NRC FORM 618
(3-96)
10 CFR 71

U.S. NUCLEAR REGULATORY COMMISSION

CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIALS PACKAGES

1.a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. PACKAGE IDENTIFICATION NUMBER	d. PAGE NUMBER	e. TOTAL NUMBER PAGES
9128	7	USA/9128/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*)

Amersham Corporation
40 North Avenue
Burlington, MA 01803

b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION

Amersham Corporation application dated March 9, 1989, as supplemented

c. DOCKET NUMBER 71-9128

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.: C-8

A steel encased, uranium shielded source exchanger. The shipping container is approximately 16 inches in diameter, 13 inches long and 22.5 inches high in its skid mounted configuration. The radioactive source assembly is housed in a Zircaloy or titanium "S" tube. A septum at the center of the "S" tube prevents moving the source assembly beyond the optimum shielding position. The tube is surrounded by depleted uranium metal as shielding material. The depleted uranium shield assembly is encased in a steel housing. The void space between the depleted uranium shield assembly and the outer container is filled with a polyurethane foam. The gross weight of the container is 500 pounds.

(2) Drawings

The packaging is constructed in accordance with Gamma Industries Drawing Nos. 821-1001-033; 180-01; 191; 821-1005-008D, Rev. A; 821-1001-117; 821-1001-128 sheet 1, Rev. 2; 821-1001-128 sheet 2; 821-1001-129; 811-1001-212, Rev. A; 811-1001-111, Rev. 2; and 801-1001-159.

5. (b) Contents

(1) Type and form of material

Cobalt 60 as sealed sources that meet the requirements of special form radioactive material.

(2) Maximum quantity of material per package

200 curies (output)

Output curies are determined in accordance with American National Standard N432-1980, "Radiological Safety for the Design and Construction of Apparatus for Gamma radiography"

6. The source shall be secured in the shielded position of the packaging by the safety cap, source assembly and lockbox assembly. The components used to secure the source must be fabricated of materials capable of resisting a 1475°F fire environment for one-half hour and maintaining their positioning function. The ball stop of the source assembly must engage the locking device. The flexible cable of the source assembly must be of sufficient length and diameter to provide positive positioning of the source at the septum in the shielded position.

7. The can and side plates must be a minimum of 1/4-inch thick carbon steel. The can and side plates shall be joined by full penetration welds. All other welds shall be fillet welds having sufficient throat thickness to develop strength equal to or greater than the metals being joined.

8. The nameplates shall be fabricated of materials capable of resisting the fire test of 10 CFR Part 71 and maintaining their legibility.

9. Use of packaging fabricated after January 31, 1991 is not authorized.

10. In addition to the requirements of Subpart G of 10 CFR Part 71:

a. The package shall be prepared for shipment and operated in accordance with the Operating Procedures of Section 7.0 of the August 19, 1996, application as supplemented.

b. The package must be maintained in accordance with the Acceptance Tests and Maintenance Program of Section 8.0 of the August 19, 1996, application as supplemented.

11. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR §71.12.

12. Expiration date: December 31, 2002.

REFERENCES

Amersham Corporation application dated March 9, 1989.

Supplements dated: August 21, and September 23, 1989; February 8, and December 6, 1990; and January 29, 1991; and November 6, 1995; and August 19, 1996; and May 21, 1997.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Cass R. Chappell

Cass R. Chappell, Chief
Package Certification Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Date: December 22, 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

APPROVAL RECORD
Model No. C-8 Package
Certificate of Compliance No. 9128
Revision No. 7

By application dated November 6, 1995, as supplemented, Amersham Corporation requested renewal of Certificate of Compliance No. 9128 for the Model No. C-8 package. No changes in package design or contents were requested. Condition 5(b)(2) of the certificate has been revised to specify that the source strength is given in output curies, consistent with American National Standard N432-1980.

Sections on operating procedures, acceptance tests and maintenance program were reviewed and found to be adequate. The certificate has been conditioned to require that the package be prepared for shipment, operated and maintained in accordance with the procedures in the supplements dated August 19, 1996, and May 21, 1997.

Amersham does not desire to fabricate additional units of the Model No. C-8 package, and the Safety Analysis Report and the certificate drawings did not specify codes, standards, and procedures for fabrication of the package. The amended certificate retains the previous condition which precludes use of packaging fabricated after January 31, 1991.

The certificate has been renewed for a five year term which expires on December 31, 2002.

Cass R. Chappell

Cass R. Chappell, Chief
Package Certification Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Date: December 22, 1997