



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/0823/S-96, REVISION 1

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 - ORNL Pu Cylindrical Source.
2. Source Description - Cylindrical single encapsulation made of Type 304L stainless steel and tungsten inert gas seal welded. An inner cylindrical assembly made of Type 304L stainless steel with a press fit lid contains the radioactive contents. Approximate exterior dimensions are 22.4 mm (0.88 in.) in diameter and 58.4 mm (2.3 in.) in length. Construction shall be in accordance with attached UT-Battelle Drawing No. N3E020995A537, Rev. A, Sheet 1 of 3.
3. Radioactive Contents - No more than 101 GBq (2.73 Ci) of Plutonium-238, 35.7 GBq (0.965 Ci) of Plutonium-239, 131 GBq (3.54 Ci) of Plutonium-240, 608 GBq (16.4 Ci) of Plutonium-241, 2.33 GBq (63 mCi) of Plutonium-242, and 10.4 MBq (0.281 mCi) of Plutonium-244. The source contents may be a mix of the plutonium isotopes, but shall not exceed 15.54 grams of total plutonium. The Pu-238, Pu-239, Pu-240, Pu-241, Pu-242, and Pu-244 are in solid oxide form.
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.

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/0823/S-96, REVISION 1


5. Expiration Date - This certificate expires on October 30, 2022.
USA/0823/S-96 Revision 0 may be used until December 31, 2017.

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 October 24, 2017 petition by Department of Energy, Washington, DC, and in consideration of other information on file in this Office.

Certified By:



November 03,
2017



William Schoonover
Associate Administrator for Hazardous
Materials Safety

(DATE)

Revision 1 - Issued to revise the authorized radioactive contents.

PARTS LIST

ITEM	QTY	DESCRIPTION	NOTE	MATERIAL / VENDOR	MFG. PN / DET. DWG #
1	1	INNER CAPSULE BODY		SST 304L	N3E020995A537 SHT 2
2	1	INNER CAPSULE TOP		SST 304L	N3E020995A537 SHT 2
3	1	OUTER CAPSULE BODY		SST 304L	N3E020995A537 SHT 3
4	1	OUTER CAPSULE TOP		SST 304L	N3E020995A537 SHT 3
5	1	SCREW STUD, 6-32 UNC, 5/8 LG		SST 300 SERIES	

GENERAL NOTES:

- [XX] ALTERNATE UNITS IN mm.
- ITEM 3 AND ITEM 4 (OUTER CAPSULE BODY AND OUTER CAPSULE TOP) SHALL BE OF THE SAME HEAT BASE METAL WITH $\le 0.05\%$ SULFUR CONTENT.
- ITEM 3 AND ITEM 4 ARE TO BE DELIVERED TO ORNL WITH THE CMTR HEAT # CLEARLY LABELED ON THE PART BAG OR SIMILAR CONTAINER.

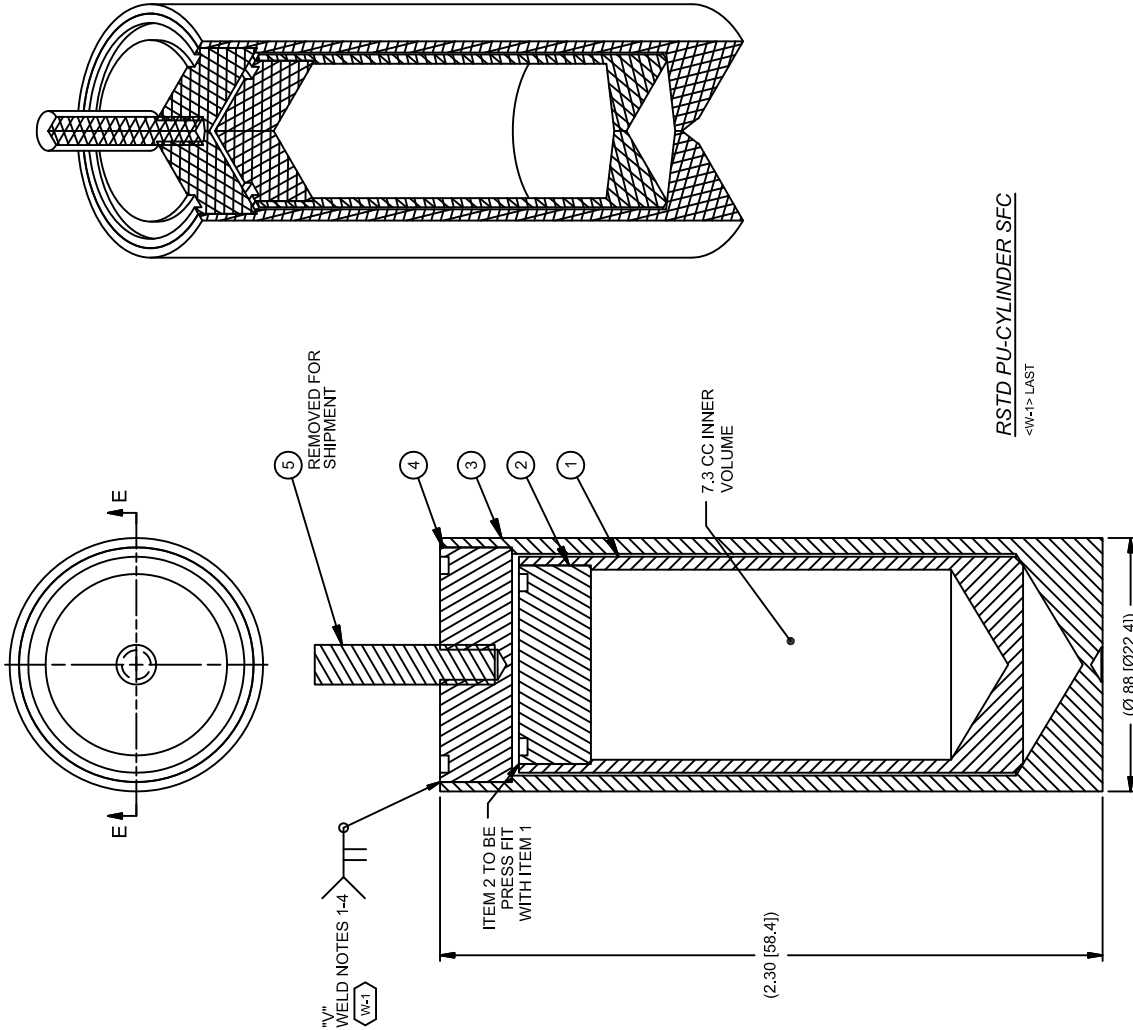
WELD NOTES:

