



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

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE USA/0657/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.103 (Manufactured on or after December 9, 1991).
2. Source Description - Cylindrical single encapsulation made of Type 316 stainless steel and tungsten inert gas seal welded. Approximate exterior dimensions are 2.9 mm (0.11 in.) in diameter and 30.4 mm (1.2 in.) in length. Minimum wall thickness is 0.225 mm (0.009 in.). Construction shall be in accordance with attached AEA Technology QSA, Inc. Drawing No. RBA62475, Rev. A.
3. Radioactive Contents - No more than 5.18 GBq (140.0 mCi) of Americium-241. The Am-241 is in oxide form and combined with molten glass and cooled to form a glass bead.
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 September 30, 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 August 19, 2013 petition by QSA Global, Inc., Burlington, MA, and in consideration of other information on file in this Office.

Certified By:



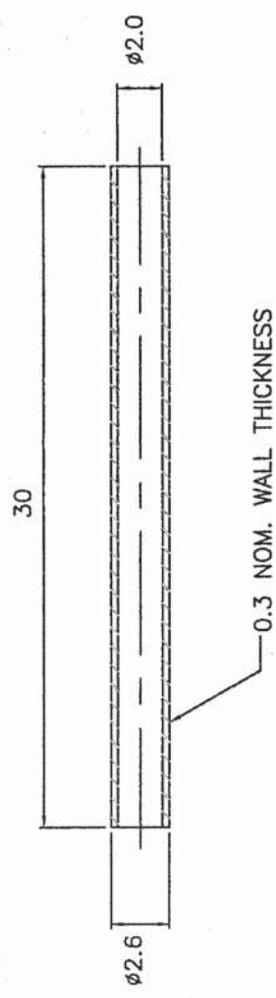
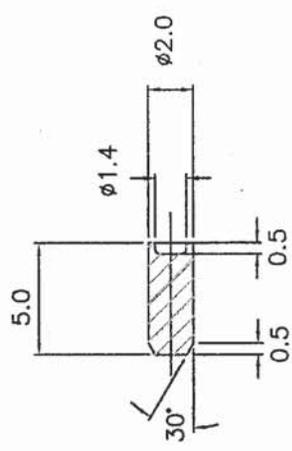
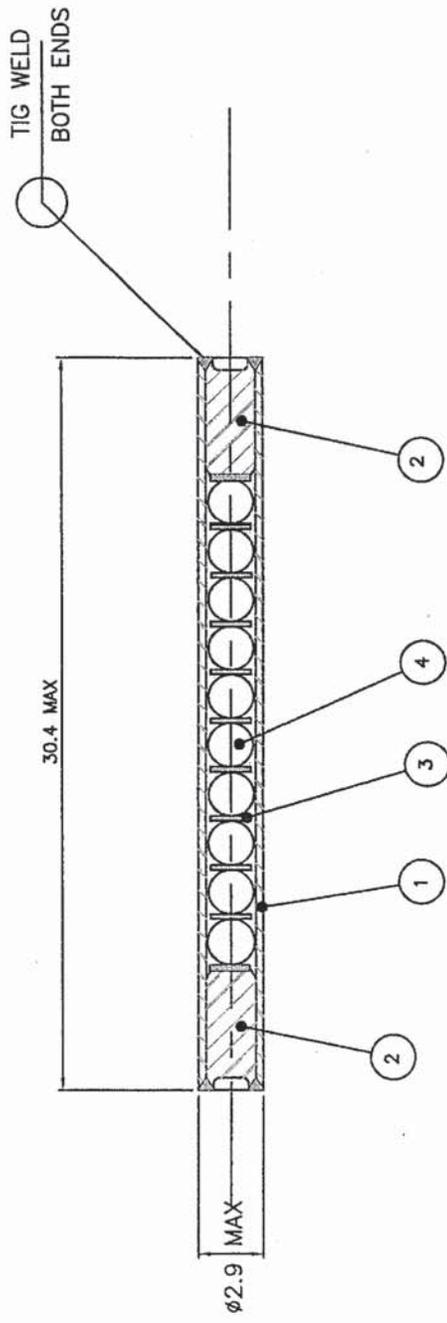
Sep 27 2013

(DATE)

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

Revision 4 - Issued to extend the expiration date.

ITEM No.	DESCRIPTION	No. OFF
1	BODY	1
2	PLUG	2
3	CERAMIC FIBRE PACKING	A/R
4	Am241 GLASS BEADS ϕ 1.9 MM	A/R



PLUG
MATERIAL - 316/316L STAINLESS STEEL

BODY
MATERIAL - 316/316L STAINLESS STEEL



APPROVALS		DATE
<i>R. Munn</i>		18 Nov 03
<i>L. P. ...</i>		21 Nov 03

DIMENSIONS IN MILLIMETERS
UNLESS OTHERWISE STATED TOLERANCES:

X.X ±0.5
X.XX ±0.1
X.XXX ±0.05
ANGULAR ±5'

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

DESCRIPTIVE
DRAWING

TITLE X103 CAPSULE ASSEMBLY

SIZE	DWG. NO.	SCALE:	SHEET	REV
A	RBA62475	NONE	1 OF 1	A

ERF # 710