



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/0159/S-96, REVISION 9

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 - E.I. Dupont/NEN Model NER-478C.
2. Source Description - Cylindrical single encapsulation containing a tungsten insert to which the vitreous ceramic source material is fused. Capsule, including window, is constructed of CRES Type 316L stainless steel, with tungsten inert gas welding. Capsules are 7.9 mm (0.31 in.) to 15.2 mm (0.60 in.) in diameter and 5.1 mm (0.20 in.) to 8.1 mm (0.32 in.) in length. Gamma window thickness is approximately 0.25 mm (0.010 in.). Sources must conform to attached New England Nuclear Corp. Drawing No. 313-301.
3. Radioactive Contents - No more than 0.074 TBq (2.0 Ci) of Americium-241 as a vitreous ceramic.
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.

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/0159/S-96, REVISION 9

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

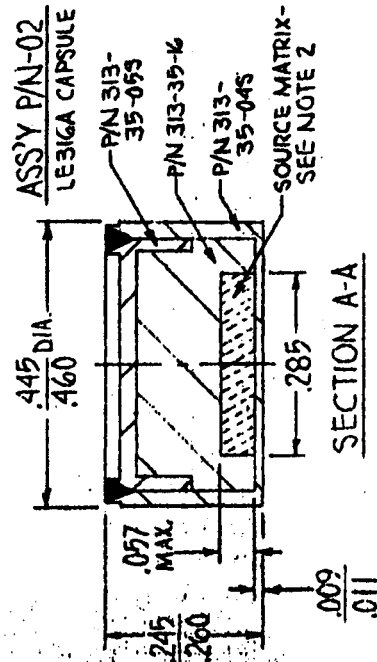
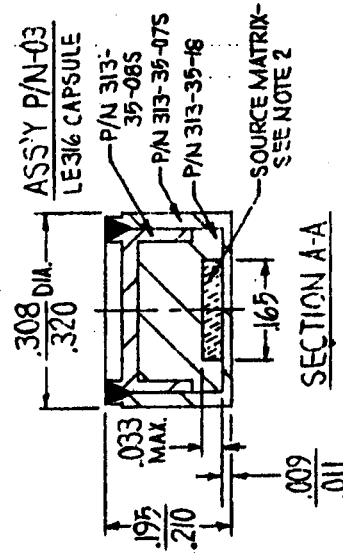
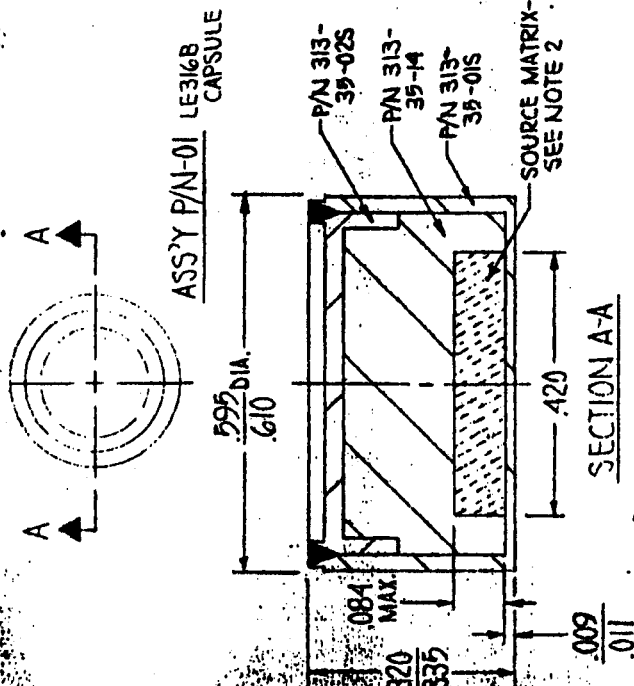
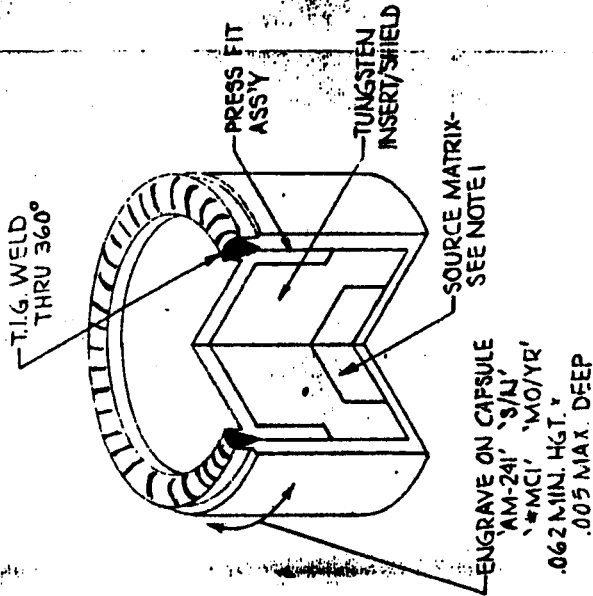
(DATE)

 William Schoonover
Associate Administrator for Hazardous
Materials Safety

Revision 9 - Issued to extend the expiration date.

NOTES

- SOURCE MATRIX CONSISTS OF AM-241 AS A VITREOUS CERAMIC AND FUSED TO THE TUNGSTEN INSERT, FORMING A CERAMIC GLAZE.
- MAXIMUM ACTIVITY CONTENT:
LE316 2000 MCI.
LE316A 2000 MCI.
LE316B 2000 MCI.
- NOMINAL ACTIVITY TOLERANCE +15%, -10%.
- LEAK TEST PER ANSI N542-1977 PROCEDURES, A2.1.1 SMEAR TEST, A2.1.3 IMMERSION TEST, AND A2.2.1 BUBBLE TEST. SEE NSQA TEST DIRECTIVE 003. LIMIT 1×10^{-3} /CI.
- ANSI N542-1977 PERFORMANCE CLASSIFICATION: CG 444.
- D.O.T. 'SPECIAL FORM' MAT'L PER 10CFR71.4.



NEW ENGLAND NUCLEAR CORP.

MATERIAL SPECIFICATIONS		FRACTIONAL	DECIMAL	ANGULAR
CRES 316L STN. STL.		$\frac{1}{16}$.005	$\pm 30'$
DATE	8-29-78	SCALE	N.T.S.	
DRWING NO.	NER-478C AM-241 L.E.	DO NOT SCALE DRAWING	DRAWING NO. 313-301	
CHECKED	J. SUMARES		PHOTON SOURCE	
APPROV				



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CERTIFICATE NUMBER: USA/0159/S-96

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