- ALL SST WELDS PER ORNL WPS-GT88-A(PF)
- $\le W-1$ INDICATES WELD IDENTIFICATION NUMBER. NO WELD SEQUENCE IMPLIED
- WELD INSPECTION:
$W-1$ - VISUAL PER ORNL NDE-21 APPENDIX F.
- WELD SIZE TO BE $>0.025''$ AND $\le 0.065''$
- LEAK TEST TO: 1.3×10^{-4} STD. ATM.-CCIS @ 25°C PER PHRD-NDE-70.

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL

QV CLAUSE	DOCUMENTS REQUIRED	PROC. NO.	PART NO.
303	MATL MILL TEST REPORT (CERT)		1-4
325	MATL SELLER CERT		5
326	SPECIAL MATL INSP. REPORT		
205	MFG. INSP. AND TEST PLAN		
312	FIELD INSP. & TEST PLAN		
314	MATERIAL MARKING		
321	WELD AND BROZE INSP. REPORT		WELD NOTES 1-4 INDICATED
322	HEAT TREAT REPR.(W/CHART)		
310	LEAK TEST REPORT		
315	CLEANING CERT		
319	DEVIATION REQUEST		
318	NONCONFORMANCE REPORT		
319	NONCONFORMANCE REPORT		
323	DIMENSIONAL REPORT		
330	FUNCTIONAL TEST REPORT		
333	IDENTIFICATION & CONTROL OF SUBSEQUENT PARTS		
★	SPECIAL PROCUREMENT REQUIRED		INFD-10
100	DOCUMENTATION		FOR ABOVE

W. GEORGE ASKEW
QUALITY REPRESENTATIVE
11/8/2016
DATE



<p>DEFAULT STANDARDS UNLESS OTHERWISE SPECIFIED</p> <p>TOLERANCES: FRACTIONS ± 1/64 XX DECIMALS ± 0.01 XXX DECIMALS ± 0.005 ANGLES ± 0° - 30' BREAK SHARP EDGES 1/64 MAX. FINISH = 125 RMS</p>	<p>THIS DRAWING CREATED IN ACCORDANCE WITH ANSI Y14.5M-1994</p>
<p>ALL DIMENSIONS ARE IN INCHES</p>	

UT - BATTELLE
NONREACTOR NUCLEAR FACILITIES DIVISION
OAK RIDGE NATIONAL LABORATORY

Operated by UT-Battelle for the Department of Energy under U.S. Government contract DE-AC05-00OR22725 • Oak Ridge, Tennessee

TITLE:
**RSTD PU-CYLINDER
SPECIAL FORM CAPSULE (SFC)**

SIZE	DWG NO.	SHEET	1 OF 3
A	N3E020995A537		

REV A

JG	Dmc	JAJ	JAK	11/16/16
DSNR	DR	SR1	SR2	DATE
APPROVALS				



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/0823/S-96

ORIGINAL REGISTRANT(S) :

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