

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIALS PACKAGES**

|                                  |                         |   |                     |                            |
|----------------------------------|-------------------------|---|---------------------|----------------------------|
| 1. a. CERTIFICATE NUMBER<br>9783 | b. REVISION NUMBER<br>3 | c. PACKAGE IDENTIFICATION NUMBER<br>USA/9783/B( ) | d. PAGE NUMBER<br>1 | e. TOTAL NUMBER PAGES<br>3 |
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2. PREAMBLE

- a. This certificate is issued to certify that the packaging and contents described in Item 5 below, meets the applicable safety standards set forth in Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material."
- b. 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

a. ISSUED TO (Name and Address)

b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION

U.S. Department of Energy  
Division of Naval Reactors  
Washington, DC 20585

Safety Analysis Report for S5W ITP  
Shipping Container dated October 15, 1973,  
as supplemented

c. DOCKET NUMBER

71-9783

4. CONDITIONS

This certificate is conditional upon fulfilling the requirements of 10 CFR Part 71, as applicable, and the conditions specified below.

5.

(a) Packaging

(1) Model No.: S5W ITR

(2) Description

The S5W ITR shipping container is designed to house two, S5W Core 2 or Core 3 interpass thermocouples or one S3W/S4W Core Water Temperature thermocouple. The container is used during removal of the irradiated thermocouples from a reactor vessel. After the interpass thermocouples are properly enclosed and sealed within the shipping container, the container is assembled to the shipping structure. The S5W ITP shipping container is nearly cylindrical vessel, approximately 17-1/2 feet long and 2 feet, 2 inches in diameter, with a carbon steel outer shell with two interior axially located stainless steel tubes (3-1/2 inches diameter Schedule 80 pipe). The annular void between the exterior shell and the interior tubes is filled with poured chemical lead. The lead provides the necessary shielding to protect personnel from radiation during the removal process and during shipment. The fin-shaped steel plates are welded to opposite sides of the container. They provide constant support of the container and provide a constant flat surface for bolting the container to the shipping structure. Two lifting holes are provided in the upper end of the support plates and are used to raise the shipping container to the vertical for thermocouple loading or unloading. Three lifting lugs are provided for handling either the container or the container and the shipping structure. A lead-filled door, supported on ball bearings, provides an opening through which the thermocouples can be drawn into, or lowered from, the container. Rotating and locking the door at a position 90° from open provides the necessary shielding. Two holddown plugs, located at the top end of the container, grip the top of the thermocouples and position them in the tubes. A lead-filled end cap retains the holddown plugs.

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The shipping structure is fabricated from two, 12-inch carbon steel structural channels, weighing 20.7 lbs/ft, joined together at the bottom flange by five carbon steel plates and ten structural supports welded to the internal faces of the channels and the container support plates. The thermocouple container support plates and the shipping structure are held together with twenty-four, 1-1/4-7UNC commercial grade bolts and nuts. Two, one-inch dowel pins affixed to the upper flanges of the shipping structure, guide and locate the thermocouple container onto the shipping structure. The assembled container and shipping structure has an approximate weight of 16,000 lbs.

(3) Drawings

The packaging is constructed in accordance with the description and drawings contained in Bettis Atomic Power Laboratory Safety Analysis Report (WAPD-OP(R)C-256) dated October 15, 1973.

(b) Contents

(1) Type and form of material

Irradiated solid material of the following form,

- (i) S5W interpass thermocouples of either Core 2 or Core 3 type, irradiated for not more than two core lives.
- (ii) S3W/S4W core water temperature thermocouple, irradiated for not more than three core lives.

(2) Maximum quantity of material per package

- (i) Two irradiated assemblies as described in 5(b)(1)(i), not to exceed 1,300 curies. Shipment shall not be made sooner than 30 days after reactor plant shutdown.
- (ii) One irradiated assembly as described in 5(b)(1)(ii), not to exceed 2,550 curies. Shipment shall not be made sooner than 150 days after reactor plant shutdown.

6. Expiration date: December 31, 1992.

CONDITIONS (continued)

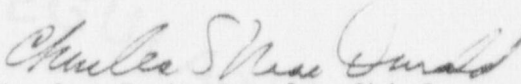
Page 3 - Certificate No. 9783 - Revision No. 3 - Docket No. 71-9783

REFERENCES

Safety Analysis Report for S5W ITR shipping container, WAPD-OP(R)C-256, dated October 15, 1973.

Supplements: Bettis Atomic Power Laboratory letters WAPD-OP(R)C-350 dated May 23, 1974, WAPD-OP(R)C-584 dated December 10, 1976 and WAPD-OP(R)C-605 dated January 13, 1977.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

  
Charles E. MacDonald, Chief  
Transportation Branch  
Division of Safeguards and  
Transportation, NMSS

Date: DEC 30 1987





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

Transportation Branch  
Approval Record  
Model No. S5W ITR Package  
Docket No. 71-9783  
Revision No. 3

By application dated November 10, 1987 (G#87-3254), Division of Naval Reactors, U.S. Department of Energy, requested renewal of Certificate of Compliance No. 9783. No changes have been authorized to the package design since approval of the latest supplement dated January 13, 1977.

The certificate of compliance has been renewed for a five year term which expires December 31, 1992.

*Charles E. MacDonald*  
Charles E. MacDonald, Chief  
Transportation Branch  
Division of Safeguards and  
Transportation, NMSS

Date: DEC 30 1991