



UNITED NUCLEAR CORPORATION

COMMERCIAL PRODUCTS DIVISION / ROUTE 21A, HEMATITE, MISSOURI 63047

DOCKET NO. 70-36 (2)

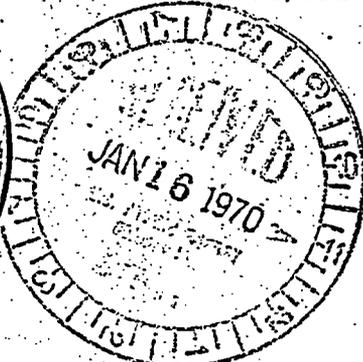
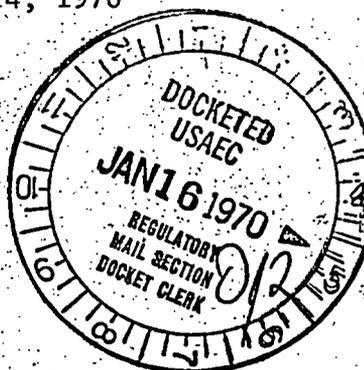
70-820

Regulatory

File Cy. TELEPHONE 314-937-4691
314-296-5640
TWX 910-760-1760

January 14, 1970

NIS:LJS-70/651



Mr. Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Material Licensing
4915 St. Elmo Place
Bethesda, Maryland 20014

Subject: Shipping Container Model UNC 1352

- Reference: 1. 12/19/69 Application for Amendment of Special Nuclear Material Licenses 33 and 777; NIS:LJS-69/722
- 2. Shipping Container Model UNC 1484
1/14/70 Application for Amendment of Special Nuclear Material Licenses 33 and 777, NIS:LJS-70/641

Gentlemen:

Discussion with Mr. McDonald of your office identified a question of the ability of the flanged closure on the inner container to insure the dryness of the contained material. We believe the hypothetical accident test performed on the UNC model 1484 (reference 2) is applicable to evaluation of the performance of the closure on the inner container of the UNC model 1352. It is noted that testing results on the UNC model 1484 showed no water inleakage to the inner container.

Comparing the UNC 1484 inner container flanged closure with the UNC 1352 inner flanged closure yield the following:

	<u>UNC 1484</u>	<u>UNC 1352</u>
Number of bolts	4	4
Bolt diameter	1/2"	3/8"
Bolt stress area	.1416 in ²	.0773 in ²
Maximum net container load	29.6 kg	18 kg (UO ₂)
Total bolt stress (based on net load)	209 kg/in ²	207 kg/in ²
Flange area (inside diameter)	21.6 in ²	28.2 in ²
Flange stress (based on net load)	1.36 kg/in ²	.64 kg/in ²

Copy to P&C
1/21/70

~~ACKNOWLEDGED~~

157 D-33

Donald A. Nussbaumer
January 14, 1970

The applicability of the UNC 1484 tests to the UNC 1352 is apparent from the above table. Based on the net loads, bolt stress area and flange (inside diameter) face area it can be seen that the UNC 1352 has less stress applied to the bolts and flange than in the UNC 1484. This same condition would exist for any dynamic and thermal stresses caused by the drop and fire test.

We trust this additional information will assist in your review of our application. Please call should you have additional questions.

Respectfully yours,



L. J. Swallow, Manager
Nuclear & Industrial Safety

LJS:jb

AEC (7)