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AUG 12 1968

DML:CHM
70-36
SNM-33, Amendment No. 71-20
70-371
SNM-368, Amendment No. 71-13
70-820
SNM-777, Amendment No. 71-15

United Nuclear Corporation
Post Office Box 1585
365 Winchester Avenue
New Haven, Connecticut 06503

Attention: Mr. D. F. Cronin
Director of Licensing

Gentlemen:

Enclosed are Amendments Nos. 71-20, 71-13, and 71-15 to Special Nuclear Material Licenses Nos. SNM-33, SNM-368, and SNM-777, respectively, to authorize the delivery of special nuclear material to a carrier for transport in the UAC-2600 package.

Our confirmation that this package meets the requirements of 10 CFR 71 is based on an independent analysis since your analysis was not complete. We would be pleased to discuss this further with you at your convenience.

Please note that these amendments do not authorize the transport of special nuclear material. Such transport is normally subject to regulation by the Department of Transportation (DOT). Questions regarding their requirements should be directed to DOT.

Very truly yours,

L. C. ROUSE

Ju Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

Enclosures:
As stated

cc: Mr. William A. Brobst

(See Docket No. 70-36 for concurrences)

OFFICE ▶	REPORTING OFFICE	DATE	DML	DML	DML
SURNAME ▶			CENMacDonald:jf	CDLuke	DANussbaumer
DATE ▶			8/9/68		

D-4

UNITED STATES
ATOMIC ENERGY COMMISSION

AUG 1 2 1968

LICENSE AMENDMENT
for
DELIVERY OF SPECIAL NUCLEAR MATERIAL
to a
CARRIER FOR TRANSPORT

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Part 70, and Part 71, the following amendment to the special nuclear material license identified below is hereby issued, authorizing the licensee to deliver special nuclear material to a carrier for transport, and is subject to the conditions specified in that license and to the conditions specified below.

Licensee	
1. Name: United Nuclear Corporation	3. License No. <u>SNM-33</u>
2. Address: Post Office Box 1883 365 Winchester Avenue New Haven, Connecticut 06508	Amendment No. <u>71-20</u>
	4. Docket No. <u>70-36</u>

CONDITIONS

5. (a) Packaging

(1) Model number

UNC-2600

(2) Description

Inner container is an 11-gage steel box of maximum 25 square inches cross section by 96" long supported in a 22 1/2" ID by 101" long 14-gage steel drum by an insertable cage formed by nine 21 1/2" diameter by 3/8" thick steel plates spaced approximately 12" apart, with a channel formed through the center of the plates by angle iron. Package constructed in accordance with United Nuclear Corporation Drawings E-20354, Sheets 1 through 5.

(b) Contents

(1) Type and form
of material

(i) Dry uranium-zirconium, uranium-aluminum alloys and compounds with densities not exceeding 1 kg U-235 per liter in the form of zirconium or aluminum clad plates. Uranium may be enriched to any degree in the U-235 isotope.

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LICENSE NO.: SNM-33

AMENDMENT NO.: 71-20

DOCKET NO.: 70-36

5. (b)(1) CONTINUED

(ii) Dry uranium oxide pellets encapsulated in stainless steel, aluminum or zircaloy rods. Uranium may be enriched to a maximum 5.0 w/o in the U-235 isotope.

(2) Maximum quantity of material per package

Ten (10) kilograms U-235 and the net weight of the contents not to exceed 308 pounds.

(c) Fissile Class

II and III

(1) Minimum number of radiation units to be shown on label for Class II

8.0

(2) Maximum number of packages per shipment for Class III

Ten (10)

6. The cross section of the inner container shall be limited to a maximum 19.6 square inches for the contents specified in 5(b)(i) where the ratio of the weight of U-235 to the weight of U-235 plus zirconium exceeds 0.074 or the ratio of the weight of U-235 to the weight of U-235 plus aluminum exceeds 0.22.
7. This amendment supersedes, in its entirety, Amendment No. 71-3 to SNM-33, dated February 3, 1967.

REFERENCES

Licensee's application dated January 3, 1967, requesting approval to deliver special nuclear material to a carrier for transport in the UNC-2600 package.

Supplements dated January 24, 1967, and June 14, 1968.

FOR THE ATOMIC ENERGY COMMISSION

Date of Amendment

AUG 12 1968

L. C. ROUSE

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Donald A. Nussbaumer
Division of Materials Licensing

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Licensee	
1. Name: United Nuclear Corporation	3. License No. <u>SNM-368</u>
2. Address: Post Office Box 1883 365 Winchester Avenue New Haven, Connecticut 06508	Amendment No. <u>71-18</u>
	4. Docket No. <u>70-371</u>

CONDITIONS

5. (a) Packaging

(1) Model number

UNC-2600

(2) Description

Inner container is an 11-gage steel box of maximum 25 square inches cross section by 96" long supported in a 22 1/2" ID by 101" long 14-gage steel drum by an insertable cage formed by nine 21 1/2" diameter by 3/8" thick steel plates spaced approximately 12" apart, with a channel formed through the center of the plates by angle iron. Package constructed in accordance with United Nuclear Corporation Drawings E-20354, Sheets 1 through 5.

