

Form AEC-313
(8-64)
10 CFR 30

UNITED STATES ATOMIC ENERGY COMMISSION
APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved
Budget Bureau file 38-2027

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.

1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital person, etc. Include ZIP Code.) Monsanto Company Carondelet Plant 8201 Idaho Ave., St. Louis, Mo. 63111		(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1(a). Include ZIP Code.) N/A	
2. DEPARTMENT TO USE BYPRODUCT MATERIAL 1. Central Lime Slurry 2. DiCalcium Phosphate		3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.) 24-01113-13 with amendment 1 thru 6	
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.) W.S. Henderson, Maint. Supervisor N.L. Marsh, Maint. Superintendent		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.) N. L. Marsh	
6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.) 1. Cesium 137 (Lime Slurry) 2. Cesium 137 (Dilute phosphate liquor) 3. Cesium 137 (Dicalcium phosphate conveyor)		(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.) 5 sealed sources 750 M.C. each Total 3.750 curies Source Model #LAB #713 (S)-E 1 sealed source 150 M.C. Source Model #US Nuclear 8-0126, Ohmart A-2102 1 sealed source 35 M.C. Source Model #Ohmart A-5771 in Ohmart SHRM holder.	
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. Ohmart density gauges to measure specific gravity of lime slurry in a 3" scheduled 40 pipe line. Continuous operation Process temperature between 30°C and 100°C. Ohmart LASR Source Holder. 2. Ohmart density gauge to measure specific gravity of a phosphoric acid solution between 70°C and 100°C. Ohmart HM-8 Source Holder. 3. Ohmart mass flow gauge to measure mass flow rate of Dicalcium Phosphate Powder. Ohmart SHRM Source Holder.			

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TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4		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	installed Ohmart engineer when in-		Yes No	Yes No
b. Radioactivity measurement standardization and monitoring techniques and instruments	II II II II		Yes No	Yes No
c. Mathematics and calculations basic to the use and measurement of radioactivity	II II II II		Yes No	Yes No
d. Biological effects of radiation	II II II II		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
		Instruction on operation and leak test procedure on guage holder by Ohmart Engineer at installation. Wipe test service contract in effect since 1963.		
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)
None required.				
11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE.				
None required.				
12. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED. (For film badges, specify method of calibrating and processing, or name of supplier.)				
None required.				
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 <input checked="" type="checkbox"/> No <input type="checkbox"/> None required.				
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 attachment				
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. See attachment				
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 SUPPLEMENTAL ATTACHMENTS, ARE TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.				
Date December 12, 1968		Monsanto Company Applicant named in item 1 By: <i>N. L. Marsh</i> Title of certifying official N. L. Marsh Maintenance Superintendent		

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.