



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

October 30, 2009

Mr. Jerry A. Tucker
Quality Assurance Manager/RSO
Industrial Nuclear Company, Inc.
14320 Wicks Boulevard
San Leandro, CA 94577

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 9157 FOR THE MODEL NO. IR-100
PACKAGE

Dear Mr. Tucker:

As requested by your application dated August 20, 2009, enclosed is Certificate of Compliance No. 9157, Revision No. 13, for the Model No. IR-100 package. Certificate changes are indicated by vertical lines placed in the margin. The staff's Safety Evaluation Report has been enclosed also.

Those on the attached list have been registered as users of the package under the general license provisions of 10 CFR 71.17 or 49 CFR 173.471. This approval constitutes authority to use the package for shipment of radioactive material and for the package to be shipped in accordance with the provisions of 49 CFR 173.471. Registered users may request, by letter, to remove their names from the Registered Users List.

If you have any questions regarding this certificate, please contact me or Kimberly Hardin of my staff at (301) 415-8500.

Sincerely,

Steven Braggett, Acting Chief
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9157
TAC No. L24371

Enclosures: 1. Certificate of Compliance
No. 9157, Rev. No. 13
2. Safety Evaluation Report
3. Registered Users List

cc w/encls 1 & 2: R. Boyle, Department of Transportation
J. Shuler, Department of Energy
Registered Users List

**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>)
Industrial Nuclear Company
14320 Wicks Blvd.
San Leandro, CA 94577 | b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION
Industrial Nuclear Company application
dated June 8, 1999, 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.: IR-100
- (2) Description

The Model No. IR-100 package is approximately 8.87 inches long, 4.5 inches wide, and 8.5 inches high. The radioactive material contents consist of iridium-192 in source assemblies that meet the requirements for special form material. The source assemblies are positioned within a zircalloy or titanium "S" tube within the IR-100. The "S" tube is surrounded by a shield assembly made of depleted uranium. The uranium shield assembly is encased in a stainless steel housing. The space between the uranium shield assembly and the stainless steel casing is filled with a rigid polyurethane foam. The maximum weight of the IR-100 exposure device is 53 pounds and the maximum shield weight is 38 pounds.

(3) Drawings

The packaging is constructed in accordance with Industrial Nuclear Company Drawing Nos.: IR 100-1A, Rev. 5 and IR 100-1B, Rev. 2.

(b) Contents

- (1) Type and form of material

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

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1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION NUMBER	PAGE	PAGE
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5. (b) Contents (continued)

(1) Maximum quantity of material per package

120 (output) curies

Output curies are determined in accordance with American National Standard N432-1980, "Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography."

6. The source must be secured in the shielded position of the packaging by the shipping plug, source assembly lock, and lock cap. The shipping plug, source assembly lock, and lock cap used must be fabricated of materials capable of resisting a 1475°F fire environment for one-half hour and maintaining their positioning function. The ball stop of the source assembly lock must engage the locking device. The flexible cable of the source assembly and shipping plug must be of sufficient length and diameter to provide positive positioning of the source in the shielded position.
7. The name plate on the exposure device must be fabricated of materials capable of resisting the fire test of 10 CFR Part 71 and maintaining its legibility.
8. In addition to the requirements of Subpart G of 10 CFR Part 71:
- (a) The package must meet the Acceptance Tests and Maintenance Program of Section 8 of the application; and
 - (b) Each package shall be operated and prepared for shipment in accordance with the operating procedures in accordance with Section 7 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. 12 of this certificate may be used until October 31, 2010.
11. Expiration date: October 31, 2014.

**CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIAL PACKAGES**

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REFERENCES

Industrial Nuclear Company application dated June 8, 1999.

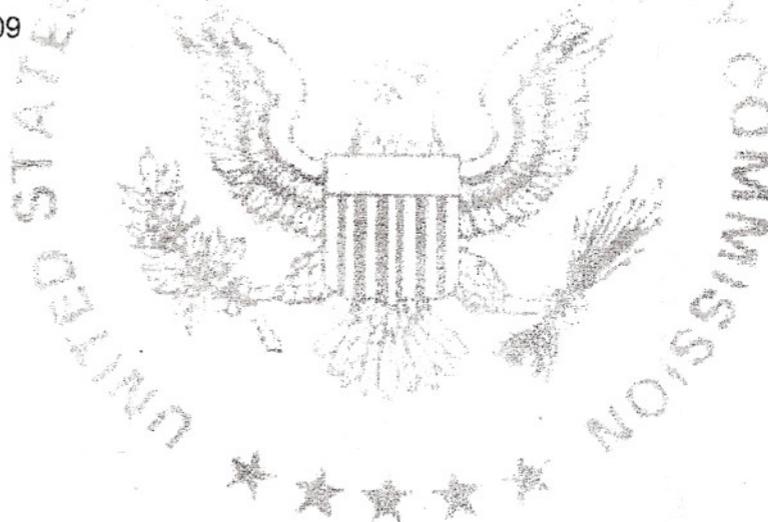
Supplements dated: June 9, August 6 and September 14, 1999; October 24, 2003; August 20, 2004; and March 22, 2007.

Renewal dated: August 20, 2009.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION


Steven Baggett, Acting Chief
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Date: October 30, 2009





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SAFETY EVALUATION REPORT

Docket No. 71-9157
Model No. IR-100 Package
Certificate of Compliance No. 9157
Revision No. 13

SUMMARY

By application dated August 20, 2009, Industrial Nuclear Company, Inc., (INC) submitted an application for renewal of Certificate of Compliance No. 9157 for the Model No. IR-100 package. INC requested no changes to the package design or authorized contents. The certificate has been renewed for a five year term.

EVALUATION:

By application dated August 20, 2009, INC, submitted an application for renewal of Certificate of Compliance No. 9157 for the Model No. IR-100 package and requested no 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 following changes have been made to the Certificate:

The certificate was revised to include Condition No. 10, which authorizes the use of the previous certificate revision for a period of approximately one year.

Condition No. 11 was changed to reflect the new expiration date.

CONCLUSION:

The certificate has been renewed for a five year term that expires on October 31, 2014. 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. 9157, Revision No. 13
on October 30, 2009.