

**CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIALS PACKAGES**

1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. PACKAGE IDENTIFICATION NUMBER	d. PAGE NUMBER	e. TOTAL NUMBER PAGES
9096	10	USA/9096/A	1	3

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 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

Chem-Nuclear Systems, Inc.
220 Stoneridge Drive
Columbia, SC 29210

Chem-Nuclear Systems, Inc. application
dated August 26, 1985.

c. DOCKET NUMBER

71-9096

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.: CNS 21-300

(2) Description

A steel encased lead shielded cask for low specific activity radioactive material. The cask is a right circular cylinder with 86-3/4-inch OD by 117-1/4-inch height, and a cavity 83-inch ID by 109-1/4-inch height. The 1-inch thick lead shield is supported by outer and inner steel shells 3/4-inch and 1/8-inch thick. The inner plates of the lid and base are laminated steel plates with a total thickness of 1/2-inch. Positive closure of the silicone rubber sealed lid is provided by twelve, 1-1/4-inch diameter cap screws. A secondary lid with a Neoprene seal uses eighteen, 3/4-inch diameter bolts for closure. The cask is welded to a 96-inch square base plate and has two lifting trunnions, three lid lift rings and one secondary lid lift ring. Package gross weight is 57,450 pounds.

(3) Drawings

The packaging is fabricated in accordance with Chem-Nuclear Systems, Inc. Drawing Nos. 1-298-101, Rev. K, and C-114-D-0006, Rev. C.

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5. (b) Contents

(1) Type and form of material

- (i) Process solids, either dewatered, solid or solidified in secondary containers, meeting the requirements for low specific activity material; or
- (ii) Solid reactor components in secondary containers, as required that meet the requirements for low specific activity material.

(2) Maximum quantity of material per package

Greater than Type A quantity of radioactive material with the weight of the contents, secondary containers, auxiliary shield, and shoring not exceeding 27,250 pounds.

6. (a) For any package containing water and/or organic substances which could radiolytically generate combustible gases, determination must be made by tests and measurements or by analysis of a representative package such that the following criteria are met over a period of time that is twice the expected shipment time:

- (i) The hydrogen generated must be limited to a molar quantity that would be no more than 5% by volume (or equivalent limits for other inflammable gases) of the secondary container gas, void if present at STP (i.e., no more than 0.063 g-moles/ft³ at 14.7 psia and 70°F); or
- (ii) The secondary container and cask cavity must be inerted with a diluent to assure that oxygen must be limited to 5% by volume in those portions of the package which could have hydrogen greater than 5%.

For any package delivered to a carrier for transport, the secondary container must be prepared for shipment in the same manner in which determination for gas generation is made. Shipment period begins when the package is prepared (sealed) and must be completed within twice the expected shipment time.

(b) For any package shipped within 10 days of preparation, or within 10 days after venting of drums or other secondary containers, the determination in (a) above need not be made, and the time restriction in (a) above does not apply.

7. Shoring must be placed between secondary containers (or activated components) auxiliary shield, and the cask cavity to prevent movement during normal conditions of transport.

8. The auxiliary shield shown in Drawing No. C-114-E-0004, Rev. No. B, may be used for shipment of solidified wastes and solid reactor components.

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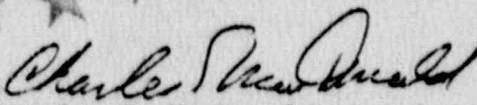
9. The lid lifting lugs must not be used for lifting the cask and shall be covered in transit.
10. Prior to each shipment the lid gaskets if opened (or if security seal is broken), must be inspected. The gaskets shall be replaced if inspection shows any defects or every twelve (12) months, whichever occurs first.
11. 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 Section 8.0, Operating Procedures, in the application dated August 26, 1985.
 - (b) The package must be maintained in accordance with Section 8.0, Tests and Maintenance, in the application dated August 26, 1985.
12. Fabrication of additional packagings is not authorized.
13. The package authorized by this certificate must be transported on a motor vehicle, railroad car, aircraft, inland water craft, or hold or deck of a seagoing vessel assigned for sole use of the licensee.
14. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR §71.12.
15. Expiration date: September 30, 1995

REFERENCE

Chem-Nuclear Systems, Inc. application dated August 26, 1985.

Chem-Nuclear Systems, Inc. supplement dated August 23, 1990.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION


Charles E. MacDonald, Chief
Transportation Branch
Division of Safeguards
and Transportation, NMSS

Date: SEP 26 1990




UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

APPROVAL RECORD
Model No. CNS 21-300
Certificate of Compliance No. 9096
Revision No. 10

By application dated August 23, 1990, Chem-Nuclear Systems, Inc., requested renewal of Certificate of Compliance No. 9096. No changes to the package design were requested and no changes have been made to the package since the last renewal on September 11, 1985. Sections on operating procedures, acceptance tests and maintenance programs were reviewed and found to be adequate.

The certificate has been conditioned to require that the package be prepared for shipment, operated and maintained in accordance with the procedures in the August 26, 1985, application.

The Certificate of Compliance has been renewed for a five year period which expires September 30, 1995.


Charles E. MacDonald, Chief
Transportation Branch
Division of Safeguards
and Transportation, NMSS

Date: SEP 26 1990