

Lyall E. Johnson, Chief
Licensing Branch

Project SNM-8
Docket 70-36

Clifford K. Beck, Chief
Hazards Evaluation Branch

2-5-59

MALLINCKRODT CHEMICAL WORKS

We have reviewed Mallinckrodt's request of December 30, 1958, modifying its applications of October 13 and November 14, and requesting approval for shipment of: (a) 3-10% enriched UO₂ in a 5 gallon drum within a 55 gallon outer container, and (b) material of 3% enrichment or less in a 15 gallon drum within an 88 gallon outer container. Amounts to be shipped in each container would not exceed the "limited safe" batch (K-1019) for the particular enrichment of the shipment.

We do not question the "^{lim}always safe" amounts to be shipped in individual containers. However, we are not satisfied that the proposed shipping method viz., transportation of up to 50 containers in cubic array, will provide sufficient isolation of one batch from another to assure safety from interaction. Data on this point should be submitted.

Mallinckrodt proposed the shipping method on the basis of criteria outlined in TID-7016, Tables 5, 6 and 7. These criteria do not apply to the present case, however, because the tables of TID-7016 are subject to the provision that the material volume of each shipping unit does not exceed 4.5 liters, whereas the volume of the Mallinckrodt inner drum is either 5 gal (19 l) or 15 gal (57 l). Consequently, we cannot approve the proposed method of shipment.

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