

# Minimum requirements for new and replacement underground storage tank systems

Pre-notification is required for installations, replacement, or repair of an underground storage tank (UST) system. At least 10 days in advance of beginning work, notify the Minnesota Pollution Control Agency (MPCA) Storage Tank Program of the project by online submittal of the “Ten-day Advance Notice” form found on the UST Program website.

Pre-notification is not required for dispenser replacement where work is performed above the shear valve, or when work is performed on exposed components below grade that can be visually inspected at a later time.

## Certified contractor

Contractors who install, replace, or repair regulated UST system components, must be certified for installation and repair by the MPCA under Minn. R. 7105. Tank contractors must follow manufacture instructions, and follow all applicable industry codes and standards found in MN R. 7150.0500.

## Compatibility

All tank system components must be compatible with the product stored. Demonstration of compatibility is required on UST’s storing biofuels greater than 10% ethanol or 20% biodiesel. Please talk with your contractor to assure system compatibility with the products stored, and discuss fuels you may plan to store in the future. For more information, see “Biofuel compatibility with underground storage tanks” fact sheet on the UST program website.

## Tank design

Tanks installed after December 22, 2007 must be **secondarily contained** and constructed of a non-corrodible material or steel that is cathodically protected.

Tanks installed after December 22, 2007 must also be designed to conduct interstitial monitoring for leak detection by detecting the presence of liquid in the interstitial space monthly using one of the following:

- Continuous automatic leak-sensing device
- Manual procedure such as sticking the interstitial space of the tank

Retail gasoline tanks in metro area must have a Stage 1 vapor recovery system installed.

## Piping design

Pressurized piping and suction piping, other than safe suction, installed after December 22, 2007, must be secondarily contained (double-wall) and constructed of a non-corrodible material, or steel that is cathodically protected. These piping systems must also be designed to conduct interstitial monitoring by detecting the presence of liquid in the interstitial space monthly using one of the following:

- Gravity drain to sump with sensor that alerts the operator of the presence of liquid
- Gravity drain to sump and monthly visual sump inspections

Pressurized piping must have an automatic line leak detector (mechanical or electronic) that can detect a leak of three gallons per hour at 10-psi line pressure within one hour. An anti-siphon device must be installed on pressure or suction piping if the piping is positioned lower than the tank top.

For safe suction piping, piping must be sloped to drain back to the tank, with a single check valve located directly beneath the suction pump. Secondary containment and release detection are not required on the piping, but is required beneath the dispenser.

## Shear valves

Shear valves installed or replaced must be double poppet design, securely anchored, and level with the top of the island.

## Dispenser containment

The following activities require secondary containment beneath the dispenser:

- The dispenser is part of a new UST system
- New or replacement piping is connected to any dispenser
- A dispenser is replaced and work is performed below the shear valve
- The concrete or base material beneath the dispenser is replaced (island replacement)

**Secondary containment** beneath the dispenser must be designed to contain a leak with liquid tight sides, bottom, and points of penetration, and be constructed of non-corrodible material such as fiberglass reinforced plastic or comparable material.

Note: If double wall dispenser sumps are installed, they will be exempt from the three-year integrity testing requirements.

## Submersible pump containment

New and replacement submersible pumps, must have **secondary containment** around and beneath the pump head. Submersible pump containment must be designed to contain a leak with liquid tight-tight sides, bottom, and points of penetration, and be constructed of non-corrodible material such as fiberglass reinforced plastic or comparable material:

Note: If double wall submersible pump sumps are installed, they will be exempt from the three-year integrity testing requirements

## Spill and overfill prevention

The fill pipe must have a liquid-tight spill bucket that will prevent release during product delivery.

Note: If double-wall spill buckets are installed, they will be exempt from the three-year integrity testing requirements.

The tank must have a drop tube extending to within six inches of the tank bottom.

The tank must have an overfill prevention device that will meet one of the following requirements:

- automatically shut off flow into tank (fill pipe flapper valve) when the tanks is no more than 95% full
- alert fill operator by audible high level alarm when the tank is no more than 90% full

## Emergency stops

An emergency stop is a switch that disconnects electrical power to the pumps and dispensers. The emergency stop must be installed according to the MN Fire Code and be readily available to persons dispensing a regulated substance.

## Notification after installation

Within 30 days after installation of UST system component, notify the MPCA Storage Tank Program of the completion of installation by online submittal of the “UST Notification” form found on the UST Program website. The form must be signed by the owner or operator, and by the certified contractor.

## Records

The owner must keep documentation of UST system design. Keep documentation such as invoices, as built drawings, specifications, operational manuals, and manufacturer performance claims for tanks, piping, overfill prevention equipment, line leak detectors, leak detection sensors, dispenser and submersible pump containment, etc.

Documentation should be obtained from contractors, kept for the life of the tank, and passed on to any subsequent owner.

## Special use tank

Tanks used solely for heating are partially regulated; see **heating oil tank** fact sheet #1.08, “Heating Oil Underground Storage Tanks” found on the UST program website.

Tanks used for emergency generator use, or if used as an emergency generator and heating (dual-use), must follow all applicable tank requirements and are fully regulated.

## Need more information?

Visit the UST Program at <https://www.pca.state.mn.us/waste/underground-storage-tank-systems>. The site has forms, fact sheets, and other information about USTs and UST requirements.

You can also call the MPCA at 651-296-6300 or 1-800-657-3864 and ask for the UST Program