

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
9089	11	USA/9089/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

Scientific Ecology Group, Inc.
P.O. Box 2530
1560 Bear Creek Rd.
Oak Ridge, TN 37831-2530

Westinghouse Hittman Nuclear, Inc.
Application dated October 28, 1988,
as supplemented.

c. DOCKET NUMBER

71-9089

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.: HN-194S
- (2) Description

The cask is a steel annulus 84-1/4 inches high by 81-5/8 inches in diameter. The cavity is 75-1/2 inches high by 75-5/8 inches in diameter. The side walls consist of two plys of 1-1/2-inch steel. The 3-inch steel base is integrally welded to the cylinder. The lid is a 3-inch steel plate, stepped to mate with the upper flange of the cylinder. A centrally located shield plug is similarly constructed. The lid and plug are attached with stud-bolts and nuts and sealed with Buna N O-ring gaskets. A plugged drain line and/or optional vent/test in the secondary lid connection is provided. Four skewed lugs welded to the outer shell are used for tie down. There are three cask lifting lugs, three lid lifting lugs, and one shield plug lifting lug. The package gross weight is approximately 43,000 pounds.

(3) Drawings

The packaging is fabricated in accordance with Westinghouse Hittman Nuclear, Inc. Drawing Nos.: STD-02-078, Rev. 1 and STD-02-079, Rev. 0.

5. (b) Contents

(1) Type and form of material.

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

(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 weight of the contents, secondary containers, and shoring must not exceed 17,000 pounds and the internal decay heat load must not exceed 2 thermal watts.

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

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

9. Packagings without a drain line must be provided with the optional vent/test connection in the cask secondary lid.

10. The drain line and optional vent/test connection must be appropriately plugged and sealed prior to transport.

CONDITIONS (continued)

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11. Prior to each shipment, the packaging lid seals, if opened (or if the security seal is broken), must be inspected. The seals must be replaced with new seals if inspection shows any defects or every twelve months, whichever occurs first.
12. The packaging must be leak tested at least once every twelve months in accordance with Leak Test Procedure STD-P-02-002, Rev. 3, dated August 18, 1989. Each cask which has been damaged or repaired in the area of a seal must also be tested prior to subsequent use; normal gasket maintenance does not require a subsequent test.
13. Packagings fabricated after November 30, 1983, must be constructed of A-516, Grade 70 carbon steel.
14. 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 license.
15. The packaging shall be prepared for shipment and operated in accordance with the Operating Procedures of Section 7.0 of the application.
16. Each package must meet the Acceptance Tests and Maintenance Program of Section 8.0 of the application.
17. Packaging fabricated in accordance with Hittman Nuclear & Development Corporation Drawing Nos. C001-5-9128, Rev. 5 and C001-5-9129, Rev. 3 are not authorized after April 1989.
18. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR §71.12.
19. Expiration date: February 28, 1999.

REFERENCES

Westinghouse Hittman Nuclear, Incorporated application dated October 28, 1988.

Supplements dated: January 26, 1989, and December 22, 1993.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Cass R. Chappell

Cass R. Chappell, Section Leader
Cask Certification Section
Storage and Transport Systems Branch
Division of Industrial and
Medical Nuclear Safety, NMSS

FEB 28 1994

Date: _____



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

APPROVAL RECORD

Model No. HN-194S
Certificate of Compliance No. 9089
Revision No. 11

By application dated December 22, 1993, Scientific Energy Group, Inc. requested renewal of Certificate of Compliance No. 9089. The package design has not changed since the last renewal. Due to a change in company ownership, the applicant requested that the certificate holder be changed to Scientific Ecology Group, Inc. A revised Safety Analysis Report (SAR) had been submitted on October 28, 1988, to modify some of the structural analyses. The changes to the SAR were reviewed and they do not affect the ability of the package to meet the requirements of 10 CFR Part 71. The application and reference citations in the certificate were updated to incorporate the revised SAR. The revised Leak Test Procedure was also reviewed, found acceptable and incorporated into the certificate. Typographical corrections were made to the certificate.

The certificate of compliance has been renewed for a five year term which expires February 28, 1999.

Cass R. Chappell

Cass R. Chappell, Section Leader
Cask Certification Section
Storage and Transport Systems Branch
Division of Industrial and
Medical Nuclear Safety, NMSS

FEB 28 1994

Date: _____