U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue SE
Washington, DC 20590

SEP 14 2011

Mr. Fred A. Nachman
President
Thunderbird Cylinder
4209 E. University Drive
Phoenix, AZ 85034-7315

Ref. No.: 10-0077

Dear Mr. Nachman:

This responds to your letter requesting clarification of the requirements concerning the tare weight of liquefied petroleum gas (LPG) cylinders under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180).

Q1. Does a low pressure (LPG) cylinder being visually inspected need to have its valve/PRD removed to verify there is no liquid inside it that would result in improper tare weight verification?

A1. No. A cylinder conforming to §180.209 used exclusively in LPG service may be given an external visual inspection in lieu of a hydrostatic test. No measurement of the tare weight is required for the external visual inspection. When the cylinder exhibits corrosion, the cylinder must be further examined for condemnation. The cylinder must be examined by measuring tare weight in accordance with CGA C-6, 5.2.1.1 (1). The cylinder must be empty. The tare weight is measured with the valve/ PRD connected. Cylinders exempt from tare weight measurement must be examined by measuring wall thickness in accordance with CGA C-6, 5.2.1.1 (2), (3), or (4).

Q2. At the time of requalification, should the pressure relief device (PRD) be changed?

A2. No. There is no regulatory requirement to change the PRD at the time of requalification. Pressure relief devices must be tested for leaks before a filled cylinder is shipped in accordance with §173.301(a)(2) and (3).

Q3. Should it even be an option to hydrostatically test or steam clean LPG cylinders when ethyl mercaptan exposed to water/moisture is corrosive?

A3. Cylinders containing LPG in accordance with §180.209(g) may be given an external visual inspection in lieu of a hydrostatic pressure test. This would avoid adding moisture to the cylinder. If steam cleaning is used, it is the responsibility of the filler to make sure the cylinder is dry before filling with a hazardous material, if moisture is dangerous to the cylinder (§173.301(d)).

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

Sincerely,

Ben Supko
Chief, Standards Development Branch
Standards and Rulemaking Division

Engru
§180.209(g)
Cylinders
10-0077

Date: April 1, 2010
To: Hattie.mitchell@dot.gov
Mark.toughiry@dot.gov
Ryan.posten@dot.gov
Subj: Request for clarification concerning tare weights of propane/LPG cylinders

Question No. 1. Does a low pressure propane (LPG) cylinder being visually inspected need to have its valve/PRD removed to verify there is no liquid inside it that would result in improper tare weight verification? ☐ Yes ☐ No

Reference is made to **49CFR180.209(g) Visual inspections** A cylinder *(DOT 3A, 3AA, 3B, 4B, 4BA, 4BW cylinders in liquefied petroleum gas)* … used exclusively in the service indicated may, instead of a periodic hydrostatic test, be given a complete exterior visual inspection… in accordance with CGA Pamphlet C-6…

CGA C-6-2007-5 Low pressure cylinders exempt from hydrostatic testing -5.2.1.1 Corrosion limits When a cylinder exhibits corrosion, the cylinder shall be condemned when the tare weight is less than 90% of the original stamped tare weight… When determining tare weight, be sure the cylinder is *empty*. Cylinders that are used exclusively in noncorrosive gas service and meet one or more of the conditions below are exempt from tare weight checking requirement: …

check

Why would propane cylinders be exempted from tare weight verification when (1) that cylinder coming in for requalification after 12 years in its original service cycle and exposed to the elements will undoubtedly exhibit *some* amount of external corrosion, (2) the original stamped mfr tare weights were not necessarily correct, (3) the valve/PRD may have been changed out with one(s) of different weights, (4) it is unclear how much liquid remains in the cylinder effecting the weight, or (5) the cylinder contains the proper length dip tube on its spitter?

Question No. 2. At time of requalification, should the PRD be changed? ☐ Yes ☐ No
It is our understanding that these resettable PRD's will reset at lower and lower PSI's as they continue to relieve pressures and reset over years in service.

Question No. 3. Should it even be an option to hydrostatically test or steam clean LPG cylinders when ethyl mercapin exposed to water/moisture is corrosive? ☐ Yes ☐ No

Respectfully submitted,

odorant

Fred

Fred A. Nachman
President
(Propane_Visual_Inspection_Clarification_4110.doc)

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