



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

OCT 23 1978

FCTR:RHO
71-9080

Those on Attached List

Gentlemen:

Enclosed is Certificate of Compliance No. 9080, Revision No. 2, for the Model No. HN-600 shipping package. This certificate supersedes, in its entirety, Certificate of Compliance No. 9080, Revision No. 1, dated June 15, 1978.

Changes made to the enclosed certificate are indicated by vertical lines in the margin.

Those on attached list have been registered as users of this package under general license provisions of 10 CFR §71.12(b) or 49 CFR §173.393a.

This approval constitutes authority to use this package for shipment of radioactive material and for the package to be shipped in accordance with the provisions of 49 CFR §173.393a.

Sincerely,

A handwritten signature in cursive script, appearing to read "R. H. MacDonald", is written above the typed name.

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

Enclosures:

1. Certificate of Compliance
No. 9080, Revision No. 2
2. Addendum No. 1 to NRC SER
for the Model No. HN-600
packaging

cc: w/encl
Mr. Richard R. Rawl
Department of Transportation

7810300371

MODEL NO. HN-600 PACKAGING
USA/9080/A

Addressees (w/encl)

Ltr dtd: OCT 23 1978

Hittman Nuclear & Development Corporation
ATTN: Mr. John C. Darrin
9190 Red Branch Road
Columbia, MD 21045

Indiana and Michigan Power Company
ATTN: Mr. John Tillinghast
P.O. Box 18
New York, NY 10004

Baltimore Gas & Electric Co.
ATTN: Mr. A. E. Lundvall
P.O. Box 1475
Baltimore, MD 21203

Iowa Electric Light and Power Company
ATTN: Mr. Keith Young
P.O. Box 351
Cedar Rapids, IA 52406

Chem-Nuclear Systems, Inc.
ATTN: Mr. Karl H. Kinkade
P.O. Box 1856
Bellevue, WA 98009

Metropolitan Edison Company
ATTN: Mr. M. R. Buring
P.O. Box 542
Reading, PA 19603

Commonwealth Edison
ATTN: Mr. B. B. Stephenson
Dresden Nuclear Power Station
R.R. #1
Morris, IL 60450

Philadelphia Electric Company
ATTN: Mr. V. S. Boyer
P.O. Box 8699
Philadelphia, PA 19101

Commonwealth Edison
ATTN: Mr. N. J. Kalivianakis
Quad Cities Nuclear Power Station
22710 - 206 Avenue North
Cordova, IL 61242

Nebraska Public Power District
ATTN: Mr. Jerry V. Sayer
P.O. Box 98
Brownville, NE 68321

Commonwealth Edison
ATTN: Mr. N. E. Wandke
Zion Generating Station
Shiloh Blvd. and Michigan
Zion, IL 60099

Consolidated Edison Company of New York, Inc.
ATTN: Mr. Stanley Wisla
Indian Point Station
Broadway and Bleakley Ave.
Buchanan, NY 10511

U.S. NUCLEAR REGULATORY COMMISSION
CERTIFICATE OF COMPLIANCE
For Radioactive Materials Packages

1.(a) Certificate Number	1.(b) Revision No.	1.(c) Package Identification No.	1.(d) Pages No.	1.(e) Total No. Pages
9080	2	USA/9080/A	1	3

2. PREAMBLE

- 2.(a) This certificate is issued to satisfy Sections 173.393a, 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):	3.(b) Title and identification of report or application:
Hittman Nuclear & Development Corporation 9190 Red Branch Road Columbia, Maryland 21045	Hittman Nuclear & Development Corporation application dated January 12, 1977, as supplemented.
	3.(c) Docket No. 71-9080

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.: HN-600

(2) Description

A steel encased, lead shielded cask for low specific activity material. The cask is a right circular cylinder 54-1/2 inches high by 84 inches in diameter. The cask cavity is 40-1/4 inches high by 75-1/2 inches in diameter. The cask side wall consists of a 3/8-inch thick inner steel shell, a 3-inch lead shell, and a 3/4-inch thick outer steel shell. The base is comprised of two steel plates welded together to form a 5-1/2-inch thick base which is integrally welded to the inner and outer steel shells of the side wall. A steel flange is welded to the inner and outer shells of the side wall at the top. The 5-1/2-inch thick lid is comprised of two steel plates welded together, which are stepped to mate with the steel flange. The cask closure is sealed by a neoprene gasket located between the lid and steel flange. Positive closure is accomplished by eight ratchet binders. The lid contains a 6-1/2-inch thick centrally located shield plug, comprised of three steel plates stepped and welded. The shield plug is sealed by a gasket, and eight 3/4-inch studs and nuts are used to provide positive closure.

