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
9079	6	USA/9079/A	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*):

Hittman Nuclear & Development
Corporation
9190 Red Branch Road
Columbia, MD 21045

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

Hittman Nuclear & Development Corporation, application dated January 12, 1977, as supplemented.

3.(c) Docket No. 71-9079

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 Nos.: HN-100 Series 2 and HN-100 Series 2A

(2) Description

A steel encased, lead shielded cask for low specific activity material. The cask is a right circular cylinder 81-1/2 inches high by 81-3/4 inches in diameter. The cask cavity is 73-3/8 inches high by 75-1/2 inches in diameter. The cask side wall consists of a 3/8-inch thick inner steel shell, a 1-3/4-inch lead shell, and a 7/8-inch thick outer steel shell. The base is comprised of two, 2-inch thick steel plates welded together to form a 4-inch thick base which is integrally welded to the inner and outer steel shells of the side wall. A steel flange is welded to the inner and outer steel shells of the side wall at the top. The lid is comprised of two, 2-inch thick steel plates, which are stepped and welded together to mate with the steel flange. The cask closure is sealed by a Neoprene gasket located between the lid and steel flange, positive closure of the lid is accomplished by eight rachet binders. The lid contains a centrally located shield plug comprised of two, 2-inch thick steel plates and one, 1-inch thick steel plate stepped and welded. The shield plug is sealed by a Neoprene gasket, and eight, 3/4-inch studs and nuts are used to provide positive closure. The Model No. HN-100 Series 2 is constructed of A-36 carbon steel. The Model No. HN-100 Series 2A is constructed of A-516, Grade 70, carbon steel.

(2) Description (continued)

Tie-down is accomplished by four tie-down lugs welded to the cask body. There are four cask lifting lugs, three lid lifting lugs, and one shield plug lifting lug. The package gross weight is approximately 48,000 pounds.

(3) Drawings

The packaging is fabricated in accordance with Hittman Nuclear & Development Corp. Drawing Nos.: C001-5-9122, Rev. 1; C001-5-9123, Rev. 1; and C001-5-9124, Rev. 1.

(b) Contents

(1) Type and form of material

Process solids, either dewatered, solid or solidified, meeting the requirements for low specific activity radioactive material, in secondary containers.

(2) Maximum quantity of material per package

Greater than Type A quantities of radioactive material with the weight of the contents and secondary containers not exceeding 14,000 pounds.

6. Shoring shall be placed between secondary containers and the cask cavity to prevent movement during normal conditions of transport.

7. The lid and shield plug lifting lugs shall not be used for lifting the cask, and shall be covered in transit.

8. Prior to each shipment, the packaging lid seals shall be inspected. The seals shall be replaced with new seals if inspection shows any defects or every twelve (12) months, whichever occurs first.

9. Packagings fabricated (10 CFR §71.53(c)) after December 18, 1980, shall be constituted of A-516, Grade 70 carbon steel instead of A-36 carbon steel.

10. Optional use of a twelve gauge 304-SS cask interior cavity surface liner is permitted. The liner shall be, if used, permanently installed in the cavity and seal welded along all edges.

11. The package authorized by this certificate shall be transported on a motor vehicle, railroad car, aircraft, inland watercraft, or hold deck of a seagoing vessel assigned for the sole use of the licensee.

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

13. Expiration date: July 31, 1982.

REFERENCES

Hittman Nuclear & Development Corporation application dated January 12, 1977.

Supplements dated: June 6 and 21, 1977; September 29, 1978; May 9, 1979; and March 17 and May 20, 1980.

Nuclear Packaging, Inc. supplement dated December 18, 1980.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

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

Date: FEB 02 1981