

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

1.	a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION NUMBER	PAGE	PAGES
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2. PREAMBLE

- a. This certificate is issued to certify that the package (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*)  
U.S. Department of Energy  
Washington, D.C. 20585
- b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION  
U.S. Department of Energy  
application dated August 23, 2006,  
as supplemented.

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.: S300
- (2) Description

The Model No. S300 package is a cylindrical container that is approximately 89 centimeters (35 inches) in overall height and 60 centimeters (23 inches) in overall diameter. The Model No. S300 is comprised of an overpack, pipe component, and a shielding insert. The Model No. S300 is designed to transport a single plutonium-beryllium (PuBe) special form capsule (SFC). The maximum gross weight of the package is 217.7 kilograms (480 lbs).

The overpack design utilizes a standard 55-gallon drum as the outer container. A standard bolted clamping ring secures the drum lid to the drum body. Within the drum body is a rigid polyethylene liner (body and lid). Lid liner and lid are pierced and the drum lid is fitted with a filter vent. Within the liner is cane fiberboard dunnage and a sheet of plywood to provided shock absorption for the pipe component.

The pipe component consists of a stainless steel cylindrical pipe welded to a stainless steel flat cap at the bottom end and a bolted pipe flange at the other end. The pipe component is closed with a stainless steel flat lid attached to the flange with 12 stainless steel bolts. A filter vent is installed in the lid. The flange-to-lid seal is either a butyl or ethylene propylene elastomeric o-ring.

The shielding insert is located within the pipe component. The shielding insert is made from solid high density polyethylene plastic. Within the shielding insert is a cylindrical opening sized to accommodate the SFC.

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(3) Drawings

The packaging is constructed in accordance with Areva drawing No. 60999-SAR, sheets 1 through 3, Revision 0, S300 Packaging SAR Drawing.

b. Contents

(1) Type and form material

Plutonium-239 (Pu-239) as PuBe sources meeting the requirements of special form sources and limited to:

- (a) The SFC Model II SFC - IAEA Certificate of Competent Authority Special Form Radioactive Materials Certificate Number USA/0696/S-96, Revision 2, issued by the U.S. Department of Transportation (DOT).
- (b) The Model III SFC - IAEA Certificate of Competent Authority Special Form Radioactive Materials Certificate Number USA/0695/S-96, Revision 2, issued by the DOT.

(2) Maximum quantity of material per package:

One SFC, containing a maximum quantity of Pu-239 as shown below.

Non-Exclusive Use Shipment		Exclusive Use Shipment	
Model II SFC	Model III SFC	Model II SFC	Model III SFC
206 grams Pu-239	160 grams Pu-239	350 grams Pu-239	160 grams Pu-239

c. Criticality Safety Index 0.0

6. Transport by air is not authorized.

7. 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 "Package Operations," in Chapter 7 of the application.
- b. Each package shall be tested and maintained in accordance with the "Acceptance Tests and Maintenance Program," in Chapter 8 of the application.

8. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.

9. Expiration date: November 30, 2011.

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REFERENCES

U.S. Department of Energy application dated August 23, 2006.

Supplement dated: November 8, 2006, and April 19, 2007.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Nelson, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Date: April 26, 2007

