

File 4.

ENGELHARD INDUSTRIES, INC.

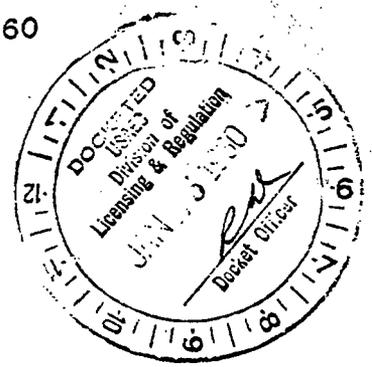
D. E. MAKEPEACE DIVISION
PINE & DUNHAM STREETS
ATTLEBORO, MASS.
ATTLEBORO 1-0090

January 22, 1960

United States Atomic Energy Commission
Germantown
Maryland

ATTN: Mr. Charles McCallum
Licensing Branch

REF: SNM-185, Docket 70-139
Amendment to Incinerate
Organic Waste



Gentlemen:

Further to our application for an amendment to reduce licensed uranium containing organic waste material in our incinerator dated December 15, 1959, we have received your request for clarification and assurances to prevent the accumulation of critical amounts of special nuclear material containing ash as well as questions concerning operation of this unit when the prevailing wind blows smoke over the adjacent Turnpike Lake. The following additional information we believe is pertinent.

Waste material which contains enriched uranium will be segregated from both normal and depleted uranium-contaminated materials by being placed in separate, colored, galvanized containers which are 30" in diameter, 24" high, and weigh 13½ lbs. These containers will be weighed before removal to the incineration area to assure that a weight of 80 lbs. of material is not exceeded. This figure was established on the basis that our combustible waste material contains 1% of fully enriched uranium by weight. We feel that this is a highly conservative estimate. The amount of U-235 which would be contained in this 80 lbs. batch would total 338 grams using the previously mentioned criteria. This amount, being less than an "always-safe" mass, will be incinerated separately.

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U. S. Atomic Energy Commission
Mr. Charles McCallum

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After incineration, the ashes from each batch of enriched waste will be removed and placed in a 15 gal. open head bolt locking steel drum which is 15-3/8" in diameter and 19-1/4" high. We estimate that we will generate approximately 26.4 lbs. of ash per batch, using a 66% reduction in weight due to burning. (REF: TID-7517, P. 229, Open Field Burning of Low-Level Radioactive Contaminated Combustible Wastes, Harris and Weinstein.) On the basis of 15 lbs. of ash per cubic foot, we will generate a volume of 1.76 cubic feet of ash per batch. This amount will nearly fill a 15 gal. drum which has a volume of 2.06 cubic feet.

Since the incinerator will be cleaned after every batch of enriched waste has been burned, there will be no possibility of an accumulation of ash or residue in crevices or corners.

Depleted and normal uranium-containing waste material will be incinerated in larger batches and the ashes placed in 30 or 55 gal. steel drums for disposal.

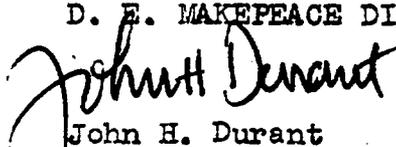
We propose to operate this facility only at such times as the prevailing wind permits us to perform air monitoring down wind from the stack, (i.e. the incinerator will not be operated when the referenced lake is down wind from the stack).

We trust the foregoing is sufficient to enable you to proceed with the requested amendment action. If there are further questions, please do not hesitate to telephone collect in the interests of early disposition.

Thank you very much.

Very truly yours,

D. E. MAKEPEACE DIVISION


John H. Durant
Business Manager

JHD/bs