

ENGELHARD INDUSTRIES, INC.

For Div of Inspection

D. E. MAKEPEACE DIVISION
PINE & DUNHAM STREETS
ATTLEBORO, MASS.
ATTLEBORO 1-0090

December 28, 1959

U. S. Atomic Energy Commission
Germantown
Maryland

ATTN: Mr. J. C. Delaney
Licensing Branch

REF: SNM-185
Docket 70-139

Gentlemen:

In connection with our fabrication of a core for the Enrico Fermi Fast Breeder Reactor, (ref: Feasibility Report DEM 5 and Revision A), it has become necessary to defer production of assembly components associated with the enriched portion. It is planned to proceed with production of fuel pins which must be stored in quantities greater than normal work in process inventory. It is accordingly requested that our license be further amended to permit storage of finished enriched pins prior to their insertion in fuel subassemblies.

(b)(4)

The storage of this amount of pins will be in accordance with recommendations set forth in TID-7016, Nuclear Safety Guide, Tables 5 and 6, pages 15 and 16, which lists maximum units of 18.5 Kg U-235 and maximum storage limits of fifty (50) units per array for two (2) associated plane arrays. Our individual storage units will consist of one hundred fifty (150) polyethylene wrapped pins closely packed with tape, each unit containing a total of 5.1 Kg. U-235. Plane arrays to be used will consist of 12, 10, and 10 units respectively. These will not be associated with the exception of two (2) arrays containing 5

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Act, exemptions
FOIA-2008-0314

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units each which will be stored in our vault. The pins will be contained in a 2½" diameter steel pipe which has a plate welded on the bottom and a cap threaded on the top. This will be considered as the inner storage container.

Outer storage containers will consist of a series of 3½" diameter capped steel pipes which are welded to a bottom steel plate and spaced within a welded angle iron framework. Spacing between adjacent units will be 18" edge to edge or 21" center to center.

A drawing (DEM #50034) of the storage containers is enclosed for reference.

The storage area which will be used is adjacent to our Nuclear Dept. The actual space to be used for pin storage will be closed off from the remainder of the area by means of a wire cage. A radiation monitor which is already installed will assure that this area is monitored in accordance with AEC requirements.

A sketch of the area (DEM #50016) is enclosed detailing the sections to be used for pin storage. One section will contain 12 storage units and the other 10 units. The total capacity of this area will be 3300 pins or 112 Kg. U-235. In addition, we plan to store 10 more units containing a total of 1500 pins (51 Kg. U-235) in a concrete vault which has dimensions of 8' x 10' x 8' high. This vault is located in our Nuclear area and is already equipped with a gamma radiation monitor.

Completed pins will be packed in the inner storage container in our nuclear area under the supervision of criticality representatives. When each container has been packed, it will be transported to the storage area while under criticality control. Only one container will be in transit at any time. The pin storage area will be locked at all times except when pins are entering or leaving. All storage areas are included under the 24-hour security surveillance by plant guards.

We will appreciate your early consideration of this application and trust that our license may be amended soon.

Very truly yours,

D. E. MAKEPEACE DIVISION

John H. Durant
John H. Durant
Business Manager

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