



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE USA/0751/S-96, REVISION 0

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

1. Source Identification - QSA Global, Inc. (formerly AEA Technology QSA, Inc.) Model Nos. X.8 (Manufactured before September 23, 1981) and X.2084 (Manufactured before July 28, 1983).
2. Source Description - The Model X.8 is a 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.

The Model No. X.2084 is a cylindrical double encapsulation made of stainless steel and tungsten inert gas or laser seal welded. Approximate outer dimensions are 9.1 mm (0.36 in.) in diameter and 12.8 mm (0.5 in.) in length. Minimum wall thickness of the sheath body is 0.95 mm (0.04 in.) and of the cell body is 0.85 mm (0.03 in.). Construction shall be in accordance with attached AEA Technology QSA, Inc. Drawing No. RBA61685, Rev. A.

3. Radioactive Contents - No more than 0.37 GBq (10 mCi) of Cesium-137 for the Model X.8. The Cs-137 is in the form of a cesium silicate in a glass matrix or a sulfate as ceramic ion exchange pellets.

No more than 1.85 GBq (50 mCi) of Americium-241 for the Model X.2084. The Am-241 is in solid oxide form and mixed with beryllium.

4. Special Conditions -
 - a. This IAEA Certificate of Competent Authority may only be used by the U.S. Department of Defense.

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.

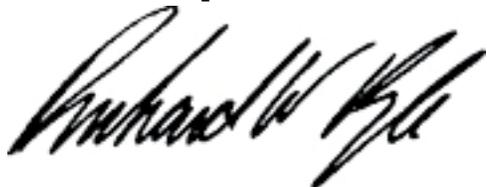
² Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

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- b. Compliance with a current revision of the U.S. Department of Transportation Special Permit DOT-SP 14568 is required.
5. 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.
6. Expiration Date - This certificate expires on September 30, 2009.

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 September 07, 2007 petition by U.S. Department of Defense, Fort Eustis, VA, and in consideration of other information on file in this Office.

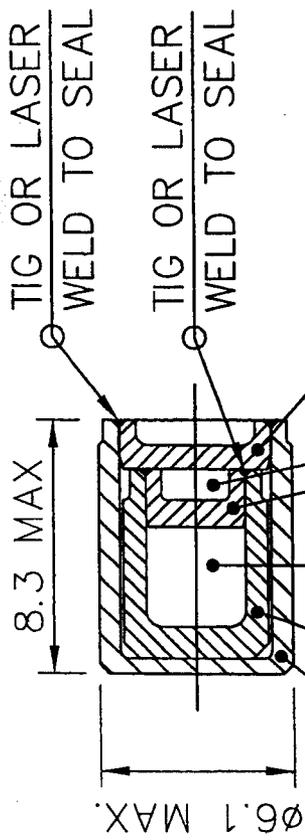
Certified By:



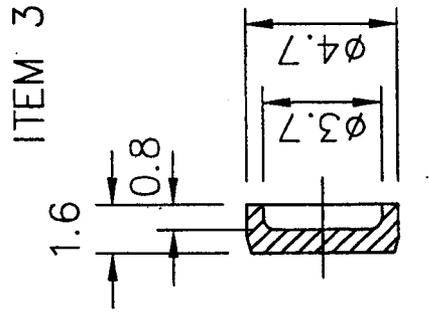
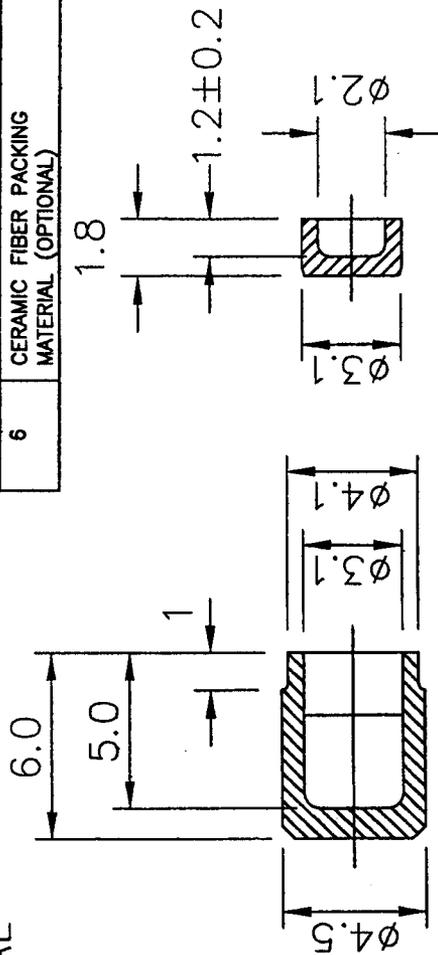
Robert A. Richard
Deputy Associate Administrator for Hazardous Materials Safety

Sep 11 2007
(DATE)

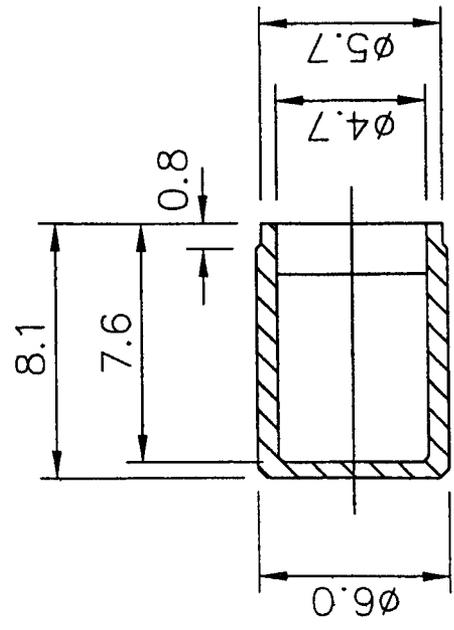
Revision 0 - Original issue.



