



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

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

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS**

CERTIFICATE USA/0784/S-96, REVISION 3

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and the United States of America² for the transport of radioactive material.

1. Source Identification - Pacific Northwest National Laboratory ANSI 96E66646 PSS MOD 0 Plutonium Series Sealed Source.
2. Source Description - Cylindrical double encapsulation made of Type 316 stainless steel and seal welded with an inner liner, cup, and covers made of tantalum. Approximate outer dimensions are 116.33 mm (4.58 in.) in diameter and 17.78 mm (0.70 in.) in thickness. Construction shall be in accordance with attached Pacific Northwest National Laboratory Drawing No. H-3-310767, Rev. 5.1.
3. Radioactive Contents - No more than the following activity and mass for the listed radionuclides. When multiple radionuclides are present, the contents are limited to the sum of the fractions based on mass.

Radionuclide	Activity (Bq, as specified)	Activity (Curie, as specified)	Mass
Uranium-232	220 MBq	5.95 mCi	0.000277 g
Uranium-233	67 GBq	1.81 Ci	187 g
Uranium-234	43 GBq	1.16 Ci	186 g
Uranium-235	16 MBq	0.432 mCi	199 g
Uranium-236	480 MBq	13 mCi	199 g
Uranium-238	2.5 MBq	0.0676 mCi	199 g
Neptunium-237	5.0 GBq	135 mCi	192 g
Plutonium-238	3.7 TBq	100 Ci	5.85 g

¹ "Regulations for the Safe Transport of Radioactive Material, 2012 Edition, No. SSR-6" published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

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

CERTIFICATE USA/0784/S-96, REVISION 3

Radionuclide (Cont'd)	Activity (Bq, as specified)	Activity (Ci, as specified)	Mass
Plutonium-239	460 GBq	12.4 Ci	199 g
Plutonium-240	1.7 TBq	45.9 Ci	199 g
Plutonium-241	170 TBq	4590 Ci	44.6 g
Plutonium-242	29 GBq	784 mCi	199 g
Americium-241	3.3 TBq	89.2 Ci	26 g
Americium-242m	52 GBq	1.41 Ci	0.145 g
Americium-243	130 GBq	3.51 Ci	17.7 g
Curium-242	22 TBq	595 Ci	0.18 g
Curium-243	3.7 GBq	100 mCi	0.00194 g
Curium-244	1.1 TBq	29.7 Ci	0.367 g
Curium-245	12 GBq	324 mCi	1.89 g
Curium-246	4.8 GBq	130 mCi	0.423 g
Curium-247	680 MBq	18.4 mCi	(198 g
Curium-248	110 MBq	2.97 mCi	0.7 g

The uranium, neptunium, plutonium, americium, and curium are in metal or oxide form.

The buildup and subsequent secular equilibrium of the Protactinium-233 daughter product of Neptunium-237 must also be accounted for in the mixture of nuclides for A_1 and A_2 calculations as required by Sections 173.433(c) (2) and 173.433(d) of Title 49 of the Code of Federal Regulations.

4. Management System Activities - Records of Management System activities required by Paragraph 306 of the IAEA regulations shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on July 31, 2026. Previous editions which have not reached their expiration date may continue to be used.

CERTIFICATE USA/0784/S-96, REVISION 3


This certificate is issued in accordance with paragraph(s) 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the May 28, 2021 petition by Department of Energy, Washington, DC, and in consideration of other information on file in this Office.

Certified By:

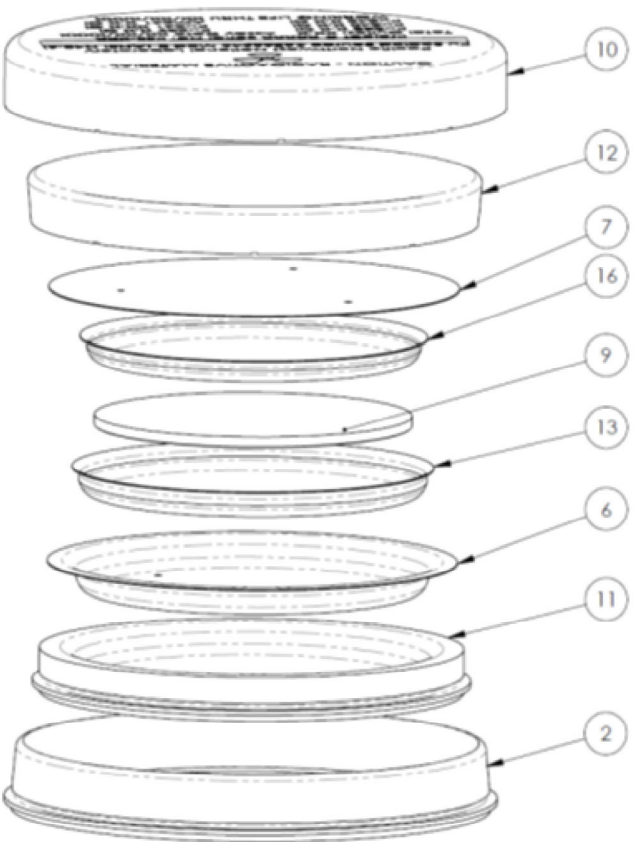


July 22, 2021

(DATE)

 William Schoonover
Associate Administrator for Hazardous
Materials Safety

Revision 3 - Issued to extend the expiration date and correct the reference to Drawing H-3-310767 from Rev. 3.0 to Rev. 5.1. Drawing Rev. 3.0 was replaced in USA/0784/S-96 Revision 2 and did not affect previous performance tests or evaluation data applicability.



PN	DESCRIPTION
1	ASSEMBLY
2	OUTER HOUSING BASE
10	OUTER HOUSING COVER
11	INNER HOUSING BASE
12	INNER HOUSING COVER
6	LINER BASE
7	LINER COVER
13	CUP
9	PUCK
16	SPACER CUP

ALL HIGHLIGHTED
VALUES MAY CHANGE

Pu Assembly, Drawing
H-3-301767, Rev. 5.1

1 ASSEMBLY



Overall Dimensions: 4.581 in. dia. x 0.70 in. thick



U.S. Department of
Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

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

CERTIFICATE NUMBER: USA/0784/S-96

ORIGINAL REGISTRANT(S) :

Department of Energy
U.S. Department of Energy
1000 Independence Ave, SW
EM-60
Washington, DC, 20585
USA