



*A Message from the Department of Environmental Quality's
Drinking Water Protection Team*



Best Management Practices for Underground Storage Tanks to Prevent Drinking Water Contamination

Why is it important to properly manage underground storage tanks (USTs) near the sources of your drinking water?

Most UST releases result from the corrosion of parts, improper installation, failure of piping systems, poorly constructed fuel deliveries (spills and overfills), and improper operation and maintenance of the UST system. UST releases can move rapidly through soil and threaten drinking water supplies. The U.S. Environmental Protection Agency estimates that about half of the UST releases reach ground water.

Petroleum includes carcinogenic compounds such as benzene. Even at very low levels, fuel contaminants in water may not be detected by smell or taste, yet they can affect human health. It does not take much pollution to create a drinking water problem. For example, an unrestricted gasoline leak of one drop per second releases about 400 gallons per year. Even a few quarts of gasoline in the ground water can pollute a drinking water well. Also, cleaning up contaminated soil and groundwater is very expensive, averaging \$125,000 at UST sites and exceeding \$1 million in some.

Pollution Prevention Measures

The following prevention measures are required by the Louisiana Department of Environmental Quality to prevent and detect UST releases:

Proper Installation: USTs must be installed according to industry standards with great care to maintain the integrity and the corrosion protection of the tank. Tanks must also be properly sited away from wells, reservoirs, and floodplains.

Registration: All owners of UST systems are required to register those systems with LDEQ within 30 days of bringing the systems into use. No owner or operator shall allow a regulated substance such as gasoline to be placed into an existing UST system that has not been registered.

Corrosion Protection: UST systems must be of non-corrodible material, such as fiberglass, or have corrosion protection provided in other ways, such as being made of externally coated and cathodically protected metal, having double walls, metal having a thick corrosion resistant cladding or jacket, or having an internal tank lining.

Spill Protection: USTs must have catchment basins that can catch spills that may occur when the delivery hose is disconnected from the fill pipe. A catchment basin is basically a bucket sealed around the fill pipe.

Overfill Protection: When a UST is overfilled, large volumes can be released at the fill pipe and through loose fittings on the top of the tank or a loose vent pipe. USTs must have overfill protection devices, such as automatic shutoff devices, overfill alarms, and ball float valves. In addition, proper filling procedures during fuel delivery must be followed to reduce the chance of spills or overfills.

Leak Detection: Detection methods include monthly inventory reconciliation, statistical inventory reconciliation, tank tightness testing, manual tank gauging, automatic tank gauging, interstitial monitoring, vapor monitoring, and ground water monitoring. All leaks must be detected in a timely manner, before they become big cleanup and liability problems. Upon discovery of a release, the owner or operator must report it to LDEQ within 24 hours by telephone at (225) 219-3640, during office hours; (225) 342-1234, after hours, weekends, and holidays; or by e-mail utilizing the Incident Report Form and procedures found at <http://www.deq.louisiana.gov/portal/tabid/279/Default.aspx>.



Proper Closure: LDEQ needs to be notified at least 30 days before UST closure, and a determination must be made if any contamination of the environment has occurred. The tank must be emptied and cleaned, after which it may be left underground and filled with an inert material or removed from the ground.

For More Information

Information and publications on UST regulations and best management practices can be obtained at no cost on the Internet at the following web site address maintained by EPA's Office of Underground Storage Tanks: www.epa.gov/OUST. You can also call the EPA hotline at 1-800-424-9346.

LDEQ regulations can be found at the following web site address:
www.deq.louisiana.gov/portal/Default.aspx?tabid=1674.

LDEQ Underground Storage Tanks Division web site address:
<http://www.deq.louisiana.gov/portal/tabid/2659/Default.aspx>

References

Louisiana Department of Environmental Quality, Title 33 Louisiana Environmental Regulatory Code

U.S. Environmental Protection Agency Source Water Protection Practices Bulletin, Managing Underground Storage Tanks to Prevent Contamination of Drinking Water, EPA 816-F-01-023, July 2001.