



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/0283/S-96, REVISION 7

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 - 3M Model 3F1G capsules manufactured prior to August 3, 1989.
2. Source Description - Double encapsulation made of stainless steel and tungsten inert gas welded. Approximate outer dimensions are 19.1 mm (0.75 in.) in diameter and 10.2 mm (0.4 in.) in length. Construction shall be in accordance with attached 3M Drawing No. SM-B-509057 (3 pages).
3. Radioactive Contents - No more than 18.5 GBq (0.5 Ci) of Strontium-90 in the form of 3M Brand Radiating Microspheres.
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 February 28, 2023. Previous editions which have not reached their expiration date may continue to be used.

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.

CERTIFICATE USA/0283/S-96, REVISION 7


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 February 13, 2018 petition by Department of the Army, Scott AFB, IL, and in consideration of other information on file in this Office.

Certified By:



March 02, 2018

(DATE)

 William Schoonover
Associate Administrator for Hazardous
Materials Safety

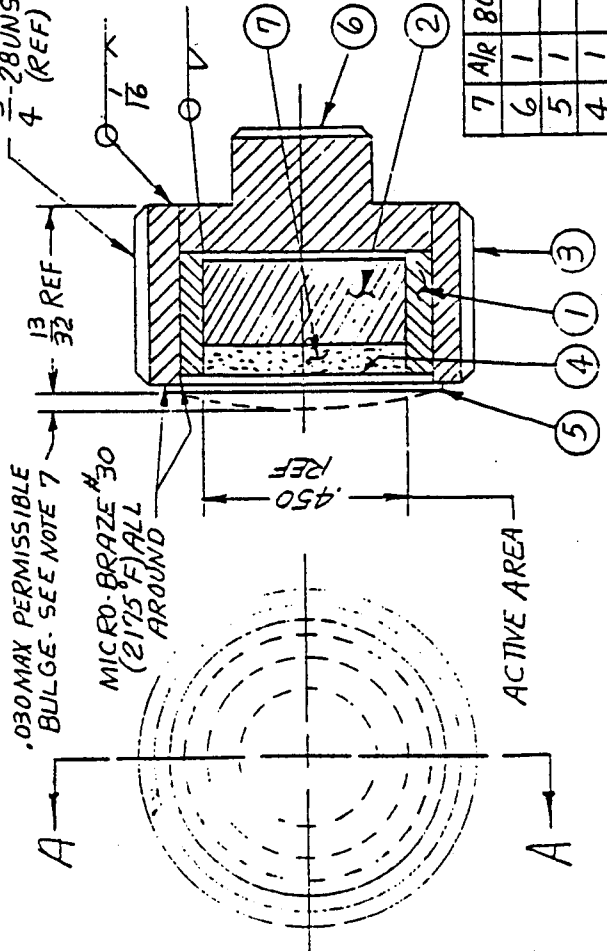
Revision 7 - Issued to extend the expiration date.

THIS DOCUMENT HAS BEEN PURCHASED BY THE GOVERNMENT AND MAY BE REPRODUCED AND USED IN CONNECTION WITH ANY GOVERNMENT PROCUREMENT OR MAINTENANCE OPERATION.

NOTE: DATA MARKED WITH AN ASTERISK (*) IS PECULIAR TO A PRIOR MANUFACTURER. IT DOES NOT TAKE PRECEDENCE OVER ANY OTHER DATA ON THIS DRAWING, AND IS NOT CONTRACTUALLY BINDING ON EITHER THE CONTRACTOR OR THE GOVERNMENT.

