

**CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIAL PACKAGES**

1.	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

- 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 January 12, 2021.

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.: SENTRY
- (2) Description

The Model No. SENTRY package includes the Model Nos. SENTRY 110, SENTRY 330, and SENTRY 867, as three variations of the same design. The external dimensions of all models in their standard transport configurations, i.e., with the handling rib and link plate assemblies, are identical and are approximately 19 inches (48 cm) wide, 19 inches (48 cm) tall, and 19 inches (48 cm) deep.

The primary components of the SENTRY packages include (i) a depleted uranium shield completely encased and supported in a cylindrically shaped, stainless steel, welded body, (ii) the rear plate lock and front plate assemblies, (iii) the handling rib and link plate, and (iv) the source assembly. The inner cavity of the welded body around the shield is filled with polyurethane foam. The Model Nos. SENTRY 110 and 330 packages can contain only one source wire assembly during transport, while two source wire assemblies can be loaded into the Model No. SENTRY 867 package. The radioactive contents are securely positioned by either a lock slide for the Model Nos. SENTRY 110 and 330 packages or locking pins for the Model No. SENTRY 867 package. All lock assemblies include a dust cover with a plunger lock to prevent rotation of the selector ring and further secure the source in the package during transport.

The optional rib/link assemblies provide lifting attachments and are bolted to the body weldment. The maximum weight, including the optional rib/link assemblies, is 780 pounds (354 kg) for the Model Nos. SENTRY 330 and 867 packages, and 605 pounds (274 kg) for the Model No. SENTRY 110 package.

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5.(a) Packaging (continued)

(3) Drawings

The package is constructed in accordance with QSA Global, Inc., Drawing No. R86000, Rev. U, sheets 1-11.

(b) Contents

(1) Type and form of material

Cobalt-60, as a sealed source, which meets the requirements of special form radioactive material.

All source wire assemblies consist of a special form capsule crimped onto the end of a flexible steel wire.

(2) Maximum quantity of material per package:

Co-60: 110 curies (4.07 TBq) for the Model No. SENTRY 110 package.

Co-60: 330 curies (12.2 TBq) for the Model Nos. SENTRY 330 and 867 packages.

(3) Maximum weight of contents:

0.09 pounds (40 grams) for the Model Nos. SENTRY 110 and 330 packages.

0.18 pounds (80 grams) for the Model No. SENTRY 867 package.

The maximum content weight includes the mass of radioactive material and the source capsule handling wire assembly for a shipment containing the maximum number of source wire assemblies that can be transported in a package, i.e., 1 source wire assembly for the Model Nos. SENTRY 110 and 330 packages, and 2 source wire assemblies for the Model No. SENTRY 867 package.

(4) Maximum decay heat: 5.5 watts

6. A cover over the source wire connector prevents access to the source assembly until a keyed lock is actuated and the cover removed. This cover stays in place during transport of the package.

7. The nameplate shall maintain its legibility and be fabricated of materials capable of resisting the fire test of 10 CFR Part 71.

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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 in Section 7 of the application;
 - (b) The package must meet the Acceptance Tests and Maintenance Program of Section 8.0 of the application.
9. Supplemental shielding shall not exceed 5% of the maximum weight of the depleted uranium casting, with a thickness not to exceed 0.5 inch.
10. Revision No. 6 of this certificate may be used until May 31, 2022.
11. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.
12. Expiration date: May 31, 2026.

REFERENCES

QSA Global Inc., application dated January 12, 2021.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

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

Date: 05/17/2021



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

**SAFETY EVALUATION REPORT
Docket No. 71-9357
Model No. Sentry Package
Certificate of Compliance No. 9357
Revision No. 7**

SUMMARY

By application dated January 12, 2021, QSA Global, Inc. (QSA or the applicant) requested an amendment to Certificate of Compliance (CoC) No. 9357, for the Model No. Sentry Package. QSA requested renewal of the CoC and made minor changes to the safety analysis report (SAR).

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

The applicant, QSA Global, Inc., proposed to make minor typographical and grammatical corrections to the SAR. The applicant provided the following submittals: (i) a list of the affected pages of the SAR, (ii) a summary table of the descriptions of the changes, and (iii) a copy of the SAR with the changes.

CONDITIONS

Condition No. 10 has been updated to allow continued use of the previous revision of the certificate for approximately one year.

Condition No. 11 has been updated to expire May 31, 2026.

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. 9357, Revision No. 7.