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

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

OCT 3 2002

DOT-E 12581
(SECOND REVISION)

EXPIRATION DATE: **September 30, 2004**

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: National Aeronautics and Space Administration (NASA)
Washington, DC
(Former Grantee: Ball Aerospace & Technologies Corp.)

2. PURPOSE AND LIMITATION:

a. This exemption authorizes the transportation in commerce of two (2) Stirling-cycle mechanical cryocoolers (container) for the High Resolution Dynamic Limb Sounder (HIRDLS) instrument used as part of the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC) Earth Observing System. 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 § 173.301(f) in that containers are not fitted with pressure relief devices; §§ 173.302a(a)(1), 173.304a(a)(2), 175.3 and 177.801(a) in that non-DOT specification packagings are not authorized, except as specified herein.

5. BASIS: This exemption is based on the application of the National Aeronautics and Space Administration dated August 2, 2002, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi-fication Number	Packing Group
Helium, compressed	2.2	UN1046	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packagings are two (2) non-DOT specification containers which are installed in spacecraft or components of spacecraft and overpacked in a wood crate (MIL-STD PPP-B-601 or equivalent) or a metal spacecraft-shipping container as described in the applicants exemption on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA). The non-DOT specification containers are designed in accordance with Ball Aerospace & Technologies Corporations engineering reports and analyses on file with OHMEA and are not fitted with valves or pressure relief devices.

b. TESTING - Welds must be radiographically inspected to MIL-STD-453 or ASTM E 1742 specification. Each non-DOT specification container must be pneumatically tested to a pressure of at least 1.5 times the vapor pressure of the lading at 22.2°C (72°F) without failure and must have a minimum burst pressure of at least 532 psig.

c. OPERATIONAL CONTROLS -

(1) Each HIRDLS may not contain more than 95.2 liters of helium at 132 psia at room temperature.

(2) Emergency response information provided with the shipment and available via an emergency response telephone number must indicate that the HIRDLS are not fitted with pressure relief devices and provide appropriate guidance in case the packaging is exposed to fire.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this exemption and the HMR.

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

c. MARKING - The overpack containing the HIRDLS must be marked on two sides in letters at least 2 inches high on a contrasting background, "DOT-E 12581".

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 or 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.:

R. Ryan

for Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

OCT 3 2002
(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.

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: ss/alb