



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/0221/S-96, REVISION 11

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 - Eckert & Ziegler Isotope Products (EZIP) Model 301 Series.
2. Source Description - Cylindrical double encapsulations made of either Type 304 or 304L stainless steel and fusion welded. Approximate outer dimensions are 3.0 mm (0.12 in.) in diameter and 25.4 mm (1.0 in.) to 838.2 mm (33.0 in.) in length. Construction shall be in accordance with attached Eckert & Ziegler Isotope Products Drawing No. 3402, Sheet 4 of 10, Rev. N.
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.

<u>Radionuclide</u>	<u>Form</u>	<u>Activity</u>
Na-22	NaCl in ceramic	11.1 GBq (0.30 Ci)
Co-57	CoCl <sub>2</sub> in ceramic	11.1 GBq (0.30 Ci)
Co-60	CoCl <sub>2</sub> in ceramic	11.1 GBq (0.30 Ci)
Ge-68	GeO in ceramic	11.1 GBq (0.30 Ci)
Ba-133	BaCl <sub>2</sub> in ceramic	11.1 GBq (0.30 Ci)
Cs-137	CsCl or CsNO <sub>3</sub> in ceramic	11.1 GBq (0.30 Ci)
Eu-152	EuCl <sub>3</sub> in ceramic	11.1 GBq (0.30 Ci)
Eu-154	EuCl <sub>3</sub> in ceramic	11.1 GBq (0.30 Ci)
Eu-155	EuCl <sub>3</sub> in ceramic	11.1 GBq (0.30 Ci)
Gd-153	GdCl <sub>3</sub> in ceramic	37.0 GBq (1.00 Ci)
Am-241	AmO <sub>2</sub> in ceramic	11.1 GBq (0.30 Ci)

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<sup>1</sup> "Regulations for the Safe Transport of Radioactive Material, 2012 Edition, No. SSR-6" 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/0221/S-96, REVISION 11**

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.
  
5. Expiration Date - This certificate expires on November 30, 2024. Previous editions which have not reached their expiration date may continue to be used.

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 November 4, 2019 petition by Eckert & Ziegler Isotope Products, Valencia, CA, and in consideration of other information on file in this Office.

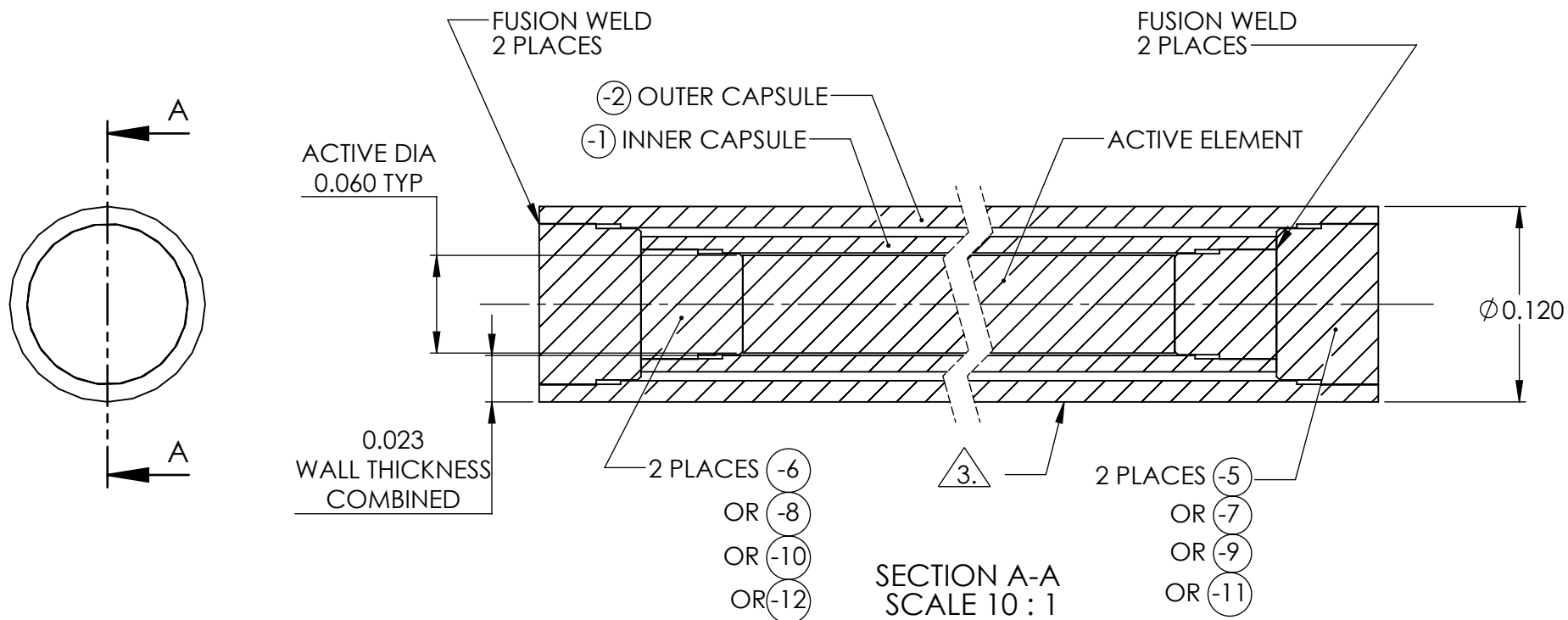
Certified By:



