

**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*)
AREVA NP, Inc.
2101 Horn Rapids Rd
Richland, WA 99354
- b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION
AREVA NP, Inc., application dated
September 13, 2007.

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.: BW-2901
- (2) Description

A shipping container for low-enriched uranium oxide powder and pellets, composed of an inner container, surrounded by insulating material, and an outer drum. The inner cross sectional dimensions of the inner container are a maximum 11.15-inch square by 29.5-inch long. The inner container is constructed of minimum 14-gauge steel, with bolted and gasketed top flange closure and welded bottom sheet. The inner container is centered and supported in an 18-gauge steel drum with 16-gauge head and DOT Specification 17H or an equivalent DOT UN1A2/Y1.5/100 closure by asbestos or ceramic sheet, plywood, hardboard, and insulating material. The drum is approximately 22-1/2 inches in diameter and either 34-1/4 inches or 35-1/2 inches in overall height. The drum lid is closed with a 12-gauge locking ring with drop forged lugs and a 5/8-inch diameter bolt. In addition to the locking ring, three lid clamps are installed to secure the drum lid. The uranium oxide is packaged in boxes, and wood boards position the boxes within the inner container. Three borated aluminum plates (approximately 25 inches by 9.25 inches by 0.375 inch) are positioned within the inner container. The maximum gross weight of the package is 660 pounds.

(3) Drawings

The packaging is constructed in accordance with B&W Fuel Company Drawing Nos. 1215597D, Rev. 5; 1215598B, Rev. 1; 1215599E, Rev. 5; and AREVA NP, Inc., Drawing No. 12155600, Rev. 7.

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5. (b) Contents

(1) Type and form of material

- (i) Sintered uranium oxide pellets enriched to a maximum 5.05 weight percent U-235. The minimum pellet diameter is 0.315 inch, and the maximum pellet diameter is 0.400 inch.
- (ii) Uranium dioxide as powder, pellets, or any combination thereof, enriched to a maximum 5.05 weight percent U-235.

(2) Maximum quantity of material per package

370 pounds, with the U-235 content not to exceed 7.47 kg. The maximum weight of the uranium oxide, pellet boxes, and all packaging materials within the inner container is 427 pounds. Uranium oxide must be packaged in accordance with B&W Fuel Company Drawing Nos. 1215597D, Rev. 5, and AREVA NP, Inc., Drawing No. 1215600, Rev. 7. The maximum mass of polyethylene within the inner container shall not exceed 1000 grams per package. Maximum quantity of radioactive material within a package may not exceed a Type A quantity.

5. (c) Criticality Safety Index (CSI) 0.7

- 6. Each package must be shipped with borated aluminum plates positioned within the inner container, on the top of, between, and on the bottom of the rows of pellet boxes. The three borated plates must have dimensions and boron concentration, and must be positioned in accordance with B&W Fuel Company Drawing No. 1215597D, Rev. 5.
- 7. For packages with fewer than six pellet boxes, solid aluminum or wood pellet box spacers must be substituted for pellet boxes. The pellet boxes, pellet box spacers, borated plates, and wood boards must provide a snug axial and cross sectional fit in the inner container.
- 8. In addition to the requirements of Subpart G of 10 CFR Part 71:
 - (a) Each packaging must be maintained and acceptance tested in accordance with Chapter 8 of the application;
 - (b) The package must be prepared for shipment and operated in accordance with the Operating Procedures of Chapter 7 of the application; and
 - (c) Prior to each shipment the insert (containment vessel) gasket shall be inspected. The gasket shall be replaced if it is damaged, defective, or degraded.
- 9. Transport of fissile material by air is not authorized.

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- 10. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR §71.17, provided that fabrication of the package was satisfactorily completed by April 1, 1999.
- 11. Expiration date: January 31, 2018.

REFERENCES

AREVA NP, Inc., application dated September 13, 2007.

AREVA NP, Inc., supplement dated December 6, 2012.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Michele Sampson, Acting Chief
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material
Safety and Safeguards

Date: *December 26, 2012*

