

**CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIAL PACKAGES**

| 1. a. CERTIFICATE NUMBER | b. REVISION NUMBER | c. DOCKET NUMBER | d. PACKAGE IDENTIFICATION NUMBER | PAGE | PAGES |
|--------------------------|--------------------|------------------|----------------------------------|------|-------|
| 5862 | 9 | 71-5862 | USA/5862/B() | 1 OF | 2 |

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

Department of the Air Force
HQ ATAC/SEG
1030 S. Highway A1A
Patrick AFB, FL 32925-3002

Teledyne Energy Systems application dated
June 26, 1985, 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.: Sentinel-100F

(2) Description

The package, a thermoelectric generator, is 45.5 inches in height with a base diameter of 24.5 inches (excluding mounting pads), and weighs approximately 2,600 pounds. The components include a Tungsten biological shield (10.705" X 13.837" OD) which is within the aluminum (6061) outer protective housing. Four 6061-T6 mounting pads at the base of the aluminum housing provide the shipping pallet attachment points.

(3) Drawings

The packaging is constructed in accordance with the following Isotopes, Inc. Drawing Nos.:

| | |
|-----------|---|
| 010F10000 | Sheets 1-3 (Rev. C), Generator Assembly Sentinel 100F |
| 010-20000 | Sheets 1-2 (Rev. B), Fuel Capsule Assembly |
| 010-70003 | (Rev. A) Shield Body |
| 010-70004 | Shield Plug |
| 001-90064 | Sheets 1-2 (Rev. A), Shipping Crate Sentinel RTG |
| 001-90039 | Sheets 1-2 (Rev. J), Sheet 3 (Rev. H), and Sheet 4, Pallet Assembly |

**CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIAL PACKAGES**

| 1. a. CERTIFICATE NUMBER | b. REVISION NUMBER | c. DOCKET NUMBER | d. PACKAGE IDENTIFICATION NUMBER | PAGE | PAGES |
|--------------------------|--------------------|------------------|----------------------------------|------|-------|
| 5862 | 9 | 71-5862 | USA/5862/B() | 2 OF | 2 |

5. (b) Contents

(1) Type and form of material

Strontium-90 titanate doubly encapsulated in a stainless steel liner and Hastelloy or Uniloy HC capsule which meets the requirements of special form radioactive material.

(2) Maximum quantity of material per package

370,000 curies.

6. Fabrication of additional packagings is not authorized.

7. 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 the supplement dated August 30, 1985.

(b) The package must be maintained in accordance with the Maintenance Program in the supplement dated August 30, 1985.

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

9. Expiration date: October 1, 2008. This certificate is not renewable.

REFERENCES

Teledyne Energy Systems application dated June 26, 1985.

Teledyne supplements dated: August 30, 1985; and July 26, 1990.

Department of the Air Force supplements dated: November 12, 1993; August 15, 1995; August 25, 2000; and August 30, 2005.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

Robert J. Lewis, Chief
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Date: September 29, 2005