



# Certificate

## CDN/E170/-96 (Rev. 7)

### Endorsement of Transport Package Design

No. **USA/9263/B(U)-96 (Rev. 12)**

The transport package design identified below is certified by the Canadian Nuclear Safety Commission pursuant to paragraph 21(1)(h) of the *Nuclear Safety and Control Act* and Subsection 10(1) of the *Packaging and Transport of Nuclear Substances Regulations*, 2015 and to the IAEA's *Regulations for the Safe Transport of Radioactive Material*, 2012 Edition.

#### **REGISTRATION OF USE OF PACKAGES**

All users of this authorization shall register their identity in writing with the Canadian Nuclear Safety Commission prior to the first use of this authorization and shall certify that they possess the instructions necessary for preparation of the package for shipment.

#### **PACKAGE IDENTIFICATION**

Designer: **Source Production & Equipment Co., Inc.**

Make/Model: **SPEC-150 Exposure Device**

Mode of Transport: **Air, Sea, Road, Rail**

#### **IDENTIFICATION MARK**

The package shall bear the competent authority identification mark "**USA/9263/B(U)-96**".

#### **PACKAGE DESCRIPTION**

The package consists of a rectangular welded titanium case in which there is a depleted uranium shield cast around an "S" tube of either titanium or zircalloy. The source is securely positioned in the "S" tube by means of a source cable locking device and a shipping plug. The containment system is the sealed source certified as special form radioactive material. The approximate mass of depleted uranium is 17 kg.

An illustration of the package is shown on attached SPEC Drawing No. 15B000 (Rev. 10).



The configuration of the package is as follows:

Shape:	<b>Box</b>	Shielding:	<b>Depleted Uranium</b>
Mass:	<b>24 kg</b>	Outer Casing:	<b>Titanium</b>
Length:	<b>369 mm</b>	Height:	<b>142 mm</b>
Width:	<b>137 mm</b>	Diameter:	<b>n/a</b>

## **AUTHORIZED RADIOACTIVE CONTENTS**

This package is authorized to contain not more than 5.55 TBq (150 Ci) output activity\* of selenium-75, ytterbium-169 or iridium-192 contained in sealed sources meeting the requirements of special form radioactive material within either the SPEC source assembly model G-60 as shown on SPEC Drawing No. B912000 (Rev. 1) or the QSA Global source assembly model 969.

\* Output activity is determined in accordance with American National Standard N432-1980, "Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography."

## **QUALITY ASSURANCE**

Quality assurance for the design, manufacture, testing, documentation, use, maintenance and inspection of the package shall be in accordance with:

- Foreign certificate No. USA/9263/B(U)-96 (Rev. 12)
- Packaging and Transport of Nuclear Substances Regulations, 2015
- IAEA Regulations for the Safe Transport of Radioactive Material, 2012 Edition

## **SHIPMENT**

The preparation for shipment of the package shall be in accordance with:

- Foreign certificate No. USA/9263/B(U)-96 (Rev. 12)
- Packaging and Transport of Nuclear Substances Regulations, 2015
- IAEA Regulations for the Safe Transport of Radioactive Material, 2012 Edition

This certificate is valid only in Canada.

*K. Owen-Whitred*

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K. Owen-Whitred  
Designated Officer pursuant to paragraph 37(2)(a)  
of the Nuclear Safety and Control Act



## **NOTES**

Foreign Certificate No. USA/9263/B(U)-96, (Rev. 12) attached.

Revision 6: June 18, 2015. Issued to incorporate Rev. 11 of foreign certificate.

Revision 7: June 1, 2020. Issued to incorporate Rev. 12 of foreign certificate.



