

Memo L J
From CFB

~~Final~~
Final

Project SNM-8
Eocket 70-36

Subject: Mullinckrodt Chemical Works

We have reviewed the letter of December 10, 1958, from Mullinckrodt Chemical Works, requesting amendment of ~~the~~ License No SNM-33 to permit pelleting operations on uranium enriched to 5% U-235 in a new facility at Hematite, Missouri.

→ limited safe masses as specified in Report K-1019, Part 4 (deleted). Batch sizes throughout the operations will not exceed

Neither the diameter ^{or} capacity of the storage hopper ^{located above} the feed hopper of the pelleting press is given. Either the diameter should be not over the limited safe dimension - or positive means should be in effect to insure against more than a limited safe mass in the hopper at any time.

Evidently accumulations are permitted at several points in the process. After drying, ^{each} drums, containing a limited safe quantity of material are stored in racks which provide a 2' edge to edge spacing and a vertical spacing of 2' top to bottom. We believe this geometry will satisfy interaction criteria.

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Under emergency conditions

~~At the furnace~~ more than limited
safe amounts of material may be accumulated ^{at the furnace area},
in 2" layers spaced 2' apart. Also, material
discharged from the high temperature sintering
furnaces is placed on a transfer cart
^{unspecified} in amounts and spacing. We request that where more
than one limited safe batch are being
accumulated, interaction criteria such as
those presented in K-1019 should be
satisfied.

Pellet Plant

Project SNM-8

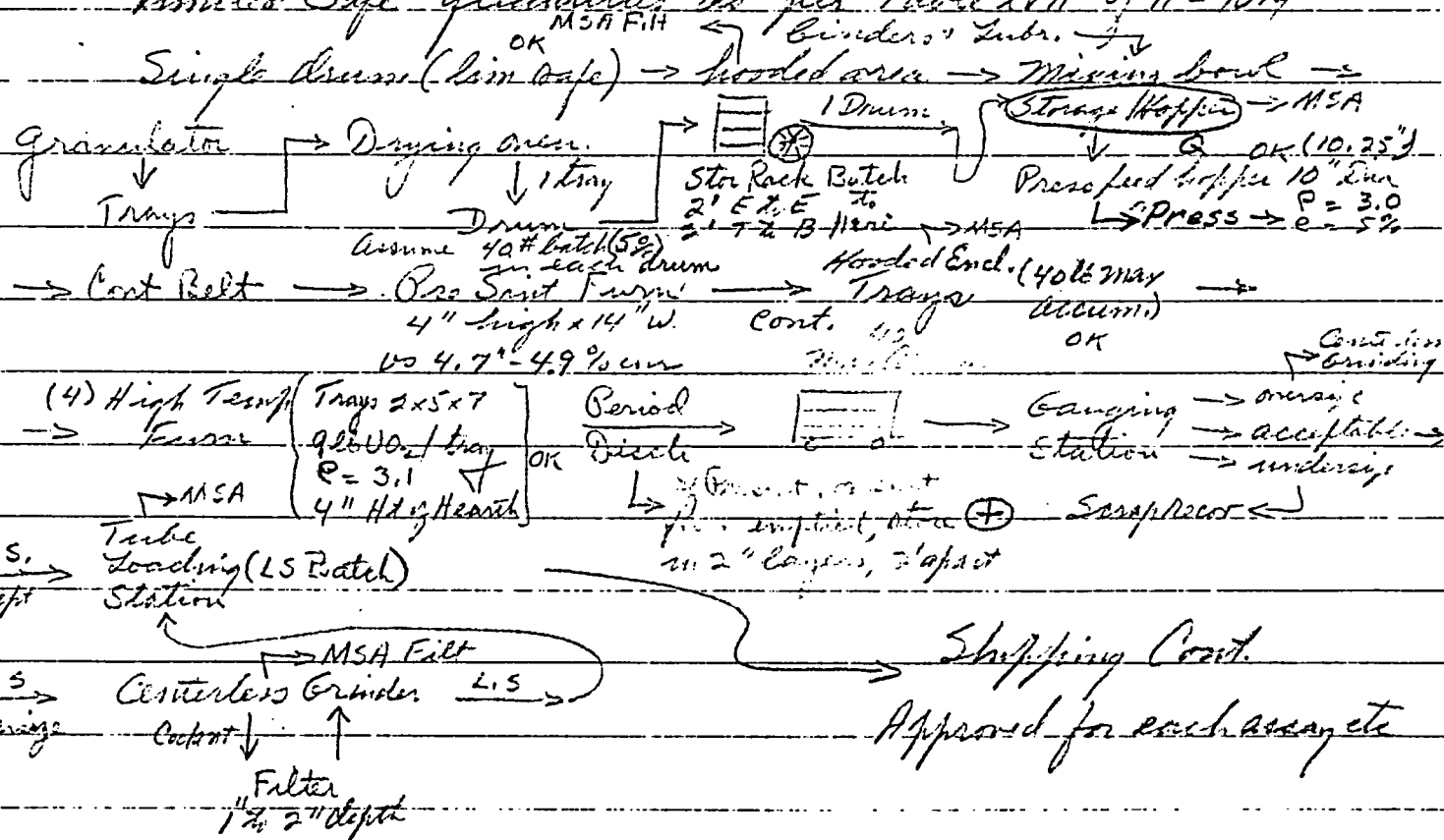
Mallinckrodt Chemical Works

Docket 70-36

Little, Leaders - Johnson 12/10/58

1. General Descr. of Process (10 operations listed). Smr. Labe $\leq 5\%$, with "Limited Safe" batch sizes acc to Table XVII of K-1019, 4th Rev, Del.

"Limited Safe" quantities as per Table XVII of K-1019



Bldg. Fireproof + rad. monitor

⊕ 2' top + bottom land 2' edge to edge - OK in comp with 18" a. (Note: 40 x .88 x 4.4 = 16,000 g U. 235 ÷ 3.1 = 5176 cc ÷ 16.4 = 315 m)

⊕ 2" layers 2' apart, 1/2" dup = 158 m² (12" x 13")