



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE USA/0353/S-96, REVISION 6

East Building, PHH-23
1200 New Jersey Avenue SE
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 Agency¹ and United States of America² for the transport of radioactive material.

1. Source Identification - Eckert & Ziegler Isotope Products Model No. 193.
2. Source Description - Cylindrical double encapsulation with a hexagonal and cylindrical extension made of Type 304 or 304L stainless steel and fusion seal welded. Approximate exterior dimensions are 9.53 mm (0.375 in.) maximum diameter and 36.5 mm (1.437 in.) in length. Construction shall be in accordance with attached Isotope Products Laboratories Drawing No. 3011, sheet 3 of 11, dated 09/03/93.
3. Radioactive Contents - The source described by this certificate is authorized to contain any one of the following radionuclides in the chemical form identified and limited to the activity shown.

Radionuclide	Form	Activity
Na-22	NaCl in gold or ceramic	3.7 GBq (0.10 Ci)
Co-57	Co metal plated on Ni foil or CoCl ₂ in ceramic	11.1 GBq (0.30 Ci)
Co-58	CoCl ₂ in ceramic	11.1 GBq (0.30 Ci)
Co-60	Ni clad Co pellets or CoCl ₂ in ceramic	11.1 GBq (0.30 Ci)
Ge-68	GeO ₂ in silver or ceramic	1.85 GBq (0.05 Ci)
Ba-133	BaSO ₄ or BaCl ₂ in ceramic	3.7 GBq (0.10 Ci)
Cs-137	CsCl in gold or ceramic	11.1 GBq (0.30 Ci)
Eu-152	Eu(NO ₃) ₃ or Eu ₂ O ₃ in ceramic	0.74 GBq (0.02 Ci)
Ra-226	Sintered RaSO ₄ in platinum sheath	1.85 GBq (0.05 Ci)
Actinides*	Oxides in gold or ceramic	1.85 GBq (0.05 Ci)

* (Isotopes of Ac, Th, Pa, Np, U, Pu, Am, and Cm)

4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations¹ 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 October 30, 2014.

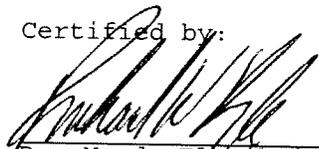
¹ "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

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

CERTIFICATE USA/353/S-96, REVISION 6

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 September 8, 2009 petition submitted by Eckert & Ziegler Isotope Products, Valencia, CA and in consideration of other information on file in this Office.

Certified by:

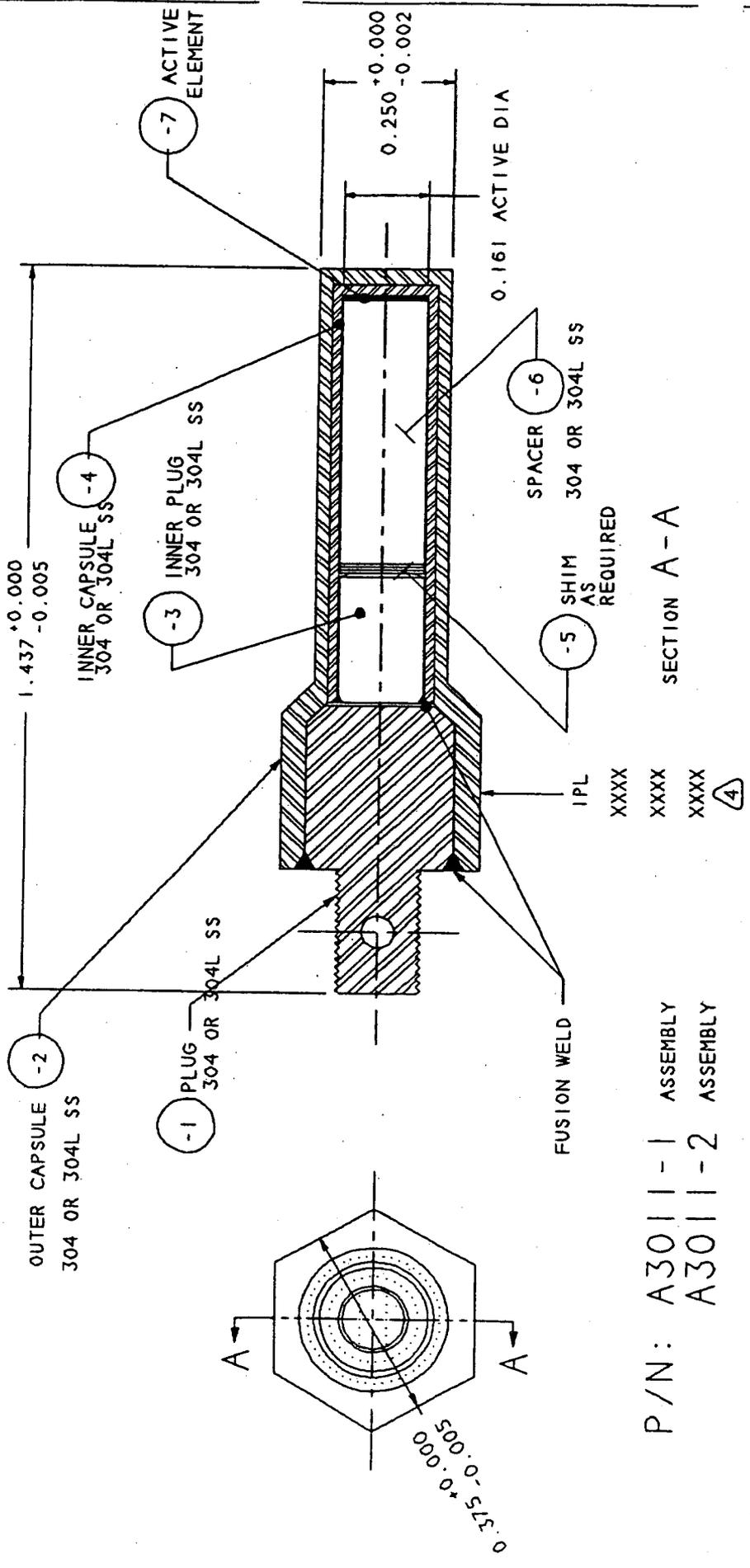


Dr. Magdy El Sibale
Acting Associate Administrator for
Hazardous Materials Safety

OCT 26 2009

(DATE)

Revision 6 - Issued to extend the expiration date and to update corporate name.



P/N: A3011-1 ASSEMBLY
 A3011-2 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:
 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, PUBLISHED OR DISCLOSED TO OTHERS WITHOUT EXPRESS AUTHORIZATION BY ISOTOPE PRODUCTS LABORATORIES.

ISOTOPE PRODUCTS LABORATORIES BURBANK, CALIFORNIA 91504		DESIGNED: JMD/RLT
		REV/CHG: D
SCALE: NTS	APPROVED: <i>Michael Deviri 8/8/94</i>	SHEET: 3 OF 11
DATE: 09/03/93		DRAWING NUMBER: 3011
TITLE: HIGH INTENSITY GAMMA SOURCE - MODEL HEG		
SERIES: HIGH INTENSITY GAMMA AND NEUTRON SOURCES		



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Hazardous Materials
Safety Administration**

CERTIFICATE NUMBER: USA/0353/S-96, Revision 6

ORIGINAL REGISTRANT(S):

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Regulatory Affairs Manager
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