



U.S. Department  
of Transportation

Pipeline and  
Hazardous Materials  
Safety Administration

COMPETENT AUTHORITY CERTIFICATION  
FOR A FISSILE  
RADIOACTIVE MATERIALS PACKAGE DESIGN  
CERTIFICATE USA/0411/AF, REVISION 11

East Building, PHH-23  
1200 New Jersey Ave.,  
Washington, D.C. 20590

This certifies that the radioactive materials package design described below has been certified by the Competent Authority of the United States as meeting the regulatory requirements for a Type AF packaging for fissile radioactive materials as prescribed in the regulations of the International Atomic Energy Agency<sup>1</sup> and the United States of America<sup>2</sup>.

1. Package Identification - Cylinder Model 30B.
2. Package Description - The packagings authorized by this certificate are bare metal cylinders (no protective overpacks required) which are designed, fabricated, inspected and marked in accordance with American National Standards Institute (ANSI) N14.1 standard in effect at the time of manufacture.
3. Authorized Radioactive Contents - The cylinders authorized by this certificate may contain fissile quantities of residual (heels) uranium hexafluoride as described and limited by Table 1. Minimum criticality safety index for these cylinders is 0.0.

TABLE 1 - Allowable Content of Uranium Hexafluoride (UF<sub>6</sub>) "Heels" in an ANSI N14.1 Cylinder

Maximum cylinder diameter		Cylinder Volume		Maximum Uranium-235 enrichment (weight percent)	Maximum "heel" weight per cylinder			
Inches	Centi-meters	Cubic Feet	Liters		UF <sub>6</sub>		Uranium-235	
					kg	Lb	kg	Lb
30	76.0	25.64	725	5	11.3	25	0.383	0.84

4. General Conditions -
  - a. Each user of this certificate must have in his possession a copy of this certificate and all documents necessary to properly prepare the package for transportation. The user shall prepare the package for shipment in accordance with United States Enrichment Corporation Report USEC-651 and applicable regulations.
  - b. Each user of this certificate, other than the original petitioner, shall register his identity in writing to the Office of Hazardous Materials Safety, (PHH-20), Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, Washington D.C. 20590-0001.

<sup>1</sup> "Regulations for the Safe Transport of Radioactive Materials, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)", published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

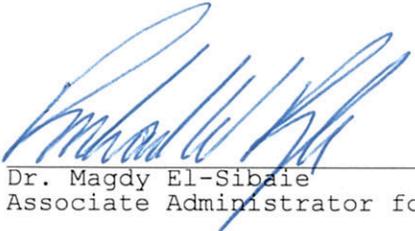
<sup>2</sup> Title 49, Code of Federal Regulations, Parts 100 - 199, United States of America.

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- c. This certificate does not relieve any consignor or carrier from compliance with any requirement of the Government of any country through or into which the package is to be transported.
  - d. Each user of this certificate must periodically inspect, test, mark, repair, and modify cylinders in accordance with the ANSI N14.1 standard in effect at the time of the action.
5. Marking and Labeling - The package shall bear the marking USA/0411/AF in addition to other required markings and labeling.
6. Expiration Date - This certificate expires on May 31, 2021. On September 1, 2016, this certificate supersedes all previous revisions of USA/0411/AF-96.

This certificate is issued in accordance with paragraph 814 of the IAEA Regulations and Section 173.472 of Title 49 of the Code of Federal Regulations, in response to a March 22, 2016 petition submitted by United States Enrichment Corporation, Piketon, OH, and in consideration of other information on file in this Office.

Certified by:



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Dr. Magdy El-Sibaie  
Associate Administrator for Hazardous Materials Safety

MAY 25 2016

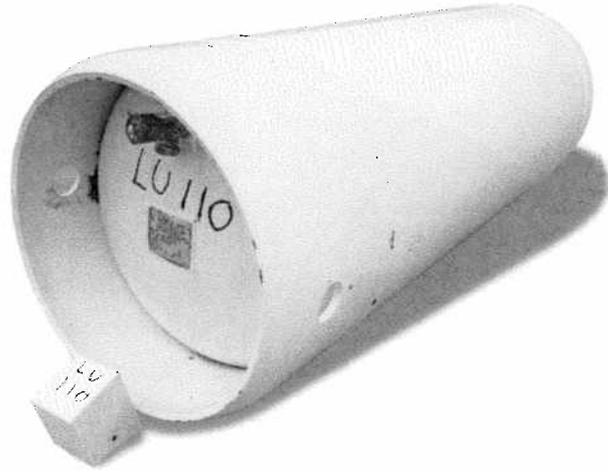
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(DATE)

Revision 11 - Issued to extend the expiration date.

