East Building, PHH-23
1200 New Jersey Ave, SE
Washington, D.C. 20590

U.S. Department of Transportation

**Pipeline and Hazardous Materials Safety Administration**

# IAEA CERTIFICATE OF COMPETENT AUTHORITY SPECIAL FORM RADIOACTIVE MATERIALS

## CERTIFICATE USA/0357/S, REVISION 12

This certifies that the sources described have been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency[1] and the United States of America[2] for the transport of radioactive material.

1. Source Identification - Eckert & Ziegler Isotope Products (EZIP) source capsule Models 3203 and 3214.

2. Source Description - Cylindrical single encapsulations made of Type 304 or 304L stainless steel, with a 0.05 mm (0.002 in.) thick window at one end, and fusion seal welded. Approximate outer dimensions are 7.9 mm (0.312 in.) in diameter and 5.1 mm (0.2 in.) in length. Construction shall be in accordance with attached EZIP Drawing No. 3203, Rev. G, Sheet 3 of 6 (Model 3203); or Isotope Products Laboratories Drawing No. A3214, Rev. A (Model 3214).

3. Radioactive Contents - The sources described by this certificate are authorized to contain any one of the following radionuclides limited to the activity shown. The radionuclides are in the form of chlorides, nitrates, or oxides in ceramic; oxides in gold or aluminum; or metal plated onto substrate. The Na-22 may also be in the form of NaCl in gold or ceramic. The Ge-68 may also be in the form of $GeO_2$ in silver. The Sr-90 may also be in the form of $SrTiO_4$ in silver. The Ba-133 may also be in the form of $BaSo_4$ in ceramic.

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[1] "Regulations for the Safe Transport of Radioactive Material, 2018 Edition, No. SSR-6 (Rev. 1)" published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

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

| **Radionuclide** | **Activity MBq (mCi)** | |
|---|---|---|
| Na-22 | 185 | (5) |
| Co-57 | 11,100 | (300) |
| Co-58 | 11,100 | (300) |
| Co-60 | 370 | (10) |
| Ge-68 | 1,850 | (50) |
| Sr-90 | 4,625 | (125) |
| Ru-106 | 1,850 | (50) |
| Ba-133 | 3,700 | (100) |
| Cs-137 | 11,100 | (300) |
| Ra-226 | 1,850 | (50) |
| Lanthanides* | 11,100 | (300) |
| Actinides** | 1,110 | (30) |

* (Isotopes of Ce, Pr, Sm, Eu, Gd, Tm, and Yb only)
** (Isotopes of Ac, Th, Pa, U, Pu, Am, and Cm only)

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 September 30, 2030. Previous editions which have not reached their expiration date may continue to be used.

**CERTIFICATE USA/0357/S, REVISION 12**

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 August 26, 2025 petition by Eckert & Ziegler Isotope Products, Valencia, CA, and in consideration of other information on file in this Office.

Certified By:

September 08, 2025

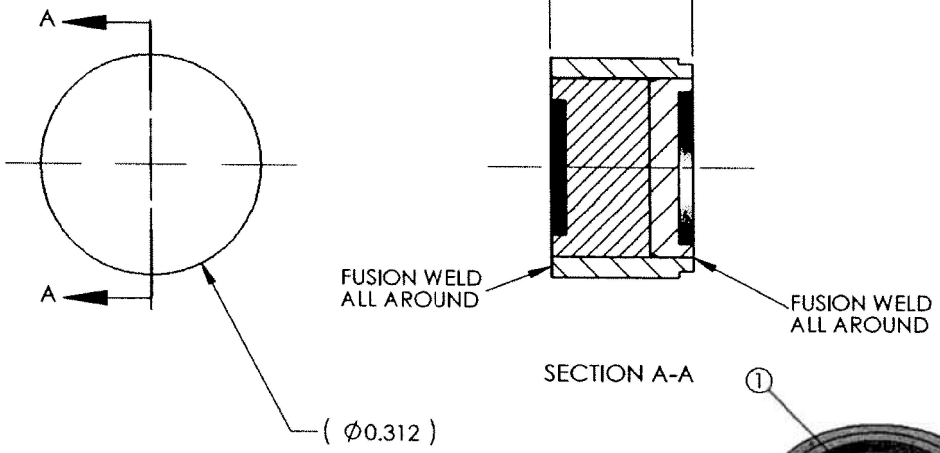
William Quade
Acting Associate Administrator for
Hazardous Materials Safety

(DATE)

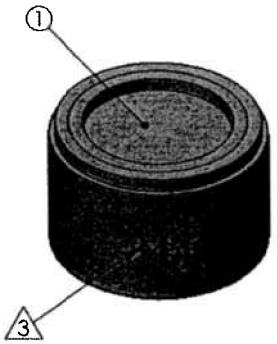
Revision 12 - Issued to endorse to 2018 edition of the IAEA Regulations for the Safe Transport of Radioactive Material, SSR-6 (Rev. 1) and to extend the expiration date.

