NRC FORM 618 (8-2000) 10 CFR 71			U.S. NUCLEAR REGULATORY COMMISSION		
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)*

TN Americas, LLC
7135 Minstrel Way, Suite 300
Columbia, MD 21045

b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION

Columbiana Hi Tech, LLC, application dated October 24, 2018.

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.: UX-30

(2) Description

Overpack for 30-inch uranium hexafluoride (UF_6) cylinders. The overpack is a right circular cylinder constructed of two stainless steel shells with the volume between the shells filled with 6-inch thick foam (7.8 - 9.8 PCF). 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 indexed, cross-locking "ball lock" pins. The overpack is 43.5" in diameter by 96" long. The maximum gross weight of the package is 8270 lbs.

Two types of 30 inch uranium hexafluoride cylinders may be carried in the UX-30 overpack. These are (1) an ANSI N14.1 Standard 30B cylinder, or (2) an ANSI N14.1 Standard 30C cylinder.

The ANSI N14.1 Standard 30C cylinder is essentially a 30B cylinder equipped with a Valve Protective Cover (VPC) that bolts over and protects the cylinder valve during transport. The VPC is a special design feature that provides additional assurance against the inleakage of water to the containment system and is an enclosure that retains any leakage.

(a) Packaging (continued)

(3) Drawings

The Model No. UX-30 packaging is fabricated in accordance with Energy*Solutions* Drawing No. C-110-B-57922-0001, sheets 1 through 3, Rev. 4.

(b) Contents

(1) Type and form of material

A. Unirradiated uranium, in the form of UF_6, with a U-235 mass percentage not to exceed 5 weight percent.

B. Reprocessed uranium, in the form of UF_6, with a U-235 mass percentage not to exceed 5 weight percent. The fission product gamma activity shall not exceed 4.4×10^5 MeV Bq/kgU. The alpha activity from neptunium and plutonium shall be less than 3.3×10^3 Bq/kgU.

(2) Maximum quantity of material per package

5,020 pounds UF_6 contained in an ANSI Standard N14.1 30B or 30C cylinder.
The maximum H/U atomic ratio for the UF_6 is 0.088.
The total activity in the package may not exceed 10^5 A_2.

(c) Criticality Safety Index (CSI)

Criticality safety index for the UX-30 overpack containing a standard ANSI N14.1 30B cylinder 5.0

Criticality safety index for the UX-30 overpack containing a standard ANSI N14.1 30C cylinder 0.0

Criticality safety index for the UX-30 overpack is not applicable to non-fissile or fissile-excepted contents.

6. The ANSI standard 30B, 30-inch diameter UF_6 cylinder, must be fabricated, inspected, tested and maintained in accordance with a) American National Standard N14.1-2012 or an earlier version of ANSI N14.1 in effect at the time of fabrication or b) American National Standard N14.1-2012 or an earlier version of ANSI N14.1 in effect at the time of fabrication and ISO 7195:2005 or an earlier version of ISO 7195 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. The ANSI N14.1 Standard 30C cylinder (new or retrofitted cylinders) must be fabricated, inspected, tested, and maintained in accordance with ANSI N14.1-2012 or earlier version of ANSI N14.1 at the time of fabrication.

8. When the optional 4 lid lifting clips are used instead of the top lugs, the top lid (cover) must be lifted with a spreader bar (saddle).

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

   (a) Prior to each shipment, the weather/dust seal gasket between the upper and lower shells must be inspected and must be replaced if inspection shows excessive wear or any defects to the gasket.

   (b) Each packaging must meet the Acceptance Tests and Maintenance Program of Chapter 8 of the application.

   (c) The package shall be prepared for shipment and operated in accordance with the Operating Procedures of Chapter 7 of the application.

   (d) Prior to each shipment, the stainless steel components of the packaging, which include the ball-lock pins, must be visually inspected. Packagings in which stainless steel components show pitting, corrosion, cracking, or pinholes are not authorized for transport.

10. The 30-inch diameter UF_6 cylinder valve and plug threads 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.

11. Transport by air is not authorized.

12. Packagings must be marked with Package Identification Number USA/9196/B(U)F-96.

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

14. Revision No. 29 of this certificate may be used until December 31, 2019.

15. Expiration date: December 31, 2024.

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REFERENCES

Columbiana Hi Tech Application dated: October 24, 2018.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

John McKirgan, Chief
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

Date: 11/2/18

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

SAFETY EVALUATION REPORT

Docket No. 71-9196
Model No. UX-30
Certificate of Compliance No. 9196
Revision No. 30

EVALUATION

By applications dated June 15, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18179A210), and September 7, 2018 (ADAMS Accession No. ML18264A002), as supplemented on October 24, 2018 (ADAMS Accession No. ML18298A067), Columbiana Hi Tech, LLC, requested renewal and amendment of Certificate of Compliance (CoC) No. 9196, for the Model No. UX-30. In its amendment, Columbiana Hi Tech requested that ownership of the certificate be transferred to TN Americas, LLC. TN Americas LLC holds a quality assurance program approval issued by U.S. Nuclear Regulatory Commissions. The October 24, 2018, submittal contained a consolidated application.

The renewal application also included a request for consideration of NUREG-1886, "Joint Canada – United States Guide for Approval of Type B(U) and Fissile Material Transportation Packages." In support of the renewal request, Columbiana Hi Tech submitted a consolidated safety analysis report (SAR). The submittal included no changes to the safety bases for the NRC approval. The staff finds the ability of the package to meet the requirements of 10 CFR Part 71 is not affected.

NRC staff has reviewed the consolidated SAR, which includes minor editorial changes. The staff reviewed the consolidated SAR against the guidance in NUREG-1886 and finds that the highlighted areas of emphasis have been appropriately addressed. The staff finds the ability of the package to meet the requirements of 10 CFR Part 71 is not affected.

CONDITIONS

The following changes have been made to the certificate of compliance:

Section 3.a. was revised to change the certificate holders name to TN Americas, LLC.

Section 3.b. was updated to refer to the consolidated application in the renewal request.

Condition No. 14 was updated to authorize use of Revision No. 29 of the certificate until December 31, 2019.

Condition No. 15 was updated to reflect the new expiration date of December 31, 2024.

The References section was updated to the consolidated application dated October 24, 2018.

CONCLUSION

The staff finds the ability of the package to meet the requirements of Title 10 of the Code of Federal Regulations (10 CFR) CFR Part 71 is not affected. The certificate has been renewed for a 5-year term.

Issued with Certificate of Compliance No. 9196, Revision No. 30.