NRC FORM 618
(3-96)
10 CFR 71

U.S. NUCLEAR REGULATORY COMMISSION

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
6568	10	USA/6568/A	1	4

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)*

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

b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION:

Tennessee Valley Authority application dated August 16, 1976, as supplemented.

c. DOCKET NUMBER 71-6568

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.: LL-60-150

(2) Description

The cask is cylindrical in shape 93 inches long and 82.5 inches in diameter. Lead shielding, 3-1/2 inches thick, is encased within the inner and outer steel shells that are welded to a laminated steel base plate assembly. The cover is a steel plate assembly secured to the top flange by 36 steel bolts. Encircling the top of the cask is a partial length steel shell of 1/2-inch thickness. Silicone O-rings provide seals at the top cover and at all plugs. The inner container is right circular steel cylinder with a capacity of 150 cu ft. The total weight, when loaded, is approximately 73,000 pounds.

(3) Drawings

The packaging is constructed in accordance with the following ATCOR Inc. Drawing Nos.: 0568-B-0005, Rev. H; 0568-C-0008, Rev. E; 05268-B-0010, Rev. E; 0568-B-0016, Rev. D; 0568-B-0018, Rev. A; 0568-B-0025; and 0568-R-0001, Rev. J.

5. (b) Contents

(1) Type and form of material

Process solids, either dewatered, solid, or solidified waste, in sealed containers, and limited to the following:

(i) Materials in which the radioactivity is essentially uniformly distributed and in which the estimated average concentration per gram of contents does not exceed:

0.0001 millicurie of radionuclides for which the A_2 quantity in Appendix A of 10 CFR Part 71 is not more than 0.05 curie;

0.005 millicurie of radionuclides for which the A_2 quantity in Appendix A of 10 CFR Part 71 is more than 0.05 curie, but not more than 1 curie; or

0.3 millicurie of radionuclides for which the A_2 quantity in Appendix A of 10 CFR Part 71 is more than 1 curie.

(ii) Objects of nonradioactive material externally contaminated with radioactive material, provided that the radioactive material is not readily dispersible and the surface contamination, when averaged over an area of 1 square meter, does not exceed 0.0001 millicurie (220,000 disintegrations per minute) per square centimeter of radionuclides for which the A_2 quantity in Appendix A of 10 CFR Part 71 is not more than 0.05 curie, or 0.001 millicurie (2,200,000 disintegrations per minute) per square centimeter for other radionuclides.

(2) Maximum quantity of material per package

Greater than Type A quantity of radioactive material with the weight of the package contents and secondary containers not exceeding 12,500 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:

(1) 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

(2) 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 a hydrogen concentration 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. In addition to the requirements of Subpart G of 10 CFR Part 71:

(a) Each package must be maintained in accordance with Reactor Cleanup Cask Maintenance Program in the supplement dated February 20, 1991.

(b) The package must be prepared for shipment and operated in accordance with the Reactor Cleanup Cask Operating Procedure in the supplement dated February 20, 1991.

8. 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.

9. Fabrication of additional packagings is not authorized.

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

11. Expiration date: April 1, 1999. This certificate is not renewable.

REFERENCES

Tennessee Valley Authority application dated August 16, 1976.

Supplements dated: October 8, 1976; October 5, 1979; October 23, 1980; February 20, 1991; February 29, and September 30, 1996.

Chem-Nuclear Systems, Inc. supplement dated December 20, 1996.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Cass R. Chappell

Cass R. Chappell, Chief
Package Certification Section
Spent Fuel Project Office
Office of Nuclear Material
Safety and Safeguards

Date: 02/04/97

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

APPROVAL RECORD
Model No. LL-60-150
Certificate of Compliance No. 6568
Revision No. 10

By letters dated September 30, and December 20, 1996, the Tennessee Valley Authority and Chem-Nuclear Systems, Inc. requested that the certificate holder for Certificate of Compliance No. 6568 for the Model No. LL-60-150 package be changed from the Tennessee Valley Authority to Chem-Nuclear Systems, Inc. Chem-Nuclear Systems, Inc. has accepted responsibility for the completeness and accuracy of the statements and representations of the previous certificate holder. Chem-Nuclear Systems, Inc. will be responsible for maintenance of the certificate, the safety analysis report for the package design, and the quality assurance records in accordance with 10 CFR §71.91(c). Chem-Nuclear Systems, Inc. stated that the records required by 10 CFR §71.91(c) for the package design will be maintained at their Columbia, South Carolina offices. Chem-Nuclear Systems, Inc. has been issued Quality Assurance Program Approval for Radioactive Materials Packages No. 0231, under Subpart H of 10 CFR Part 71.

The Certificate has been revised to show Chem-Nuclear Systems, Inc. as certificate holder. These changes do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Cass R. Chappell

Cass R. Chappell, Chief
Package Certification Section
Spent Fuel Project Office
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Safety and Safeguards

Date: 02/04/97