FACT SHEET

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Coincident Use of Overfill Prevention Devices in Underground Storage Tanks

Office of Land Quality

(317) 234-4112 • (800) 451-6027 **www.idem.IN.gov** 100 N. Senate Ave., Indianapolis, IN 46204

Introduction:

Every owner or operator of regulated petroleum underground storage tanks (USTs) in Indiana must comply with state and federal requirements for overfill prevention equipment as required by the Indiana Code (*IC 13-23-1*), and the Code of Federal Regulations (*40 CFR, Part 280, Subparts B and C*). Owners and operators must follow these requirements:

- Use overfill prevention equipment that will do one of the following:
  - Automatically shut off flow into the tank when the tank is no more than 95% full; or
  - Alert the transfer operator when the tank is no more than 90% full by restricting the flow into the tank or triggering a high-level alarm; or
  - Restrict flow 30 minutes prior to overfilling, alert the transfer operator with a high level alarm one minute before overfilling, or automatically shut off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overfilling.
- Ensure that releases due to spilling or overfilling do not occur. The owner and operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

Some UST owners and operators have flow restrictor devices, commonly known as ball float vent valves, installed on UST systems as overfill prevention equipment. Some UST owners and operators have or will opt to use automatic shut off devices, commonly known as flapper valves, in place of ball float vent valves.

Ball float vent valves and flapper valves cannot be allowed to coexist on the same UST if they are installed according to industry practice. Ball float vent valves are required to be installed so they activate when the UST is 90% full or less. Flapper valves must be installed so they activate at 95% or less. Under certain conditions, the use of both devices could lead to a release of fuel from the top of the vent pipe, which can be more than ten feet above ground level and pose an extreme fire or explosion risk, as well as harm to the environment. This dual use can also cause fuel to flow into the vapor recovery line which can then cause the fuel to be spilled on the surface when the hose is removed from the vapor recovery port.

Ball float vent valves used as flow restrictors may need to be accessed or removed for required testing in accordance with 40 CFR 280.35. In order to alleviate difficult circumstances that would be imposed on UST owners and operators, and possible damage to existing UST systems in situations where a ball float vent valve cannot be accessed and/or removed, alternatives are allowed as long as the alternative complies with the requirements of the applicable rules.

Alternatives Allowed:

While some form of overfill prevention equipment must be utilized, owners and operators will only be required to operate and maintain the overfill prevention equipment identified as the “primary” form in use on a specific tank if:

- The primary form of overfill prevention equipment has been identified by submitting a new UST Notification Form; and
- The owners and operators verify through adequate documentation that the multiple forms of overfill prevention equipment cannot interfere with each other; and
- The owners and operators verify through adequate documentation that the primary form of overfill prevention equipment is installed in accordance with the rules and the manufacturer’s specifications.

UST owners and operators may install a flapper valve on the fill pipe of a UST while a ball float vent valve is also in use if:

- The owners and operators verify through adequate documentation that a ball float vent valve cannot be accessed and/or removed; and
- The owners and operators install a flapper valve set to activate at or below the level of the ball float vent valve installed on the same UST; normally at or below 90% full; and

- The owners and operators submit adequate documentation to IDEM, detailing at what level the flapper valve was installed, the diameter and length measurements of the UST, and that the flapper valve was installed in accordance with applicable national industry standards.

Any alternative utilized by an owner and/or operator, including installation and use of multiple overfill prevention mechanisms, must be installed, operated, and maintained in a manner that will prevent releases. The alternatives listed will be approved and permitted by the agency only as long as they continue to provide for adequate overfill prevention. Owners and operators must ensure an alternative applied at their site(s) functions as required to prevent releases due to overfilling of a UST.

Environmental Impacts:

- Indiana has over 4,100 operating UST sites that have over 12,000 USTs. If not managed properly, these sites can have negative impacts on human health and the environment from releases such as underground leaks and above ground spills.
- Refined petroleum products such as gasoline and diesel are a mixture of numerous compounds that have a detrimental effect on human health or the environment. These compounds are often toxic or carcinogenic.
- Contamination from leaking UST sites can migrate to streams or lakes, contaminate drinking water, or cause dangerous vapors in buildings and underground sewers.
- By ensuring that UST owners and operators operate and maintain appropriate overfill prevention equipment, releases can be prevented.

IDEM's Role:

IDEM is responsible for protecting human health and the environment while providing for safe industrial, agricultural, commercial, and governmental operations vital to a prosperous economy. IDEM's UST Compliance Section is responsible for inspecting all regulated UST systems in Indiana for compliance with applicable rules and regulations.

UST Owner or Operator's Role:

Owners and operators of petroleum USTs must ensure that a release, spill or overfill does not occur due to improper installation, operation or maintenance of overfill prevention equipment.

Owners and operators must be able to properly document all aspects of the physical characteristics of their UST systems and provide the documentation in accordance with 329 IAC 9 and 40 CFR, Part 280.

Additional Information:

- For questions regarding UST compliance, call the UST Program at (317) 234-4112 or (800) 451-6027, ext. 4-4112.
- Applicable laws are found at:
  - UST Rule- www.IN.gov/legislative/iac/T03290/A00090.PDF