

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: 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.)		(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED (If different from 1 (a). Include ZIP Code.)	
Missouri Portland Cement Company P. O. Box 147 Joppa, Illinois		Plant two (2) miles west of Joppa, Illinois 62953	
2. DEPARTMENT TO USE BYPRODUCT MATERIAL		3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)	
Kiln department, clinker burning		12-10988-01	
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.)		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.)	
Herman Geller - Chief Chemist James Mitchell - Production Supervisor		None	
6. (a) BYPRODUCT MATERIAL (Elements and mass number of each.)		(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.)	
Cs 137		1 - Sealed source, 1500 Mc Cs 137, 30 inch long Minnesota Mining 4F6L capsule held in Ohmart SHRH-A4 strip Source holder.	
Cs 137		1 - Sealed source (Ohmart Corporation Model A-2096) of 100 Millicuries of cesium 137, held in source holder model SHRM-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 with gamma-ray level gauge to detect level of clinker in Folax cooler to provide signal for controlling same. Entrance ways and access points will be posted against unauthorized entry. Normal operation also precludes entry due to temperatures in order of 1,000° F.			
Second source is to measure clinker density.			
<div style="text-align: center;"> <p>COPIES SENT</p> <p>REGULATORY OPERATIONS</p> </div>			
8507260707 850711 REG3 LIC30 12-10988-01		PDR 47027	

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	By Allis-Chalmers Engineer at time of installation	2-3 days	(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

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 of gauge and leak test procedure and initial radiation survey by Allis-Chalmers Engineer at time of installation.		

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)
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.)

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) 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 attached 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.

See attached sheet

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.

Missouri Portland Cement Company

Applicant named in item 1

Date 4/5/74

By: John P. Snyders, Purchasing Manager

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.

ATTACH SHEET - FORM AEC-313 (8-64)

Item 14 A. Control Measures - Source holder will be placed in CLOSED position and locked while being shipped and installed. It will be placed in OPEN position after mounting and cooler is secured against entry. If source holder is removed from cooler, it will be locked in the CLOSED position before removal. Before anyone enters cooler, source will be locked in CLOSED position. Cooler portals will be posted prohibiting entry without locking out source.

B. Initial radiation survey will be made by a licensed Allis-Chalmers Mfg. Co. engineer at the time of installation of the gauge. A copy of the radiation survey will be kept on file at the plant for future reference.

C. If maintenance or repair of the source holder is required, it will be returned to the Ohmart Corporation in the CLOSED position. The Ohmart Corporation will be contacted for detailed shipping instructions.

The Ohmart Corporation, the local Public Health agency, the regional operation office of the AEC, or other qualified agency will be contacted immediately in the event of an emergency involving the source holder. (Such an emergency might be a fire or explosion involving the source holder, or damage to the source holder which would prevent placing it in the CLOSED position.) In the event of an emergency, the area in the vicinity of the source holder will be barricaded until inspected by a qualified person.

D. Leak Test Procedure - A wipe test will be performed on the surface of the source holder every six months or three years as required, by qualified personnel, to assure that there has been no leakage of radioactive material from the source container in the source holder. The leak test materials will be supplied and analyzed by contract with a qualified organization, and their instructions followed.

E. Whenever the source holder is to be disposed of, it will be returned to the Ohmart Corporation. The Ohmart Corporation will be contacted for detailed shipping instructions.