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Docket File
NRC PDR
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Region I
RHodegaarden
WHLake
HWLee
CRMarotta
NMSS R/F
FCTC R/F

71-5097

*Return to
C. Macdonald
396-55*

JUL 23 1982

FCTC:RHO
71-5097

U.S. Department of Energy
ATTN: Mr. Reuben P. Prichard
MS E-201
Washington, DC 20545

Gentlemen:

This refers to your application dated November 2, 1977, requesting approval of the Model No. Model 44 packaging.

In connection with our review, we need the information identified in the enclosure to this letter.

Please advise us when this information will be provided. The additional information requested by this letter should be submitted in the form of revised pages. If you have any questions regarding this matter, we would be pleased to meet with you and your staff.

Sincerely,

Original Signed by
CHARLES E. MACDONALD

Charles E. Macdonald, Chief
Transportation Certification Branch
Division of Fuel Cycle and
Material Safety, IRSS

Enclosure: As stated

cc w/encl:
U.S. Department of Energy
ATTN: Mr. R. J. Hart, Manager
Oak Ridge Operations Office
P.O. Box E
Oak Ridge, TN 37830

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PDR ADOCK 07105097
C PDR

OFFICE	FCTC RHO	FCTC HWLee	FCTC HWLee	FCTC CRMarotta	FCTC CEMacDonald		
SURNAME	RHodegaarden: a	WHLake	HWLee	CRMarotta	CEMacDonald		
DATE	07/23/82	07/23/82	07/23/82	07/23/82	07/23/82		

JUL 23 1982

Encl to ltr dtd: _____

STRUCTURAL

1. The package skids should be shown to meet the requirements of 10 CFR §71.31(d)(2).
2. Drawing of the inner containment vessel should clearly show all safety features (i.e., welds (including seam)). Material properties (specifications) for the foamglass filler tested should be included on the drawing. Drawing and revision numbers should be shown on the drawing.
3. For a 30-foot side drop onto the drum, show that the 9-inch diameter hole in the center of the package (cut-out in drums) will not cut or pierce the 12-gauge inner containment vessel.
4. For the puncture test, show that a drop between the skids directly onto the center weld of the package (location of cut-vent) that "beam like" failure of the package will not occur and the containment vessel will not be cut or pierced.

CRITICALITY

The fifth paragraph on page 6 of the SAR states that the aluminum tubing is not required for nuclear criticality safety reason. Independent calculations indicate the containment vessel would be critical (10 CFR §71.33(a)(2)) without the aluminum tubes. Also consideration should be given to effects on nuclear criticality safety of shipments containing less than 44 fuel rods and increased moderation between rods.

OPERATING PROCEDURES, TESTS AND MAINTENANCE

Nuclear criticality safety for the array is based on the containment vessel remaining leak tight during normal and accident conditions of transport. The drawing of the package (Figure 2) states that:

- (1) At the time of fabrication, the inner vessel will be bubble leak tested for 10 psi over a one (1) hour period.
- (2) A new gasket will be used for each shipment.

Item 3 on page 17 indicates the welds on the inner vessel will be tested by pulling. The procedures should be revised to require a leak test following this operation. Also, the inspection form on page 21 should be revised to include:

- (1) A new gasket gasket for each shipment.
- (2) Torquing of the closure bolts (specified value).
- (3) Annual leak testing of the inner vessel.

OFFICE ▶							
SURNAME ▶							
DATE ▶							