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

U.S. NUCLEAR REGULATORY COMMISSION

CERTIFICATE OF COMPLIANCE

For Radioactive Materials Packages

1.(a) Certificate Number 6722	1.(b) Revision No.	1.(c) Package Identification No. USA/6722/A	1.(d) Pages No. 1.(e) Total No. Pages
0765		0011/0744/11	

2. PREAMBLE

- 2.(a) This cartificate is issued to satisfy Sections 173.393, 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): Tennessee Valley Authority 716 Edney Building Chattanooga, Tennessee 37401

- Title and identification of report or application: Tennessee Valley Authority application dated July 9, 1975, as supplemented.
- 3.(c) Docket No. 71-6722

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.: BS-33-180
 - (2) Description

The shipping cask is a cylindrical steel weldment with overall dimensions of 84 inches in diameter and 97-1/4 inches in length. The effective cavity is 76-1/2 inches in diameter by 79-1/4 inches long. The outer shell is fabricated of concentric layers consisting of three one-inch thick and 1/2-inch thick carbon steel plates. The inner half-inch thick shell is separated from the one-inch thick shells by a 1/4-inch thick asbestos sheet. The flange is three inches thick, with 36 tapped holes and a groove to accommodate a silicone O-ring. The top cover is secured to the flange ring by 36 ASTM-A-320, Grade L7 1-1/2-inch bolts. A 10-inch deep steel impact limiter is mounted to the top cover to act as a shock absorber. The cask is mounted to a tie-down frame by sixteen 1-1/4-inch high strength steel bolts. Other cask features include a drain line, access port to the inner liner and a reinforcing steel shell to protect the cask seal. The inner waste container shell and the end plates are fabricated, respectively, of 1/4-inch and 1/2-inch steel with an internal capacity of 180 cubic feet. A lifting sling is permanently attached to the liner. Threaded access plugs are installed on the top of the liner. A bottom side drain is also provided. Maximum gross weight is approximately 51,100 pounds.

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- 5. (a) Packaging (continued)
 - .(3) Drawings

The packaging is constructed in accordance with the following ATCOR Inc. Drawings Nos.: 0568-C-0024, Rev. E; 0568-D-0022, Rev. E; 0568-D-0023, Rev. D; 0568-C-0026, Rev. B; 0568-A-0013, Rev. B; and 0568-D-0002, Rev. K.

- (b) Contents
 - (1) Type and form of material

Solids or solidified waste, meeting the requirements for low specific activity radioactive material as defined in 10 CFR §71.4(g).

- (2) Maximum quantity of material per package
 - (i) The combined thermal heat load of the cask cavity contents shall not exceed 20 watts with a nominal activity of 55 curies.
 - (ii) The cask cavity contents shall be limited to 18,000 pounds.
- 6. The contents shall be contained in the liner shown in TVA Drawing No. CH-M-2081-R2, or DOT specification containers.
- Dunnage shall be provided in the shipping cask cavity sufficient to prevent significant movement of the DOT specification packages relative to the outer packaging under normal or accident conditions.
- 8. Operating procedures shall be followed to assure that:
 - All threaded pipe plugs in the cask and liner are sealed using an appropriate sealant.
 - (ii) The liner or DOT specification containers are inspected and/or tested to assure leak tightness.
 - (iii) The space between the liner or DOT specification containers and cask cavity shall be dry prior to delivery to a carrier for transport.
- 9. All eight (8) lifting shackles will be shrouded by the appropriate covers prior to transport to prevent its use as tie-down devices.
- 10. The package authorized by this certificate shall be transported on a motor vehicle, railroad car, aircraft, inland water craft, or hold or deck of a seagoing vessel assigned for the sole use of the licensee.

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- 11. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR \$71.12/2).
- 12. Expiration date: November 30, 1980.

REFERENCES

Tennessee Valley Authority application dated July 9, 1975.

Supplement dated: February 10, 1977.

ATCOR Supplements dated: October 29 and November 5, 1975.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Charles S. Mas Varaly Charles E. MacDonald, Chief

Transportation Certification Branch

Division of Fuel Cycle and

Material Safety

AUG 0 1 1979 Date:

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