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TO : Files
 (THRU) J. C. Delaney, Chief, Materials Section

DATE: April 15, 1958

FROM : *C. P. McCallum Jr.*
 C. P. McCallum Jr.

SUBJECT: CLEVITE RESEARCH CENTER REQUEST FOR SPECIAL NUCLEAR MATERIAL LICENSE -
 DOCKET NO. 70-133

ANALYSIS AND FINDINGS

Analysis of the application for special nuclear material license dated July 22, 1957, as amended January 24, February 10 and 21, and March 14, 1958, submitted by the Clevite Research Center has resulted in the following observations, conclusions and findings.

The applicant requests that it be licensed to receive 9.01 kilograms of uranium enriched to 90% in the U-235 isotope for use in engineering processes.

The proposed use of the special nuclear material is for the conduct of research and development activities of the type specified in Section 31 of the Act.

Based upon our review of the information furnished by the applicant it is hereby determined that the applicant is qualified by reason of training and experience to use this special nuclear material for the purpose requested, and that the applicant's procedures, facilities and equipment are adequate to protect health and minimize the danger to life and property.

As limited to those manufacturing processes described in the submission numbered S. P. No. CR-17-A and, with regard to shipping procedures to a maximum loading of 5 kgs of U-235 per AEC birdcage, the applicant's procedures to avoid a condition of accidental criticality are adequate. These limitations are necessarily imposed because of the following reasons.

1. The applicant's submission S. P. No. CR-17-A contains the only manufacturing processes submitted in sufficient detail upon which to base a finding concerning accidental criticality. (See memo dated March 7, 1958 from C. K. Beck, Chief, Hazards Evaluation Branch to Lyall Johnson, Chief, Licensing Branch.)

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2. The applicant requests that it be authorized to ship up to 9.01 kgs of uranium 90% enriched in the U-235 isotope per AEC birdcage provided the birdcage be cadmium lined. This has been limited in the license to 5 kgs per AEC birdcage (a safe limit for unlined birdcages) because the use of external poisons while advisable as a supplementing aid, cannot be accepted as a principle of criticality control to the extent of materially effecting the masses involved.

The application contains adequate corporate and financial data and has been signed under oath.

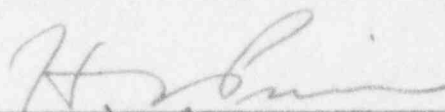
It is therefore determined that the application meets the requirements of the Act and the regulations of the Commission, and that a license may be issued authorizing the activities proposed by the applicant.

CONCUR:

APPROVED:



Lyall Johnson
Chief, Licensing Branch



H. L. Price, Director
Division of Licensing & Regulation