



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

DOT-E 11267  
(SECOND REVISION)

MAR 18 1997

400 Seventh Street, S.W.  
Washington, D.C. 20590

EXPIRATION DATE: August 31, 1997

(FOR RENEWAL, SEE 49 CFR SECTION 107.109.)

1. GRANTEE: The University of New Mexico, Albuquerque, NM.
2. PURPOSE AND LIMITATION: This emergency exemption authorizes the one-time transportation in commerce of a TOPAZ II space power unit which contains within it certain Division 4.3 and 4.1 solid substances and Class 7 excepted articles and packaged in either specially designed or standard ocean freight container as prescribed herein. This exemption provides no relief from any regulation other than as specifically stated herein.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107, 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR Section 173.240, 173.241, 173.242 and 173.244.
5. BASIS. This exemption is based on The University of New Mexico's emergency request dated December 11, 1996 submitted in accordance with 49 CFR 107.103 and the public process thereon and a prior revision request dated June 27, 1996.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous materials description/proper shipping name	Hazard Class/ Division	Identification number	Packing Group
Radioactive material, excepted package-instruments or articles	7	UN2910	N/A
Alkali metal alloys, liquid, n.o.s	4.3	UN1421	I
Cesium	4.3	UN1407	I
Lithium hydride, fused, solid	4.3	UN2805	II
Zirconium hydride	4.1	UN1437	II

7. PACKAGING AND SAFETY CONTROL MEASURES:

PACKAGING - The inner packaging shall be the TOPAZ II Space Nuclear Power System without the nuclear fuel inserted, but still containing the two excepted Class 7 fission chamber instruments. The outer packaging shall be one of the following:

a. An all stainless steel shipping container with wall thickness not less than 2.5 mm (0.1 inch), each end of which shall be fitted with 4 hinged safety bolts, and gasketing sufficient to hold a 0 psia vacuum and shall be pressured with pure argon to 14.7-15 psia prior to shipment. The stainless steel shipping container must meet the specifications prescribed in Attachment II of the application. The package must be tied securely to a flat-bed truck trailer for transportation.

b. When the Topaz II Space Power System does not contain any alkali metal alloys (e.g. the Topaz II Space Power Unit Model Eh-41) a standard 20 x 8 x 8 foot ocean shipping container may be used provided the Topaz II unit is mounted to a structural steel support frame and is completely wrapped in several layers of plastic. The steel support frame must be braced within the container so that it will not shift during transport.

8. SPECIAL PROVISIONS:

a. Persons who receive the packages covered by this exemption may reoffer them for transportation provided no modifications or changes are made to the packages, all terms of this exemption are complied with and a current copy of this exemption is maintained at each facility from which such reoffering occurs.

b. This University of New Mexico must comply with all provisions of this exemption, and all other applicable requirements contained in 49 CFR Parts 171-180.

9. MODES OF TRANSPORTATION AUTHORIZED. Motor vehicle, cargo vessel.10. MODAL REQUIREMENTS: A copy of this exemption must be carried aboard each cargo vessel and motor vehicle used to transport packages covered by this exemption.

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11. COMPLIANCE. Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation laws 49 U.S.C. Section 5101 et seq:
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
  - o Registration required by 49 CFR 107.601 et seq., when applicable.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect unless a regulation has been amended making the exemption no longer necessary.

12. REPORTING REQUIREMENTS. The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (49 CFR 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incidents involving the package and shipments made under the terms of this exemption.

Issued at Washington, D.C.:

MAR 18 1997

  
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Alan I. Roberts  
Associate Administrator  
for Hazardous Materials Safety

\_\_\_\_\_  
(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.  
Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

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