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
C	REDRAWN WITH ECP W/BFBZAE010, NDR 020	13 AUG 61	ES. HJW



SOURCE CONTROL DRAWING

FIND NO.	QTY REQD	CODE IDENT.	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	NOTE
7	1	80063	SM-B-509057-1	MATERIAL, RADIOACTIVE PLUG		849
6	1		SM-B-509054	WINDOW, OUTER		
5	1		SM-B-509053	WINDOW, INNER		
4	1		SM-B-509052	CAPSULE, OUTER		
3	1		SM-B-509051	PLUG		
2	1		SM-B-509050	CAPSULE, INNER		
1	1		SM-B-509049			

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: FRACTIONS DECIMALS ANGLES

MATERIAL:

DA-28-043-AMC-02402E

DEPARTMENT OF DEFENSE
U. S. ARMY ELECTRONICS COMMAND
FORT MONMOUTH
NEW JERSEY 07703

SOURCE ASSEMBLY

SIZE CODE IDENT NO. B 80063

SM-B-509057

DATE 24 FEB 69

SHEET 1 OF 3

APPROVED SOURCE	3M CO ST PAUL MINN. 55105
MFG PART NO	SOURCE
3 FIG	

SM-D-508994	USED ON
SM-D-508981	DL-508965
NEXT ASSY	APPLICATION

WHEN REFERRING TO THIS DRAWING STATE DRAWING NO., APPLICABLE ISSUE LETTER IF ANY, AND DATE

Encl 14

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REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
C	SEE SHEET 1	13796 81	ES-HJW

NOTES

- THIS ASSEMBLY SHALL MEET SPECIAL FORM MATERIAL TEST REQUIREMENTS OF TITLE 49, CODE OF FEDERAL REGULATIONS.
- THE STRONTIUM -90 (SR90) SOURCES MUST MEET THE ANSI CLASSIFICATION OF 4343 (REFERENCE ANSI N542-1977).
- THE RADIOACTIVE SOURCE ASSEMBLY MUST BE EVALUATED AND APPROVED FOR USE BY THE NUCLEAR REGULATORY COMMISSION OR AGREEMENT STATE. CONTRACTOR TO SUBMIT DOCUMENTATION OF THE ABOVE TO HEADQUARTERS, CECOM, DRSEL-SF-H, FORT MONMOUTH, NJ 07703.
- WHEN THE SOURCE ASSEMBLIES ARE INSTALLED IN THE AM/UDM-2 () RADICAL CALIBRATOR, EACH ASSEMBLY SHALL MEET THE FOLLOWING REQUIREMENT AND TEST PARAGRAPHS OF SPEC MIL-R-55350:

REQT PARA

- 3.4.1.1
- 3.4.1.3

TEST PARA

- 4.6.1.1
- 4.6.1.3

- IN ADDITION, EACH SOURCE ASSEMBLY SHALL MEET THE FOLLOWING REQUIREMENT AND TEST PARAGRAPHS OF SPEC MIL-R-55350:

REQT PARA

- 3.11
- 3.11.1
- 3.11.1.1
- 3.11.1.2
- 3.11.1.3

TEST PARA

- 4.10
- 4.10.1.1
- 4.10.1.3
- 4.10.1.2 & 4.10.1.4
- 4.10.1.5

- BACK SURFACE TO BE PAINTED RED (COMMERCIAL) FOR IDENTIFICATION AND EACH SOURCE ASSEMBLY SHALL CONTAIN A SERIAL NUMBER IN ACCORDANCE WITH PARAGRAPH 3.9.2 OF MIL-R-55350.
- AIR PRESSURE BUILD UP DURING ASSEMBLY PROCEDURES MAY PRODUCE BULGING OF EITHER OR BOTH ITEMS 4 OR 5. ACCEPTABLE BULGING IS AS NOTED.
- THE SR-90 RADIOISOTOPE SHALL BE CONTAINED IN A CERAMIC CARRIER MATERIAL. THIS CARRIER SHALL BE SPHERICAL, DRY, FREE FLOWING MATERIAL WITH AT LEAST 95% HAVING A DIAMETER IN THE RANGE OF 35 MICRONS MINIMUM AND 65 MICRONS MAXIMUM.
- THE SR-90 RADIOISOTOPE WHEN CONTAINED IN THE CARRIER SHALL BE IDENTIFIED AS THE ACTIVATOR.
- THE ACTIVATOR SHALL HAVE A MINIMUM SPECIFIC ACTIVITY OF 100 MILLICURIES PER GRAH OF ACTIVATOR.
- THE ACTIVATOR SHALL EXHIBIT A SOLUBILITY NOT IN EXCESS OF 0.1 PERCENT WHEN A SAMPLE IS SOAKED AT 25°C FOR 24 HOURS IN 100 MILLILITERS OF 0.1 NORMAL HYDROCHLORIC ACID.
- THE VENDOR OF THE SOURCE ASSEMBLY SHALL UTILIZE A QUALITY ASSURANCE SYSTEM THAT MEETS THE REQUIREMENTS OF MIL-Q-9859.
- PRIOR TO THE AWARD OF A CONTRACT FOR SOURCE ASSEMBLIES, THE VENDOR SHALL SUBMIT FOR APPROVAL WRITTEN PROCEDURE FOR:
 - MEASURING THE RADIATION OUTPUT OF THE SR-90 SOURCES.