William Schoonover  
Associate Administrator for Hazardous  
Materials Safety

December 11, 2019  
(DATE)

Revision 11 - Issued to update drawing and extend the expiration date.



3. ENGRAVE CHARACTERS 0.060 HIGH x 0.003 DEEP MAX ON CIRCUMFERENCE OF 3402-2 0.500" MIN FROM END: IPL, ACTIVITY, NUCLIDE, SERIAL NUMBER, TREFOIL OR "CAUTION RADIOACTIVE"
2. ASSEMBLE COMPLETE PER ENGINEERING DRAWING PRESS FIT PLUGS INTO TUBES AND FUSION WELD IN PLACE
1. MATERIAL: SEE COMPONENTS
- NOTES: UNLESS OTHERWISE SPECIFIED

P/N	PLUG LENGTH	TOTAL LENGTH	ACTIVE LENGTH
A3402-AXXXXXX	0.040	XX.XXX+0.160	XX.XXX
A3402-BXXXXXX	0.0625	XX.XXX+0.250	XX.XXX
A3402-CXXXXXX	0.125	XX.XXX+0.500	XX.XXX
A3402-DXXXXXX	0.098	XX.XXX+0.392	XX.XXX



**Eckert & Ziegler**  
Isotope Products

VALENCIA, CALIFORNIA 91355

CAGE CODE	32993	DRAWING SIZE	LETTER
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCH SIZES. METRIC UNITS [mm] ARE IN MILLIMETERS.			
TOLERANCES (UNLESS OTHERWISE SPECIFIED)			
X.XXX ± .002	INCH	ANGULAR TOLERANCE OF 0°±30"	
X.XX ± .005	INCH	FRACTIONAL DIMENSIONS ± 1/32"	
X.X ± .03	INCH	REFERENCE DIMENSIONS ( ) N/A	
X. ± .1	INCH	SURFACE ROUGHNESS μINCH MAX	

DRAWN	IT
ME/CHECKER	JR
ENGINEER	LT
SCALE	10:1

TITLE	DOUBLE ENCAPSULATED LINE SOURCE (301B)		
SERIES TITLE	LINE SOURCES		
DRAWING NO.	3402	REV	N
SHEET	4 OF 10		



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**CERTIFICATE NUMBER:** USA/0221/S-96

**ORIGINAL REGISTRANT(S) :**

Eckert & Ziegler Isotope Products  
24937 Avenue Tibbitts  
Valencia, CA, 91355  
USA