



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE NUMBER USA/0398/S, REVISION 1**


This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in IAEA Regulations¹ and USA regulations² for the transport of radioactive materials.

1. Source Description - The source described by this certificate is identified as CPN Corporation Model No. 131, Part No. T400521. The doubly encapsulated Type 316L stainless steel welded capsule measures 9.0 mm (.356") in diameter by 12.7 mm (.500") in length.
2. Radioactive Contents - This source consists of not more than 0.00185 TBq (50 mCi) of Americium-241 oxide in a beryllium metal powder pressed to form a pellet.
3. Expiration Date - This certificate expires July 31, 1992.

This certificate is issued in accordance with paragraph 803 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, and in response to the August 3, 1989 petition by CPN Corporation, Martinez, CA, and in consideration of the associated information therein, and other information filed with this office.

Certified by:

AUG 8 1989

for

Michael E. Wangler
Chief, Radioactive Materials Branch
Office of Hazardous Materials Transportation

(DATE)

Revision 1 - Issued to clarify the source model identification and to extend the expiration date.

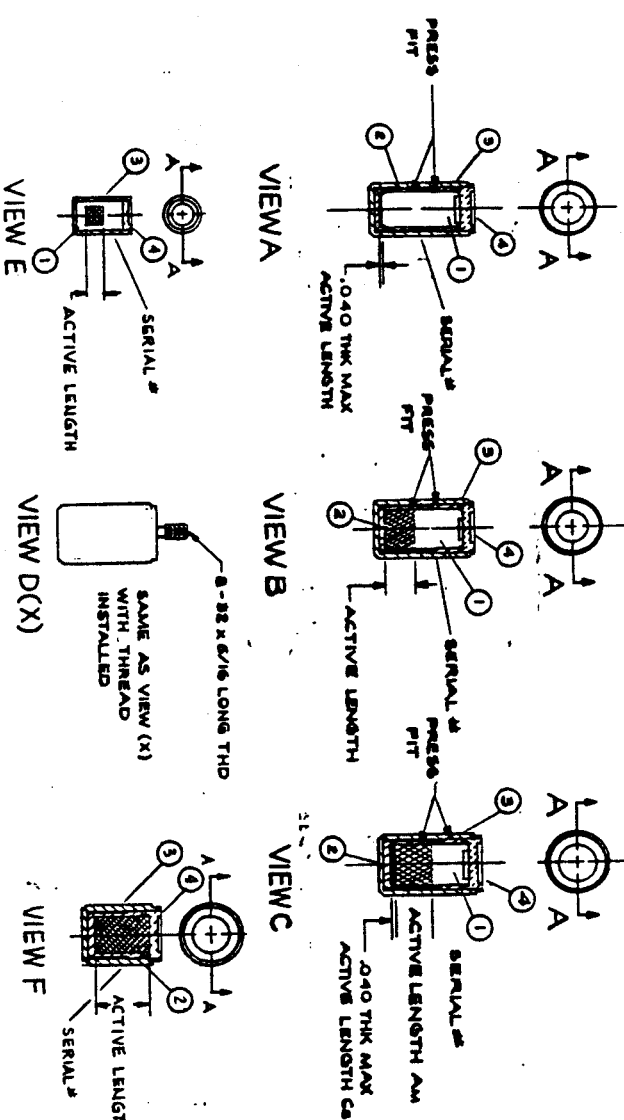
1 "Safety Series No. 6, Regulations for the Safe Transport of Radioactive Materials, 1973 Revised Edition" published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

2 Title 49, Code of Federal Regulations, Parts 100 - 199, USA.

F B EDI/MVA
 ADD SPEC 1, CHNGD SPEC 6,
 .040 WAS .005, CHNGD
 MTL, AND SPEC 7, ADD 11
 ADD VIEW D(X)
 H I Z J K L
 DELETE APPD VENDOR S.P.
 ADD T100A05
 TOL WAS +20% -0%
 H K C G
 ADD Co-60, Cf-252
 Co-60, Cf-252, Y-CI WAS M.C.
 4/4/89 TO
 11-7-88 (4)
 12-3-85 TO
 4-7-86 TO
 5/11/73
 1-24-N TA

