

**CERTIFICATE OF COMPLIANCE
FOR RADIOACTIVE MATERIALS PACKAGES**

U.S. NUCLEAR REGULATORY COMMISSION

1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. PACKAGE IDENTIFICATION NUMBER	d. PAGE NUMBER	e. TOTAL NUMBER PAGES
9192	0	USA/9192/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):

ANEFECO, Incorporated
904 Ethan Allen Highway
Ridgefield, CT 06877

b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION:

ANEFECO application dated October 3, 1985, as supplemented.

c. DOCKET NUMBER

71-9192

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.: AP-300 Type A

(2) Description:

Steel encased, lead shielded shipping cask for low specific activity material. The cask is right circular cylinder 83-5/8 inches in diameter by 96.0 inches high. The cask cavity is 76.0 inches in diameter by 82 inches high. The cask side walls consist of 1/2-inch thick inner steel shell, 2.06-inch thick lead shell, and a 1-1/4-inch thick outer steel shell. The base is similarly constructed of plate materials. The stepped lid is comprised of a 1/2-inch thick inner steel plate, 2.06-inch thick lead layer, 3/8-inch thick steel plate, 3.8-inch thick concrete layer, and 2.0-inch thick outer steel lid plate. The lid is secured with 36, 3/4-inch diameter hex socket bolts with washers and a Red Devil gasket. The lid is provided with a test port to verify the effectiveness of the lid seal following loading of the cask. The cask is provided with four lifting/tie-down lugs. The top of the cask is provided with a 3-inch diameter toroidal ring impact limiter and the bottom of the cask is equipped with a 2-1/2-inch square tubing impact limiter. The gross weight of the package is about 66,720 pounds.

(3) Drawings

The package is fabricated in accordance with ANEFECO, Inc. Drawing Nos.: 133-1, Rev. 8; 134-1, Rev. 7; 134-1a, Rev. 1; 135-1, Rev. 6; 136-1, Rev. 4; 138-1, Rev. 8; 139-1, Rev. 1; 141-1, Rev. 1; 142-1, Rev. 1; 143-1, Rev. 2; 144-1, Rev. 1; 145-1, Rev. 1; 146-1, Rev. 1; and 151-1, Rev. 1.

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(b) Contents

(1) Type and form of material

- (i) Dewatered, solids, or solidified waste, meeting the requirements for low specific activity material, in secondary containers; or
- (ii) Activated solid components meeting the requirements for low specific activity material, in secondary containers.

(2) Maximum quantity of material per package

Greater than Type A quantity of radioactive material which may contain fissile material provided the fissile material does not exceed the limits in 10 CFR §71.53. The decay heat load is limited to 1 watt.

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. Maximum gross weight of the contents, secondary containers, and shoring is limited to 20,000 pounds.

8. Except for close fitting contents, shoring must be placed between secondary containers and the cask cavity to minimize movement during normal conditions of transport.

CONDITIONS (continued)

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9. The lid lifting eye bolts must not be used for lifting the cask, and must be removed and the holes covered in transit.
10. The cask cover must be secured by 36, ASTM A-320, Type L7A, 3/4-10 UNC-3A x 3-1/4 hex socket head bolt with 1-3/8 OD x 13/16 ID x 1/2 thick flat steel (L7A) washers torqued to 110 ft-lbs (lubricated).
11. In addition to the requirements of Subpart G of 10 CFR Part 71:
 - (i) Prior to each shipment, the packaging Red Devil lid seal must be inspected. The seal must be replaced with a new seal if inspection shows any defects or every 12 months, whichever occurs first. Red Devil lid test port gaskets must be replaced following each use.
 - (ii) The cask must meet the Acceptance Tests and Maintenance Program of Section 8.0 of the application. The cask bottom impact limiter must be inspected prior to each shipment in accordance with Section 8.2.1.1 of the application.
12. The cask body and cask lid must be marked in accordance with 10 CFR §71.85(c).
13. The package authorized by this certificate must be transported on a motor vehicle, railroad car, aircraft, inland watercraft, or hold or deck of a seagoing vessel assigned for the 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: October 31, 1990.

REFERENCES

ANEFco, Inc. application dated October 3, 1985.

Supplement dated: October 25, 1985.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

R H Odgaard

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

Date: MAR 19 1986