



U.S. Department  
of Transportation

Pipeline and  
Hazardous Materials  
Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY  
SPECIAL FORM RADIOACTIVE MATERIALS  
CERTIFICATE NUMBER USA/0356/S-96, REVISION 11

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

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<sup>1</sup> and United States of America<sup>2</sup> for the transport of radioactive material.

1. Source Identification - Eckert & Ziegler Isotope Products Model HEG-XXX Series (A3000, A3015, A3015-1, A3023, A3024, and A3030), where XXX represents the radionuclide mass number.
2. Source Description - Cylindrical double encapsulations made of Type 304 or 304L stainless steel (Model Nos. A3000, A3015, A3015-1, A3023, and A3024) or Type 316 stainless steel (Model No. A3030) and fusion welded. Approximate external dimensions are 6.4 mm (0.25 in.) in diameter and 15.9 mm (0.625 in.) in length (Model A3000); 6.0 mm (0.236 in.) in diameter and 8.0 mm (0.315 in.) in length (Models A3015 and A3015-1); 6.0 mm (0.236 in.) in diameter and 12.0 mm (0.473 in.) in length with one end having an internal 3-48 thread (Model A3023); 6.0 mm (0.236 in.) in diameter and 10.0 mm (0.394 in.) in length (Model A3024); and 12.7 mm (0.5 in.) in diameter and 19.1 mm (0.752 in.) in length (Model A3030). Construction shall be in accordance with attached Isotope Products Laboratories Drawing Nos. 3000, 3015 (Sheet 3 or 4 of 8), 3023, or 3030; or Eckert & Ziegler Isotope Products Drawing No. 3024.
3. Radioactive Contents - The sources described by this certificate are authorized to contain any one of the following radionuclides in the chemical form identified and limited to the activity shown.

Radionuclide	Form	Activity GBq (Ci)
Na-22	NaCl in gold or ceramic	3.7 (0.10)
Co-57	CoO in ceramic or Co metal plated on Ni foil	11.1 (0.30)
Co-58	CoO in ceramic	11.1 (0.30)
Co-60	CoO in ceramic or 1 mm x 1mm Ni clad Co	22.2 (0.60)
Ge-68	GeO <sub>2</sub> in silver	1.9 (0.05)
Ba-133	BaSO <sub>4</sub> in ceramic	3.7 (0.10)
Cs-137	CsCl in gold or Cs in ceramic	22.2 (0.60)
Eu-152	Oxide in gold or ceramic	0.74 (0.020)
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)

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

4. Quality Assurance - Records of Quality Assurance activities required by paragraph 310 of the IAEA regulations<sup>1</sup> 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.

<sup>1</sup> "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.

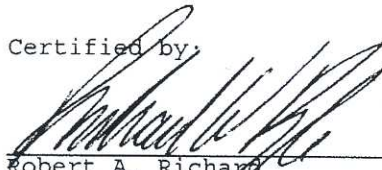
<sup>2</sup> Title 49, Code of Federal Regulations, Parts 100 - 199, United States of America.

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5. Expiration Date - This certificate expires on August 31, 2010. On October 30, 2009 this certificate supersedes all previous revisions of USA/0356/S-96.

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 August 26, 2009 petition by Eckert & Ziegler Isotope Products, Valencia, CA, and in consideration of other information on file in this Office.

Certified by:

  
\_\_\_\_\_  
Robert A. Richards  
Deputy Associate Administrator for  
Hazardous Materials Safety

SEP -2 2009

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(DATE)

Revision 11 - Issued to revise the source identification and add Model A3015-1.