SPECIFICATIONS

- 1) SEALED SOURCE: PER ANSI N542 CLASS C64444.
- 2) WALL MATL: .025-.040 THK 316L.
- 3) CLOSURE: DOUBLE FUSION WELD (Co-60 SOURCE).
- 4) STABILITY: ACTIVE MATERIAL FIXED IN PLACE.
- 5) LABELING: ACTIVE MATERIAL AND QUANTITY PLUS VENDORS S/N TO BE STAMPED OR ENGRAVED ON SIDE OF CAPSULE.
- 6) REPORT: A TEST REPORT SHALL BE SUPPLIED STATING THE MEASURED EQUIVALENT ACTIVITY OR NEUTRON EMISSION SHALL MEET ALL REQUIREMENTS FOR "SPECIAL FORM" PER IATA, DANGEROUS GOODS REGULATIONS, US 49 CFR AND IAEA SAFETY SERIES NO. 8.
- 7) TRANSPORTATION: THE ENCAPSULATION SHALL MEET ALL REQUIREMENTS FOR "SPECIAL FORM" PER IATA, DANGEROUS GOODS REGULATIONS, US 49 CFR AND IAEA SAFETY SERIES NO. 8.
- 8) SIZE: 0.250 TO 0.500 DIA BY 0.500 TO 0.750 LONG. SEE TABULATION. TOLERANCE -.005
- 9) LOADING: 0-100 mCi Ca-137 ±12%, 0-500 mCi Am-241/Bg ±10%, 0-10 mCi Ra-226/Bg ±10%, 0-100 mCi Co-60 ±12%, 0-500 mCi Cf-252 ±15%. SEE TAB
- 10) APPROVED VENDORS: SEE TABULATIONS
 A) AMERSHAM
 B) AMERSHAM
- 11) TESTS: PER ANSI WIRE TEST (H) THE SOURCE IS WIPED WITH A SWAB OR TISSUE, MOISTENED WITH ETHANOL OR WATER, THE ACTIVITY REMOVED IS MEASURED. LIMIT: 0.005 %dli.
 BUBBLE TEST (B) THE SOURCE IS IMMERSSED IN A SUITABLE LIQUID (ETHANOL) AND THE PRESSURE IN THE VESSEL REDUCED TO 100mm OF MERCURY. NO BUBBLES MUST BE OBSERVED.
 IMMERSION TEST (I50) THE SOURCE IS IMMERSSED IN WATER AT 50°C FOR 4 HOURS AND THE ACTIVITY IN THE WATER MEASURED. LIMIT: 0.005 %dli.
 IMMERSION TEST (I100) THE SOURCE IS IMMERSSED IN WATER WHICH IS RAISED TO 100°C AND HELD AT THAT TEMP-ERATURE FOR 10 MIN. THE WATER IS THEN REMOVED, THE SOURCE COOLED AND RINSED USING FRESH WATER. THESE OPERATIONS ARE REPEATED TWICE, BOILING IN THE WATER FROM THE PRECEDING RINSING OPERATION. LIMIT: .005 %dli IN ALL THE LIQUID COLLECTED. SEE TABULATION



TABULATION

P/N	Cl-137	Am-241/Bg	Ra-226/Bg	Co-60	Cf-252	SIZE	VIEW	APPR. VEND.	USED ON	TESTS
T400878	10mCi	50mCi	50mCi	10mCi	30mCi	.38 DIA X .380 LONG	A	B, C, I	MC-501	W/B, I50
T400881	10mCi	50mCi	50mCi	10mCi	30mCi	.380 DIA X .380 LONG	B	B, C, I	MC-501	W/B, I100
T800160	10mCi	50mCi	50mCi	10mCi	30mCi	.38 DIA X .380 LONG	C	B, C, I	BRC, MC-5	W/B, I100
T100A05	10mCi	50mCi	50mCi	10mCi	30mCi	.38 DIA X .380 LONG	B	B, C, I	AC-2	W/B, I100
T400982	10mCi	50mCi	50mCi	10mCi	30mCi	.38 DIA X .380 LONG	E	B, C, I	MC-J	W/B
T400981	10mCi	50mCi	50mCi	10mCi	30mCi	.38 DIA X .380 LONG	F	B, C, I	MC-J	W/B, I50

MODEL 4-1-F1
 4-1-F1
 4-1-F1
 4-1-F1

OUTER CAP
 OUTER CAPSULE
 INNER CAPSULE
 INNER PLUG
 CPN
 SOURCE CAPSULE
 MODEL CPN 131
 C200131
 N

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