



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

**IAEA CERTIFICATE OF COMPETENT AUTHORITY  
SPECIAL FORM RADIOACTIVE MATERIALS  
CERTIFICATE USA/0645/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 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 XN159/XN160 (Manufactured on or after February 27, 1980).
2. Source Description - Cylindrical double encapsulation made of stainless steel and tungsten inert gas or laser seal welded. Approximate exterior dimensions are 8.05 mm (0.32 in.) in diameter and 32.35 mm (1.27 in.) in length. Minimum wall thickness of the outer encapsulation is 0.65 mm (0.025 in.). Construction shall be in accordance with attached AEA Technology QSA, Inc. Drawing No. RBA10923, Rev. B.
3. Radioactive Contents - No more than 9.25 GBq (250.0 mCi) of Americium-241. The Am-241 is in the form of an oxide mixed with a beryllium powder and pressed into a solid pellet.
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 February 28, 2018.

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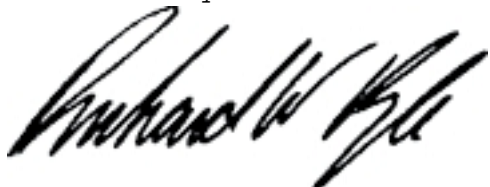
<sup>1</sup> "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

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

**CERTIFICATE USA/0645/S-96, REVISION 4**


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 12, 2013 petition by QSA Global, Inc., Burlington, MA, and in consideration of other information on file in this Office.

Certified By:



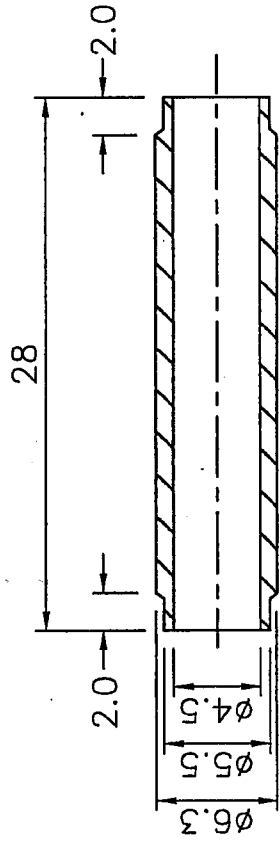
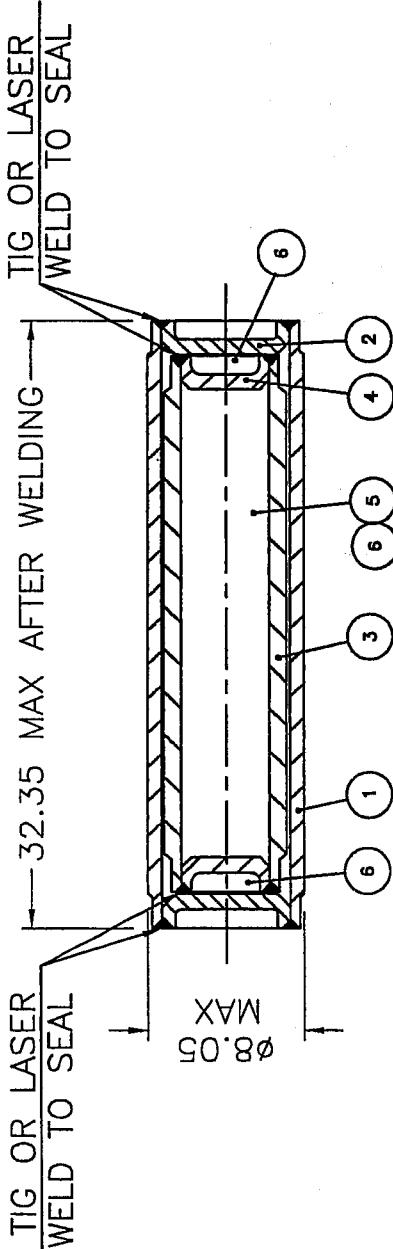
**Feb 22 2013**

(DATE)

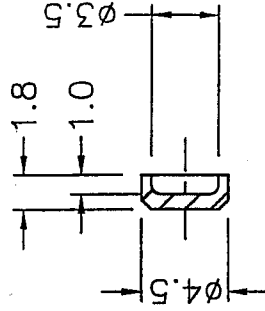
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Dr. Magdy El-Sibaie  
Associate Administrator for Hazardous Materials Safety

Revision 4 - Issued to extend the expiration date.

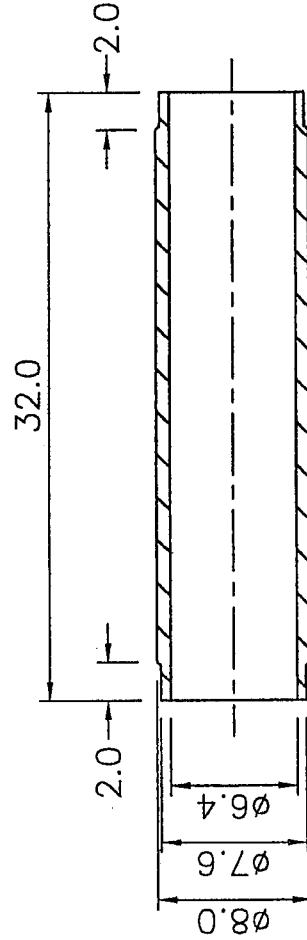
ITEM No.	DESCRIPTION	QTY.
1	SHEATH BODY STAIN.STL.	1
2	SHEATH LID STAIN.STL.	1
3	CELL BODY STAIN.STL.	1
4	CELL LID STAIN.STL.	1
5	ACTIVE MATERIAL	AR
6	CERAMIC FIBER (OPTIONAL)	AR



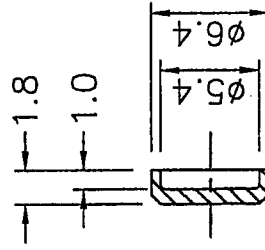
ITEM 3



ITEM 4



ITEM 1



ITEM 2

APPROVALS	
<i>R. Munn</i>	17 Nov 03
<i>R. P. ...</i>	18 Nov 03

DIMENSIONS IN MILLIMETERS  
UNLESS OTHERWISE STATED TOLERANCES:

X	±0.5	INTERNAL	<input checked="" type="checkbox"/>
X.X	±0.1	INTERNAL	<input checked="" type="checkbox"/>
X.XX	±0.05	EXTERNAL	<input checked="" type="checkbox"/>
ANGULAR	±5		



DESCRIPTIVE  
DRAWING

TITLE XN159/XN160 CAPSULE ASSEMBLY

SIZE	DWG. NO.	SCALE:	SHEET	REV
A	RBA10923	NONE	1 OF 1	B

ERF # 715



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Washington, D.C. 20590

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Hazardous Materials  
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**CERTIFICATE NUMBER:** USA/0645/S-96, Revision 4

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