



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

East Building, PHH-23
1200 New Jersey Ave, SE
Washington, D.C. 20590

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS

CERTIFICATE USA/0634/S-96, REVISION 6

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.

¹ "Regulations for the Safe Transport of Radioactive Material, 2012 Edition, No. SSR-6" 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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4. Management System Activities - Records of Management System activities required by Paragraph 306 of the IAEA regulations 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 requirements of Subpart H of 10 CFR 71.

5. Expiration Date - This certificate expires on July 31, 2027. Previous editions which have not reached their expiration date may continue to be used.

This certificate is issued in accordance with paragraph(s) 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the July 5, 2022 petition by QSA Global, Inc., Burlington, MA, and in consideration of other information on file in this Office.

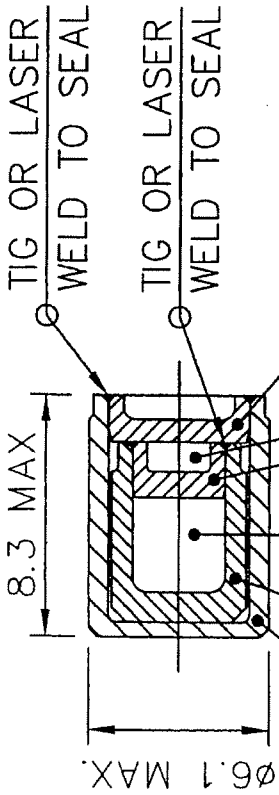
Certified By:



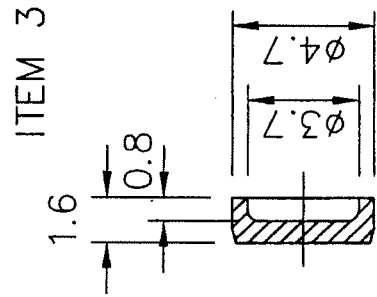
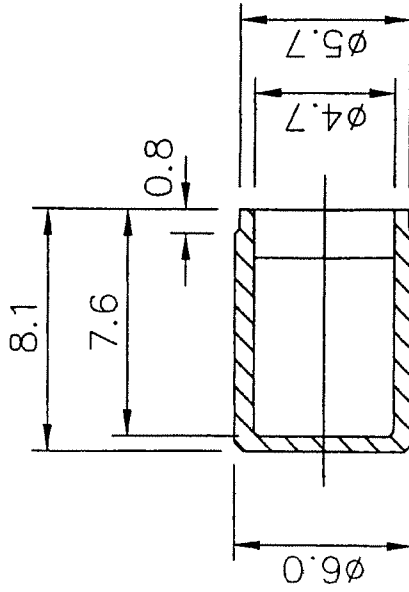
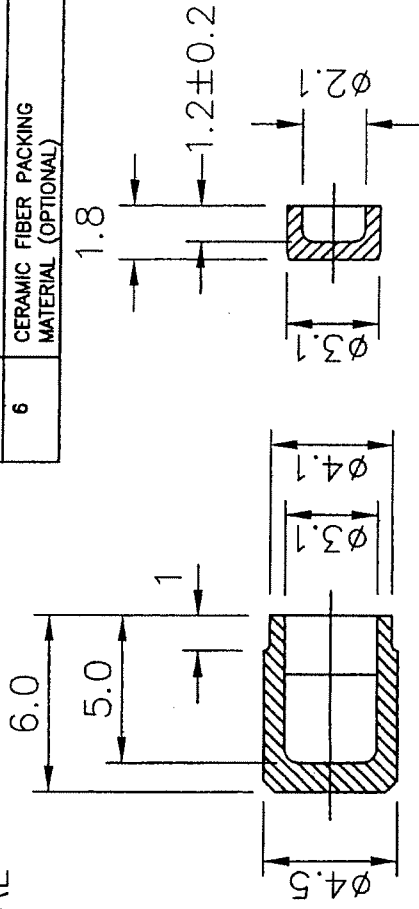
William Schoonover
Associate Administrator for Hazardous
Materials Safety

July 25, 2022
(DATE)

Revision 6 - 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>J.P. ...</i> | 10003 |

DIMENSIONS IN MILLIMETERS
UNLESS OTHERWISE STATED TOLERANCES:

| | | | |
|---------|-------|----------|---|
| X | ±0.5 | INTERNAL | M |
| X.X | ±0.1 | INTERNAL | M |
| X.XX | ±0.05 | EXTERNAL | M |
| ANGULAR | ±5° | | |

AEATECHNOLOGY
QSA
40 NORTH AVE. BURLINGTON, MA 01803

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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1200 New Jersey Ave, SE
Washington, D.C. 20590

CERTIFICATE NUMBER: USA/0634/S-96

ORIGINAL REGISTRANT(S) :

QSA Global, Inc.
40 North Avenue
Burlington, MA, 01803
USA

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U.S. Department of Energy
1000 Independence Ave, SW
EM-60
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USA

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Sugar Land, TX, 77478
USA

U.S. Geologic Survey
Idaho Water Science Center, U.S. Geological Survey
Department of Interior
1955 N Fremont MS 4131
Idaho Falls, ID, 83415
USA

U.S. Army Corps of Engineers
USACE Huntsville Center - Environmental and Munitions Center of Expert
721 19th St.
Denver, CO, 80202
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