

DOE Form F-618
(11-77)
10 CFR 71

U.S. DEPARTMENT OF ENERGY
CERTIFICATE OF COMPLIANCE
For Radioactive Materials Packages

1a. Certificate Number USA/6400 BLF (DOE-NR)	1b. Revision No. 3	1c. Package Identification No. USA/6400/BLF (DOE-NR)	1d. Page No. 1	1e. Total No. Pages 2
---	-----------------------	---	-------------------	--------------------------

2. PREAMBLE:

- 2a. This certificate is issued to satisfy Sections 173.393g, 173.394, 173.395, and 173.396 of the Department of Transportation Hazardous Materials Regulations (49 CFR 170-189).
- 2b. The packaging and contents described in item 5 below, meets the safety standards set forth in Subpart C of Title 10, Code of Federal Regulations, Part 71, "Packaging of Radioactive Material for Transport and Transportation of Radioactive Material Under Certain Conditions."
- 2c. This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported.

3. This certificate is issued on the basis of a safety analysis report of the package design or application--

(1) Prepared by (Name and address):

Bettie Atomic Power Laboratory
P.O. Box 79
West Mifflin, PA 15122
Attn: W. M. Evans

(2) Title and Identification of report or application:

Safety Analysis Report for Packaging
Super Tiger Shipping Container
as Adapted for Small Numbers of LWBR Type Fuel
Rods, WAPD-LP(CE)-256, dated May 1983.

(3) Date:

4. CONDITIONS

This certificate is conditional upon the fulfilling of the requirements of Subpart D of 10 CFR 71, as applicable, and the conditions specified in item 5 below.

5. Description of Packaging and Authorized Contents, Model Number, Fissile Class, Other Conditions, and References:

A. General Information Concerning Container

The Super Tiger is a protective overpack which provides impact resistance, thermal resistance, and partial containment for its contents. The containment vessel (cavity) is approximately 76" x 76" x 172" constructed of 3/16" thick and 10 gauge mild steel. Closure of the containment vessel is by a 1/4" thick aluminum plate with silicone rubber gasket which is bolted to the containment vessel. A pressure fitting with cap on the closure plate provides a means for leak testing. A die stamped steel identification plate is welded to the outside of the protective overpack.

The containment vessel is centered and supported in an outer 3/16" thick steel jacket by approximately 32" of polyurethane foam insulation at the end and 10" on the sides. A removable section or cap consisting of approximately 34" of polyurethane foam insulation encased in steel with a silicone rubber gasket is bolted to the main outer steel jacket. The overall dimensions of the package are approximately 8' x 8' x 20'. Vent holes are provided on the sides and ends of the container. Set into each corner of the outer container are standard I.S.O. steel castings. The total weight of the fully loaded container will not exceed 45,000 pounds.

6a. Date of Issuance:

6b. Expiration Date:

FOR THE U.S. DEPARTMENT OF ENERGY

7a. Address (of DOE Issuing Office)

7b. Signature, Name, and Title (of DOE Approving Official)

8307290374 830708
PDR. ADDCK 07106400
C PDR

**Certificate of Compliance
(Continued)**

Nine BAPL 5910 Birdcage shipping containers, Certificate of Compliance USA/5910/BF (DOE-NR), are used as secondary packaging within the Super Tiger cavity for this application. Each Birdcage container will accommodate one LWBR rod transport box or equivalent, containing up to 16 seed, eight blanket, or four reflector LWBR type binary fuel rods. Total containment is ensured by the Super Tiger chassis, the Birdcage structure, the rod transport containers, and the rod cladding. The Super Tiger is constructed in accordance with Protective Packaging, Inc., Drawings, Reference (1) and the Birdcage containers are constructed in accordance with Bettis Atomic Power Laboratory Drawing, Reference (2). The Safety Analysis Report for packaging consists of Bettis Report, Reference (3), as supported by Bettis Report, Reference (4).

B. Permitted Contents

The Super Tiger can be used to ship fissile material ($^{233}\text{UO}_2 + \text{Th O}_2$) in the form of LWBR-type fuel rods as described in Reference (3) subject to the following restrictions:

1. No shipment to exceed 2 Kg of U_{233} .
2. Rods are packaged in LWBR rod transport boxes or equivalent at not more than 16 seed, eight blanket, or four reflector rods per box.
3. Each rod transport box gross weight is not over 99 pounds.

C. Restrictions

1. The Super Tiger will be shipped as Fissile Class III with a limit of one Super Tiger per transport vehicle.

D. References

1. Protective Packaging, Inc., Drawing Nos. 32106, Sheet 1, Revision F and 32106, Sheet 2.
2. Bettis Atomic Power Lab Drawing No 1528E73.
3. Bettis Atomic Power Lab Report No. WAPD-LP(CE)-256, "Safety Analysis Report for Packaging, Super Tiger Shipping Container as Adapted for Small Numbers of LWBR-Type Fuel Rods", April 1983.
4. Bettis Atomic Power Laboratory Report No. WAPD-LP(FE)-220, "Safety Analysis Report for Packaging, Super Tiger Shipping Container as adapted for LWBR-Type Fuel Rods", Revision 3, January 1983.