



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

**IAEA CERTIFICATE OF COMPETENT AUTHORITY  
SPECIAL FORM RADIOACTIVE MATERIALS  
CERTIFICATE USA/0814/S-96, REVISION 0**

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

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<sup>1</sup> and the United States of America<sup>2</sup> for the transport of radioactive material.

1. Source Identification - ORNL Plutonium Zirconia Pre-Encapsulation Cube Canister 1 (Pu ZipCube 1).
2. Source Description - Rectangular shaped single encapsulation made of a stainless steel box and lid that are tungsten inert gas seal welded. Two ports in the lid are plugged with screws and seal welded shut. On one side of the encapsulation is a 6 mm (0.24 in.) x 6 mm (0.24 in.) x 4 mm (0.16 in.) boss with a threaded hole. On the opposite side of the encapsulation is a 6 mm (0.24 in.) x 6 mm (0.24 in.) x 2 mm (0.08 in.) boss with an internal insert. Approximate exterior dimensions are 35.6 mm (1.4 in.) x 20 mm (0.79 in.) x 20 mm (0.79 in.), not including the two bosses. Construction shall be in accordance with attached ORNL Drawing No. N3E020995A503, Revision 0 (SI).
3. Radioactive Contents - No more than 7.56 GBq (204.32 mCi) of Plutonium-238, 0.0242 GBq (0.65 mCi) of Plutonium-239, 125.0 GBq (3,378.38 mCi) of Plutonium-240, and 1.42 GBq (38.38 mCi) of Plutonium-242. The Pu-238, Pu-239, Pu-240, and Pu-242 are in solid oxide form.
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations<sup>1</sup> 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 applicable requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on April 30, 2021.

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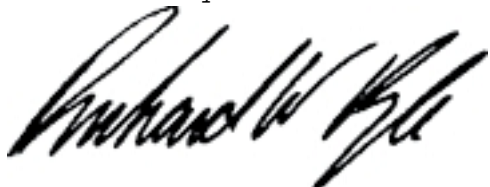
<sup>1</sup> "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

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

**CERTIFICATE USA/0814/S-96, REVISION 0**


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 November 12, 2015 petition by Department of Energy, Washington, DC, and in consideration of other information on file in this Office.

Certified By:



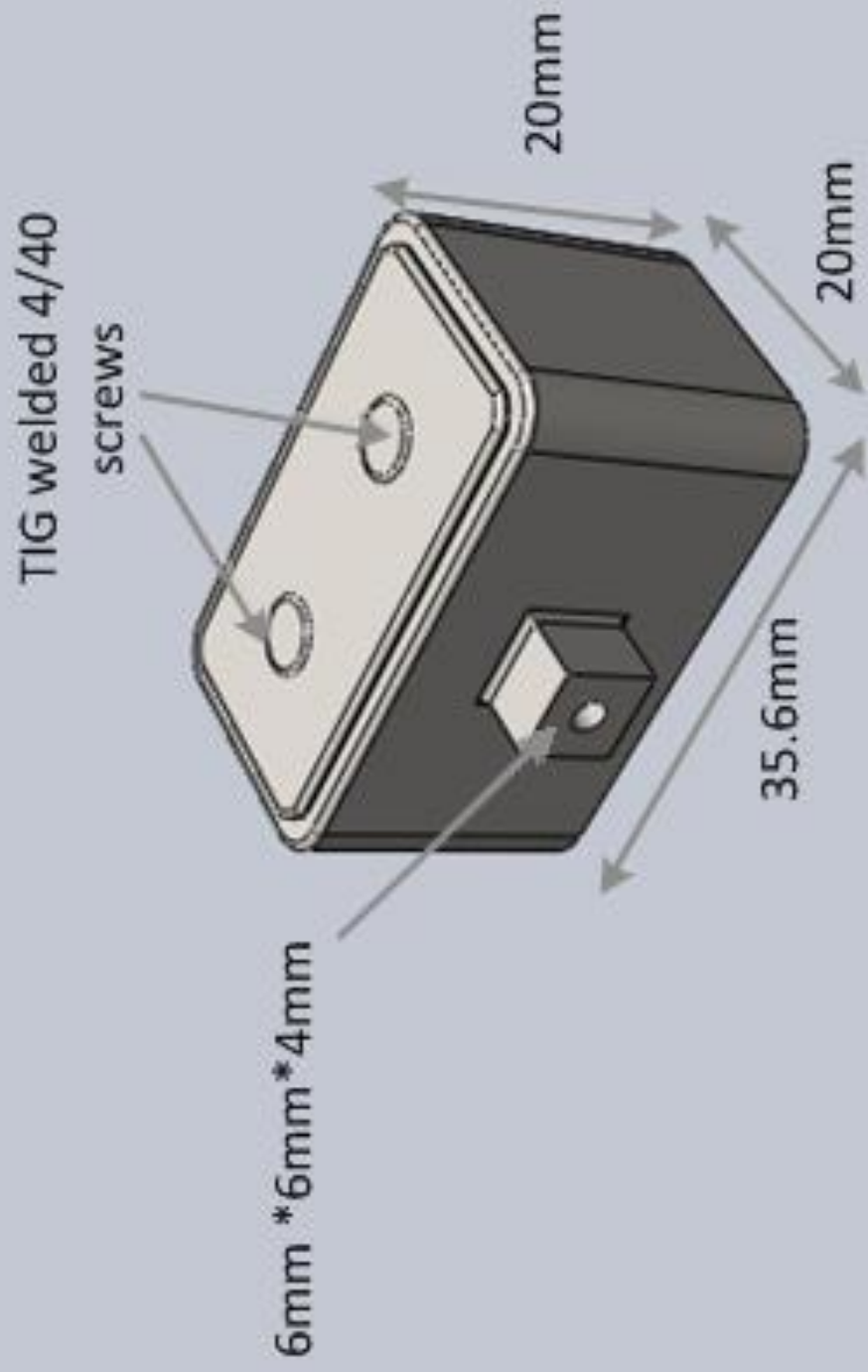
**Apr 20 2016**

(DATE)

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Dr. Magdy El-Sibaie

Associate Administrator for Hazardous Materials Safety

Revision 0 - Original Issue.



Name: ORNL Pu ZipCube 1  
ORNL Drawing: N3E020995A503, Rev 0 (SI)



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**CERTIFICATE NUMBER:** USA/0814/S-96, Revision 0

**ORIGINAL REGISTRANT(S):**

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