

Leuterbach

UNITED STATES GOVERNMENT

Memorandum

TO : Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch, DML

DATE: July 19, 1965

FROM : Charles D. Luke, Chief
Criticality Branch, DML *CDL*

SUBJECT: MARTIN COMPANY, DOCKET NO. 70-58, APPLICATION DATED JUNE 3, 1965, AS
SUPPLEMENTED JULY 9, 15 AND 16, 1965

SYMBOL: DML:TGM

We have reviewed the subject application as supplemented for authorization for the exclusive use shipment of scrap material. The shipment is comprised of forty-six 55-gallon drums.

Fourteen of the containers are used for uranium solution. The as loaded H/X ratio is 5200 or greater. Each container is further limited to a maximum of 350 g U-235. The nuclear safety of an unlimited number of such containers is assured.

Five containers are used for filters. Each drum is limited to one filter (18" x 18" x 6") and a maximum U-235 loading of 522 g. Controls described are adequate to assure that this quantity will not be exceeded. Although we have not verified the applicant's statement that an unlimited number of these containers may be safely transported without nuclear safety concern, we have by independent analysis determined that 27 such containers may be safely transported.

The remaining 27 containers are used for solid scraps. These containers are the previously approved "all purpose container" consisting of a 4" diameter, 42" long Schedule 40 inner container centered within a 55-gallon drum. Individual drum is limited to less than 5 kg U-235. The maximum k_{eff} of an individual container has been determined as 0.46. By solid angle calculation, the shipment of 57 such containers as damaged in the accident test series is justified.

We, therefore, conclude that the shipment, as proposed, is safe.



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