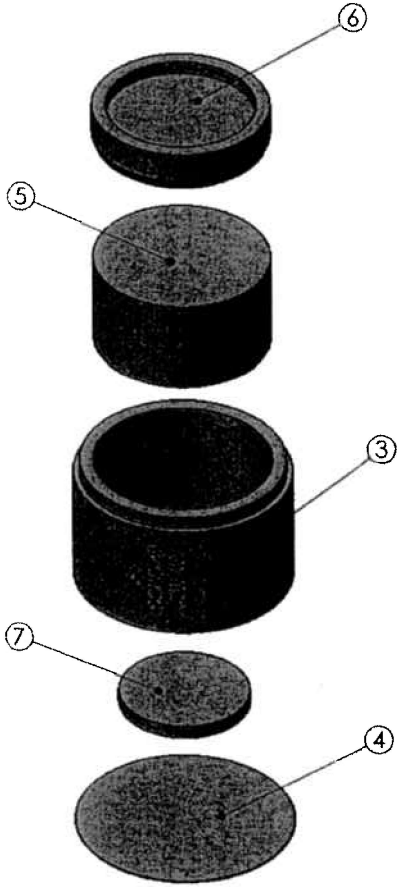
| X | ACTIVE ELEMENT SIZE |
|---|---|
| 0 | 0.000" DIA X 0.000" NO HOLE |
| 1 | 0.125" DIA X 0.030" |
| 2 | 0.187" DIA X 0.020" |
| 3 | 0.210" DIA X 0.040" |
| 4 | 0.250" DIA X 0.040" |

| ITEM # | DESCRIPTION |
|---|---|
| 1 | ASSEMBLY |
| 3 | CAPSULE BODY |
| 4 | WINDOW |
| 5 | SHIELD |
| 6 | PLUG |
| 7 | ACTIVE ELEMENT |




SECTION A-A




3. ENGRAVE CHARACTERS 0.003 DEEP MAX
CENTERED ON CIRCUMFERENCE OF 3203-1;
IPL
ISOTOPE
ACTIVITY
SERIAL NUMBER
2. PACKAGE AND IDENTIFY PART NUMBER THERE ON
1. ASSEMBLE PER ENGINEERING DRAWING
NOTES: UNLESS OTHERWISE SPECIFIED

P/N A3203-X ASSEMBLY

Eckert & Ziegler
Isotope Products
VALENCIA, CALIFORNIA 91355

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.

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 |

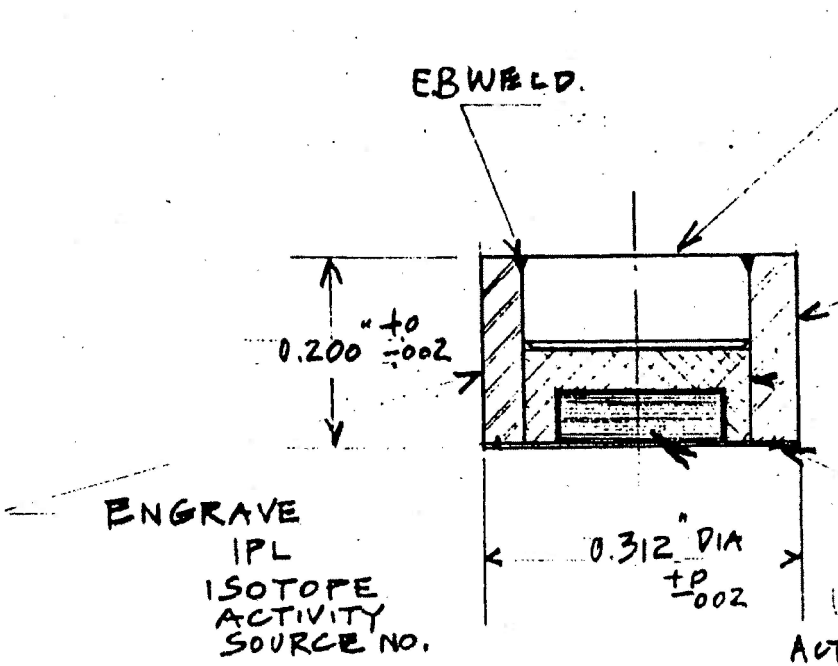
ALL DIMENSIONS ARE FINISHED DIMENSIONS

THIRD ANGLE PROJECTION

| DRAWN | TITLE |
|---|---|
| KP | MODEL 3203 GFS-3 SOURCE |
| ME/CHECKER: EZ | SERIES TITLE: GFS AND XFB SOURCES (PHI & BFI) |
| ENGINEER: EZ | |

| SCALE | SIZE | CAGE CODE | DRAWING NO. | REV | SHEET |
|---|---|---|---|---|---|
| NONE | A | 32993 | 3203 | G | 3 OF 6 |

ACTUAL SIZE




1. PLUG 304 or 304L ST STL.
2. CAPSULE 304 or 304L ST STL.
3. SPACER T-17 TUNGSTEN USE PART NO 3204-2
4. WINDOW 0.002 X 0.312 DIA ST. STL. SPOT TO CAPSULE & WELD ANSI CLASS 65454
5. ACTIVE ELEMENT IN CERAMIC OR POROUS GLASS

GROUP #1

ISOTOPE PRODUCTS LAB

APPL... CAT.

EBS

EAW 2-26-87

3/3/87

3-3-87

# ISOTOPE PRODUCTS LABORATORIES

BURBANK, CALIFORNIA 91504

| | | |
|---|---|---|
| SCALE: 5 TO 1 | APPROVED BY: | DRAWN BY E.W. |
| DATE: 2-26-87 | | REVISED A 9/15/88 |

LOW ENERGY X RAY SOURCE.
GFS-3

GFS AND XFB SOURCES

DRAWING NUMBER
A3214

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/0357/S-96

**ORIGINAL REGISTRANT(S):**

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

Boeing
P.O. Box 3707
M/S 6Y-38
Seattle, WA, 98124
USA