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30 January 1959

AIR MAIL

Mr. Lyall Johnson
Licensing Branch
Div. of Licensing & Regulations
U. S. Atomic Energy Commission
Washington 25, D.C.

SUBJECT: Special Nuclear Materials License No. SNM-33 - RE our 10 December 1958 application for a pellet production plant.

Dear Mr. Johnson:

Mr. C. McCallum called Friday, January 23, regarding questions on our pellet plant application. The first question was regarding Paragraph 4, Page 2.

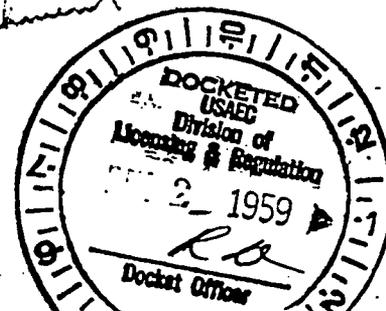
Q: What is the diameter of the storage hopper above the 10" feed hopper on the pellet press?

A: This hopper is 13" in diameter; however, it has a volume of 1436 in³ including the discharge spout. According to K-1019 Part 4, Deleted, Table 16, for 5% or lower assay product, a cubic volume of 1648 in. is considered safe for material with a density of 3.2 g/cc or less. Since our density is below this, it would appear that this hopper is adequately safe. OK

Regarding Paragraph 1, Page 3

Q: Mr. McCallum requested further amplification of safety precautions at the discharge end of the pre-sinter furnace.

A: It has been decided to install a special chute at the end of the pre-sinter furnace and equip this chute with a photo-electric cell, the beam of which will be interrupted in case the pellets pile up. If the beam is interrupted, the power drive to the continuous belt will be turned off and a red warning light illuminated to notify the foreman. It has been estimated that a gross volume of two gallons of pellets, 462 in³, would be sufficient to interrupt the beam. As quoted above, this volume is a safe quantity, according to K-1019, for 5% or lower assay. OK



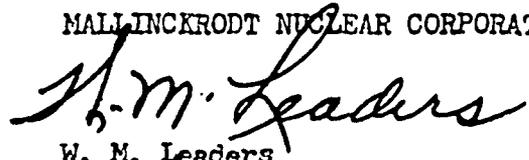
Public Affairs

- Q: Mr. McCallum asked for additional details of the manner in which the pellet trays would be transferred from the end of the high fire furnace to the gauging station. Described in our original application on Page 3, Paragraph 2.
- A: Transfer carts have been obtained which will hold approximately 10 trays of fired pellets on the transfer cart. These will be on the carts as a single layer. Actually, there will be four trays per hour transferred - one from each furnace, so that there will be no reason for accumulation at this point of the operation. In no case will the transfer carts be double layer and since the trays are 2" high, we would have a slab array on the cart well within the safe slab limits given in Table 13 of K-1019, Part 4, Deleted.

We sincerely hope that these further explanations completely clarify the application of 10 December 1956. However, if there are additional questions, we urge that you call us collect so the application may be acted upon as soon as possible.

Very truly yours,

MALLINCKRODT NUCLEAR CORPORATION



W. M. Leaders
Technical Director

WML:dj