

U.S. Department of Transportation

IAEA CERTIFICATE OF COMPETENT AUTHORITY SPECIAL FORM RADIOACTIVE MATERIALS

Pipeline and Hazardous Materials Safety Administration CERTIFICATE USA/0508/S, REVISION 6

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 1 and the United States of America 2 for the transport of radioactive material.

- 1. <u>Source Identification</u> Eckert & Ziegler Isotope Products (EZIP) Model A3906.
- 2. Source Description Cylindrical single IPL Model HEG-1 encapsulation constructed of Type 304 or 304L stainless steel and fusion seal welded. Approximate outer dimensions are 4.7 mm (0.186 in.) in diameter and 5.7 mm (0.225 in.) in length. The Model HEG-1 is in a cylindrical holder with a hexagonal extension made of Type 316L stainless steel and fusion welded. Approximate outer dimensions of the holder are 38.1 mm (1.5 in.) in length, 6.35 mm (0.25 in.) in diameter in the cylindrical section and 9.53 mm (0.375 in.) across the flats of the hexagonal section. Construction shall be in accordance with attached IPL Drawing No. 3906, Sheet 3 of 5, Rev. G.
- 3. <u>Radioactive Contents</u> 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.

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.

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Radionuclide	Form	Activity GBq (Ci)
Na -22	NaCl in gold or ceramic	3.7 (0.10)
Co - 57	CoO, CoCl ₂ Co(NO ₃) ₂ in ceramic	11.1 (0.30)
Co - 58	CoO, CoCl ₂ Co(NO ₃) ₂ in ceramic	11.1 (0.30)
Co - 60	CoO, $CoCl_2$ $Co(NO_3)_2$ in ceramic or Co pellets	11.1 (0.30)
Ge - 68	GeCl ₄ in ceramic	1.85 (0.05)
Ва - 133	BaSO ₄ or BaCl ₂ in gold or ceramic	3.7 (0.10)
Cs - 137	CsCl, Cs_2SO_4 or $CsNO_3$ in ceramic, AL or Au pellets	11.1 (0.30)
Ra - 226	RaSO ₄ in gold or ceramic	1.85 (0.05)
Cf - 252	Oxide in metal or ceramic	0.037 (0.001)
Actinides*	Oxides in gold or ceramic	1.85 (0.05)

^{* (}Isotopes of Ac, Th, Pa, Np, U, Am, and Cm)

- 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, 2029. Previous editions which have not reached their expiration date may continue to be used.

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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 October 17, 2024 petition by Eckert & Ziegler Isotope Products, Valencia, CA, and in consideration of other information on file in this Office.

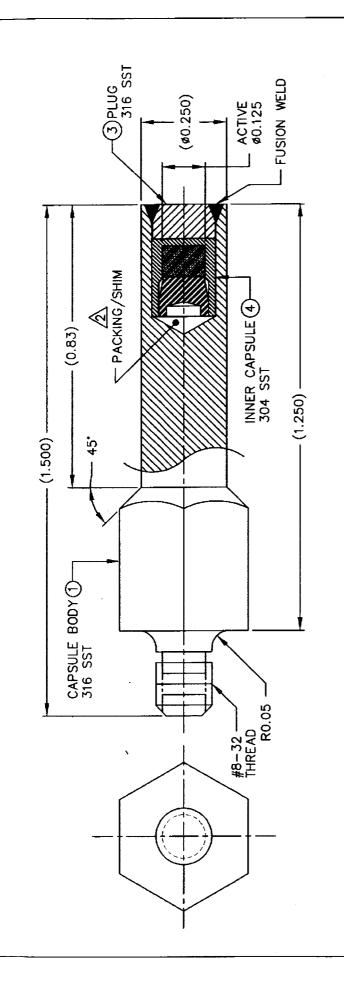
Certified By:

Materials Safety

William Schoonover
Associate Administrator for Hazardous

November 15, 2024 (DATE)

Revision 6 - Issued to extend the expiration date and to issue the certificate to the 2018 edition of SSR-6.



LOGGING, DENSITOMETER SOURCE

MODEL	NUCLIDE	ACTIVITY
HEG-0027	Cs-137	10 mCi
HEG-0067	Cs-137	20 mCi
HEG-0066	Cs-137	55 mCi
HEG-0065	Cs-137	100 mCi
HEG-CUST	Cs-137	CUSTOM

SOURCE MUST PASS A RATTLE TEST (PER CUSTOMER REQUEST) AFTER WELDING. SHIM AS REQUIRED TO ARREST INNER CAPSULE MOVEMENT. 1. ASSEMBLE COMPLETE PER ENGINEERING DRAWING
AND PER PROCEDURE PM20-1. FUSION WELD AS REQUIRED.

NOTES: UNLESS OTHERWISE SPECIFIED

DRAWING NUMBER SERIES TITLE INDUSTRIAL SOURCES, CUSTOM DRAWING TITLE CALIBRATION SOURCE, Cs-137 3906 ASSEMBLY CAGE CODE REVISION S A3906 32993 DESIGN SCALE MG/DI NONE SIZE \triangleleft ANGLE H.5 UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES THIRD ANGLE PROJECTION .01 .02 .03 TOLERANCES ON DECIMAL ±1/64 SOTOPE PRODUCTS LABORATORIES BURBANK, CALIFORNIA 91504

SHEET P



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Pipeline and Hazardous Materials Safety Administration

CERTIFICATE NUMBER: USA/0508/S

ORIGINAL REGISTRANT(S):

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

Halliburton 3000 North Sam Houston Parkway, East Houston, TX, 77032 USA