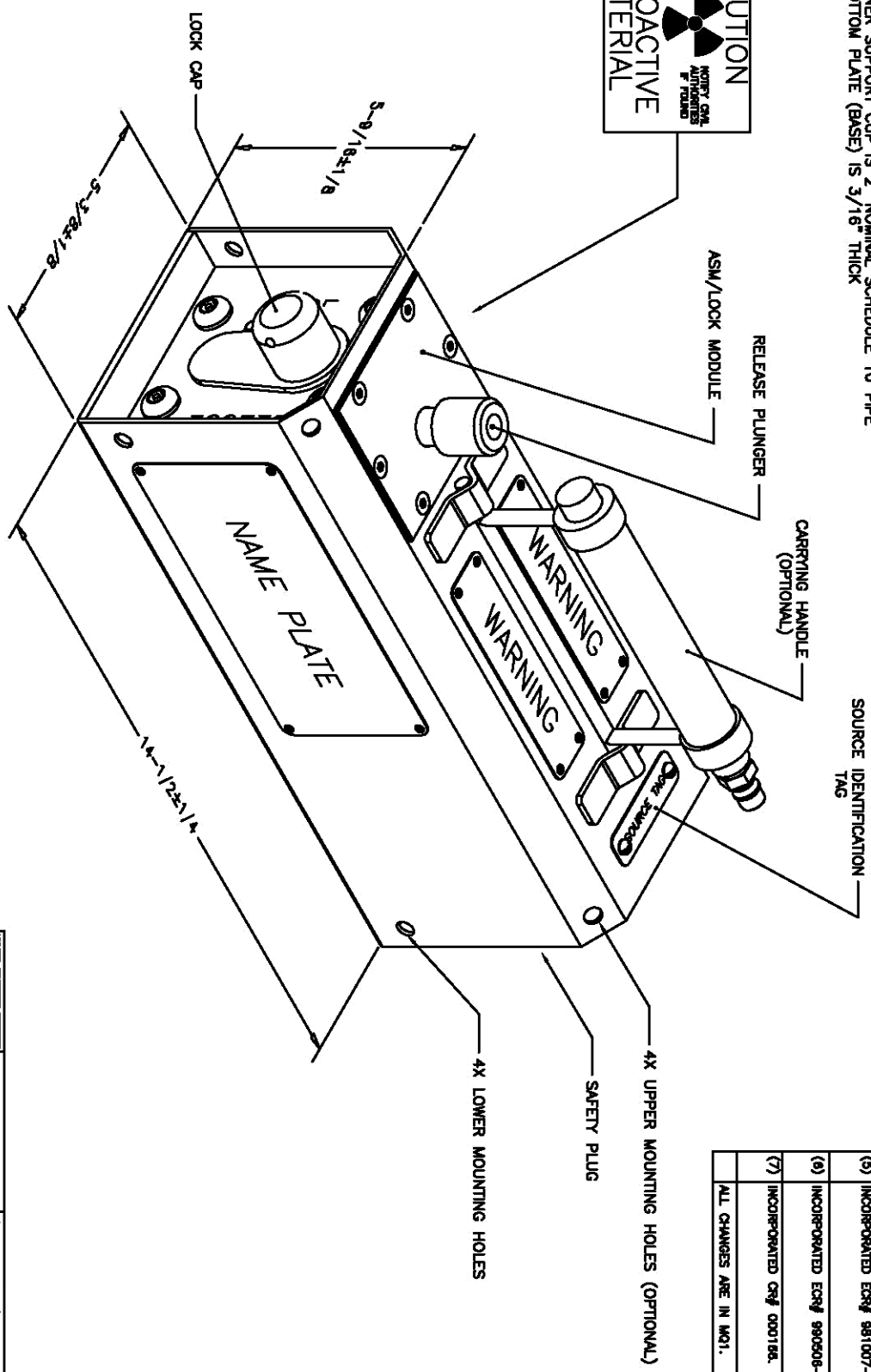
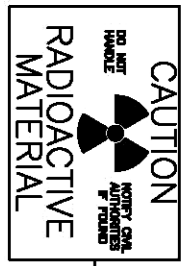
CONTROLLED COPY NO

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
(1)	SEE QA FILE FOLDER 15B000.	3-8-85	S. BYRD KC RJD
(2)	SEE QA FILE FOLDER 15B000.	3-8-85	S. BYRD KC RJD
(3)	SEE QA FILE FOLDER 15B000.	4-14-85	S. BYRD KC RJD
(4)	SEE QA FILE FOLDER 15B000.	9-21-85	S. BYRD KC RJD
(5)	INCORPORATED ECR# 881007-02.	10-15-88	S. BYRD KC RJD
(6)	INCORPORATED ECR# 990508-04.	4-20-89	S. BYRD KC RJD
(7)	INCORPORATED CR# 000184.	3-10-08	JP KR KR
	ALL CHANGES ARE IN MQ1.	3-11-09	MQ1

STATEMENTS OF FABRICATION:

- SUPPLEMENTAL SHIELDING, IF NEEDED TO MEET NORMAL CONDITION DOSE RATE LIMITS, IS ATTACHED TO THE SHIELD OR OTHER PACKAGE COMPONENTS USING ALUMINUM EPOXY POTTING COMPOUND. THE SUPPLEMENTAL SHIELDING CONSISTS OF ONE POUND OR LESS OF DEPLETED URANIUM, TUNGSTEN OR LEAD.
- MAXIMUM WEIGHT: 53.5 LBS.
- SEE DRAWING 15B001-3 FOR MATERIAL SPECIFICATIONS FOR SERIAL NUMBERS 1475 AND NEWER. HOUSING COVER IS 3/32" THICK  
OUTLET END SUPPORT CUP & BULKHEADS ARE 1/8" THICK  
INNER SUPPORT CUP IS 2" NOMINAL, SCHEDULE 10 PIPE  
BOTTOM PLATE (BASE) IS 3/16" THICK



SOURCE PRODUCTION & EQUIPMENT CO., INC. 113 TEAL ST. ST. ROSE, LA 70067	
SPEC-150 TYPE B(U) PACKAGE ISOMETRIC VIEW	SCALE: NTS 15B000
SHEET 1 OF 1	SHEET 1 OF 1