

Fuel Safety Bulletin

2013-01

Dated: March 13, 2013

Subject: Vaporizers and heavy-ends traps

CSA B149-2-10

9.1.10 *Where a **direct-fired vaporizer** is used on a permanent installation, an effective means of controlling heavy ends from entering the downstream piping shall be installed.*

Recently, we have started receiving some larger plan submissions for propane systems at commercial and industrial sites. These plans include drawings for larger-than-normal tanks and vaporizer systems.

Propane vaporizer systems have, in the past, created some unique problems since the heating of the propane liquid causes heavy-ends (oils) to drop out of the propane mix. These oils are then carried through the system and deposited throughout, in ever increasing amounts, and will eventually foul delicate controls and create a hazardous situation. The amounts of heavy ends are directly proportional to the amount of gas passing through the system, how fast the gas travels (volume), and the amount that the propane liquid is heated to vaporize it. These risks can be reduced by a number of design criteria, however, the heavy ends are always an issue. This is certainly recognized by vaporizer manufacturers, as they all offer a number of different sizes of contaminant traps for use with their vaporizers.

In the past, makeshift traps have been devised which consist mainly of a piece of larger pipe that the propane vapors flow through. This was a stopgap measure at best, and ultimately does very little to reduce this problem.

Clause 9.1.10 of the CSA B149.2 code is very clear. The means of controlling heavy ends must be “effective”.

Please be informed that, in the future, all vaporizer installations will require the installation of a properly designed, and properly sized, contaminant/heavy end trap in the piping downstream from the propane vaporizer.

It must also be noted that this trap is only as effective as its maintenance. If the trap is never emptied, it becomes ineffective very quickly. All heavy end traps must be emptied at least once every 30 days in winter conditions.

For any questions regarding this Bulletin, please contact me at our Halifax offices.

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