. K. Rao, Research Specialist

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.)

D. J. Scott  
(See items 8 and 9)

6. (a) BYPRODUCT MATERIAL (Elements and mass number of each.)

none

(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.)

Two Kr-85 sealed sources each 10 mci  
3M Company, St. Paul, Mn.  
3M Model 3B4G

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.)

The 3M Model 3B4G source is placed in a 4 in. dia., 3/16 in. thick stainless steel pipe and is used to neutralize aerosol particle charge. The container is made at Monsanto Company. Inspected and source installed by 3M Company.

Applicant.....  
Check No. 368828  
Amount/Fee Category 4110-3L  
Type of Fee APP  
Date Check Rec'd. 5/31/78  
Received By. att

94181

April 78-6 NK

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## 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)
a. Principles and practices of radiation protection	Texas Nuclear Corp.	5 days	Yes No	Yes No
b. Radioactivity measurement standardization and monitoring techniques and instruments	Texas Nuclear Corp.	"	Yes No	Yes No
c. Mathematics and calculations basic to the use and measurement of radioactivity	Texas Nuclear Corp.	"	Yes No	Yes No
d. Biological effects of radiation	Texas Nuclear Corp.	"	Yes No	Yes No

## 9. EXPERIENCE WITH RADIATION. (Actual use of radioisotopes or equivalent experience.) See attached sheet No. 9)

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE

## 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)
Searle Analytic Geiger type survey meter	1	Alpha Beta Gamma	0-100		Monitoring

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

Each time unit is used calibrated with sealed Ra-226 source.

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

R. S. Landauer, Jr. & Co. Glenwood, Illinois 60425

## 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
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 test, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source.
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 form 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.

License Fee Category \$ \_\_\_\_\_

Fee Enclosed \$ \_\_\_\_\_

Date \_\_\_\_\_

Dr. B. M. Kocatas

Applicant named in item 1

By: Bahar Kocatas

Senior Research Group Leader

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.

ITEM No. 9

TO: Nuclear Regulatory Commission

NAME: Dennis J. Scott

TITLE: Safety Engineer, Corporate Research Department

DEGREE: B.S. Safety - Central Missouri State University

NUMBER OF YEARS - MONSANTO: 3 years, 4 months

RADIATION TRAINING: Attended and successfully completed a course of instruction, conducted under the auspices of Texas Nuclear Corporation in April 1975. The course covered fundamentals of radiation, units of dose and quality of radiation fields, hazards of radiation exposure, detection devices, regulatory controls, industrial devices, and specific training on installation and leak testing of density and weight gauges.

RESEARCH CENTER RESPONSIBILITIES:

1. Member of Monsanto Industrial Chemicals Company Radiation Safety Committee and Corporate Research Department.
2. Evaluate radiation hazards in experimentation with radio-isotopes and make recommendations for safe usage.
3. Insure NRC regulations are followed.
4. Surveying of radioactive materials received by Storeroom.

Dennis J. Scott

sp

6/28/77

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