



U.S. Department
of Transportation
**Pipeline and
Hazardous Materials
Safety Administration**

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE USA/0634/S-96, REVISION 4**

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

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 Agency¹ and the United States of America² for the transport of radioactive material.

1. Source Identification - QSA Global, Inc. Model X.8 (Manufactured on or after September 23, 1981).
2. Source Description - Cylindrical double encapsulation made of stainless steel and tungsten inert gas or laser seal welded. Approximate exterior dimensions are 6.1 mm (0.24 in.) in diameter and 8.3 mm (0.33 in.) in length. Minimum wall thickness of the outer encapsulation is 0.4 mm (0.02 in.). Construction shall be in accordance with attached AEA Technology QSA, Inc. Drawing No. RBA62011, Rev. C.
3. Radioactive Contents - No more than either 37.0 GBq (1.0 Ci) of Cesium-137, or 740.0 MBq (20.0 mCi) of Radium-226, or 740.0 MBq (20.0 mCi) of Barium-133. The Cs-137 is in the form of a cesium silicate in a glass matrix or a sulfate as ceramic ion exchange pellets. The Ra-226 is in the form of a low solubility radium sulfate powder. The Ba-133 is in the form of barium silicate as a glass bead or a ceramic pellet.
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations¹ 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 January 31, 2018.

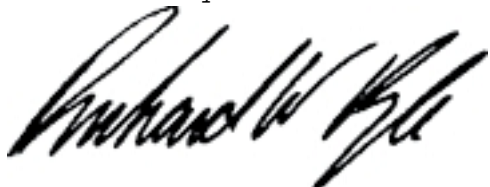
¹ "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

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

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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 January 07, 2013 petition by QSA Global, Inc., Burlington, MA, and in consideration of other information on file in this Office.

Certified By:

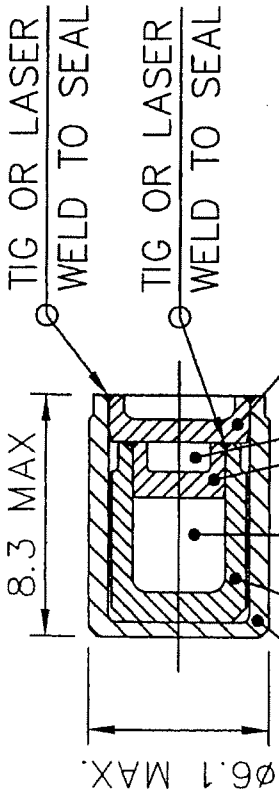


Jan 24 2013

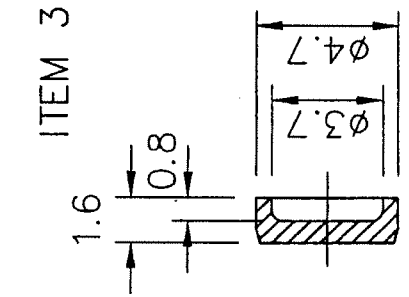
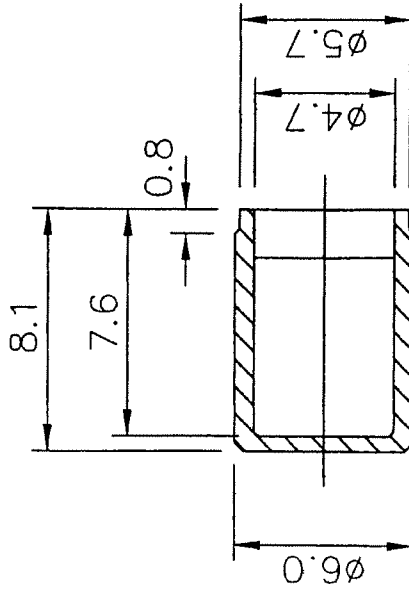
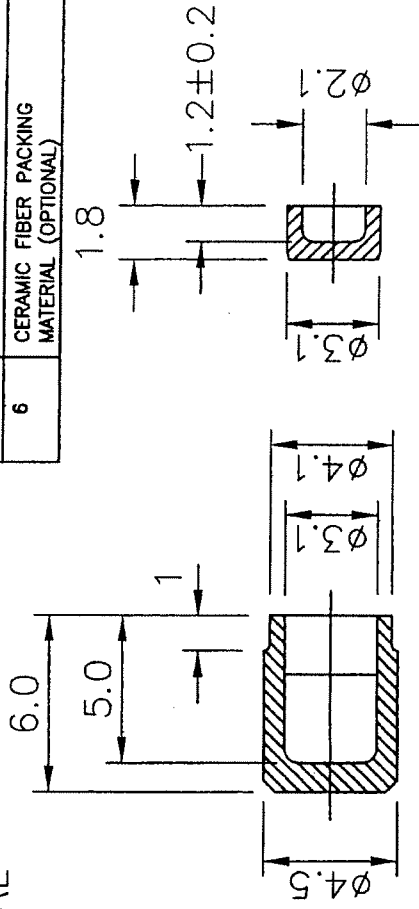
(DATE)

 _____
Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

Revision 4 - Issued to extend the expiration date.



ITEM No.	DESCRIPTION	QTY.
1	SHEATH BODY STAIN.STL.	1
2	SHEATH LID STAIN.STL.	1
3	CELL BODY STAIN.STL.	1
4	CELL LID STAIN.STL.	1
5	ACTIVE MATERIAL AND CERAMIC FIBER PACKING MATERIAL	AR
6	CERAMIC FIBER PACKING MATERIAL (OPTIONAL)	AR



ITEM 1

ITEM 2

ITEM 3

ITEM 4

APPROVALS	
<i>R. Minn</i>	10003
<i>S. D. ...</i>	10003

DIMENSIONS IN MILLIMETERS
UNLESS OTHERWISE STATED TOLERANCES:

X ±0.5
XX ±0.1
XXX ±0.05
ANGULAR ±5°

INTERNAL $\frac{M}{A}$
EXTERNAL $\frac{A}{M}$



DESCRIPTIVE
DRAWING

TITLE X8 CAPSULE ASSY

SIZE	DWG. NO.	SHEET 1 OF 1	REV
A	RBA62011	SCALE: NONE	C

ERF # 679



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Washington, D.C. 20590

**Pipeline and
Hazardous Materials
Safety Administration**

CERTIFICATE NUMBER: USA/0634/S-96, Revision 4

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