U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

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

DOT-SP 13181
(THIRD REVISION)

EXPIRATION DATE: January 31, 2015

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Thermo MF Physics
Colorado Springs, Colorado

2. PURPOSE AND LIMITATION:

a. This special permit authorizes the manufacture, marking, sale and use of high voltage accelerators for the transportation in commerce of sulfur hexafluoride. 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 consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.

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

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.304(a)(2) in that the prescribed packaging is not authorized except as specified herein.

5. BASIS: This special permit is based on Thermo MF Physics' application dated October 27, 2010 submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	**Hazard Class/ Division**	**Identi- fication Number**	**Packing Group**
Sulfur hexafluoride	2.2	UN1080	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a high voltage accelerator system, consisting of a high voltage accelerator and other instrumentation assembled within an aluminum alloy shell. The aluminum shell is constructed of 6061-T6 seamless pipe with 6061-T6 end caps. The shell is filled with sulfur hexafluoride. The assembly must be in conformance with Thermo MF Physics' drawings on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA) and with the following requirements:

(1) The high voltage accelerator system may not be charged with sulfur hexafluoride to a pressure exceeding 120 psig at 70□F.

(2) The high voltage accelerator system must be equipped with a safety relief device capable of limiting the pressure to 180 psig.

b. TESTING -

(1) At Time of Manufacture

(i) Each high voltage accelerator with all pressure containing components must be capable of withstanding a hydrostatic proof pressure test of not less than 450 psig.

(2) Prior to shipment, each high voltage accelerator system must be leak tested to at least 150 psig without evidence of leakage.

(2) Requalification

(i) Only the Thermo MF Physics in Colorado Springs is authorized to test/refurbish/certify new or used housings for shipment.

(ii) Each high voltage accelerator must be reinspected and retested in accordance with Thermo MF Physics procedures detailed in the application for special permit on file with OHMSPA.

c. OPERATIONAL CONTROLS:

(1) The high voltage accelerator system must be overpacked in strong outside containers as described in the information on file with OHMSPA. When so packed, the systems are exempt from labeling, except when offered for transportation by air.

(2) Each outside packaging must be marked "INSIDE CONTAINERS CONFORM WITH "DOT-SP 13181".

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a package covered by this special permit, may reoffer it for transportation provided no modifications or changes are made to the package and it is offered for transportation in conformance with this special permit and the HMR.

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

d. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.

e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, cargo vessel, cargo only aircraft, and passenger-carrying aircraft.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel or aircraft used to transport packages covered by this special permit. The shipper must furnish a current copy of this special permit 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 special permit and penalties prescribed by Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

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

- 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.

- 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 the 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 Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: SS/sln/mn