Form NRC-618
(12-73)*
10 CFR 71

U.S. NUCLEAR REGULATORY COMMISSION

CERTIFICATE OF COMPLIANCE

For Radioactive Materials Packages

1.(a) Certificate Number	1.(b) Revision No.	1.(c) Package Identification No.	1.(d) Pages No.	1.(e) Total No. Pages
6441	2	USA/6441/AF	1	3

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 20585

3.(b) Title and identification of report or application:
Safety Analysis Report for D2G Power Unit Shipping Container dated August 4, 1969, as supplemented.

3.(c) Docket No. 71-6441

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.: D2G Power Unit

(2) Description

The D2G Power Unit shipping container assembly consists of five main assemblies; (1) the barrel assembly, (2) the upper cover, (3) the lower cover, (4) the main shipping skid, and (5) the barrel trunnion supports. To prepare the power unit shipping container for shipment of a power unit, the container barrel is rotated to the vertical position, the upper cover is removed and the power unit is loaded into the barrel and secured in the container with eight (8) shipping studs. The upper cover is then installed and the container is rotated to the horizontal position for shipment. The container assembly is 31 feet long and 8-1/2 feet wide and it is attached to a government owned permanently assigned depressed center railroad car; the maximum height above the rails is 13 feet-10 inches in the shipping configuration. The power unit is shipped complete with design control rods and mechanisms installed.

(2) Description (continued)

The closure head in a Type A and Type B power unit contains an integral bolting flange. This type of power unit is retained in the container by means of eight shipping bolts which clamp the power unit to the barrel upper flange of the shipping container. The control rods in a Type A or B power unit are restrained in the power unit by means of control rod holddown latch pawls located in the upper control rod drive mechanism. The Type C, D, and E power unit is also retained in the container by means of eight shipping bolts but because the closure heads on these power units do not include a bolting flange, a special shipping ring is used to clamp the closure head and core cartridge assembly to the barrel upper flange of the shipping container. The control rods in a Type C, D, or E power unit are restrained in the power unit by means of rebound and outmotion latches located in the latching portion of the control rod drive mechanisms. The container assembly weighs about 100,000 pounds empty and about 270,000 pounds loaded.

(3) Drawings

The packaging is constructed in accordance with Baldwin-Lima-Hamilton Corporation Drawing Nos. R-126361, Rev. E and R-126347, Rev. K and Westinghouse Electric Corporation Drawing Nos. 955F632, Rev. 5 and 972D940, Rev. 5.

(b) Contents

(1) Type and form of material

Unirradiated enriched uranium as contained in Naval Reactors Type A, B, C, D, or E power units consisting of core barrel, unirradiated fuel assemblies, closure head, mechanisms and associated hardward, with all design control rods and mechanisms installed.

(2) Maximum quantity of material per package

One power unit as described in 5(b)(1).

(c) Fissile Class III

Maximum number of packages per shipment: one (1)

6. Expiration date: February 29, 1988.

REFERENCES

Safety Analysis Report for D2G Power Unit Shipping Container, ONP-74252-13 dated August 4, 1969.

Supplements: Bettis Atomic Power Laboratory letters WAPD-DP(CH)-1252; dated November 30, 1973, WAPD-DP(CH)-1466; dated October 18, 1974, and Knolls Atomic Power Laboratory letter CGN 85542-250; dated February 5, 1981.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

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

Date: FEB 10 1983

U.S. Nuclear Regulatory Commission
Transportation Certification Branch
Approval Record
Model No. D2G Power Unit Shipping Package
Docket No. 71-6441

By application dated July 27, 1982, U.S. Department of Energy requested renewal of Certificate of Compliance No. 6441. No changes have been authorized to the package design since approval of latest supplement dated February 5, 1981.

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: OCT 10 1983