

December 10, 2007

## LPG PIPING RETROFIT - MEMORANDUM

A recent article titled “**The clock is ticking on internal valve retrofits**” by Ann Rey printed in the September 2007 issue of Butane Propane News “BPN” magazine prompted this memo. A requirement for piping retrofit at LPG storage facilities was first introduced in 2001 and the deadline is drawing near for all facilities to upgrade their piping systems. Wisconsin’s Comm Chapter 40 and NFPA 58-2004, specifically Section 5.7.7.2 identifies the piping retrofit requirements for compliance by July 1, 2011. Yes, it appears a long way off but time flies quickly and a need to make preparation is now if you haven’t done so already. This memo is sent to Wisconsin’s propane facility owners and industry officials to inform everyone that the time to plan a retrofit is now. The requirements indicated in the above mentioned article are applicable to containers over 4000 gallon capacity at both new and existing facilities. The intent is to make everyone aware of the requirement with sufficient time for owners, contractors and suppliers to plan and utilize convenient maintenance schedules or unexpected downtimes at your facility for piping upgrade / retrofit at your earliest opportunity.

To start, we enclose our Gas Systems brochure which provides a snapshot of Comm Chapter 40 regulations that include the adoption of the NFPA 58-2004 standard. A quick review only takes a moment. The brochure is an aid that helps one understand Gas Systems, navigate to our website, obtain a copy of Comm Chapter 40, Gas Systems code or obtain other useful contact and reference information about our Gas Systems Program.

We apologize for duplicating the requirements as shown in the BPN magazine article (attached) but should this notice part ways with the attachment, below are the code sections that apply for piping retrofit on new and existing LPG storage facilities in the State of Wisconsin by July 1, 2011:

NFPA 58, 5.7.7.2 ASME containers over 4000 gal (15.2 m<sup>3</sup>) water capacity shall be equipped in accordance with 5.7.7.2(A) through 5.7.7.2(G) and Table 5.7.7.3.

(A) Vapor withdrawal openings shall be equipped with either of the following:

(1) A positive shutoff valve located as close to the container as practical in combination with an excess-flow valve installed in the container

(2) An internal valve

(B) Liquid withdrawal openings in new installations shall be equipped with an internal valve that is fitted for remote closure and automatic shutoff using thermal (fire) actuation where the thermal element is located within 5 ft (1.5 m) of the internal valve.

(C) Liquid withdrawal openings in existing installations where the container is equipped with an internal valve that is not fitted for remote closure and automatic shutoff using thermal (fire) actuation shall be equipped for remote & thermal closure by 7-1-03.

(D) Liquid withdrawal openings in existing installations shall be equipped with either of the following by July 1, 2011:

(1) An internal valve that is fitted for remote closure and automatic shutoff using thermal (fire) actuation where the thermal element is located within 5 ft (1.5 m) of the internal valve

(2) An emergency shutoff valve that is installed in the line downstream as close as practical to a positive shutoff valve in combination with an excess flow valve installed in the container.

(E) Vapor inlet openings shall be equipped with either of the following:

(1) A positive shutoff valve that is located as close to the container as practical in combination with either a backflow check valve or excess-flow valve installed in the container

(2) An internal valve

(F) Liquid inlet openings in new installations shall be equipped with either of the following:

(1) An internal valve that is fitted for remote closure and automatic shutoff using thermal (fire) actuation where the thermal element is located within 5 ft (1.5 m) of the internal valve

(2) A positive shutoff valve that is located as close to the container as practical in combination with a backflow check valve that is designed for the intended application and is installed in the container

(G) Liquid inlet openings in existing installations where the container is equipped with an internal valve that is not fitted for remote closure and automatic shutoff using thermal (fire) actuation shall be equipped for remote and thermal closure by 7-1-03.

Because of the important 2011 piping retrofit requirements above, the department takes advantage of this memo to make facilities aware of other important procedures that must be written for LPG sites and made available upon request at sites in Wisconsin. NFPA 58, 6.16.1 indicates new and existing LPG installations for bulk and industrial storage plants must have written maintenance and operating procedures that comply with NFPA 58, Chapter 14. NFPA 58, 6.23.3.2 also states that modes of fire protection shall be specified in a written product release prevention and incident preparedness review unless an existing written Fire Safety Analysis for the site is available per 6.23.3.6. Since most LPG owners / operators are already in compliance with such written requirements, it is recommended to review and update any existing procedures if necessary. The department also suggests that LPG owners / operators initiate, communicate, coordinate and share planning of emergency response, incident preparedness and inadvertent product release procedures at their sites with local fire and emergency response officials.

With the combined assistance and cooperation of LPG owners, local officials and safety personnel in your community, the department hopes this safety memo will help initiate required planning and the development of effective procedures in the event of an incident in your area. Be safe and as always, contact our staff or the local District Inspector should LPG questions arise.

Sincerely,

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Attachment : BPN Magazine, Sept 2007 (4) page Article by Ann Rey  
Gas Systems Brochure