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

U.S. Department of Transportation

Pipeline and Hazardous Materials Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS

CERTIFICATE USA/0523/S-96, REVISION 5

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[1] and the United States of America[2] for the transport of radioactive material.

1. Source Identification - J.L. Shepherd & Associates Model No. 7810-484-1.

2. Source Description - The source is a double encapsulation of Type 304 stainless steel, with outer dimensions of diameter 16.4 mm (0.644 in.) and length 170 mm (6.68 in.). The inner capsule is 14.4 mm (0.567 in.) in diameter by 161 mm (6.35 in.) long. End plugs on both capsules are sealed by tungsten inert gas welds. The thickness of the outer wall is 0.76 mm (0.03 in.), and that of the inner wall is 0.51 mm (0.02 in.). All plug thicknesses are 2.54 mm (0.10 in.). Source is to be manufactured in accordance with attached J.L. Shepherd & Associates Drawing Nos. A-0484-3245-1 and A-0484-3245-2.

3. Radioactive Contents - No more than 244 TBq (6600 Ci) of Co-60 in the form of rods measuring 6.35 mm (0.25 in.) in diameter and from 2.0 mm (0.08 in.) to 51 mm (2.0 in.) in length, or pellets measuring approximately 1 mm (0.04 in.) in diameter. Spacers of stainlees steel and pellets of Co-59 may be used to fill void spaces.

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[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/0523/S-96, REVISION 5

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, 2026. 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 May 26, 2021 petition by J.L. Shepherd & Associates, San Fernando, CA, and in consideration of other information on file in this Office.

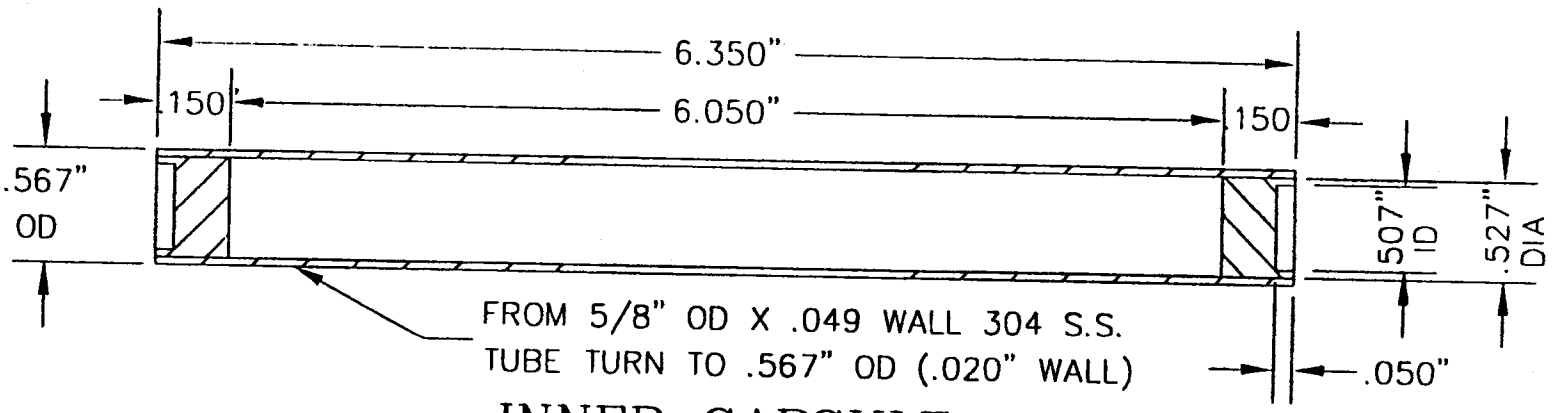
Certified By:

July 02, 2021

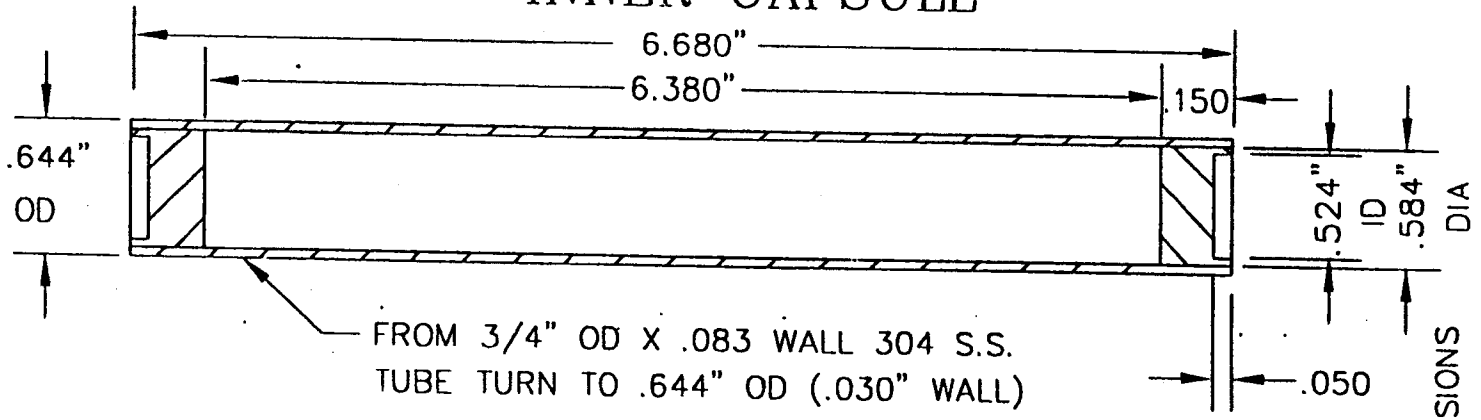
William Schoonover
Associate Administrator for Hazardous Materials Safety

(DATE)

Revision 5 - Issued to extend the expiration date.



