

**Pennsylvania Department of Environmental Protection
Division of Storage Tanks**

September 21, 2017

IMPORTANT NOTICE

**Ball Float Vent Valve and Drop Tube Shutoff
Valve Installation Concerns**

The Department has recently become aware of a few situations where overfill prevention equipment, if incorrectly installed or not properly removed, could cause fuel to be released to the environment.

If a ball float vent valve was installed to meet overfill prevention regulatory requirements, the ball should seat in the cage and close the storage tank vent pipe when the storage tank is filled to 90% of its capacity. If, during operability testing, the ball float vent valve is found to be inoperable or uninspectable (e.g. the ball is missing out of the cage, the pipe stub is damaged and cannot be removed, the extractor fitting riser is paved over and cannot be readily accessed, etc.), responsible parties might consider resolving the violation by installing a drop tube shutoff valve to perform positive shutoff at 95% of the storage tank capacity and decide not to remove the pipe stub to the ball float vent valve. In this scenario, the end of the pipe stub will be under fuel (from 90% to 95% of the tank capacity) before the drop tube shutoff valve shuts and ends the fuel delivery. When this occurs, the storage tank cannot properly vent. Instead, the fuel delivery pressurizes the storage tank and forces fuel into the vent line, potentially causing a release of fuel out of the storage tank vent.

A second concern is that if the ball float vent valve is still operable and the ball float closes the storage tank vent pipe at 90% of its capacity and a drop tube shutoff valve is installed, the ball float vent valve would directly interfere with the ability of the drop tube shutoff valve to function properly and close at 95% of the tank capacity. Additionally, when overfill prevention device operability testing occurs, the operability testing may incorrectly evaluate the drop tube shutoff valve and not the ball float vent valve.

To address these concerns, Petroleum Equipment Institute Recommended Practice 100-11 states, "WARNING: When installing flow shut-off devices, do not install a ball-float valve for overfill prevention."

The Department's Storage Tank certification regulations, Chapter 245, Sections 108 and 132, require certified installers to install equipment properly so it does not cause a violation of the Storage Tank and Spill Prevention Act, the Storage Tank Regulations, the Clean Streams Law, etc. and so the equipment does not cause pollution or a release. Improperly installing new overfill prevention equipment or leaving parts of previous overfill prevention equipment installed could directly cause release.

In order to prevent future generations of leaking underground storage tank systems, correct installation of all storage tank equipment is extremely important. If you have questions or desire clarification of the above, please contact the Division of Storage Tanks at (717) 772-5599 and ask to speak with a member of the Underground Storage Tank Unit.