Frequently Asked Questions: Overfill Requirements and Settings

BUREAU OF WEIGHTS AND MEASURES

PO Box 8911
Madison, WI 53708
(608) 224-4942
datcp.wi.gov

RESOURCES

Wis. Admin. Code ATCP 93: http://docs.legis.wisconsin.gov/code/admin_code/atcp/090/93

Regulated underground storage tank systems are required to have spill and overfill protection under Wis. Admin. Code § ATCP 93.505. To address some commonly asked questions an overview of the requirements is provided below.

What are the overfill requirements for Underground Storage Tanks (USTs) ?

There are requirements for both the installed overfill equipment and the tank filling operations process.

Overfill Equipment: The overfill equipment must be installed, properly set and functional at all times. There are two major sets of components.

- **Overfill Alarm:** The system must alert the transfer operator when the tank is no more than 90 percent full by triggering an audible and visual high-level alarm. This is a probe, and its setting parameters are interconnected to the tank monitor.
- **Automatic Shut Off:** The system must automatically shut off the flow of liquid into the tank when the tank is no more than 95 percent full if the tank uses tight-connect delivery. This is a mechanical device installed within the tank fill drop tube that operates independent of the tank monitor. The 95 percent fill level is the maximum allowable regulatory capacity of the tank system. Any product level above this regulatory threshold is an overfill condition.

- This equipment is required to be verified at installation, after repair and at least annually under Wis. Admin Code § ATCP 93.510(2)(a)5.

Tank Filling Operations:

- **Product transfer responsibilities:**
  Prior to delivery, the operator of the fuel delivery equipment that is transferring the product shall ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank under Wis. Admin Code §§ ATCP 93.505(1) and ATCP 93.605(6).

  The transfer operation shall be monitored constantly by the operator of the delivery equipment so as to prevent overfilling and spilling.

  Fuel-delivery persons shall immediately inform the owner or operator of any overfilling or spilling which occurs during the delivery procedure as required under Wis. Admin Code § ATCP 93.585(2)(b).

To safely meet the overfill equipment and tank filling operation requirements the proper tank volume for each tank must be determined first.

How is the proper tank volume established?

- Tanks are manufactured in several different configurations. The physical tank dimensions, such as interior length, diameter and profile impact the final volume calculation. The correct tank volume is determined by the values declared in the manufacturer's approved specifications. This information is documented on a tank specific "tank chart." At installation, each tank is supplied with the manufacturer's tank chart. These charts include values for the total functional capacity as well as the incremental values for the fill levels throughout the entire fill range.
- These charts include values for the 90 and 95 percent levels in inches of diameter as well as other volume levels.
- At installation, the values in inches or volume from the tank specific chart are entered into the Automatic Tank Gauge (ATG).
- The site setup parameters are verified at installation and again during the annual underground tank system functionality verifications.

What can I do if the tank chart is not immediately available?

- Be cautious as generic tank reference charts may not reflect the proper tank volume of the actual equipment installed. This may lead to tank overfill conditions.
- In the event a physical copy of the manufacturer's specific tank chart is not readily available on site, all alarms and overfill equipment settings shall correspond with the tank volumes programmed into the tank monitor based on the conditional approval. This information can be retrieved from the automatic tank gauge set up report.

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