



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE NUMBER USA/0632/S, REVISION 2**

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 materials.

1. Source Identification - AEA Technology QSA, Inc. Model Nos. AX1, X.1, and X.1/2.
2. Source Description - All models are a cylindrical double encapsulation made of stainless steel and tungsten inert gas or laser seal welded. Approximate outer dimensions of all models are 7.9 mm (0.31 in.) in diameter and 10.15 mm (0.4 in.) in length. Construction shall be in accordance with attached AEA Technology QSA, Inc. Drawing No. RBA10880, Rev. D.
3. Radioactive Contents - No more than either 3.7 GBq (100 mCi) Americium-241 or 13 GBq (351 mCi) Californium-252. The Am-241 is in oxide form and mixed with Beryllium powder and pressed into a solid pellet. The Cf-252 is in the form of a metal wire or an oxide solid ceramic.
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 and consignees in the United States exporting or importing shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires June 15, 2008. On December 31, 2003, this certificate supersedes, in its entirety, all previously issued revisions of USA/0632/S.

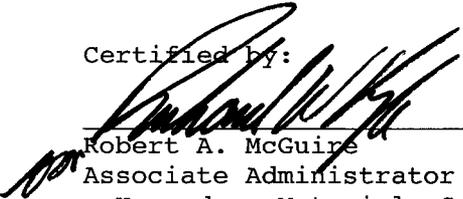
1 "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

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

CERTIFICATE USA/0632/S, REVISION 2

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 petition and information dated October 10, 2003 and December 1, 2003 submitted by AEA Technology QSA, Inc., Burlington, MA, and in consideration of other information on file in this Office.

Certified by:



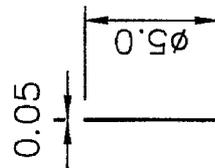
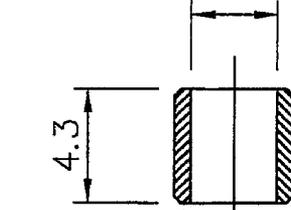
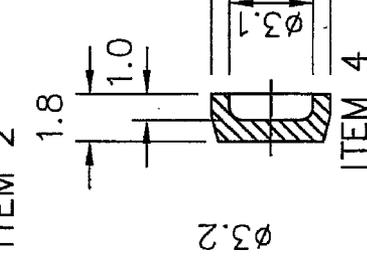
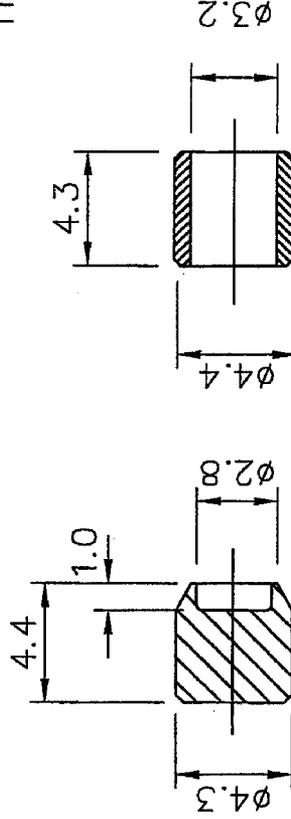
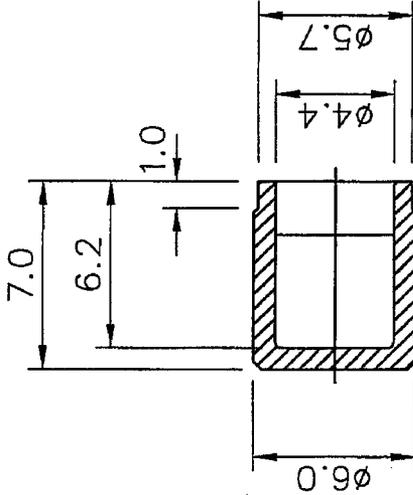
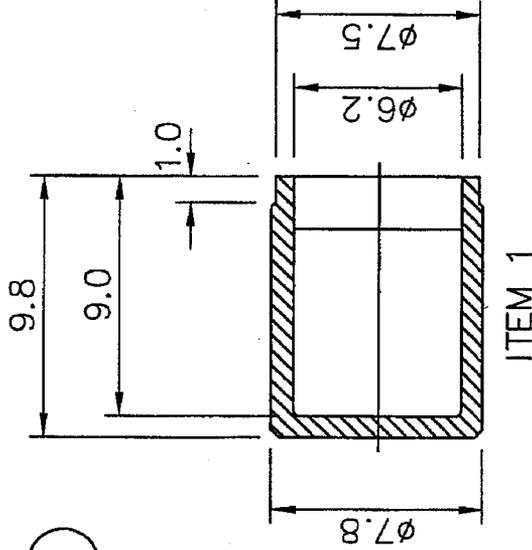
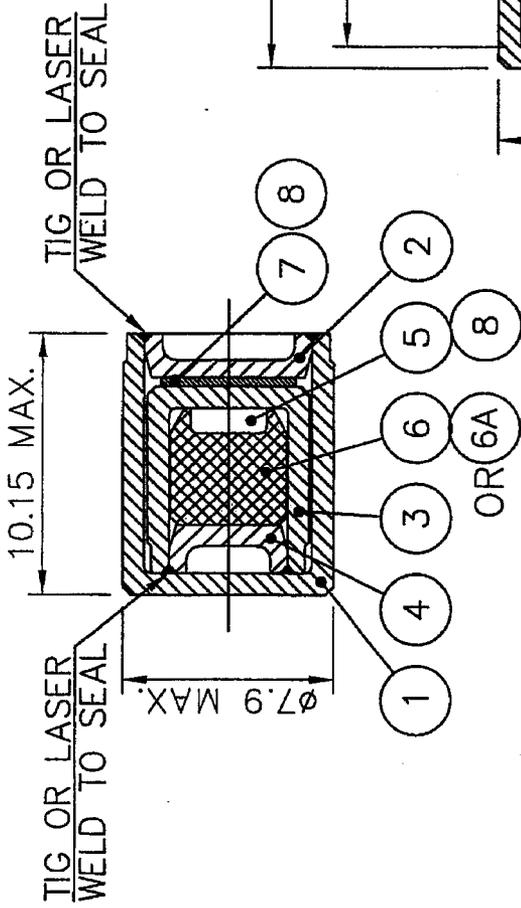
Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

DEC - 8 2003

(DATE)

Revision 2 - Issued to reflect construction dimensions and add optional spacers and/or ceramic fiber packing.

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	1
6	SPACER (MODEL X1/2 ONLY) ALUM.	AR
6A	SPACER (X1 OR AX1) STAINLESS STEEL (OPTIONAL)	AR
7	SPACER (X1 OR AX1) STAINLESS STEEL (OPTIONAL)	AR
8	CERAMIC FIBER PACKING(OPTIONAL)	AR



APPROVALS	
<i>[Signature]</i>	17 Dec 03
<i>[Signature]</i>	18 Dec 03

DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED TOLERANCES:

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

INTERNAL ∇
 EXTERNAL ∇



DESCRIPTIVE DRAWING

TITLE AX1, X1 & X1/2 CAPSULE ASSY
 SIZE DWG. NO. RBA10880
 SCALE: NONE SHEET 1 OF 1

ERF # 732

ITEM 7

REV D