FIND NO.	QTY REQD	CODE IDENT.	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	NOTE
				PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: FRACTIONS DECIMALS ANGLES						
MATERIAL:						
ELECTRONICS COMMAND						
REVIEWED						
APPROVED						
DATE						
SM-D-508994				DEPARTMENT OF DEFENSE		
SM-D-508981				U. S. ARMY ELECTRONICS COMMAND		
NEXT ASSY USED ON				FORT MONMOUTH NEW JERSEY 07703		
DL-508965				SOURCE ASSEMBLY		
APPLICATION				SIZE CODE IDENT NO.		
				B 80063 SM-B-509057		
				SCALE		
				SHEET 2 OF 3		

THIS DOCUMENT HAS BEEN PURCHASED BY THE GOVERNMENT AND MAY BE REPRODUCED AND USED IN CONNECTION WITH ANY GOVERNMENT PROCUREMENT OR MAINTENANCE OPERATION.

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REVISIONS		
LTR	DESCRIPTION	DATE APPROVED
C	SEE SHEET 1	13/2/70 ES, H/iv

B. DETERMINE THE QUANTITY OF SR-99 CONTAINED IN EACH SOURCE ASSEMBLIES.

12. ONLY THE ITEM DESCRIBED ON THIS DRAWING WHEN PROCURED FROM THE VENDORS LISTED HEREON IS APPROVED BY HDOTRS, CS&TA LABS (ERADCON), FT. MONMOUTH, NJ 07703 FOR USE IN THE APPLICATION SPECIFIED HEREON. A SUBSTITUTE ITEM SHALL NOT BE USED WITHOUT PRIOR TESTING AND APPROVAL BY HDOTRS, CS&TA LABS. PRIOR TO SUBMISSION FOR HDOTRS, CS&TA LABS APPROVAL, THE SUBSTITUTE ITEM SHALL MEET NOTES 1-11 REQUIREMENTS.

FIND NO.	QTY REQD	CODE IDENT.	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	NOTE
				DEPARTMENT OF DEFENSE U. S. ARMY ELECTRONICS COMMAND FORT MONMOUTH NEW JERSEY 07703		
				SOURCE ASSEMBLY		
				SIZE	CODE IDENT NO.	
				B	80063	SM-B-509057
				SCALE		SHEET 3 OF 3

PARTS LIST	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: FRACTIONS DECIMALS ANGLES	<div style="text-align: center; border: 1px solid black; width: 100px; height: 100px; margin: 0 auto;">X</div>
MATERIAL:	ELECTRONICS COMMAND
	REVIEWED
	APPROVED
	DATE

5M-D-508994	APPLICATION
5M-D-508981	USED ON
NEXT ASSY	



U.S. Department of
Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

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

CERTIFICATE NUMBER: USA/0283/S-96

ORIGINAL REGISTRANT(S) :

Department of the Army
Military Surface Deployment and Distribution Command
Bldg 1900W
1 Soldier Way
Scott AFB, IL, 62225
USA