



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/0185/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 Agency<sup>1</sup> and the United States of America<sup>2</sup> for the transport of radioactive material.

1. Source Identification - New England Nuclear Model No. NER-476C.
2. Source Description - Source is a single encapsulation of Type CRES 316L stainless steel, tungsten-inert-gas welded, in the form of a circular annulus of outer diameter 51 mm (2.0 in.), inner diameter 24 mm (0.95 in.), and height 8 mm (0.31 in.). Source material is embedded in a vitreous ceramic fused to an annular groove in an annular tungsten insert. Gamma window has a thickness of 0.25 mm (0.01 in.). Capsule weight is 220 g (0.48 lb). Construction shall be in accordance with attached New England Nuclear Corporation Drawing No. 313-390.
3. Radioactive Contents - Not more than 0.074 TBq (2.0 Ci) of Americium-241 in ceramic fused to the tungsten insert.
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.

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<sup>1</sup> "Regulations for the Safe Transport of Radioactive Material, 2012 Edition, No. SSR-6" 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/0185/S-96, REVISION 9**


5. Expiration Date - This certificate expires on September 30, 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 August 31, 2021 petition by Eckert & Ziegler Isotope Products, Valencia, CA, and in consideration of other information on file in this Office.

Certified By:



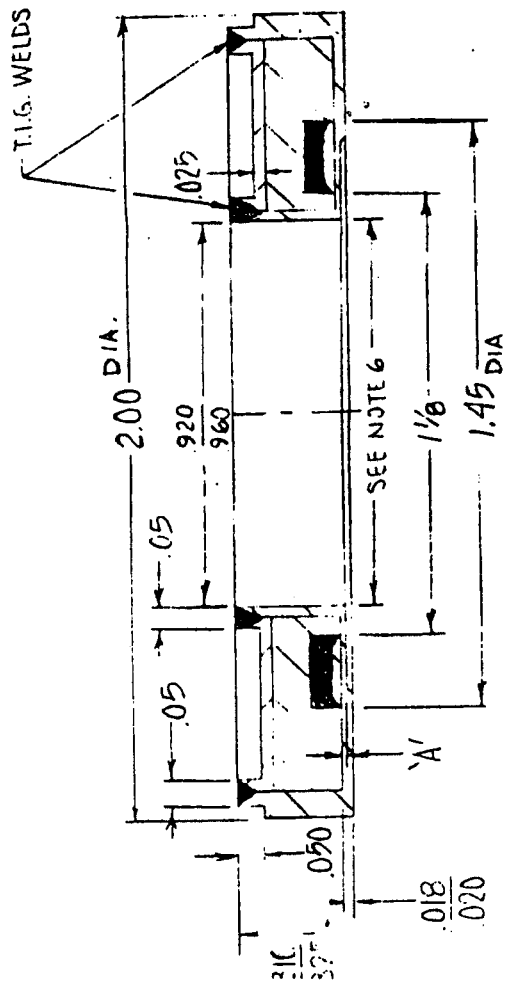
September 24,  
2021

 William Schoonover  
Associate Administrator for Hazardous  
Materials Safety

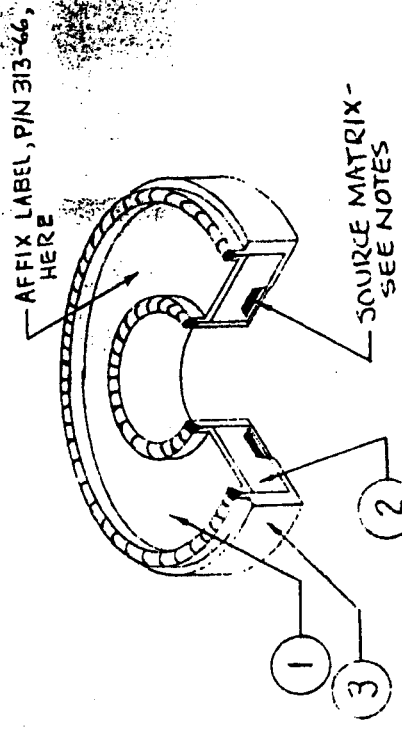
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(DATE)

Revision 9 - Issued to extend the expiration date.

DATE	REVISION RECORD	AUTH



SECTION VIEW



ASSY P/N-01		ASSY P/N-02	
ITEM NO.	PART NO.	ITEM NO.	PART NO.
1	313-28-01	1	313-268-01
2	313-28-02	2	313-268-02
3	313-28-03	3	313-268-03

NOTES

- ASSY MODEL: CAPSULE WINDOW ANSIN 542-1977  
PIN NUMBER: MAT'L THICKNESS(A) CLASSIFICATION  
-01 NER-476C LEA66 1100 ALJM. 6 MIL 77C93322  
-02 NER-476C LEA31/2 36LSTH. STL. 10 MIL 77C6644
- SOURCE MATRIX CONSISTS OF AM-241 INCORPORATED INTO A VITREOUS CERAMIC & FUSED TO THE TUNGSTEN ALLOY SHIELD (ITEM NO. 2).
- NOMINAL ACTIVITY TO BE SPECIFIED ON PURCHASE ORDER. TOLERANCE TO BE +15%, -10%. MAXIMUM ACTIVITY CONTENT TO BE 2000 MCI.
- LEAK TEST PER ANS/N542-1977 PROCEDURES A2.2.1 AND A2.1.1 OR A2.1.3. LIMIT <math>1 \times 10^{-8}</math> MCI.
- ASSY P/N-02 IS SPECIAL FORM MATERIAL PER 10CFR PART 71.1.
- SELECT A RING SHIELD, P/N 313-32C-07, HAVING AN O.D. THAT SLIP FITS INTO CAPSULE I.D. WHEN ASSEMBLING AN XRF SYSTEM.

TOLERANCES (EXCEPT AS NOTED)		NEW 313 AND NUCLAR COMP	
DECIMAL	XX ± .010	SCALE	1 N.T.S.
FRACTIONAL	± XX ± .005	DRAWN BY	APPROVED BY
ANGULAR	± 30'	TITLE	NER-476C 241AM ANNUAL SOURCE
		DATE	2-15-80
		DRAWING NUMBER	313-390



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**CERTIFICATE NUMBER:** USA/0185/S-96

**ORIGINAL REGISTRANT(S) :**

Eckert & Ziegler Isotope Products  
24937 Avenue Tibbitts  
Valencia, CA, 91355  
USA