



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

August 6, 2009

Philip W. Noss, Licensing Manager  
AREVA Federal Systems, LLC  
1102 Broadway Plaza, Suite 300  
Tacoma, WA 98402-3526

SUBJECT: AMENDMENT OF CERTIFICATE OF COMPLIANCE NO. 9184 FOR THE  
MODEL NO. PAS-1 TRANSPORTATION PACKAGE

Dear Mr. Noss:

As requested in your letter dated June 12, 2009, enclosed is Certificate of Compliance (CoC) No. 9184, Revision No. 8, for the Model PAS-1 transportation package. The staff's Safety Evaluation Report is also enclosed. This revision supersedes, in its entirety, CoC No. 9184, Revision No. 7, dated January 1, 2008. Changes made to the enclosed CoC are indicated by vertical lines in the margins.

Those on the attached list have been registered as users of the package under the general license provisions of 10 CFR §71.17 and 49 CFR §173.41. The approval constitutes authority to use the package for shipment of radioactive material and for the package to be shipped in accordance with the provisions of 49 CFR §173.471. Registered users may request by letter to remove their names from the Registered Users List if they no are longer users of the package.

If you have any questions regarding this certificate, please do not hesitate to contact me at (301) 492-3294.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric Benner".

Eric Benner, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 71-9184  
TAC No.: L24156

Enclosures: 1. CoC No. 9184, Rev No. 8  
2. Safety Evaluation Report  
3. Registered users list

cc w/encls 1 & 2: R. Boyle, Department of Transportation  
J. M. Shuler, Department of energy  
Registered Users

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

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 Federal Services, LLC  
1102 Broadway Plaza, Suite 300  
Tacoma, WA 98402-3526
- b TITLE AND IDENTIFICATION OF REPORT OR APPLICATION  
Nuclear Packaging, Inc., consolidated application dated March 31, 1989, 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.: PAS-1
- (2) Description.

The packaging consists of a primary containment vessel (20.5" OD x 23.4" OH) enclosed inside a secondary containment vessel and radiation shield (32.5" OD x 39.0" OH). The 15 milliliter water sample is contained within a undefined sample cask. Additionally, four iodine collection cartridges and four offgas vials are maintained inside the foam shoring above the sample cask. Loose vermiculite surrounds the perimeter of the sample cask to absorb the water sample should leakage occur. Completely surrounding the secondary containment vessel and radiation shield is a foam filled steel encased overpack (48.0" OD x 66.0" OH) which provides impact and thermal protection.

The primary containment vessel, which is constructed of 304 stainless steel varying in thickness from 3/4" to 1.25", is provided with double Viton O-ring seals and a sealed test port between the seals for leak testing. The assembly is secured with eight, 3/8"-16 UNC x 8" long screws.

The secondary containment vessel and radiation shield provides 0.75" thick steel and 5.1" thick lead shielding in the radial direction, 2.0" thick steel and 5.1" thick lead shielding on the bottom, and 3.5" thick steel and 4.8" thick lead shielding on the top. The lid is secured with eight, 1.0"-8 UNC x 3.0 long bolts. The lid is sealed with two Viton O-rings with a sealed test port between the seals for leak testing.

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## 5.(a) Packaging Continued

## (2) Description continued

The overpack provides about 7.25" thick foam on the sides and about 13" on the top and bottom. The two halves of the overpack are held together by eight, 3/4"-10 UNC x 1.5" long bolts. A Neoprene gasket prevents rain water from entering the overpack.

The weight of the package including a maximum sample cask weight of 1,375 pounds, is about 12,800 pounds.

## (3) Drawings

The package is constructed in accordance with Nuclear Packaging, Inc. Drawing No. X-20-218D, Sheets 1 and 2, Rev. C.

## (b) Contents

## (1) Type and form of material

- (i) Radioactive material in form of liquid or gaseous samples in sample casks, cartridges and vials.
- (ii) Byproduct and activation materials as solids and process solids or resins, either dewatered, solid, or solidified in secondary containers.

## (2) Maximum quantity of material per package

50 Ci of mixed fission and activation products, 15 milliliters of liquid, one sample cask or secondary container and four cartridges and four vials.

6. In addition to the requirements of Subpart G of 10 CFR Part 71, each package prior to first use must meet the acceptance tests and criteria specified in Section 8.1, must be maintained in accordance with Section 8.2, and must be prepared for shipment in accordance with Chapter 7.0 of the application, and the supplement dated July 8, 1994.
7. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17, provided the fabrication of the packaging was satisfactorily completed by April 1, 1999.
8. Transport by air of fissile material is not authorized.
9. Expiration date: August 31, 2014.

**CERTIFICATE OF COMPLIANCE  
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REFERENCES

Nuclear Packaging, Inc., consolidated application dated March 31, 1989.

Supplement dated: April 7, 1989.

VECTRA Technologies, Inc., supplements dated: July 8, 1994 and January 30, 1998.

Transnuclear, Inc., supplement dated January 30, 1998.

Packaging Technology, Inc., Supplement dated: April 30, 1999, March 16, 2004, and November 26, 2007.

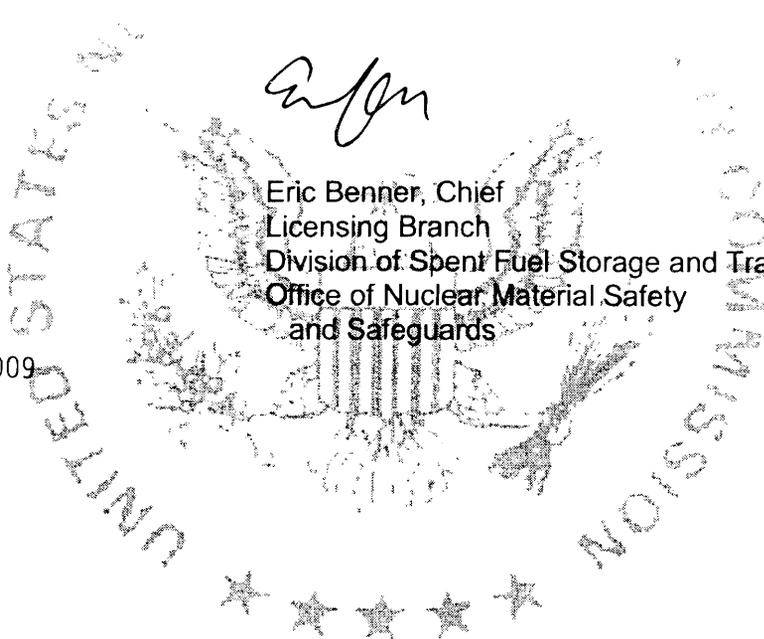
AREVA Federal Systems, LLC, supplement daied: June 12, 2009.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Eric Benner, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Date: August 6, 2009





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

**SAFETY EVALUATION REPORT**

**Docket No. 71-9184**  
**Model No. PAS-1**  
**Certificate of Compliance No. 9184**  
**Revision No. 8**

By application dated June 12, 2009, AREVA Federal Systems, LLC, requested renewal of Certificate of Compliance No. 9184 for the Model No. PAS-1 package.

The certificate has been renewed for a five-year term which expires on August 31, 2014. This change does not affect the ability of the package to meet the requirements of 10 CFR Part 71. There have been no changes to the packaging design or contents.

Since the transport of fissile material by air is not authorized, License Condition No. 8 was added.

Issued with Certificate of Compliance No. 9184, Revision No. 8  
on August 6, 2009.