



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

**COMPETENT AUTHORITY CERTIFICATION  
FOR A TYPE B(U)  
RADIOACTIVE MATERIALS PACKAGE DESIGN  
CERTIFICATE USA/9036/B(U)-96, REVISION 16**

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

This certifies that the radioactive material package design described has been certified by the Competent Authority of the United States as meeting the regulatory requirements for a Type B(U) packaging for 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>.

1. Package Identification - C-1.
2. Package Description and Authorized Radioactive Contents - as described in U.S. Nuclear Regulatory Commission Certificate of Compliance No. 9036, Revision 13 (attached).
3. General Conditions -
  - a. Each user of this certificate must have in his possession a copy of this certificate and all documents necessary to properly prepare the package for transportation. The user shall prepare the package for shipment in accordance with the documentation and applicable regulations.
  - b. Each user of this certificate, other than the original petitioner, shall register his identity in writing to the Office of Hazardous Materials Technology, (PHH-23), Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, Washington D.C. 20590-0001.
  - c. This certificate does not relieve any consignor or carrier from compliance with any requirement of the Government of any country through or into which the package is to be transported.

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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.

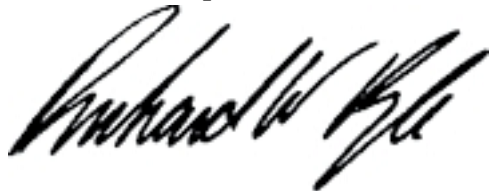
<sup>2</sup> Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

**CERTIFICATE USA/9036/B(U)-96, REVISION 16**

- d. 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.
4. Marking and Labeling - The package shall bear the marking USA/9036/B(U)-96 in addition to other required markings and labeling.
5. Expiration Date - This certificate expires on October 31, 2021. On October 31, 2016, this certificate supersedes all previous revisions of USA/9036/B(U)-96.

This certificate is issued in accordance with paragraph 808 of the IAEA Regulations and Section 173.471 of Title 49 of the Code of Federal Regulations, in response to the July 05, 2016 petition by Source Production and Equipment Company, Inc., St. Rose, LA, and in consideration of other information on file in this Office.

Certified By:



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

Jul 29 2016  
(DATE)

Revision 16 - Issued to endorse U.S. Nuclear Regulatory Commission  
Certificate of Compliance No. 9036, Revision 13.

## CERTIFICATE OF COMPLIANCE FOR RADIOACTIVE MATERIAL PACKAGES

| 1. a. CERTIFICATE NUMBER | b. REVISION NUMBER | c. DOCKET NUMBER | d. PACKAGE IDENTIFICATION NUMBER | PAGE | PAGES |
|--------------------------|--------------------|------------------|----------------------------------|------|-------|
| 9036                     | 13                 | 71-9036          | USA/9036/B(U)-96                 | 1    | OF 3  |

### 2. PREAMBLE

- a. This certificate is issued to certify that the package (packaging and contents) described in Item 5 below meets the applicable safety standards set forth in Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material."
- b. This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported.

### 3. THIS CERTIFICATE IS ISSUED ON THE BASIS OF A SAFETY ANALYSIS REPORT OF THE PACKAGE DESIGN OR APPLICATION

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|--|---|
| <p>a. ISSUED TO (<i>Name and Address</i>)</p> <p>Source Production and<br/>Equipment Company, Inc.<br/>113 Teal Street<br/>St. Rose, LA 70087-9691</p> | <p>b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION</p> <p>Source Production and Equipment Company, Inc.<br/>application dated February 28, 2001, as supplemented</p> |
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### 4. CONDITIONS

This certificate is conditional upon fulfilling the requirements of 10 CFR Part 71, as applicable, and the conditions specified below.

### 5.

#### (a) Packaging

- (1) Model No. C-1
- (2) Description

The packaging consists of a steel inner unit inside an outer overpack. The inner unit is a rectangular box approximately 9" high x 7.5" wide x 7.5" deep around a depleted uranium shield. All fittings and source locking components are protected and enclosed within the 1/8" carbon steel outer shell. The inner receptacle consists of a uranium shield equipped with two closed bottom Zircalloy or titanium "J" tubes, each of which may house one "pigtail type" special form source. The overpack is a 12-gallon, 20- or 22-gage steel drum partially filled with foam. The weight of the inner unit is 51 to 70 lbs. The weight of the overpack is 19 to 22 lbs. Up to 8 lbs. of ancillary equipment may be included within the overpack. The maximum gross weight of the package is 100 lbs.

#### (3) Drawings

The packaging is constructed in accordance with Source Production and Equipment Company, Inc., Drawing Nos. B322000, Rev. (3); B311000, Rev. (2); B311001, Rev. (1); and B311002, Rev. (0).

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5.(b) Contents

(1) Type and form of material

Iridium-192, Selenium-75, and Ytterbium-169 as sealed sources that meet the requirements of special form radioactive material.

(2) Maximum quantity of material per package

Two sealed sources with a combined activity not to exceed 300 curies (11.1 TBq) (output)

Output curies are determined by measuring the source output at 1 meter and expressing its activity in curies derived from the following: 0.48 R/(h-Ci) Iridium-192.

6. Tungsten shield pads, with dimensions up to approximately 2-inches diameter and ½-inch thick, may be welded to the inside surface of the source changer housing.
7. The nameplate shall be fabricated of materials capable of resisting the fire test of 10 CFR Part 71 and maintaining their legibility.
8. In addition to the requirements of Subpart G of 10 CFR Part 71:
  - (a) The package shall be prepared for shipment and operated in accordance with the Operating Procedures of Section 7.0 of the application, as supplemented; and
  - (b) The package shall meet the Acceptance Tests and be maintained in accordance with the Maintenance Program of Section 8.0 of the application, as supplemented.
9. The packaging authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.
10. Revision No. 12 of this certificate may be used until October 31, 2016.
11. Expiration date: October 31, 2021.

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

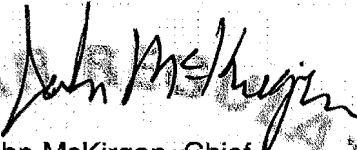
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REFERENCES

Source Production and Equipment Company, Inc., applications dated September 27, 2000, and February 28, 2001.

Supplements dated: April 11 and May 11, 2001; May 1, June 14 and June 23, 2006; May 26, 2011; and May 31, 2016.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



John McKirgan, Chief  
Spent Fuel Licensing Branch  
Division of Spent Fuel Management  
Office of Nuclear Material Safety  
and Safeguards

Date: June 24, 2016





U.S. Department  
of Transportation

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

**Pipeline and  
Hazardous Materials  
Safety Administration**

**CERTIFICATE NUMBER:** USA/9036/B(U)-96, Revision 16

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