

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
9503	2	USA/9503/B()F	1	3

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): Monsanto Research Corporation Mound Laboratory Miamisburg, Ohio 45342	3.(b) Title and identification of report or application: Monsanto Research Corporation Report No. MLM-2074 dated June 28, 1974
3.(c) Docket No. 71-9503	

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.: MWH-IHS-SC

(2) Description

A multi-hundred watt isotope heat source shipping container. Main components consist of a carrier and a finned cask. The carrier body is fabricated of heavy gauge steel screen welded to channel and angle iron frame members. The base plate is a 3/4-inch thick steel plate. The carrier top is fabricated of aluminum screen welded to aluminum frame members to facilitate handling. Approximate dimensions of the carrier are 62 inches in height with a width and length of 49 inches.

The finned cask, positioned within the carrier, is made of stainless steel with aluminum fins to dissipate heat. The cask is about 43 inches in both height and diameter. The maximum gross weight of the packaging and contents is 3,000 pounds.

5. (a) Packaging (continued)

(3) Drawings

The packaging is constructed in accordance with the following Monsanto Research Corporation Drawings Nos.:

5-2059, Sheet 1, Rev. A Multi-Hundred Watt Isotope Heat
Sheet 2, Rev. B Source Shipping Container;

5-2060, Sheet 1, Rev. B Carrier Body;
Sheet 2, Rev. A

5-2061, Sheet 1, Rev. B Carrier Cap;
Sheet 2, Rev. A

5-2062, Sheet 1, Rev. B Cask; and
Sheet 2, Rev. A

Drawings given in Appendix IV of application.

(b) Contents

(1) Type and form of material

Hot-pressed solid plutonium oxide in 24 Fuel Sphere Assemblies (FSA) as the primary containment within secondary packagings of a Heat Source Assembly (HSA) and a Storage Protection Container (SPC).

(2) Maximum quantity of material per package

A total plutonium content not to exceed 5.3 kg, of which not more than 20 w/o may consist of Pu-239, Pu-241 or any combination of those nuclides. The maximum content weight, including the HSA and SPC, not to exceed 300 pounds with a total decay heat not to exceed 2,430 watts.

(c) Fissile Class

II

Minimum transport index to be shown on label

0.3

6. The MHW-IHS-SC shipping container shall be filled with helium gas to the equivalent of approximately 7 psig at 200°F. The MHW-IHS-SC shipping container shall be equipped with a pressure relief valve set at 33 ± 3 psig which shall be tested initially and annually thereafter.
7. The valve on the Storage Protection Container (SPC) shall be closed prior to delivery to a carrier for transport. The SPC shall be leak tested in accordance with the draft American National Standard N 14.5 prior to delivery to a carrier for transport.

8. The shipping container shall meet the Quality Control specified in Section J of the Application.
9. The package authorized by this certificate is hereby approved for use under the general license provisions of Paragraph 71.12(b) of 10 CFR Part 71.
10. Expiration date: March 31, 1982.

REFERENCE

Monsanto Research Corporation's Safety Analysis Report No. MLM-2074 dated June 28, 1974.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

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

Date: SEP 15 1978