

DOCKET NO. 70-139

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**ENGELHARD INDUSTRIES, INC.**

D. E. MAKEPEACE DIVISION

PINE & DUNHAM STREETS  
ATTLEBORO, MASS.  
ATTLEBORO 1-0090

Myrtle-5-9358

April 18, 1961

U.S. Atomic Energy Commission  
Division of Licensing and Regulation  
Germantown, Maryland

Attention: Mr. Joseph C. Delaney Chief,  
Nuclear Materials Section

Reference: Docket 70-139; SNM-185

Subject: Request for Amendment to Mix Shipments of PRDC  
and CP-5 Material.

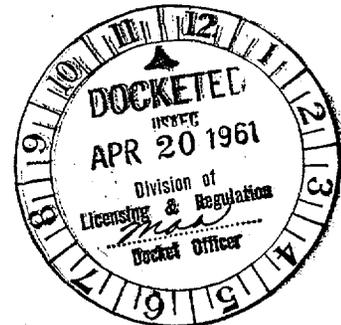
Gentlemen:

In order to fulfill current scheduling requirements, D.E. Makepeace Division requests an amendment to SNM License 185 to permit mixed shipments of enriched uranium to Nuclear Metals, Inc., Concord, Mass., subject to the following conditions:

Current license amendments allow shipment of enriched ingots and canned slugs in quantities and containers as outlined in Feasibility Report DEM-5, Revision A, Sept. 4, 1959. This material is to be fabricated into PRDC Enrico Fermi Fast Breeder Reactor fuel elements. The maximum quantity of this material to be shipped to Nuclear Metals will be the equivalent of four enriched ingots or a total of 54 Kg. U-235.

25  
54 = 13.5 Kg x Sa  
4

In addition to PRDC material, DEM proposes to ship enriched uranium-aluminum composite billets which are to be extruded as fuel tubes for the Argonne CP-5 Reactor. Drawings of the composite billet (No. 1113-5) are enclosed. Each billet contains two uranium-aluminum fuel rings with a maximum U-235 loading of 76.5 grams each. The maximum billet loading is therefore 153 grams U-235.



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It is proposed to pack two composite billets (306 gms. U-235) in a 5 gallon steel bucket. Packing material will be added to prevent damage to the material while in transit. A maximum of three such buckets fastened to the truck at a 12" edge-edge distance from all other enriched uranium will be shipped to Nuclear Metals via DEM truck.

Justification for the individual units are taken from TID-7019, Table I, which lists 350 gms. U-235 as the maximum permissible value for any U-235 enrichment. The spacing criteria were taken from TID-7019, Section 3.3, i.d.

We trust that sufficient information has been presented to allow amendment to our license. Further information will be supplied upon request to the writer.

Very truly yours,

*Norton M. Weiss*

Norton M. Weiss  
Health & Safety Manager

NMW/sl

Enc:

