

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION NUMBER	PAGE	PAGE
9269	5	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*)
- b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION

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

AEA Technology/QSA Inc., application dated  
July 23, 1999, 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 stainless steel encased, uranium shielded, Iridium-192 or Selenium-75 source changer. Primary components consist of a steel or stainless steel housing, internal supports, depleted uranium shield, and a titanium "U" tube. The tube is crimped in the middle of the "U" to provide a positive stop for the source assembly. Additionally, the Model No. 650L has two source locking assemblies mounted on the top cover plate. These assemblies are used to secure the radioactive source in a shielded position during transport. The unit resembles a rectangular box approximately 10-inches long, 13.25-inches high and 8.25-inches wide. The maximum weight of the package is 90 pounds.

(3) Drawings

The packaging is constructed in accordance with the AEA Technology/QSA Inc., Drawing No. R65006, Rev. H, Sheets 1-4.

## (b) Contents

(1) Type and form of material

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

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

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## 5. (b) Contents (continued)

## (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, rev. ed, Rockville, MD).

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 1475EF 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 of Chapter 7 of the application, and
  - (b) Each package must meet the Acceptance Tests and Maintenance Program of Chapter 8 of the application.
9. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.
10. Revision No. 4 of this certificate may be used until July 31, 2007.
11. Expiration date: November 30, 2010.

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REFERENCES

AEA Technology/QSA Inc. application dated July 23, 1999.

Supplements dated November 19, 1999, October 2 and October 31, 2000, July 8, 2005, and March 1, June 6, June 30 and July 14, 2006.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

Christopher M. Regan, Acting Chief  
Spent Fuel Project Office  
Office of Nuclear Material Safety  
and Safeguards

Date: August 3, 2006

