



U.S. Department  
of Transportation  
**Pipeline and  
Hazardous Materials  
Safety Administration**

**IAEA CERTIFICATE OF COMPETENT AUTHORITY  
SPECIAL FORM RADIOACTIVE MATERIALS  
CERTIFICATE USA/0530/S-96, REVISION 3**

East Building, PHH-23  
1200 New Jersey Avenue Southeast  
Washington, D.C. 20590

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<sup>1</sup> and the United States of America<sup>2</sup> for the transport of radioactive material.

1. Source Identification - J.L. Shepherd & Associates Model 8810-AmBe-154.
2. Source Description - Cylindrical triple encapsulation made of stainless steel and tungsten inert gas seal welded. Approximate exterior dimensions are 29.0 mm (1.14 in.) in diameter and 50.0 mm (1.96 in.) in length. Construction shall be in accordance with attached J.L. Shepherd and Associates Drawing No. A-0503-4225.
3. Radioactive Contents - No more than 185.0 GBq (5.0 Ci) of Americium-241. The Am-241 is in the form of an oxide mixed with a beryllium powder.
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations<sup>1</sup> 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.
5. Expiration Date - This certificate expires on March 31, 2019.

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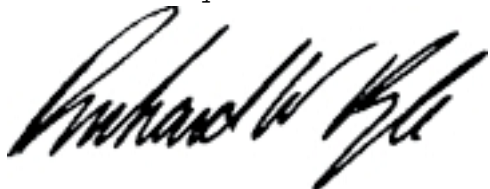
<sup>1</sup> "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

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

**CERTIFICATE USA/0530/S-96, REVISION 3**


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 March 06, 2014 petition by J.L. Shepherd & Associates, San Fernando, CA, and in consideration of other information on file in this Office.

Certified By:



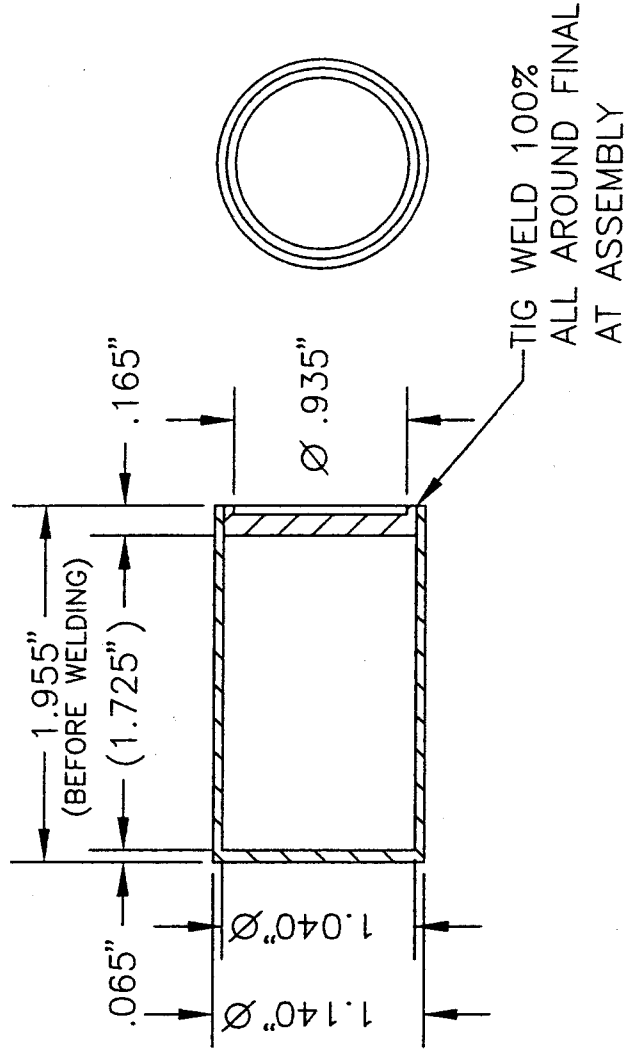
**Mar 21 2014**

(DATE)

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Dr. Magdy El-Sibaie  
Associate Administrator for Hazardous Materials Safety

Revision 3 - Issued to extend the expiration date.

| REVISIONS |             |      |          |
|-----------|-------------|------|----------|
| REV       | DESCRIPTION | DATE | APPROVED |
|           |             |      |          |



- NOTE:
1. END CAP - 304 SS.
  2. SOURCE CERTIFIED "SPECIAL FORM".
  3. END CAP HAS .002" REGISTER, .0005" INTERFERENCE FIT.
  4. REMOVEABLE CONTAMINATION (LEAK TEST) AFTER LOADING  $\leq 5 \times 10^{-3}$  mCi.
  5. SCRIBE / ENGRAVE 3/32" HIGH LETTERS (MIN.): "JLS 7810-109R 5 Ci 241-AM/BE S/N 1400 AM 29 DATE:10/31/96
  6. WELD PENETRANT TEST REQUIRED AFTER LOADING.
  7. ALL DIM'S +/- .002"

MATL = 304 SS (MACHINE FROM ROD)  
 INNER CAPSULE = NUMEC AM-154

WITH OPTIONAL CAP

|                                       |          |             |       |
|---------------------------------------|----------|-------------|-------|
| J. L. SHEPHERD and Associates         |          |             |       |
| DRAWN BY                              | DATE     | APPROVED BY | SCALE |
| D. TRAN                               | 01-15-97 | o/7 s.      | FULL  |
| TERTIARY "SPECIAL FORM" ENCAPSULATION |          |             |       |
| FOR NUMEC AM-154                      |          | A-0503-4225 |       |



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Hazardous Materials  
Safety Administration**

**CERTIFICATE NUMBER:** USA/0530/S-96, Revision 3

**ORIGINAL REGISTRANT(S):**

Ms. Mary Shepherd  
Vice President  
J.L. Shepherd & Associates  
1010 Arroyo Ave.  
San Fernando, 91340-1822  
USA