

U.S. NUCLEAR REGULATORY COMMISSION
CERTIFICATE OF COMPLIANCE
For Radioactive Materials Packages

1.(a) Certificate Number 5914	1.(b) Revision No. 1	1.(c) Package Identification No. USA/5914/B()F	1.(d) Pages No. 1	1.(e) Total No. Pages 3
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2. PREAMBLE

- 2.(a) This certificate is issued to satisfy Sections 173.393a, 173.394, 173.395, and 173.396 of the Department of Transportation Hazardous Materials Regulations (49 CFR 170-189 and 14 CFR 103) and Sections 146-19-10a and 146-19-100 of the Department of Transportation Dangerous Cargoes Regulations (46 CFR 146-149), as amended.
- 2.(b) 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 Materials for Transport and Transportation of Radioactive Material Under Certain Conditions."
- 2.(c) 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--

3.(a) Prepared by (Name and address): U.S. Department of Energy Division of Naval Reactors Washington, DC 20545	3.(b) Title and identification of report or application: Safety Analysis Report for 57.5 x 108 Core Cartridge Shipping Container dated May 6, 1968, as supplemented. 3.(c) Docket No. 71-5914
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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) Packaging

- (1) Model No.: 57.5 x 108 Core Cartridge
- (2) Description

The Model No. 57.5 x 108 Core Cartridge Shipping Container was designed for the shipment and storage of new and unirradiated fissile material. This unit consists of two basic assemblies, a barrel assembly and a shipping cradle. The barrel assembly houses and supports the cargo and is supported on a shock-support shipping cradle that is floor mounted to a transport vehicle. The overall height of the assembled unit is 155-3/16 inches and the maximum planform envelope dimensions are 108 by 182 inches. The barrel assembly consists of two concentric cylinders, an inner barrel and an outer barrel, and a top plate. The inner barrel measures approximately 100 inches in height and is manufactured from 1/2 inch thick stainless steel plate rolled into a 57-inch diameter cylinder and welded to a stainless steel flange on the top end, and a stainless steel plate on the bottom end which is drilled and tapped for thirty-two 3/4-inch diameter bolts for fastening the outer barrel. The outer barrel is of carbon steel construction, slides over the inner barrel and is attached to the inner barrel at the bottom flange. The outer barrel is 61-inches in diameter, approximately 149-3/4 inches high and is made from 1 thick carbon steel plate. A top flange is welded to the barrel for securing a bolted top plate that encloses the open end of the barrel, and a middle flange is welded to the

5. (a) (Cont'd)

(2) Description (Cont'd)

barrel to provide a means of attaching the barrel to the shipping cradle. Within the barrel assembly a hoisting rig for handling the core cartridge is secured to the top plate with four 1-1/2-inch diameter jackscrews and four 2-inch diameter ACME thread bolts. The core cartridge is suspended from the top flange of the inner barrel. The shipping cradle stands approximately 96-inches high and consists of a base plate, fourteen 8-inch, schedule 40 steel pipes, a top ring, 10 shear mounts and a support ring. The barrel assembly is suspended and attached to the support ring which in turn rests against and is attached to the ten shear mounts that mount on the top ring of the shipping cradle. The fourteen steel pipes are welded at their ends to the 1-1/4-inch thick steel base plate and the 2-1/4-inch thick top ring. Six stops and eight 1-1/2-inch diameter bolts secure the shipping cradle to the floor of the transport vehicle. The gross weight of the packaging is 28,800 pounds and when loaded with either an S5W Type 2 or R2, or an S5W-3 or R3 core cartridge, the package weight is 48,000 pounds.

(3) Drawings

The packaging is constructed in accordance with Westinghouse Electric Corporation Drawing Nos. 923J706, Rev. C, 901J914, Rev. D and 901J916, Rev. D.

(b) Contents

(1) Type and form of material

Unirradiated fuel assemblies of the following type:

- (i) S5W-2 or R2 unirradiated naval reactor fuel core cartridge containing a full complement of control rods secured in place by a holdown cap.
- (ii) S5W-3 or R3 unirradiated naval reactor fuel core cartridge containing a full complement of control rods secured in place by a holdown cap.

(2) Maximum quantity of material per package

One fuel assembly as described in 5(b)(1)(i) or 5(b)(1)(ii).

(c) Fissile Class

III

Maximum number of packages per shipment:

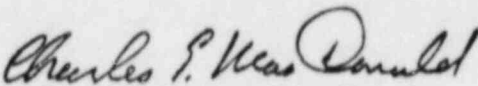
One

6. Expiration date: January 31, 1988.

REFERENCES

Safety Analysis Report for 57.5 x 108 Core Cartridge Shipping Container, WAPD-OP(R)S-2599, dated May 6, 1968 as supplemented by Bettis Atomic Power Laboratory letter WAPD-OP(R)S-2801, dated September 3, 1968.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION


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

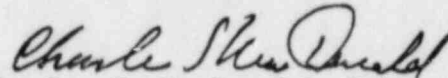
JAN 06 1983

Date: _____

U.S. Nuclear Regulatory Commission
Transportation Certification Branch
Approval Record
Model No. 57.5 x 108 Core Cartridge
Docket No. 71-5914

By application dated July 27, 1982, U.S. Department of Energy requested renewal of Certificate of Compliance No. 5914. No changes have been authorized to the package design since approval of latest supplement dated September 3, 1968.

The staff concludes that the statements of the original application, as supplemented, satisfies the requirement for renewal of the Certificate of Compliance.



Charles E. MacDonald, Chief
Transportation Certification Branch
Division of Fuel Cycle and
Material Safety, NMSS

Date: JAN 06 1983