

*This brochure is effective
October 13, 2018.*

OVERFILL PREVENTION

MANAGING YOUR

UNDERGROUND STORAGE TANK



Owners and operators of regulated underground storage tanks (USTs) on tribal lands must comply with the federal UST regulation.

This compliance assistance brochure highlights tips for overfill prevention.

Note: This document is a resource to promote compliance and does not replace the federal UST regulation.

This brochure is one in a series of EPA compliance assistance brochures designed to help owners and operators in Indian country comply with the federal UST regulation.

Other brochures focus on implementation, compatibility spill buckets, recordkeeping and notification, financial responsibility, insurance, tank release detection, and piping release detection.

www.epa.gov/ust/publications-related-underground-storage-tanks



Office of Underground Storage Tanks
www.epa.gov/ust
May 2017
EPA-510-F-17-006

Compliance Assistance in
Indian Country

OVERFILL PREVENTION

[Overfill prevention](#) is required for every underground storage tank (UST) filled with more than 25 gallons of product at one time. It is installed inside your tank to stop product flow, reduce product flow, or alert the delivery person during delivery before the tank becomes full.

There are three common types of overfill protection, as shown below:



Overfill alarm



Automatic shutoff device (flapper valve)



Flow restrictor (ball float valve)

If a tank is overfilled, product could be forced through the vent line and other loose tank fittings, potentially resulting in a release into the environment. Properly functioning overfill prevention will significantly reduce the chance of an overfill release.

Inspect your overfill prevention equipment every three years to ensure it will function properly to prevent overfills.

What can you do to prevent an overfill?

Repair or replace improperly functioning overfill alarms

Alarms alert the delivery person that product is reaching a certain level in the tank.

They also give the delivery person enough time to shut off product flow to avoid a potential release.

Alarms must be located where the delivery person can easily see or hear them.

If you hear the alarm, ensure the delivery person has stopped the flow of fuel to the tank.

Repair or replace improperly functioning automatic shutoff devices

Automatic shutoff devices stop the flow of product when the product reaches a certain level in the tank during delivery.



Automatic shutoff device with damaged float



Looking down the fill pipe at the flapper valve

The automatic shutoff device is located in the drop tube within the fill pipe riser.

A qualified UST contractor can check to make sure that all float components are functioning properly, and the float arm is not obstructed and can move freely.

Keep the automatic shutoff valve free and unobstructed. A disabled automatic shutoff prevents the valve from closing to prevent an overfill.



A dip stick is in the drop tube preventing the shutoff device from closing.

Inspect the automatic shutoff device to make sure it has not been tampered with, disabled, or removed from the fill pipe and there are no obstructions in the drop tube that will prevent the device from operating.

Monitor product deliveries and transfers

Pay close attention before, during, and after product delivery to help the delivery person avoid overfilling your UST.

Immediately report spills to your implementing agency.

Replace improperly functioning ball float valves

Ball float valves slow product flow by preventing vapors from leaving the tank when product reaches a certain level in the tank. This alerts the driver to stop the delivery. The top of the tank must be tight during deliveries so that vapors cannot escape.

A qualified UST contractor can check to make sure the ball float operates properly and moves freely, the cage is intact, and the ball float air hole is not plugged.



Ball float valve with ball out of the cage

Ball floats may be used on tanks installed on or before 10/13/15 as long as they operate properly.

Ball float valves may not be used when overfill prevention is installed or replaced.

Note: Recommended practices say ball float valves should not be installed on tanks with: suction piping, pumped delivery, coaxial Stage I vapor recovery, remote fill pipes with gauge openings, or when shutoff valves are used for overfill prevention.

Order the appropriate amount of product

Order only the quantity of product that will fill 90 percent of the tank.

The formula for determining the maximum amount of gasoline to order is:

(Tank capacity in gallons X 90%) – volume of product currently in tank = maximum amount of fuel to order

Example: (10,000 gallons X 0.9) – 2,000 gallons = 7,000 gallon maximum amount to order

For recommended inspection guidelines, checklists, and tips for managing your UST system overfill prevention, see EPA's [Operating And Maintaining Underground Storage Tank Systems: Practical Help And Checklists](#) or order free copies by calling (800) 490-9198.