

**CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIALS PACKAGES**

U.S. NUCLEAR REGULATORY COMMISSION

1. a. CERTIFICATE NUMBER 9133	b. REVISION NUMBER 2	c. PACKAGE IDENTIFICATION NUMBER USA/9133/B(U)	d. PAGE NUMBER 1	e. TOTAL NUMBER PAGES 2
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2. PREAMBLE

- a. This certificate is issued to certify that the 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 of Radioactive Materials for Transport and Transportation of Radioactive Material Under Certain Conditions."
- 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. PREPARED BY (Name and Address):

Gamma Industries
P.O. Box 2543
Baton Rouge, LA 70821

b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION

Gamma Industries application dated
April 12, 1982.

71-9133

c. DOCKET NUMBER

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-10

(2) Description

A steel encased, uranium shielded radiographic device. The source exchanger is approximately 7.0 inches long and 5.5 inches in diameter and provided with a 5" high steel handle (1/2" diameter). The radioactive source assembly is housed in a Zircalloy or titanium "S" tube. The tube is surrounded by depleted uranium metal as shielding material. The depleted uranium shield assembly is encased in a steel housing. The void space between the depleted uranium shield assembly and the outer container is filled with a polyurethane foam. The source exchanger is enclosed in a steel box 10-1/2" x 10-1/2" x 17-1/4" long with the steel handle of the source exchanger protruding. The gross weight of the package is 70 pounds.

(3) Drawings

The packaging is constructed in accordance with Gamma Industries Drawing Nos. 637-7001-020, Rev. 2; 637-7001-033A, Rev. -; 637-7001-033B, Rev. -.

(b) Contents

(1) Type and form of material

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

(2) Maximum quantity of material per package

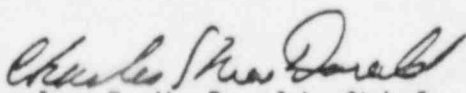
240 curies

6. The minimum depleted uranium shielding thickness must be 1-9/16 inches.
7. The source must be secured in the shielded position of the packaging by the safety cap, source assembly and lock box assembly. The components used to secure the source must be fabricated of materials capable of resisting a 1,475°F fire environment for one-half hour and maintaining their positioning function. The ball stop of the source assembly must engage the locking device. The flexible cable of the source assembly must be of sufficient length and diameter to provide positive positioning of the source at the optimum shielding position at the center of the "S" tube.
8. The name plates must be fabricated of materials capable of resisting the fire test of 10 CFR Part 71 and maintaining its legibility.
9. The packaging must be provided with a tamperproof feature which meets the requirements of 10 CFR §71.43(b).
10. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR §71.12.
11. Expiration date: May 31, 1987.

REFERENCE

Gamma Industries application dated April 12, 1982.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION


Charles E. MacDonald, Chief
Transportation Certification Branch
Division of Fuel Cycle and
Material Safety, NRC

Date: APR 10 1984

QUALITY ASSURANCE PROGRAM APPROVAL
FOR RADIOACTIVE MATERIAL PACKAGES

0040

REVISION NUMBER

2

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Title 10, Code of Federal Regulations, Chapter 1, Part 71, and in reliance on statements and representations heretofore made in Item 5 by the person named in Item 2, the Quality Assurance Program identified in Item 5 is hereby approved. This approval is issued to satisfy the requirements of Section 71.101 of 10 CFR Part 71. This approval is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

2. NAME

Technical Operations, Inc. Radiation Products Division

3. EXPIRATION DATE

October 31, 1989

STREET ADDRESS

40 North Avenue

4. DOCKET NUMBER

CITY

Burlington

STATE

MA

ZIP CODE

01803

71-0040

5. QUALITY ASSURANCE PROGRAM APPLICATION DATE(S)

July 9, 1979 and August 13, 1984

6. CONDITIONS

Activities conducted under applicable criteria of Subpart H of 10 CFR Part 71 to be executed with regard to transportation packages for radioactive material in special form.

840030502 2R

FOR THE U.S. NUCLEAR REGULATORY COMMISSION


Charles E. MacDonald

SEP 25 1984

CHIEF, TRANSPORTATION CERTIFICATION BRANCH
DIVISION OF FUEL CYCLE AND MATERIAL SAFETY
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

DATE

DOCKET NO. 71-0552
CONTROL NO. 25810
DATE OF DOC. 09/12/85
DATE RCVD. 09/16/85
FCUF _____ PDR ☒
FCAF _____ LPDR _____
WM _____ I&E REF. ☒
WMUR _____ SAFEGUARDS _____
FCTC ☒ OTHER _____

DESCRIPTION:

enclosed description
of their Quality
Assurance Program

09/25/85 INITIAL C&C