INNER CAPSULE



OUTER CAPSULE

NOTES:

1. HELIARC ALL AROUND BOTH ENDS
2. ENDCAPS – 304 S.S.
3. SOURCES CERTIFIED "SPECIAL FORM"
4. END CAPS HAVE .002 REGISTER
5. BEFORE LOADING, 1 END OF EA. TUBE WELDED & HELIUM LEAK TESTED TO SENSITIVITY OF 1 X 10^{-6} CC/MIN
6. REMOVEABLE CONTAMINATION (LEAK TEST) AFTER LOADING $\leq$ 5 X 10^{-3} μCI
7. SCRIBE / ENGRAVE 3/32" HIGH LETTERS:
   JLS 7810-484-1_____Ci Co-60
   S/N_____ DATE _____

7-22-02 REV. (A) REVISED DIMENSIONS

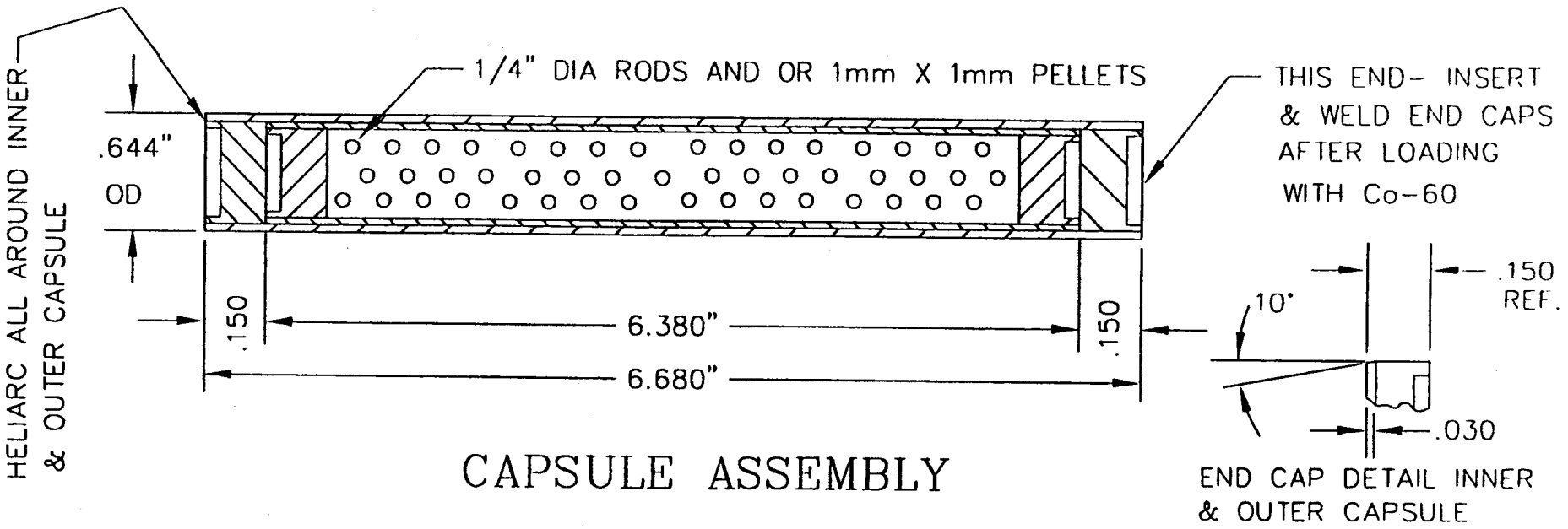
J. L. SHEPHERD and Associates

DRAWN BY	DATE	APPROVED BY	SCALE
D. TRAN	09-10-96		NONE

SOURCE CAPSULE FOR MODEL 7810-484-1

A-0484-3245-1

ORIGINAL



CAPSULE ASSEMBLY

END CAP DETAIL INNER & OUTER CAPSULE

NOTES:

1. HELIARC ALL AROUND BOTH ENDS
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5. BEFORE LOADING, 1 END OF EA. TUBE WELDED & HELIUM LEAK TESTED TO SENSITIVITY OF 1 X 10^{-6} CC/MIN
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7. SCRIBE / ENGRAVE 3/32" HIGH LETTERS:
   JLS 7810-484-1_____Ci Co-60
   S/N_____ DATE _____

7-22-02 REV. (A) REVISED DIMENSIONS

J. L. SHEPHERD and Associates		SCALE NONE	
DRAWN BY D. TRAN	DATE 09-10-96	APPROVED BY	
SOURCE CAPSULE FOR MODEL 7810-484-1			A-0484-3245-2

ORIGINAL

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

U.S. Department of Transportation

Pipeline and Hazardous Materials Safety Administration

CERTIFICATE NUMBER: USA/0523/S-96

ORIGINAL REGISTRANT(S):

J.L. Shepherd & Associates
1010 Arroyo Ave.
San Fernando, CA, 91340-1822
USA