

Project: S-8
Docket: 70-36

MAR 7 1962

Donald A. Mussbauer, Chief
Special Source & Nuclear Materials Div.

Charles D. Luke, Chief
Criticality Evaluation Div.

UNITED NUCLEAR-MALLINCKRODT -- DOCKET 70-36

Ref: DLR:CDL

We have reviewed the United Nuclear application dated December 21, 1961, requesting approval of shipping procedures for low enriched oxides.

We recommend against approval of the application for several reasons.

First, a statement on the bill of lading instructing the carrier not to commingle the United Nuclear shipment with other SWM shipments is not sufficient assurance that commingling will be avoided. Please refer to the fourth paragraph of our January 4 memo for a possible alternative.

Second, we recommend against a safety factor of 25% (80% of critical mass assuming optimum moderation) in transportation, even though procedures assure against double batching. The full safety factor of 2.5 is necessary to protect against criticality in the event of accident, flooding and the combining of the contents of two containers. The proposed light gage sheet metal containers cannot be depended upon to prevent loss of contents.

Third, we wish at this time to again recommend against all uses of the sheet metal skirt attached to the United Nuclear drum birdcages. Please refer to our memorandum of January 30 which discusses this subject in some detail. Inasmuch as it is renewal time for United Nuclear we suggest that previous approvals of the skirt be withdrawn.

Attachment:
ltr dtd 12/21/61

Note:
Received by
United Nuclear
ltr of 4/27/62

DLAR:FL:CEB

CDLuke/vj

3/7/62

689