(b) Contents

(1) Type and form
of material

(i) Dry uranium-zirconium, uranium-aluminum alloys and compounds with densities not exceeding 1 kg U-235 per liter in the form of zirconium or aluminum clad plates. Uranium may be enriched to any degree in the U-235 isotope.

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LICENSE NO.: SNM-368

AMENDMENT NO.: 71-18

DOCKET NO.: 70-371

5. (b)(1) CONTINUED

(ii) Dry uranium oxide pellets encapsulated in stainless steel, aluminum or zircaloy rods. Uranium may be enriched to a maximum 5.0 w/o in the U-235 isotope.

(2) Maximum quantity of material per package

Ten (10) kilograms U-235 and the net weight of the contents not to exceed 308 pounds.

(c) Fissile Class

II and III

(1) Minimum number of radiation units to be shown on label for Class II

8.0

(2) Maximum number of packages per shipment for Class III

Ten (10)

6. The cross section of the inner container shall be limited to a maximum 19.6 square inches for the contents specified in 5(b)(i) where the ratio of the weight of U-235 to the weight of U-235 plus zirconium exceeds 0.074 or the ratio of the weight of U-235 to the weight of U-235 plus aluminum exceeds 0.22.
7. This amendment supersedes, in its entirety, Amendment No. 71-4 to SNM-368, dated February 3, 1967.

REFERENCES

Licensee's application dated January 3, 1967, requesting approval to deliver special nuclear material to a carrier for transport in the UNC-2600 package.

Supplements dated January 24, 1967, and June 14, 1968.

FOR THE ATOMIC ENERGY COMMISSION

Date of Amendment AUG 12 1968

L. C. ROUSE

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Donald A. Nussbaumer
Division of Materials Licensing

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UNITED STATES
ATOMIC ENERGY COMMISSION

AUG 12 1968

LICENSE AMENDMENT
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CARRIER FOR TRANSPORT

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Part 70, and Part 71, the following amendment to the special nuclear material license identified below is hereby issued, authorizing the licensee to deliver special nuclear material to a carrier for transport, and is subject to the conditions specified in that license and to the conditions specified below.

Licensee	
Name: United Nuclear Corporation	3. License No. <u>SNM-777</u>
Address: Post Office Box 1883 365 Winchester Avenue New Haven, Connecticut 06508	Amendment No. <u>71-15</u>
	4. Docket No. <u>70-820</u>

CONDITIONS

5. (a) Packaging

- | | |
|------------------|--|
| (1) Model Number | UNC-2600 |
| (2) Description | Inner container is an 11-gage steel box of maximum 25 square inches cross section by 96" long supported in a 22 1/2" ID by 101" long 14-gage steel drum by an insertable cage formed by nine 21 1/2" diameter by 3/8" thick steel plates spaced approximately 12" apart, with a channel formed through the center of the plates by angle iron. Package constructed in accordance with United Nuclear Corporation Drawings E-20354, Sheets 1 through 5. |

(b) Contents

- | | |
|-------------------------------|--|
| (1) Type and form of material | (i) Dry uranium-zirconium, uranium-aluminum alloys and compounds with densities not exceeding 1 kg U-235 per liter in the form of zirconium or aluminum clad plates. Uranium may be enriched to any degree in the U-235 isotope. |
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LICENSE NO.: SNM-777

AMENDMENT NO.: 71-15

DOCKET NO.: 70-820

5. (b)(1) CONTINUED

(ii) Dry uranium oxide pellets encapsulated in stainless steel, aluminum or zircaloy rods. Uranium may be enriched to a maximum 5.0 w/o in the U-235 isotope.

(2) Maximum quantity of material per package

Ten (10) kilograms U-235 and the net weight of the contents not to exceed 308 pounds.

(c) Fissile Class

II and III

(1) Minimum number of radiation units to be shown on label for Class II

8.0

(2) Maximum number of packages per shipment for Class III

Ten (10)

6. The cross section of the inner container shall be limited to a maximum 19.6 square inches for the contents specified in 5(b)(i) where the ratio of the weight of U-235 to the weight of U-235 plus zirconium exceeds 0.074 or the ratio of the weight of U-235 to the weight of U-235 plus aluminum exceeds 0.22.

7. This amendment supersedes, in its entirety, Amendment No. 71-3 to SNM-777, dated February 3, 1967.

REFERENCES

Licensee's application dated January 3, 1967, requesting approval to deliver special nuclear material to a carrier for transport in the UNC-2600 package.

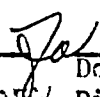
Supplements dated January 24, 1967, and June 14, 1968.

FOR THE ATOMIC ENERGY COMMISSION

AUG 12 1968

L. C. ROUSE

Date of Amendment


Donald A. Mussbaumer

COPY Division of Materials Licensing