5. a) Packaging (cont'd)

(2) Description (cont'd)

Tie-down is accomplished by four tie-down lugs welded to the cask body. There are four cask lifting lugs, three lid lifting lugs, and one shield plug lifting lug. The package gross weight is approximately 48,000 pounds.

(3) Drawings

The packaging is fabricated in accordance with Hittman Nuclear & Development Corporation Drawings Nos.: C001-4-9600, Sheet 1, Rev. C; C001-4-9601, Sheet 1, Rev. B and Sheet 2, Rev. 0; C001-4-9602, Sheet 1, Rev. B and Sheet 2, Rev. 0; C001-4-9603, Sheet 1, Rev. A.

(b) Contents

(1) Type and form of material

- (i) Solids and solidified waste, meeting the requirements for low specific activity radioactive material as defined in 10 CFR §71.4(g), in secondary containers.
- (ii) Activated solid components meeting the requirements for low specific activity radioactive material as defined in 10 CFR §71.4(g).

(2) Maximum quantity of material per package

Greater than Type A quantities of radioactive material with the weight of the contents, secondary containers and shoring not exceeding 13,000 pounds.

- 6. Shoring shall be placed between secondary containers (or activated components) and the cask cavity to prevent movement during normal conditions of transport.
- 7. The lid and shield plug lifting lugs shall not be used for lifting the cask, and shall be covered in transit.
- 8. 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.

9. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR §71.12(b).
10. Expiration date: August 31, 1982.

REFERENCES

Hittman Nuclear & Development Corporation application dated January 12, 1977 (including SAR dated 1/13/77).

Supplements dated: June 6 and 21, 1977; and August 18, 1978.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

R H Odegarden

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

Date: OCT 23 1978

ADDENDUM NO. 1 FOR
U.S. NUCLEAR REGULATORY COMMISSION
TRANSPORTATION BRANCH SAFETY EVALUATION OF
THE HITTMAN NUCLEAR & DEVELOPMENT CORPORATION
MODEL HN-600 PACKAGING
USA/9080/A

Encl to Ltr dtd OCT 23 1978

Summary

By application dated August 18, 1978, Hittman Nuclear & Development Corporation requested revision to the approval for shipment of low specific activity radioactive material in the Model No. HN-600 packaging. It was requested that the weight limit of the contents, secondary containers and shoring be increased to 13,000 pounds and the total package weight be increased correspondingly to about 48,000 pounds and that the Type A secondary container limitation be deleted.

The applicant has submitted packaging drawing revisions and structural evaluations to show that the effects of the one-foot free fall test required under normal conditions of transport will not significantly reduce the package containment ability and that the lifting and tie-down requirements are met.

Based on the statements and representations contained in the application, the staff has concluded that the Model No. HN-600 packaging and contents, as described, satisfy the requirements of 10 CFR Part 71.

Reference

Hittman Nuclear & Development Corporation application dated August 18, 1978.

Drawings

The packaging is fabricated in accordance with Hittman Nuclear & Development Corporation Drawings Nos.: C001-4-9600, Sheet 1, Rev. C; C001-4-9601, Sheet 1, Rev. B and Sheet 2, Rev. 0; C001-4-9602, Sheet 1, Rev. B and Sheet 2, Rev. 0; C001-4-9603, Sheet 1, Rev. A.

Structural/Thermal Evaluation

The applicant has shown that the general standards of 10 CFR Part 71 have been met. The lifting and tie-down devices, if overloaded to failure, would not impair the ability of the packaging to meet other requirements in the regulations nor significantly decrease the shielding properties of the packaging.

The applicant has demonstrated by analysis that the packaging satisfies the performance requirements for normal conditions of transport when subjected to the free drop tests described in Appendix A of 10 CFR Part 71. The secondary containers or activated solid components are positioned within the cask to minimize secondary impacts. While there may be localized damage as a result of the one-foot free drop, containment for normal conditions of transport is assured by the cask seals.

R H Odgaard
for Charles E. MacDonald, Chief
Transportation Branch
Division of Fuel Cycle and
Material Safety

Date: OCT 23 1978

OCT 23 1978

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

MEMORANDUM FOR: James H. Conran, Licensing Project Manager,
Standardization Branch, DPM

FROM: Walter P. Haass, Chief, Quality Assurance Branch,
Division of Project Management

SUBJECT: REVIEW SCHEDULE FOR GAISSAR

As requested in your memorandum of October 18, 1978 to C. Long, et al,
we have reviewed the acceptability of your proposed Level D schedule
for the review of the GAISSAR application and find the dates assigned
to QAB for important milestones to be acceptable.

Original signed by
Walter P. Haass

Walter P. Haass, Chief
Quality Assurance Branch
Division of Project Management

cc: D. Skovholt
J. Gilray
R. McDermott

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OFFICE	DPM: QAB					
SURNAME	W. P. Haass					
DATE	10/23/78					