U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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

DOT-E 9797 (EXTENSION)
THIRD REVISION December 13, 1991

In accordance with 49 CFR 107.105 of the Department of Transportation (DOT) Hazardous Materials Regulations DOT-E 9797 is hereby extended for the party(ies) listed below by changing the expiration date in paragraph 10 to April 30, 1998. This change is effective from the issue date of this extension. All other terms of the exemption remain unchanged.

This extension applies only to party(ies) listed below based on the application(s) received in accordance with 49 CFR 107.105. This extension constitutes a necessary part of this exemption and must be attached to it.

for Marilyn E. Morris
Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

JUN 6 1996
(DATE)

Dist: FHWA

EXEMPTION HOLDER	APPLICATION DATE
National Aeronautics & Space Administration (NASA) Washington, DC	April 15, 1996

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400 Seventh Street, S.W.
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DEC 1 3 1991

DOT-E 9797
(THIRD REVISION)

1. LTV Missiles and Electronic Group, Dallas, Texas, is hereby granted an exemption from certain provisions of this Department's Hazardous Materials Regulations to offer packages prescribed herein of the hazardous materials described in paragraph 3 below for transportation in commerce, subject to the limitations and special requirements specified herein. This exemption authorizes shipment of non-DOT specification containers described as space erectable radiator system panels, and provides no relief from any regulation other than as specifically stated. Each of the following is hereby granted the status of a party to this exemption:

National Aeronautics & Space Administration (NASA), Washington, D.C.- PTE-1.

2. BASIS. This exemption is based on the application of LTV Missiles & Electronics Group dated January 8, 1991 and additional information dated August 23, 1991, submitted in accordance with 49 CFR 107.103 and the public proceeding thereon, and 107.105. The granting of party status is based on the following application submitted in accordance with 49 CFR 107.111, and the public proceeding thereon and 107.105.

National Aeronautics & Space Administration's application dated November 8, 1990.

3. HAZARDOUS MATERIALS (Descriptor and class). Anhydrous ammonia or Helium, classed as a nonflammable gas.

4. PROPER SHIPPING NAME (49 CFR 172.101). Ammonia, anhydrous, or Helium, as appropriate.

5. REGULATION AFFECTED. 49 CFR 173.302, 173.304(a)(2).

6. MODES OF TRANSPORTATION AUTHORIZED. Motor vehicle.

7. SAFETY CONTROL MEASURES. Packagings prescribed are:

a. A 48 foot outer container consisting of six nonrefillable, non-DOT specification, containers described as space erectable radiator system panels having a network of heat pipes. Each heat pipe will consist of an evaporator section and a condenser section made of 2024 or 6061 aluminum alloy.

The panels must conform with either Thermacore Inc.'s drawings C-382-123 and D-380140 or with Vought Corporation's drawing 83-29353, on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA). The panels must be packaged inside the shipping container described in LTV's drawing FCSM No. 80378.

i. The maximum amount of ammonia packaged in an outside container is 10 pounds. Maximum operating pressure for each heat pipe is 422 psig.

b. A 44 foot outer container containing either one or two, non-DOT specification containers described as space erectable radiator system panels having a network of heat pipes. Each heat pipe will consist of an evaporator section and a condenser section made of 6063-T6 aluminum alloy. The panels must conform with LTV's drawing 83-36730, on file with OHMEA. The panels must be packaged inside the shipping container described in LTV's drawing 83-36730.

i. The maximum amount of ammonia packaged in an outside container is 600 grams. Maximum operating pressure for each head pipe is 422 psig.

c. A 23 foot outer container containing one, non-DOT specification container described as a space erectable radiator system panel having a network of heat pipes. Each heat pipe will consist of an evaporator section and condenser section made of 6063-T6 aluminum alloy. The panel must conform with LTV's drawing 83-36727, on file with the OHMEA. The panel must be packaged inside the shipping container described in LTV's drawing 83-36727.

i. The maximum amount of helium packaged in an outside container is 12.2 grams. Maximum operating pressure for each heat pipe is 146 psig.

ii. The maximum amount of ammonia packaged in an outside container is 300 grams. Maximum operating pressure for each heat pipe is 422 psig.

d. A 52 foot outer container containing a Radiator Experiment Assembly, described as the SHARE II Assembly, which consists of a Flight Beam assembly, separator, thermal blanket, supporting hardware and equipment and two non-DOT specification containers described as radiator panel assemblies having a network of heat pipes. The radiator panel assemblies are described in paragraph 7. b. of this exemption and as authorized under DOT Exemption E-7546 issued to Grumman Aerospace Corporation, Bethpage, New York.

The SHARE II Assembly must be packaged inside the shipping container described in NASA drawings SED 39117789 Rev. D, SED 361344379, and SED 36134380 on file with OHMEA.

i. The maximum amount of ammonia packaged in a outside container may not exceed 750 grams. The maximum operating pressure for each heat pipe is 422 psig.

e. Each heat pipe must be proof tested to at least 2 times operating pressure. Design burst pressure of the pressure vessels must be at least 4 times operating pressure.

8. SPECIAL PROVISIONS.

a. A copy of this exemption must be carried aboard each motor vehicle used to transport packages covered by this exemption.

b. One round trip shipment per panel is authorized between LTV's facilities in Dallas, Texas, and either NASA's Lyndon B. Johnson Space Center, Houston, Texas, or NASA's Kennedy Space Center, Florida. For the SHARE II assembly described in paragraph 7.d., and its back-up assembly, three round trips are authorized between NASA's Lyndon B. Johnson Space Center, Houston, Texas and NASA's Kennedy Space Center, Florida.

9. REPORTING REQUIREMENTS. Any incident involving loss of packaging contents or packaging failure must be reported to the Associate Administrator for Hazardous Materials Safety as soon as practicable.

10. EXPIRATION DATE. November 30, 1992.

Issued at Washington, D.C.:

DEC 13 1991

Alan I. Roberts
Director
Office of Hazardous Materials
Transportation

(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C., 20590. Attention: Exemptions Branch.

Dist: FHWA.