## UF<sub>6</sub> Cylinder Model 30B

Nominal Diameter.....	30 in. (76 cm)
Nominal Length.....	81 in. (206 cm)
Wall Thickness.....	1/2 in. (1.25 cm)
Nominal Tare Weight.....	1,400 lb (635 kg)
Maximum Net Weight.....	5,020 lb (2,277 kg)
Nominal Gross Weight.....	6,420 lb (2,912 kg)
Minimum Volume.....	26 ft <sup>3</sup> (736 liters)
Basic Material of Construction.....	Steel (ASTM A-516)
Service Pressure.....	200 psig (1380 kPa gage)
Hydrostatic Test Pressure.....	400 psig (2760 kPa gage)
Isotopic Content Limit.....	5.0% <sup>235</sup> U (max. with moderation control)

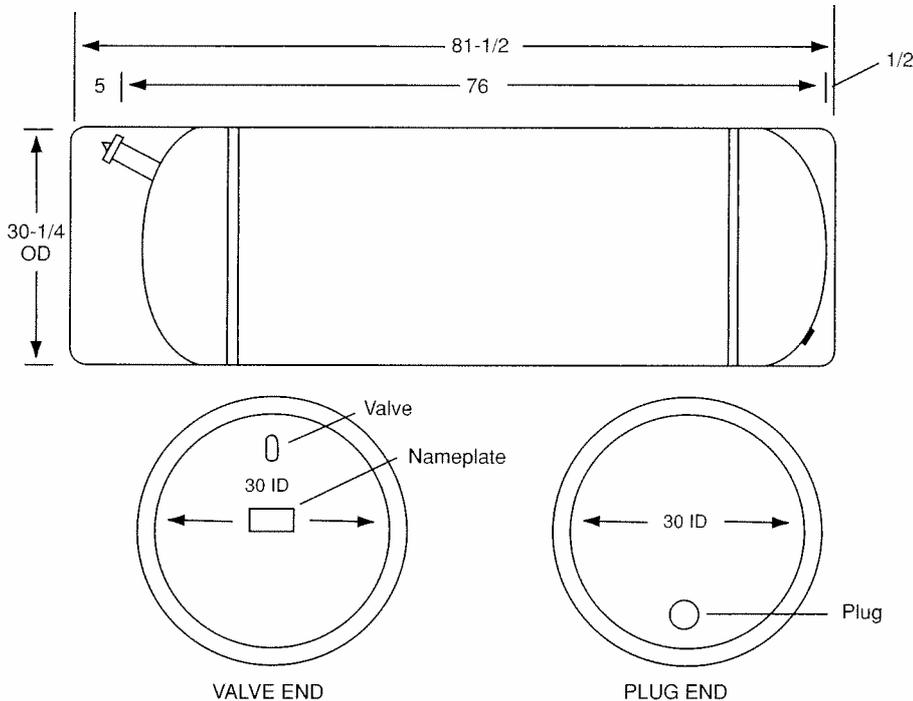


**Cylinder Model 30B**

Valve Used - Type 51 - 1-inch valve.

*Note: Primarily used for low enriched UF<sub>6</sub> product.*

*Note: The 30B cylinder replaces the 30A cylinder which was similar in dimensions. The 30A has a concave shell with a Maximum Net Weight of 4950 pounds.*



**Schematic of Cylinder Model 30B**



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of Transportation

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Washington, D.C. 20590

**Pipeline and  
Hazardous Materials  
Safety Administration**

**CERTIFICATE NUMBER:** USA/0411/AF-85, Revision 11

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