NRC FORM 618
(8-2000)
10 CFR 71

U.S. NUCLEAR REGULATORY COMMISSION

CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIAL PACKAGES

a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION NUMBER	PAGE	PAGES
9269	9	71-9269	USA/9269/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

a. ISSUED TO *(Name and Address)*

QSA Global, Inc.
40 North Avenue
Burlington, MA 01803

b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION

QSA Global, Inc., application dated August 3, 2010, as supplemented.

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.: 650L

(2) Description

A welded carbon or stainless steel cylindrical outer shell encases a welded carbon or stainless steel rectangular inner shell. The inner shell contains a titanium "U" tube set in depleted uranium along with internal supports. The tube is crimped in the middle of the "U" to provide a positive stop for the source assembly. Additional shielding is provided by lead or tungsten positioned at various locations around the depleted uranium shield. The Model No. 650L has two source locking assemblies, mounted on the top cover plate, that are used to secure the radioactive special form source, Iridium-192 or Selenium-75, in a shielded position during transport. The packaging measures approximately 10-inches (254 mm) wide, 13.25-inches (337 mm) high and 8.25-inches (210 mm) deep. The maximum weight of the packaging is 90 pounds (41 kg).

(3) Drawings

The packaging is constructed in accordance with QSA Global, Inc., Drawing No. R65006, Rev. N, sheets 1-5.

(b) Contents

(1) Type and form of material

Iridium-192 as sealed sources which meet the requirements of special form radioactive material.

5. (b) Contents (continued)

Selenium-75 as sealed sources which meet the requirements of special form radioactive material.

(2) Maximum quantity of material per package

Ir-192: 240 curies (8.9 TBq) (output)

Se-75: 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 at 1 meter (Ref: American National Standard N432-1980, "Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography") and 0.2 R/(h-Ci) Selenium-75 at 1 meter (Ref: U.S. Public Health Service, Bureau of Radiological Health, 1970. Radiological Health Handbook, Rockville, MD).

(3) Maximum weight of contents

0.08 pounds (36 grams), including the mass of radioactive material and the weight of the source capsule handling wire assembly for a shipment containing two source wire assemblies.

(4) Maximum decay heat

Ir-192: 4.8 Watts

Se-75: 1.52 Watts

6. The source shall be secured in the shielded position of the packaging by the source assembly. The source assembly must be fabricated of materials capable of resisting a 1475°F fire environment for one-half hour and maintaining its positioning function. The cable of the source assembly must engage the source hold-down assembly. The flexible cable of the source assembly must be of sufficient length and diameter to provide positive positioning of the source at the crimp of the "U" tube.

7. The nameplates 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 in accordance with the Operating Procedures in Chapter 7 of the application, and

(b) The packaging shall be maintained in accordance with the Maintenance Program in Chapter 8 of the application.

9. Fabrication of new packagings is not authorized. Fabrication of replacement components needed to support shipment of existing packages is authorized, except for the depleted uranium shield and the inner carbon steel shell.

10. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.

11. Expiration date: November 30, 2020.

REFERENCES

QSA Global, Inc., application dated August 3, 2010.
Supplements dated August 11 and 25, 2010; December 8, 2014; January 13, 2015, March 23, 2015, May 8, 2015, and July 8, 2015.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Mark Lombard, Director
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

Date: August 3, 2015

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

SAFETY EVALUATION REPORT
Docket No. 71-9269
Model No. 650L
Certificate of Compliance No. 9269
Revision No. 9

SUMMARY

By application dated May 8, 2015, as supplemented July 8, 2015, QSA Global, Inc. (QSA), requested amendment to Certificate of Compliance (CoC) No. 9269, for the Model No. 650L transportation package. QSA requested revising the CoC to include the ability to use a new version of the drawings. The components of the drawings changed are weld call outs, the bottom plate, the outer sleeve, the inner shell, and the lock screws. Staff reviewed these changes and concludes that they do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

EVALUATION

By application dated May 8, 2015, as supplemented July 8, 2015, QSA requested amendment to CoC No. 9269, for the Model No. 650L transportation package. QSA requested revising the CoC to include the ability to use a new version of the drawings. The drawings have been updated to specify the welding standard for the bottom plate and outer sleeve components. These components will be done in accordance with AWS D17.2/D17.2M Resistance Welding for Aerospace Applications. QSA updated their drawings to include a note which discusses the exceptions to this welding standard used for the package. The note clarifies the applicable sections and exceptions to the standard for resistance welds. Resistance welding for this package only applies to Class C welds whose failure will not impact the ability of the package to meet the regulations. The weld callout for the outer sleeve has been removed and instead a reference to the note has been added. As part of adding this standard, the notation for the weld nut spot weld has been clarified as a resistance weld to avoid any confusion of the applicability of AWS D17.2/D17.2M for those welds. The outer sleeve weldment has also been updated to include an alternate construction which is equivalent or stronger than the primary construction.

Additionally, QSA removed a redundant material reference for the inner shell. QSA also added alternate material specifications for the lock screw applicable to screws installed after July 2015. This allows for lock screws that meet the properties of ASTM F879 Austenitic Alloy Group 1, CW, or CW1.

Staff reviewed these changes and concludes that they do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

CONDITIONS

Condition No. 5.(a)(3), "Drawings," has been updated to include the latest revision of the drawings, Revision N.

The references section has been updated to include this request.

CONCLUSION

Based on the statements contained in the application, and the conditions listed above, the staff concludes that the changes indicated do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9269, Revision No. 9,
on August 3, 2015.