

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

This compliance assistance brochure highlights best management practices for overfill prevention.

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

EPA developed this brochure to help UST owners and operators in Indian country comply with the federal UST regulations.

This brochure is one in a series of EPA compliance assistance brochures designed to help owners and operators comply with UST regulations.

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

www.epa.gov/oust/pubs

OVERFILL PREVENTION

BEST MANAGEMENT PRACTICES FOR YOUR UNDERGROUND STORAGE TANK



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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 damaging and costly release into the environment. Properly functioning overfill prevention will significantly reduce the chance of an overfill release.

What can you do to prevent an overfill?

Repair or replace improperly functioning overfill alarms

- Alarms alert the delivery driver that product is reaching a certain level in the tank. They also give the delivery driver enough time to shut off product flow to avoid a potential release.

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

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.

Periodically 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. The restricted flow alerts the driver to stop the delivery. The top of the tank must be tight during deliveries so that vapors can not escape.



Ball float valve with ball out of the cage

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 valves should not be installed on tanks with: suction piping, pumped delivery, coaxial Stage 1 vapor recovery, remote fill pipes with gauge openings, or when shutoff valves are used for overfill prevention.

The top of the tank must be tight during deliveries so that vapors can not escape.

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 best management practices for your UST system overfill prevention, see EPA's *Operating and Maintaining Underground Storage Tank Systems* at www.epa.gov/oust/pubs/ommanual.htm or order a free copy by calling (800) 490-9198.

Operating And Maintaining Underground Storage Tank Systems
Practical Help And Checklists

