

**CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIAL PACKAGES**

a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION NUMBER	PAGE	PAGES
9234	19	71-9234	USA/9234/B(U)F	1	OF 3

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*)
Columbiana Hi Tech, LLC
1802 Fairfax Road
Greensboro, NC 27407
- b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION
Nuclear Containers, Inc. application dated
January 11, 1993, 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.: NCI-21PF-1
- (2) Description

Overpack for 30-inch enriched uranium hexafluoride (UF₆) cylinders. The valve end of the cylinder may be equipped with a valve protection device. The overpack is a right circular cylinder constructed of two stainless steel shells with the volume between the shells filled with fire resistant, phenolic-foam per USAEC Specification SP-9, Rev. 1, and Supplement K/TL-729. The volume between the 1/4-inch thick end closure plates of the two shells is filled with oak wood blocks which are cross-laminations of 3 layers of boards glued and nailed together. A stepped and gasketed horizontal joint permits the top half of the overpack to be removed from the base. The package "halves" are secured with ten, 1-inch stainless steel toggle closures. The overpack is 43-5/8 inches O.D. by 92 inches long. The maximum gross weight of the package, including the valve protection device, is 8875 pounds.

(3) Drawing

The Model No. NCI-21PF-1 packaging is fabricated in accordance with Nuclear Containers, Inc. Drawing No. DED-206-B, Sheets 1 through 11, Rev. 5. The valve protection device and the valve protection device gauge are fabricated and assembled in accordance with United States Enrichment Corporation Drawing Nos. VPD-0001, Rev. 1, VPD-0002, Rev. 2, and VPD-0003, Rev. 1.

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9234	19	71-9234	USA/9234/B(U)F	2	OF 3

5.(b) Contents

- (1) Type and form of material

Uranium hexafluoride contained within a Model 30B cylinder.

- (2) Maximum quantity of material per package

5,020 pounds uranium hexafluoride. Uranium enriched to not more than 5 w/o in the U-235 isotope. The total quantity of radioactive material within a package may not exceed a Type A quantity.

- (c) Criticality Safety Index

Minimum transport index to be shown on label for nuclear criticality control: 5.0

6. The Model 30B cylinders must be fabricated, inspected, tested, and maintained in accordance with American National Standard ANSI N14.1-2001, or an earlier version of ANSI N14.1 in effect at the time of fabrication. Cylinders must be fabricated in accordance with Section VIII, Division I, of the ASME (American Society of Mechanical Engineers) Boiler and Pressure Vessel Code and be ASME code stamped.
7. In addition to the requirements of Subpart G of 10 CFR Part 71:
- (a) Each packaging must meet the Acceptance Tests and Maintenance Program of Chapter 8 of the application.
- (b) The package shall be prepared for shipment and operated in accordance with the Operating Procedures of Chapter 7 of the application.
- (c) The torque on the overpack closures must be 110 ± 10 foot-pounds. Within the 12-month period prior to shipment, the torque must be checked in accordance with the procedure described in the supplement dated November 19, 1996.
8. Packagings manufactured by Nuclear Containers, Incorporated, during the period November 30, 1991, to October 1, 1994, and having NCI serial Nos. 487 through 619, but excluding 487A and 488A, are authorized for use.
9. Model No. NCI-21PF-1 packages must be equipped with the valve protection device described in 5(a)(3). The valve protection device must be installed in accordance with the procedures specified in the supplement dated November 30, 2000.
0. Prior to each shipment, the stainless steel components of the packaging must be visually inspected. Packagings in which stainless steel components show pitting, corrosion, cracking, or pinholes are not authorized for transport.

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11. The Model 30B cylinder valve stem and plug may be tinned with ASTM B32, alloy 50A or Sn50 solder material, or a mixture of alloy 50A or Sn50 with alloy 40A or Sn40A material, provided the mixture has a minimum tin content of 45 percent.
12. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.
13. Expiration date: December 31, 2008

REFERENCES

Nuclear Containers, Inc. application dated January 11, 1993.

Supplements dated: September 10, 1993; July 21, 1994; November 19, 1996; February 26, April 21, May 15, July 9, and August 11, 1997; September 9, 1998; July 13 and November 30, 2000; April 11, 2002; August 27, 2003, January 28 and June 13, 2005.

United States Enrichment Corporation supplement dated: April 14, 1997.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Michael T. Markley
Michael T. Markley, Acting Chief
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Date: July 5, 2005