Form NRC-618
(12-73)
10 CFR 71

U.S. NUCLEAR REGULATORY COMMISSION

CERTIFICATE OF COMPLIANCE

For Radioactive Materials Packages

1.(a) Certificate Number	1.(b) Revision No.	1.(c) Package Identification No.	1.(d) Pages No.	1.(e) Total No. Pages
5862	2	USA/5862/B( )	1	2

2. PREAMBLE

2.(a) This certificate is issued to satisfy Sections 173.393a, 173.394, 173.395, and 173.396 of the Department of Transportation Hazardous Materials Regulations (49 CFR 170-189 and 14 CFR 103) and Sections 146-19-10a and 146-19-100 of the Department of Transportation Dangerous Cargoes Regulations (46 CFR 146-149), as amended.

2.(b) The packaging and contents described in item 5 below, meets the safety standards set forth in Subpart C of Title 10, Code of Federal Regulations, Part 71, "Packaging of Radioactive Materials for Transport and Transportation of Radioactive Material Under Certain Conditions."

2.(c) 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—

3.(a) Prepared by *(Name and address)*:

Teledyne Energy Systems
110 West Timonium Road
Timonium, MD 21093

3.(b) Title and identification of report or application:

Isotopes, Inc. application dated August 10, 1971, as supplemented.

3.(c) Docket No. 71-5862

4. CONDITIONS

This certificate is conditional upon the fulfilling of the requirements of Subpart D of 10 CFR 71, as applicable, and the conditions specified in item 5 below.

5. Description of Packaging and Authorized Contents, Model Number, Fissile Class, Other Conditions, and References:

(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. A), Generator Assembly Sentinel 100F
010-20000 Fuel Capsule Assembly
010-70003 Shield Body
010-70004 Shield Plug
001-90064 Sheets 1-2, Shipping Crate Sentinel RTG
001-90039 Sheets 1-4, Pallet Assembly

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 meet the requirements of special form as defined in 10 CFR §71.4(o).

(2) Maximum quantity of material per package

370,000 Curies.

6. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR §71.12(b).

7. Expiration date: July 31, 1985.

REFERENCES

Isotopes, Inc., application dated August 10, 1971.

Supplements dated: September 24, October 22, November 30, and December 20, 1971; and January 19, 1972.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

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

Date: JUL 09 1980