SPECIAL PERMIT 1503 REVISION NO. 6

This Special Permit is issued pursuant to the terms of Section 71.6(a) of the "Regulations for the Transportation of Dangerous Commodities by Rail" to authorize the shipment of non-CTC Specification 3AA cylinders by rail in Canada, under conditions prescribed herein, and does not relieve any shipper or carrier from compliance with any requirement of the said Regulations, except as specifically stated.

1. BASIS

Letter dated March 15, 1988 from FABER Industries SPA, n.115-33043 Cividale del Friuli, Udine, 33043 Italy.

2. COMMODITY CLASSIFICATION

Flammable gas 2.1.

COMMODITY NAME

Methane or natural gases.

4. IDENTIFICATION NUMBER

1971.

5. REGULATION AFFECTED

73.302.

6. AUTHORIZED SHIPPER

FABER Industrie, S.P.A. and its customers.

7. PACKAGING DESCRIPTION

Specification CTC 3AA cylinders except that

- a) The wall stress shall not exceed 75 per cent of the minimum tensile strength at test pressure.
- b) The wall stress shall be a maximum of 90,500 psi.
- c) The tensile strength to be in the range of 121,000 to 135,000 psi.
- d) Each cylinder shall be marked "CNG ONLY" in addition to all other markings as prescribed by CTC Specification 3AA and Section 7 of this Special Permit.
- e) Usage of carbon boron steel as prescribed in Section 178.37-5 (a) & (b) of the Code of Federal Regulations Title 49 is authorized.

Cylinders manufactured in accordance with this Special Permit shall be as described in FABER Industries SPA application dated January 20, 1982 to include Drawings CAN-355-345-738, CAN-316-345-738 and CAN-267-345-738 per Faber Industries SPA's letter dated 15.03.88 on file with the Director of Operation.

8. SPECIAL REQUIREMENTS

- a) Each cylinder shall be plainly marked "CTC SP 1503" with letters and figures at least one-half inch high.
- b) Gas quality: methane or natural gases shall not contain more than:
 - (i) 0.5 lbs. of water per million cubic feet at standard temperature and pressure (STP) $(60^{\circ}F_{\bullet}, 30 \text{ inches H}_{2})$.
 - (ii) 0.1 grain of hydrogen sulfide per 100 cubic feet at STP as determined by ASTM D 2385-76 test for hydrogen sulfide and mercaptan sulfur in natural gas (cadmium sulfate iodometric titration method).
 - (iii) Total soluble sulfides other than ${\rm H_2S}$ must be less than .1 grain per 100 cubic feet at STP.
 - (iv) One percent by volume of oxygen.
 - (v) Three percent by volume of carbon dioxide.
 - (vi) Four percent total (including but not limited to items (iv) and (v) of this paragraph) by volume of all non-hydrocarbon gases (excluding nitrogen).
- c) The cylinders shall be reinspected once in 5 years in conformance with the standards set forth in CGA Pamphlets C-1 and C-6.

9. ADDITIONAL TESTING

One out of each group of 1,000 cylinders shall be subjected to the cycling test to destruction at service pressure and pulse frequency shall be approximately 5 cycles per minute. The results of the cycling tests shall be reported to this office.

10. REPORTING REQUIREMENTS

The Director of Operation shall be advised of any incident involving loss of contents and shall be provided with a summary of experience before the expiration date of the Special Permit.

11. EXPIRY DATE

This Special Permit shall remain in effect until April 25, 1989 and may be revoked at any time by the Director of Operation prior to this date.

Birector of Operation Rail Safety Branch

Issued at Hull, Quebec this 25th day of April, 1988

Address all enquiries to:

Director of Operation, Rail Safety Branch National Transportation Agency Ottawa, Ontario K1A ON9