U.S. Department
of Transportation
**Research and
Special Programs
Administration**

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

NOV 18 2003

DOT-E 13333

EXPIRATION DATE: March 31, 2004

1. GRANTEE: The Boeing Company
Kennedy Space Center, FL

2. PURPOSE AND LIMITATION:

a. This emergency exemption authorizes the transportation in commerce of the Space Shuttle Orbiter Auxiliary Power Unit Fuel Tank containing Hydrazine, anhydrous. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.

b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.201 in that non-DOT specification packaging is not authorized, and § 172.101 Hazardous Materials Table, Column (9B) in that the quantity limitation may not be exceeded, except as specified herein.

5. BASIS: This emergency exemption is based on the application of The Boeing Company dated November 11, 2003, submitted in accordance with § 107.117 and a determination that it is necessary to prevent significant economic loss.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper shipping name	**Hazard Class/ Division**	**Identi-fication Number**	**Packing Group**
Hydrazine, anhydrous	8	UN2029	I

7. SAFETY CONTROL MEASURES:

a. PACKAGING: The packaging system for the Space Shuttle Orbiter Auxiliary Power Unit Fuel Tank is as follows

(i) Inner receptacle is a pressure vessel (tank) that meets MIL-STD-1522. It is a 28-inch diameter spherical, 6AL-4V spun-wound titanium tank with 0.048-inch wall thickness and is electron beam welded. The volumetric size is 6.5 cu ft (approximately 50 gallons). It is designed for operational pressures of 425 psia and the Proof Pressure rating is 970 psig. The tank is manufactured under part number 80228-1 and conforms with The Boeing Company drawings on file with the Office of Hazardous Materials Exemptions and Approvals.

(ii) Each pressure vessel must be totally encapsulated by a hydrazine compatible material then placed into a fiberboard box lined with a minimum of 4 inches flexible polyurethane foam conforming to MIL-C-26514, Type I, Class 2. The bottom and top of the container must be lined with a minimum of 5 inches flexible polyurethane foam conforming to MIL-C-26514, Type I, Class 2. When placed in the cushioned box, the tank must be prevented from rotation by compression of the cushioning materials and the protrusion of the ports. The fiberboard box will be sealed shut using commercial packing tape. The sealed fiberboard box must then be placed into a plywood shipping container lined on all sides, top and bottom with a minimum of 2 inches polyurethane foam conforming to MIL-C-26514, Type I, Class 2.

b. OPERATIONAL CONTROLS -

(i) Transportation is authorized only between the Kennedy Space Center in Floria and the White Sands Testing Facility in New Mexico; and

(ii) Each tank may contain only a residue of hydrazine.

8. SPECIAL PROVISIONS:

a. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

b. Each outer packaging must be marked "DOT-E 13333" in accordance with § 172.301(c).

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo aircraft only.

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each aircraft and motor vehicle used to transport packages covered by this exemption. The shipper must furnish a copy of this exemption to the air carrier before or at the time the shipment is tendered.

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 law, 49 U.S.C. 5101 et seq:

- All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

- Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when this exemption has expired or is otherwise no longer in effect.

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. (Sections 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 incident involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:

NOV 1 8 2003

(DATE)

for Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, D.C. 20590.
Attention: DHM-31.

Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/exemptions Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: DL/ss