U.S. Department
of Transportation

1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

**Pipeline and
Hazardous Materials
Safety Administration**

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE USA/0784/S-96, REVISION 2

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 Agency[1] and United States of America[2] 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. 3.

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.

   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)
   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.

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[1] "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

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

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4. Quality Assurance - Records of Quality Assurance activities required by paragraph 310 of the IAEA regulations[1] 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, 2021.

This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the June 28, 2016 petition by the U.S. Department of Energy, Washington, D.C., and in consideration of other information on file in this Office.

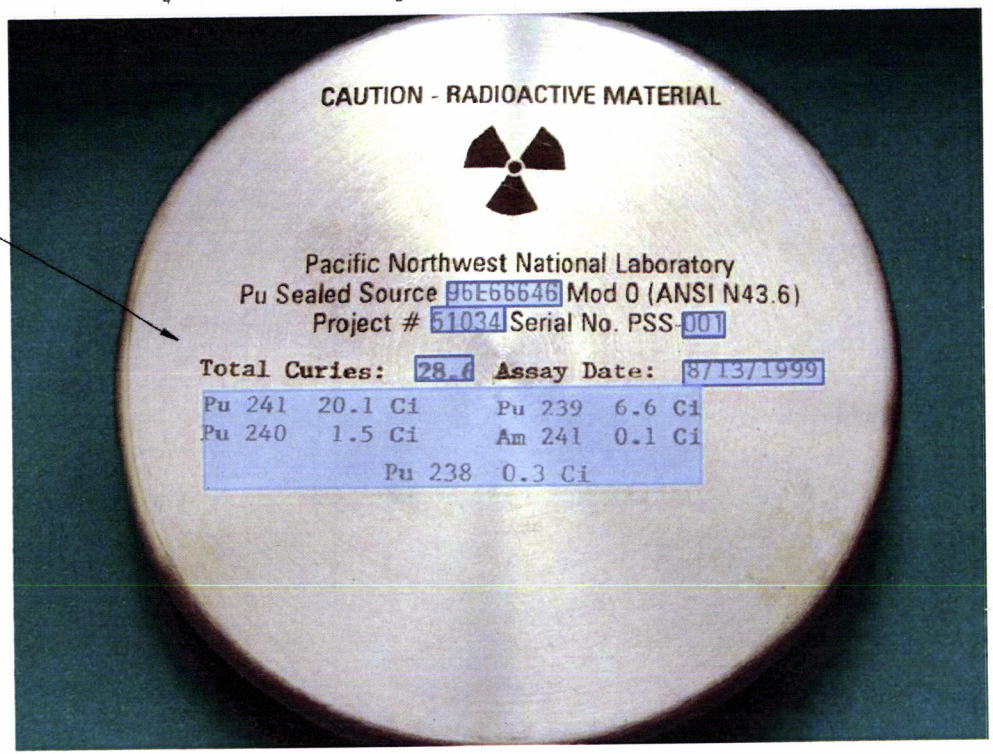
Certified by:

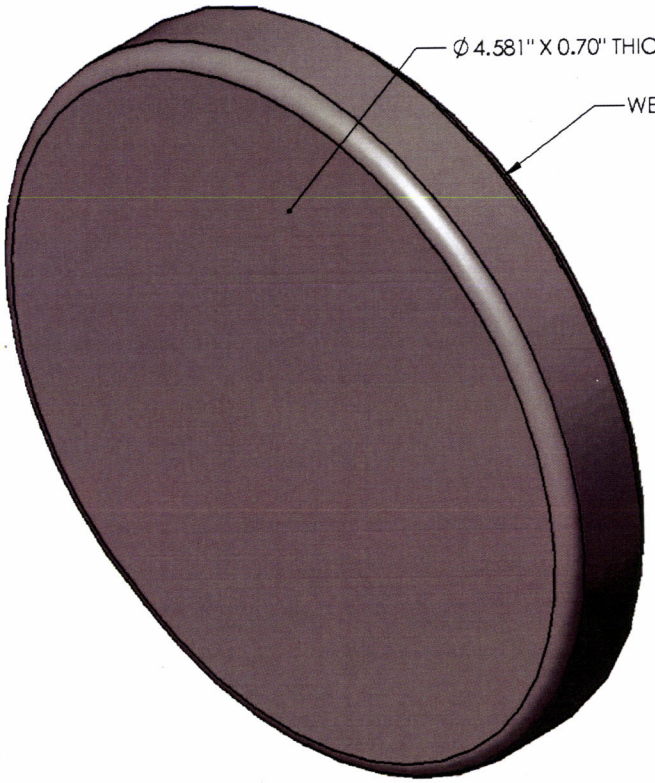
Dr. Magdy El-Sibaie
Associate Administrator for
Hazardous Materials Safety

JUL - 6 2016
(DATE)

Revision 2 - Issued to extend the expiration date.

ALL HIGHLIGHTED VALUES MAY CHANGE





	CHECKER	ENGINEER	APPROVER
DRAWING IS CLEAR, ACCURATE AND COMPLETE			
PROPER FIT UP TOLERANCES			
MEETS ANSI Y14 SERIES REQUIREMENTS			
TECHNICAL CONTENT IS CORRECT			
EDP IS REFERENCED			
MODEL NAME IS CORRECT			
REVIEWS COMPLETE			

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± 1/16
ANGULAR: MACH ± .1 BEND ± .1
TWO PLACE DECIMAL ± .01
THREE PLACE DECIMAL ± .005

INTERPRET GEOMETRIC TOLERANCING PER:

MATERIAL —

FINISH —

	NAME	DATE
DRAWN	SLOWSLEY	06/25/2011
CHECKED		
ENG		
APVD		
APVD		

COMMENTS:

PACIFIC NORTHWEST NATIONAL LABORATORY

TITLE:
Pu SOURCE ASSEMBLY
EXTERIOR MARKING DETAILS

SIZE	DWG. NO.	REV
B	H-3-310767	3

SCALE: 3:2

SHEET 13 OF 13

U.S. Department
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**Pipeline and
Hazardous Materials
Safety Administration**

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

CERTIFICATE NUMBER: USA/0784/S-96, Revision 2

ORIGINAL REGISTRANT(S):

Dr. James M. Shuler
Manager, Packaging Certification Program
Department of Energy
U.S. Department of Energy
1000 Independence Ave, SW
EM-60
Washington, DC 20585