



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 15**

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 Agency¹ and the United States of America².

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 12 (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.

¹ "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.

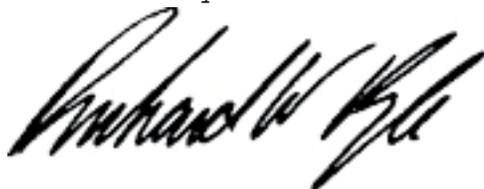
² Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

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- d. Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations¹ 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, 2016.

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 18, 2011 petition by Source Production and Equipment Company, 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

Aug 05 2011
(DATE)

Revision 15 - Issued to endorse U.S. Nuclear Regulatory Commission Certificate of Compliance No. 9036, Revision 12.

**CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIAL PACKAGES**

a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION NUMBER	PAGE	PAGES
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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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| a. ISSUED TO (<i>Name and Address</i>)
Source Production and
Equipment Company, Inc.
113 Teal Street
St. Rose, LA 70087-9691 | b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION
Source Production and Equipment Company, Inc.
application dated February 28, 2001, as supplemented. |
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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. 11 of this certificate may be used until October 31, 2012.
11. Expiration date: October 31, 2016.

**CERTIFICATE OF COMPLIANCE
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REFERENCES

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

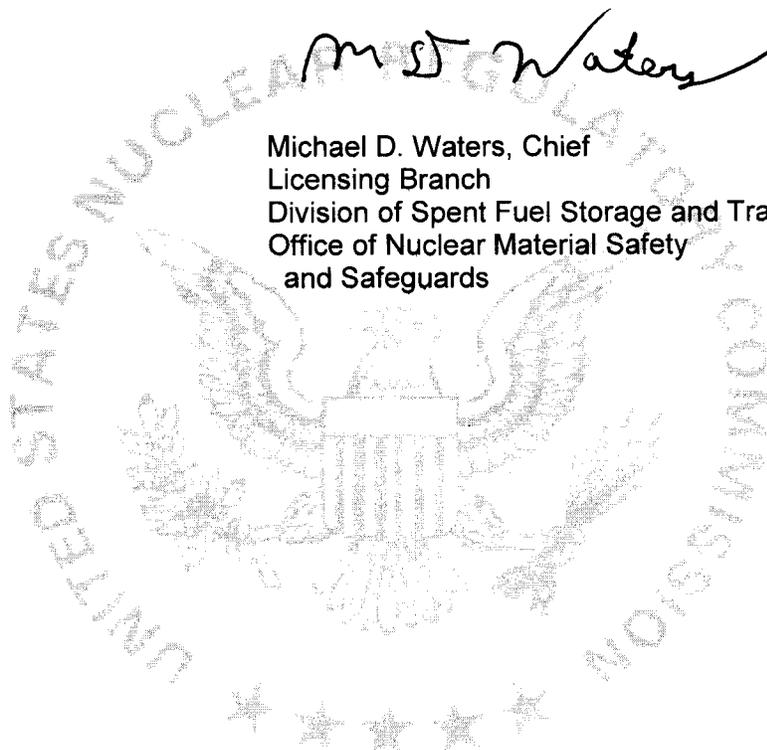
Supplements dated: April 11 and May 11, 2001; May 1, June 14 and June 23, 2006; and May 26, 2011.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Michael D. Waters, Chief
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Date: July 13, 2011.





UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION REPORT

Docket No. 71-9036
Model No. C-1 Package
Certificate of Compliance No. 9036
Revision No. 12

SUMMARY

By application dated May 26, 2011, Source Production & Equipment Co., Inc., requested renewal of Certificate of Compliance No. 9036, for the Model No. C-1 package. Source Production & Equipment Co., Inc., did not request any changes to the package design or authorized contents. The certificate has been renewed for a five year term.

EVALUATION

By application dated May 26, 2011, Source Production & Equipment Co., Inc., requested renewal of Certificate of Compliance No. 9036, for the Model No. C-1 package. Source Production & Equipment Co., Inc., did not request any changes to the package design or authorized contents. The staff reviewed the documents referenced in the certificate and determined that the documentation was available and complete. The staff also reviewed the operating and maintenance procedures for the package and found them to be adequate.

The following changes have been made to the Certificate:

Condition No. 5(b)(2) was revised to clarify the derivation of the maximum quantity of Iridium-192 in terms of output curies, and to include the corresponding radioactivity in units of Terabecquerels.

Condition No. 10 was revised to authorize the use of the previous revision of the certificate for a period of approximately one year.

Condition No. 11 was revised to reflect the new expiration date, October 31, 2016, of the certificate.

CONCLUSION

The certificate has been renewed for a five year term that expires on October 31, 2016. This change does not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9036, Revision No. 12, on
July 13, 2011.



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1200 New Jersey Avenue SE
Washington, D.C. 20590

**Pipeline and
Hazardous Materials
Safety Administration**

CERTIFICATE NUMBER: USA/9036/B(U)-96, Revision 15

ORIGINAL REGISTRANT(S):

Mr. R.D. Donny Dicharry
President
Source Production and Equipment Company
113 Teal Street
St. Rose, 70087-9691
USA

Kelly Richardt
Regulatory and Quality Manager
Source Production and Equipment Company
113 Teal St.
St. Rose, 70087
USA

REGISTERED USER(S):

Ms. Lori Podolak
Product Licensing Specialist
QSA Global, Inc.
40 North Avenue
Burlington, MA 01803

Mr. Marc-Andre Charette
Manager, Regulatory Affairs
MDS Nordion
447 March Road
Ottawa, K2K 1X8
CANADA

Mr. William M. Johnston
Radiation Safety Officer
Global X-Ray & Testing Corporation
P. O. Box 1536
Morgan City, 70381
USA

Drew McCorkle
Century Inspection, Inc.
P.O. Box 59126
Dallas, TX 75229-1126

Ms. Cathleen Roughan
Director, Regulatory Affairs and QA
QSA Global, Inc.
40 North Avenue
Burlington, MA 01803

Robert J. Slack
Director of Regulatory Affairs
MISTRAS Holdings Group, CONAM Inspection & Engineering Services, Inc
899 Carol Court
Carol Stream, IL 60188

T. L. Finkenbinder
Radiation Safety Officer
Western Industrial X-Ray
1707 Enterprise Drive
Unit J
P.O. Box 238
Fairfield, CA 94533

Luc Desgagne
Senior Licensing Coordinator
MDS Nordion
447 March Road
Ottawa, Ontario K2K 1X8
CANADA

Mr. Marc-Andre Charette
Manager, Regulatory Affairs
MDS Nordion
447 March Road
Ottawa, K2K 1XB
CANADA

Mr. Michael Fuller
Regulatory Compliance Associate
QSA Global, Inc.
40 North Avenue
Burlington, MA 01803

Ms. Jackie Kavanagh
Manager, Facility & Transportation Licensing
MDS Nordion
MDS Nordion
447 March Road
Ottawa, K2K 1X8
Canada

Mr. John S. Quinn
Radiation Safety Officer
High Country Fabrication
1000 West 1st Street
Casper, 82604
USA

Mr. Mike Rose
Industrial Nuclear Company, Inc.
14320 Wicks Blvd.
San Leandro, CA 94577