



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

IAEA CERTIFICATE OF COMPETENT AUTHORITY  
SPECIAL FORM RADIOACTIVE MATERIAL  
CERTIFICATE NUMBER USA/0498/S, REVISION 1

This certifies that the sources described have demonstrated their ability 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 United States of America<sup>2</sup> for the transport of radioactive materials.

1. Source Identification - Isotope Products Laboratories (IPL) Model HEG-1.
2. Source Description - the source authorized by this certificate is a fusion welded, single encapsulation constructed of Type 304 or 304L stainless steel. The capsule measures 4.7 mm (0.186") in diameter and 5.7 mm (0.225") in length and has a minimum wall thickness of 0.5 mm (0.020"). The source shall be constructed and maintained in accordance with IPL drawing no. 3025 (attached).
3. Radioactive Contents - the source described by this certificate is authorized to contain any one of the following radionuclides in the chemical form and quantity identified.

<u>Nuclide</u>	<u>Form</u>	<u>Activity in GBq (Ci)</u>	
Na-22	NaCl in gold or ceramic	3.7	(0.10)
Co-57	CoO, CoCl <sub>2</sub> or Co <sub>2</sub> (NO <sub>3</sub> ) in ceramic	11.1	(0.30)
Co-58	CoO in ceramic	11.1	(0.30)
Co-60	CoO in ceramic or Ni clad Co pellets	11.1	(0.30)
Ge-68	GeCl <sub>4</sub> in ceramic	1.9	(0.05)
Cs-137	CsCl in gold or Cs in ceramic	11.1	(0.30)
Ba-133	BaSO <sub>4</sub> in gold or ceramic	3.7	(0.10)
Ra-226	RaSO <sub>4</sub> in gold or ceramic	1.9	(0.05)
Cf-252	Oxide in metal or ceramic	0.037	(0.001)
Actinides*	Oxides in gold or ceramic	1.9	(0.05)

\* Actinides are defined as isotopes of Ac, Th, Pa, Np, U, Pu, Am, and Cm

<sup>1</sup> "Safety Series No. 6, Regulations for the Safe Transport of Radioactive Materials, 1985 edition, as amended," 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.

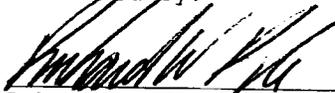
( - 2 - )

CERTIFICATE USA/0498/S, REVISION 1

4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 209 of the IAEA<sup>1</sup> 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 and consignees in the United States exporting or importing shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on November 1, 2005.

This certificate is issued in accordance with paragraph 703 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the November 2, 2000 petition submitted by Isotope Products Laboratories, Burbank, CA, and in consideration of other information on file in this Office.

Certified by:



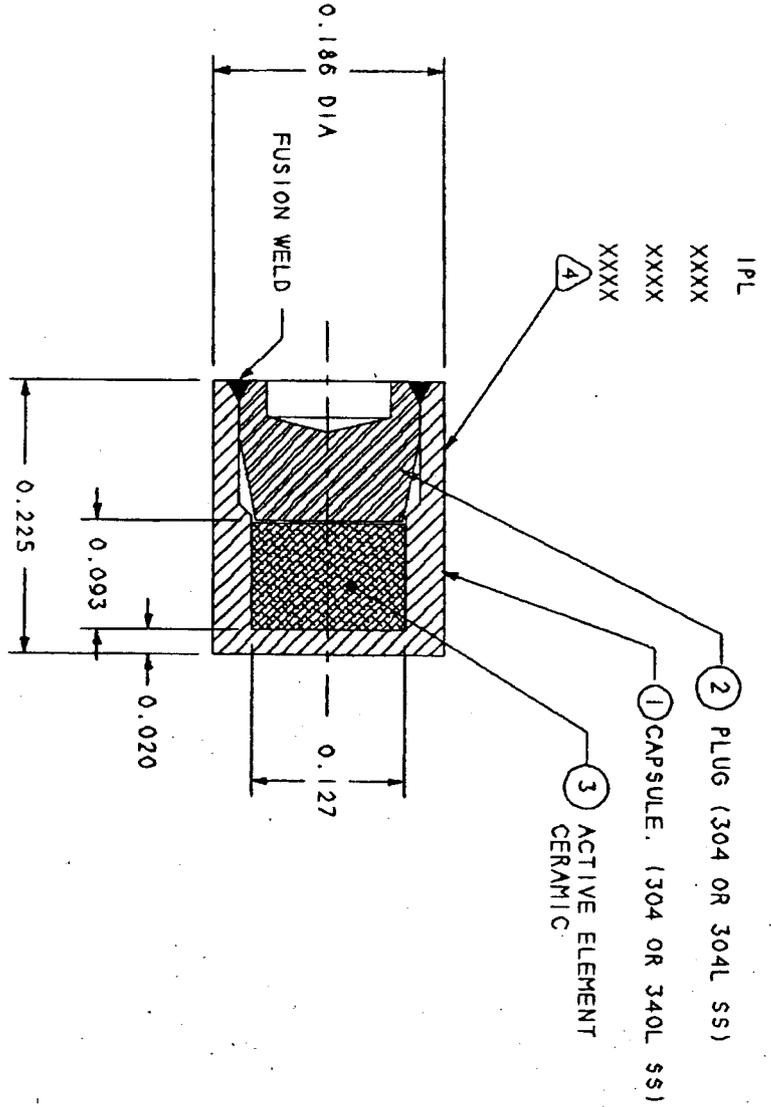
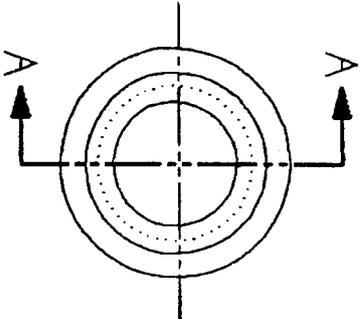
Robert A. McGuire

Associate Administrator for Hazardous Materials Safety

NOV 6 2005

(DATE)

Revision 1 - issued extend the expiration date of the previous certificate.



P/N: A3025

ASSEMBLY

SECTION A-A

5. PACKAGE AND IDENTIFY PART NUMBER THEREON  
 ENGRAVE CHARACTERS 0.060 HIGH x 0.003 DEEP MAX  
 ON CIRCUMFERENCE AND BLACK FILL WHEN NOT INSTALLED IN SECONDARY CAPSULE:

IP L  
ISOTOPE  
ACTIVITY  
SERIAL NUMBER

- 3. TOLERANCES: 0. XXX ± 0.002, 0. XX ± 0.01, 0. X ± 0.1, ANGLE ± 0.5°
- 2. DIMENSIONS ARE IN INCHES
- 1. ASSEMBLE COMPLETE PER ENGINEERING DRAWING AND FUSION WELD AS REQUIRED

NOTE: UNLESS OTHERWISE SPECIFIED

THIS DRAWING IS THE PROPERTY OF ISOTOPE PRODUCTS LABORATORIES, AND MAY NOT BE USED, REPRODUCED, PHOTOCOPIED OR DISCLOSED TO OTHERS WITHOUT EXPRESS AUTHORIZATION BY ISOTOPE PRODUCTS LABORATORIES.

DATE: 12/29/94	SCALE: NTS	DRAWING NUMBER: 3025	SHEET: 3 OF 3
DESIGNED: JMD/RLT	REV/CHK: -		