



U.S. Department  
of Transportation

Pipeline and  
Hazardous Materials  
Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY  
SPECIAL FORM RADIOACTIVE MATERIALS  
CERTIFICATE USA/0632/S-96, REVISION 5

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

1. Source Identification - QSA Global, Inc. Model Nos. AX1, X.1, and X.1/2 (All models manufactured on or after May 17, 1977).
2. Source Description - Cylindrical double encapsulations made of stainless steel and tungsten inert gas or laser seal welded. Approximate outer dimensions of all models are 7.9 mm (0.31 in.) in diameter and 10.15 mm (0.4 in.) in length. Construction shall be in accordance with attached AEA Technology QSA, Inc. Drawing No. RBA10880, Rev. E.
3. Radioactive Contents - No more than either 3.7 GBq (100.0 mCi) of Americium-241 or 13.0 GBq (351.0 mCi) of Californium-252. The Am-241 is in oxide form and mixed with beryllium powder and pressed into a solid pellet. The Cf-252 is in the form of a metal wire or an oxide solid ceramic.
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 applicable requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on March 31, 2013.

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<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.

**CERTIFICATE USA/0632/S-96, REVISION 5**

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 February 29, 2008 petition by QSA Global, Inc., Burlington, MA, and in consideration of other information on file in this Office.

Certified By:



**Mar 13 2008**

(DATE)

Robert A. Richard

Deputy Associate Administrator for Hazardous Materials Safety

Revision 5 - Issued to extend the expiration date.

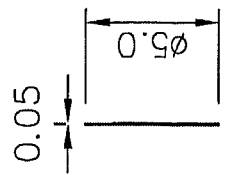
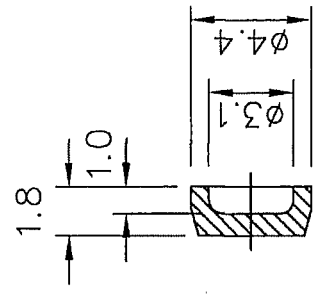
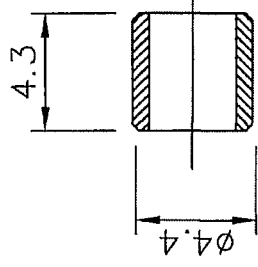
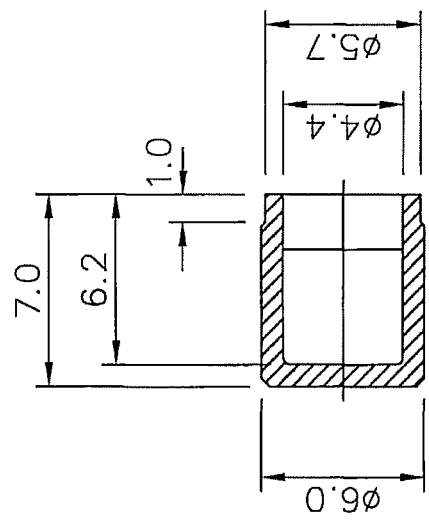
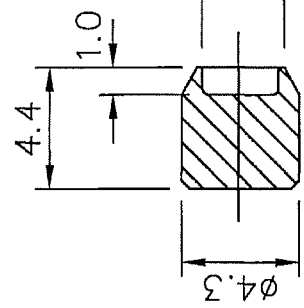
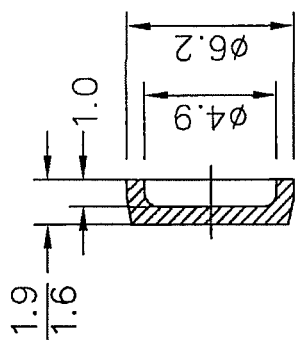
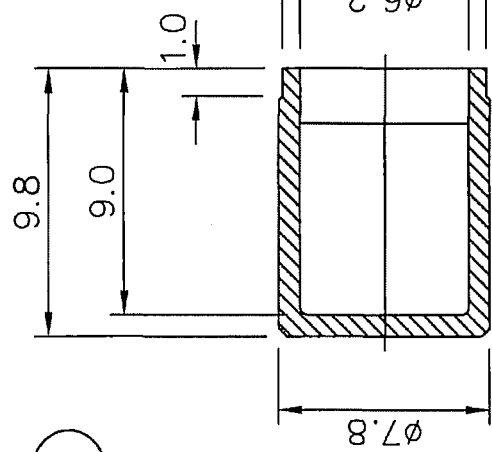
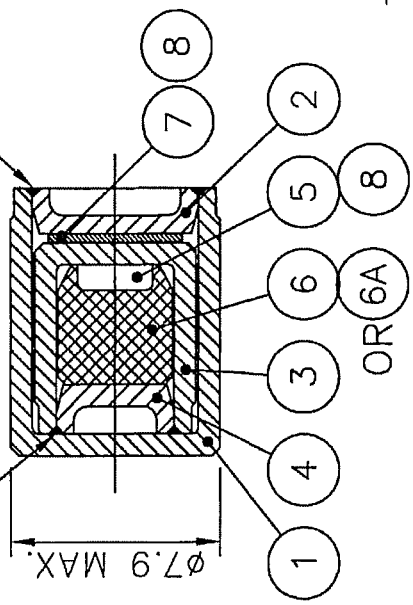
ITEM No.	DESCRIPTION	QTY.
1	SHEATH BODY STAINLESS STEEL	1
2	SHEATH LID STAINLESS STEEL	1
3	CELL BODY STAINLESS STEEL	1
4	CELL LID STAINLESS STEEL	1
5	ACTIVE MATERIAL	1
6	SPACER (MODEL X1/2 ONLY) ALUMINUM OR STAINLESS STEEL	AR
6A	SPACER (X1 OR AX1) STAINLESS STEEL (OPTIONAL)	AR
7	SPACER (X1 OR AX1) STAINLESS STEEL (OPTIONAL)	AR
8	CERAMIC FIBER PACKING(OPTIONAL)	AR

TIG OR LASER WELD TO SEAL

10.15 MAX.

TIG OR LASER WELD TO SEAL

Ø7.9 MAX.



ITEM 6 ITEM 6A ITEM 3 ITEM 4 ITEM 7

APPROVALS	
<i>[Signature]</i>	<i>[Signature]</i>
<i>[Signature]</i>	7/14/07

DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED TOLERANCES:

X.X ±0.5 INTERNAL

X.XX ±0.05 EXTERNAL

ANGULAR ±5°



DESCRIPTIVE DRAWING

TITLE AX1, X1 & X1/2 CAPSULE ASSY

SIZE DWG. NO. RBA10880

A SCALE: NONE SHEET 1 OF 1

REV E

ERF # 1685

ITEM 7