

January 30, 2015



U.S. Department  
of Transportation

East Building, PHH-30  
1200 New Jersey Avenue, Southeast  
Washington, D.C. 20590

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 14187  
(THIRD REVISION)

**EXPIRATION DATE: December 31, 2018**

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Space Systems/Loral  
Palo Alto, CA
2. PURPOSE AND LIMITATION:
  - a. This special permit authorizes the transportation in commerce of a Space Systems/Loral satellite assembly containing non-DOT specification pressure vessels pressurized with compressed hydrogen, which is a component part of a nickel-hydrogen battery. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
  - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with use as a component of a vehicle or other device, or other uses not associated with transportation in commerce.
  - c. Party status will not be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.301(f), 173.302a(a) in that a non-DOT specification cylinder is not authorized, except as specified herein.
5. BASIS: This special permit is based on the application of Space Systems/Loral dated January 2, 2015, submitted in accordance with § 107.109.

January 30, 2015

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

<b>Hazardous Material Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/ Division</b>	<b>Identi- fication Number</b>	<b>Packing Group</b>
Hydrogen, compressed	2.1	UN1049	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packagings are non-DOT specification pressure vessels that have a maximum service pressure of 1100 psig which are part of a Space Systems/Loral (SS/L) satellite assembly described in SS/L's application on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA). The pressure vessels are constructed of Inconel 718 alloy per AMS 5596 and manufactured by Eagle-Picher Industries, Inc. The pressure vessels are a component of a nickel-hydrogen battery as described in the SS/L application.

b. OPERATIONAL CONTROLS: The satellite must be shipped in the Satellite Container and operated as described in the documentation on file with the OHMSPA.

(1) This special permit only authorizes the transportation of two (2) batteries each with 22 to 58 cells (pressure vessels) per Satellite Container configured as shown in the application.

(2) Pressure relief devices are not required.

(3) The nickel-hydrogen battery must meet the requirements of § 173.159(d) for a non-spillable, wet, electric storage battery. There may not be a release of gas during the vibration or pressure differential tests.

(4) The nickel-hydrogen battery must meet the requirements of Qualification Test Report No. TR-E172815 or Qualification Compliance Report, Document No. E177680 on file with OHMSPA.

(5) The pressure vessel must have a burst pressure to service pressure ratio of 2.0 or greater.

8. SPECIAL PROVISIONS:

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

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

c. The satellite shipping container must be marked "DOT-SP 14187" on two opposite sides in letters at least 2 inches in height on the contrasting background.

d. Emergency response information provided with the shipment and available via an emergency response telephone number must indicate that the receptacles are not fitted with pressure relief devices and provide appropriate guidance for exposure to fire.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle used to transport packages covered by this special permit.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.

**January 30, 2015**

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

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

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

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)- "The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.



for Dr. Magdy El-Sibaie  
Associate Administrator for Hazardous Materials Safety

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

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at

[http://hazmat.dot.gov/sp\\_app/special\\_permits/spec\\_perm\\_index.htm](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm)

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PO: SS/kah