

Lump Division Bloomfield, N. J. 07003

January 26, 1968

DML: CEM 40-2286 40-6656

For Div. of Compliance

U.S. Atomic Energy Commission Washington, D. C. 20545

Att: Mr. Don F. Harmon

Source & Spec. Nuclear Materials Branch

Division of Materials Licensing

AEC License SMB-353 As renewed

Gentlemen:

Kindly refer to our subject license which you renewed under date of November 17, 1967.

Since renewal date, a modification has been made in our handling of Thorium Oxide under this license and is covered in the attached memorandum dated December 28, 1967 from our Administrator of Accident Prevention.

Will you kindly review this matter and let us have your approval for this modification.

P. E. Murphy Section Supervisor

Purchasing Department

PEM: fmb

Attachment

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BLOOMFIELD WORKS December 28, 1967 CHANGE IN PROCEDURES FOR HANDLING THORIUM OXIDE LICENSE SMB-353 TO: P. E. Murphy CC: D. E. Tesen The application for renewal of AEC license STB 467 (later combined by the AEC with license SMB 353) page 2 of Attachment A, 3rd paragraph, indicates that during the manufacture of thoriated emission mixture, the mixture of thorium oxide, carbonates and methyl alcohol is dried, hand crushed and sieved prior to being fired in a hydrogen atmosphere furnace. This portion of the manufacturing process has been modified to eliminate the hand crushing and sieving of the mixture. A potential source of airborne dust has been eliminated. The third paragraph should now read: In the manufacture of thoriated emission mixture, a 50 lb. pail of thorium oxide is taken from the storage area SK8227 to the scales area 14. 1248 grams of oxide are weighed out into a quart jar. The jar is carried to area 2, exhaust velocity 150 fm where the material is put into a porcelain mill with 750 grams of carbonates and methyl alcohol. After milling the mixture is placed in furnace boats, area 6 and placed in a vacuum oven, area 10 where it is dried. Following drying, the boats are placed in hydrogen atmosphere furnace area 18, exhaust velocity 150 fm. The material is removed from the furnace and transferred to glass bottles (one quart). 800 grams are weighed out, area 14, into a 1 quart mill with ethyl alcohol and milled. Following milling, the mixture is packaged in 8 ounce jars, sealed with radioactive materials label, delivered to using departments or placed in chemical storage area. R. T. Williams Division Administrator Accident Prevention RTW:erj