Kaurin
File: 180.407
SC: 333

National PROPANE GAS Association
4301 North Fairfax Drive, Suite 340 • Arlington, Virginia 22203 • 703/351-7500 • Fax 703/351-7505

March 20, 1996
File: 285.07.11

Mr. Edward Mazzullo
Office of Hazardous Materials Safety
Research & Special Programs Administration
U.S. Department of Transportation
400 Seventh St., S.W.
Washington, D.C. 20590-0001

Dear Mr. Mazzullo:

A member company has approached us with a problem they have encountered in several mid-western states with enforcement of the Hazardous Materials Regulation (HMR). Field inspectors in each of these states have reportedly issued citations for violation of the annual leakage test requirements for cargo tanks (§180.407) in the DOT Hazardous Materials Regulations.

Because of the widespread importance of such an interpretation, the company has asked the NPGA to obtain a formal interpretation of the provision in question.

NPGA is the national trade association of the LP-gas (principally propane) industry with a membership of about 3,500 companies, including 37 affiliated state and regional associations, members in all 50 states. Although the single largest group of NPGA members are retail marketers of propane gas, the membership also includes propane producers, transporters and wholesalers, as well as manufacturers and distributors of associated equipment, containers and appliances. Propane gas is used in over 18 million installations nationwide for home and commercial heating and cooking, in agriculture, in industrial processing, and as a clean air alternative engine fuel for both over-the-road vehicles and industrial lift trucks.

These field inspectors maintain that the leakage test effectively requires that piping segments on a cargo tank motor vehicle transporting propane must be tested independently and that leakage past or through a valve is not permitted. In seeking resolution of this matter, the company contacted RSPA/OHMS and received a verbal interpretation that in effect upheld the field inspectors. Such an interpretation poses enormous problems that make it virtually impossible to comply with the Hazardous Materials Regulation.

The requirement for an annual leakage test was adapted as part of the HM-183 amendments. At the time this requirement was adopted, the understanding throughout the industry was that the test was intended to determine there were no leaks of the lading through piping joints and other such fixtures to the atmosphere. This understanding was upheld in numerous discussions with OHMS representatives and industry members as well as association representatives (myself included). In fact, the DOT representatives themselves suggested that leak detector solutions, such as are used to check a domestic piping system, would be a suitable means of checking the propane piping on a cargo tank motor vehicle! At no time was there an indication that leak detection through valves in the lading piping system was required.

The MC-331 specification requires that excess flow valves are required in certain critical points as a means of lading flow control in the event of a major break or separation in the piping system during loading or unloading of the lading, in addition to positive shutoff valves in the lading piping. These excess flow valves have been a required feature of a propane cargo tank for many years. Indeed, they are an essential part of the safety design of the cargo containment system for the vehicle.

In the event an excess flow valve is caused to operate, the valve is designed to reopen automatically whenever the piping downstream of the valve is made pressure tight through closure of an intervening positive shutoff valve or other suitable means. In virtually all designs of these excess flow valves, regardless of manufacturer, this automatic re-opening feature is accomplished by allowing a controlled flow space for a very small amount of propane to by-pass the closed valve.

The interpretation of these field inspectors that all valves in the piping system must be tested to determine that they provide positive shutoff and that no leakage past the valve is allowed even though the piping system itself is leak tight to the atmosphere means that all of these excess flow valves will have to be replaced with an excess flow valve that must be manually opened -- a device that to our knowledge does not presently exist, at least in a form approved for use on a tank truck.

There has not been any adverse experience with present designs for excess flow valves that would even begin to indicate a major re-design of the valve would be in order. The present designs are rather simple mechanically and have operated flawlessly for years. The cost of replacing all these valves in propane cargo tank motor vehicles would be enormous, especially so since there is no operations or safety problems with the present designs.

The propane industry remains firm in its belief (1) that the required leakage test is intended to determine that there are no lading leaks to the atmosphere and (2) that test of individual valves in the piping system is **not** intended nor required.

We would appreciate your confirmation that our interpretation and application of §180.407 is correct. Your reply at your earliest convenience would be very much appreciated.

We would be glad to discuss this interpretation request further at your convenience.

Sincerely,

W H Butterbaugh

W. H. Butterbaugh, CAE
Director
Regulatory Affairs

cc: William B. McHenry
Gerry Misel
Mike Gorham
Brian Clayton
D. R. Meyers
D. N. Myers
R. R. Roldan
Bruce Swiecicki
Field Service Directors

Information Copies: Daryl McClendon, Sam McTier, Bob Mattocks, and Doug Rinke