U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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

MAR 2 1999

Mr. Paul Horgan
Department of California Highway Patrol
P.O. Box 942898
Sacramento, CA 94298

Ref. No. 99-0040

Dear Mr. Horgan:

This is in reference to our conversation on February 3, 1999, concerning the proper orientation for loading certain DOT 4L cylinders which are being used in oxygen, refrigerated liquid service. The requirements in 49 CFR 173.316(c) and 177.840(a)(1) specify that DOT 4L cylinders must be loaded (on a motor vehicle) in an upright position.

The cylinders in question were designed and constructed to be used and transported with the longitudinal axis of the cylinders positioned, horizontally. Because of the unique design of these DOT 4L cylinders, the vapor space is along the longitudinal axis of the cylinder. Therefore, it is this office's determination that these cylinders are "upright" when they are transported in a horizontal position, as the safety relief devices are in communication with the vapor space of the cylinder. This type of positioning enables the pressure relief devices to function and protect the cylinder in a safe manner as intended. Accordingly, we find that the transportation of these cylinders in a horizontal position conforms with the requirements in §§ 173.316(c) and 177.804(a)(1). We proposed a revision to § 177.804(a)(1) in a recent notice of proposed rulemaking (RSPA 98-3684 HM-220; October 30, 1998).

I hope this information is helpful. If we can be of further assistance, please contact this office.

Sincerely,

Hattie L. Mitchell

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Chief, Regulatory Review and Reinvention
Office of Hazardous Materials Standards

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File: 177.840(a), 173.316

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Staff	Mitchell	First Draft Due: 3/5/99	
Section	173.316(c)	First Draft Date: 2/12/99	
Subject	Cylinders		
Concurrence			
Status		Status Date	
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HBP ☐ Copy to Docket ☐ Copy to DHM-60 ☐

Comment