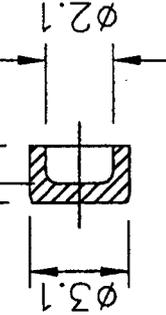
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1	SHEATH BODY STAIN.STL	1
2	SHEATH LID STAIN.STL	1
3	CELL BODY STAIN.STL	1
4	CELL LID STAIN.STL	1
5	ACTIVE MATERIAL AND CERAMIC FIBER PACKING MATERIAL	AR
6	CERAMIC FIBER PACKING MATERIAL (OPTIONAL)	AR



ITEM 2



ITEM 3



ITEM 4

APPROVALS	
<i>R. Munn</i>	10/03
<i>S. P. ...</i>	10/03

DIMENSIONS IN MILLIMETERS
UNLESS OTHERWISE STATED TOLERANCES:

X ±0.5
X.X ±0.1
X.XX ±0.05
ANGULAR ±5°

INTERNAL Δ
EXTERNAL Δ

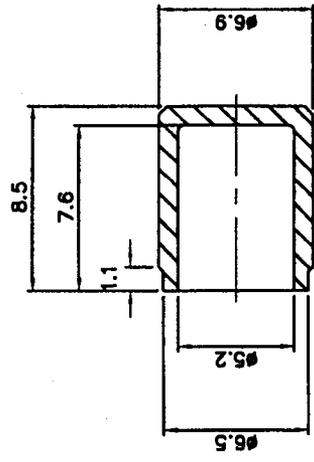
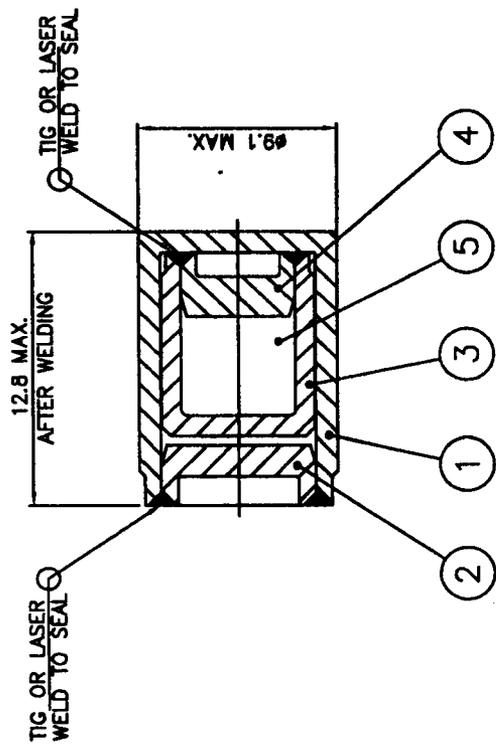
AEATECHNOLOGY
QSA
40 NORTH AVE, BURLINGTON, MA 01803

DESCRIPTIVE DRAWING

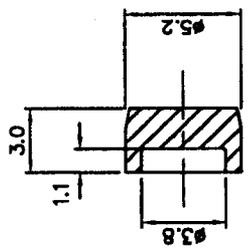
TITLE X8 CAPSULE ASSY	
SIZE A	DWG. NO. RBA62011
SCALE: NONE	SHEET 1 OF 1
REV	C

ERF # 679

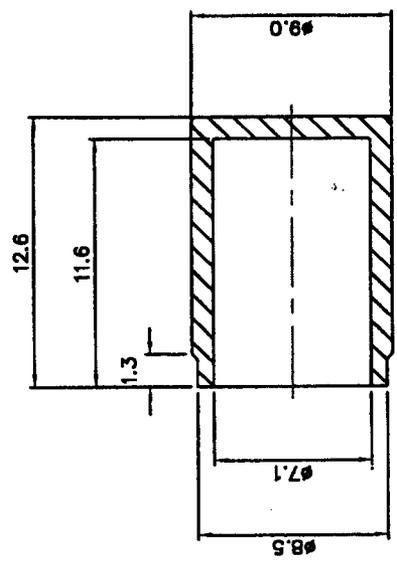
ITEM No.	DESCRIPTION	QTY.
1	SHEATH BODY STAIN.STL.	1
2	SHEATH LID STAIN.STL.	1
3	CELL BODY STAIN.STL.	1
4	CELL LID STAIN.STL.	1
5	ACTIVE MATERIAL	AR



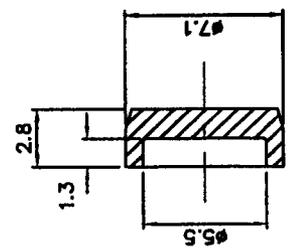
ITEM 3



ITEM 4



ITEM 1



ITEM 2



APPROVALS	
<i>[Signature]</i>	OSMARD 3
<i>[Signature]</i>	3MARD 3

DESCRIPTIVE DRAWING

TITLE

X2084 CAPSULE ASSEMBLY

SIZE

DWG. NO. RBA61685

REV

A

SCALE: NONE

SHEET 1 OF 1

ERF # 475

DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED TOLERANCES:

X	±0.5	INTERNAL	✓
XX	±0.1	INTERNAL	✓
XXX	±0.05	INTERNAL	✓
ANGULAR	±5'	EXTERNAL	✓



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1200 New Jersey Avenue SE
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CERTIFICATE NUMBER: USA/0751/S-96, Revision 0

ORIGINAL REGISTRANT(S):

Mr. Joe Dugan
Safety Specialist
U.S. Department of Defense
Military Surface Deployment and Distribution Command
Fort Eustis, VA 23604