

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
5687	2	USA/5687/AF	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): Nuclear Fuel Services, Inc. P.O. Box 218 Erwin, TN 37650	3.(b) Title and identification of report or application: Nuclear Fuel Services, Inc. application dated August 25, 1982 3.(c) Docket No. 71-5687
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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.: RMG-184

(2) Description

The containment vessel is a 5-gallon bucket, DOT Specification 17H. Closure is by means of lug-clamps used with a new lid and gasket for each shipment. The outer container, a 55-gallon DOT Specification 17H steel drum and gasketed lid is closed by a 12-gauge bolted ring with drop forged lugs, one of which is threaded, having a 5/8-inch bolt. The containment vessel is supported in the outer container by two, 26 gauge sleeves filled with tamped vermiculite and fire retardant polyurethane foam.

(3) Drawing

The packaging is constructed in accordance with Nuclear Fuel Services, Inc. Drawing No. RMG-184, Rev. A. Use of optional 5-gallon insulator bucket is not authorized.

5. (b) Contents

(1) Type, form, and maximum quantity of material per package

- (i) Oxides of uranium, at uranium densities not to exceed 3.2 g/cc. Not to exceed one hundred pounds of product with the maximum enrichment in the U-235 isotope not to exceed 10 w/o. H/U-235 ratio, considering all sources of moderation within containment vessel and maximum U-235 content must not exceed:

<u>Enrichment % U-235</u>	<u>Maximum H/U-235</u>	<u>U-235 Content Kilograms</u>
1	20	0.401
2	10	0.802
3	5	1.203
4	5	1.604
5	3	2.005
6	3	2.405
7	3	2.805
8	2	3.205
9	2	3.605
10	2	4.005

- (ii) Uranium oxide or metal, at uranium densities exceeding 3.2 g/cc. Not to exceed one hundred pounds of product with the maximum enrichment in the U-235 isotope not to exceed 5 w/o. H/U-235 ratio, considering all sources of moderation within containment vessel and maximum U-235 content must not exceed:

<u>Enrichment % U-235</u>	<u>Maximum H/U-235</u>	<u>U-235 Content Kilograms</u>
1	20	0.401
2	10	0.802
3	5	0.700
4	5	0.700
5	3	0.700

5. (c) Fissile Class II and III

(1) Minimum transport index to be shown on label for Class II	Maximum Enrichment % U-235	Transport Index
	3	0.2
	7	0.4
	10	0.7

(2) Maximum number of packages per shipment for Class III	Maximum Enrichment % U-235	Number of Packages
	3	1,550
	5	390
	7	330
	10	234

6. Uranium enriched to greater than 6 w/o in the U-235 isotope must be packaged within a 3-gallon metal can or plastic bottle surrounded by vermiculite within the 5-gallon bucket.
7. During transport and storage, the eight (8) 1/4-inch vent holes in the lid or the optional arrangement of four (4) 1/2-inch vent holes in the sides of the drum near the top must be covered with tape to preclude entry of rain water into the packaging.
8. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR §71.12(b).
9. Expiration date: September 30, 1987.

REFERENCE

Nuclear Fuel Services, Inc. application dated August 25, 1982.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

R H Odegaard

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

Date: OCT 13 1982

U.S. Nuclear Regulatory Commission
Transportation Certification Branch
Approval Record
Model No. RMG-184
Docket No. 71-5687

By application dated August 25, 1982, Nuclear Fuel Services, Inc. requested renewal of Certificate of Compliance No. 5687. It was requested that all supplemental information referenced by the Certificate of Compliance be incorporated into a consolidated application.

A review of the consolidated application confirmed that all appropriate supplement information has been incorporated. The application and packaging drawing presented three conditions affecting the packaging which were not addressed by the safety analysis report. The Certificate of Compliance has been modified to preclude the use of (1) the "or equivalent" option in lieu of the Specification 17H steel drum or pail, and (2) the optional 5-gallon insulator bucket and require taping of the vent holes in the drum to preclude inleakage of rain water during shipment or storage.

The staff concludes that the consolidated safety analysis report satisfies the requirement for renewal of the Certificate of Compliance.

R H Odegaard

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

Date: OCT 13 1982