

NRC FORM 618
(0-85)
10 CFR 71CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIALS PACKAGES

1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. PACKAGE IDENTIFICATION NUMBER	d. PAGE NUMBER	e. TOTAL NUMBER PAGES
9167	4	USA/9167/B(U)	1	3

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

Amersham Corporation
40 North Avenue
Burlington, MA 01803

Amersham Corporation application dated
August 25, 1982, as supplemented.

c. DOCKET NUMBER 71-9167

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 Nos.: 3206B, 3227B, and 3218
- (2) Description

The KEG containers are designed as Type B shipping containers for neutron sources in special form. The containers are constructed of stainless steel and the dimensions are 16.8 inches in diameter by 20.4 inches high. The containers are filled with water extended polyester (WEP) which provides radiation and thermal protection to the contents. The Model No. 3206B and 3227B containers each have one receptacle for the source (2-inch diameter and 3-inch diameter receptacles, respectively). The Model No. 3218 container has two (2) receptacles for the sources (2-inch diameter and 1.3-inch diameter receptacles). The smaller receptacle will be used only for a reference or calibration source. A stainless steel encased WEP plug will be inserted into the receptacle and held in place by a knurled stainless steel screw cap. A stainless steel latch bar is locked in place over the screw cap with a key operated padlock. The gross weight of each container is 165 pounds.

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5. (a) (3) Drawings

The packagings are constructed in accordance with Amersham Corporation Drawing Nos.:

<u>Model No. 3206B</u>	<u>Model No. 3227B</u>	<u>Model No. 3218</u>
0A22413, Rev. D	0A22527, Rev. D	0A22440, Rev. D
1A22299, Rev. G	1A22299, Rev. G	1A22299, Rev. G
3A22297, Rev. C	3A22297, Rev. C	2A22441, Rev. A
3A22420, Rev. B	3A22416, Rev. A	2A22442, Rev. A
2A22442, Rev. A	2A22528, Rev. A	3A22302, Rev. C
2A22385, Rev. B	2A22417, Rev. A	3A22439, Rev. A
2A22419, Rev. C		3A22443, Rev. A
		3A22444, Rev. A
		3A22321, Rev. C

and the "NOTES ON DRAWINGS" given on pp 1-34 and 1-35 of the application (01/17/83).

(b) Contents

(1) Type and form of material

Am-241/Be neutron sources that meet the requirements of special form radioactive material.

(2) Maximum quantity of material per package

25 curies

6. Venting of the source receptacle(s) in event of decomposition of the WEP shielding plug due to the accident conditions of transport, shall be provided for by drilling a 1/4-inch hole in the top surface of the screw cap(s). The hole shall be filled with plastic, rubber, or low temperature melt alloy to preclude entry of rain water during normal conditions of transport.
7. Name plates on the container must be fabricated of materials capable of resisting the fire test of 10 CFR Part 71 and maintaining their legibility.
8. In addition to the requirements of Subpart G of 10 CFR Part 71:
 - (a) Each package shall be prepared for shipment and operated in accordance with the Operating Procedures in Section 7 of the application, as supplemented; and
 - (b) Each package shall be acceptance tested and maintained in accordance with the Acceptance Tests and Maintenance Program of Section 8 of the application, as supplemented.

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9. The packaging authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR §71.12.
10. Expiration date: December 31, 1998.

REFERENCES

Amersham Corporation application dated August 25, 1982.

Amersham Corporation supplements dated: January 17, 1983; March 1, 1988; August 1 and September 19, 1991; and February 17 and October 29, 1993.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Cass R. Chappell

Cass R. Chappell, Section Leader
Cask Certification Section
Storage and Transport Systems Branch
Division of Industrial and
Medical Nuclear Safety, NMSS

Date: DEC 22 1993*



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

APPROVAL RECORD

Model Nos. 3206B, 3227B, 3218
Certificate of Compliance No. 9167
Revision No. 4

By application dated February 17, 1993, as supplemented July 30 and October 29, 1993, Amersham Corporation requested renewal of Certificate of Compliance No. 9167 for the Model Nos. 3206B, 3227B, and 3218 shipping containers. The only change since the last renewal is a revision of the Operating Procedures, and Acceptance Tests and Maintenance Program provided in the application. The revision includes an updated reference to Amersham's Corporate Quality Assurance Program (NRC No. 0040) for packages manufactured after August 1, 1991. The previous version of the Acceptance Tests and Maintenance Program stated that packages were manufactured in accordance Amersham Corporate Quality Assurance Program (NRC No. 0370) which was deactivated on August 1, 1991. The October 29, 1993, supplement supersedes the July 30, 1993, supplement in its entirety.

The certificate of compliance has been renewed for a five-year term which expires December 31, 1998.

Cass R. Chappell

Cass R. Chappell, Section Leader
Cask Certification Section
Storage and Transport Systems Branch
Division of Industrial and
Medical Nuclear Safety, NMSS

DEC 22 1993

Date: _____