



Petroleum Storage Tanks

Potential Environmental Impacts

Petroleum storage tanks have the potential to leak into the environment. Just one gallon of gasoline can contaminate the water supply for 50,000 people and is toxic to fish and other aquatic life. Ignitable vapors from leaking tanks can collect in places such as basements or sewers, potentially causing fires or explosions. Gasoline vapors also contain significant amounts of air toxics, including VOCs (volatile organic compounds) which negatively affect our air quality.



Removal of soil contaminated by a leaking underground storage tank

Legal Requirements

- ◆ **Underground Petroleum Storage:** Petroleum tanks with 10% or more of total volume below grade (including the volume of connected underground pipes) are considered Underground Storage Tanks (USTs). For vehicle service operations, regulated tanks include gasoline, diesel fuel, kerosene, and used oil USTs of any size and heating oil USTs with a capacity of 2100 gallons or greater used solely for on-site heating. Oil/water separators are not subject to UST requirements but must be in compliance with all applicable standards for the management of wastewater (see the Shop Wastewater fact sheet).

USTs must meet certain requirements [RCSA Section 22a-449(d)-1 and Sections 22a-449(d) 101-113 and CGS Sections 22a-449o and 22a-449q] which are summarized below:

- 1) The tanks must be constructed of fiberglass-reinforced plastic or steel with manufacturer applied anti-corrosive coating and cathodic protection, or be a composite or jacketed tank certified to meet UL Standard 1746 or the ACT-100. The piping must be constructed of fiberglass-reinforced plastic or steel with manufacturer applied anti-corrosive coating and cathodic protection, or be flexible or semi flexible plastic. UST systems must be installed according to manufacturer's specifications;
- 2) As of October 1, 2003, all new tanks and piping must be double-walled and the new tanks must have continuous interstitial monitoring;
- 3) The facility must have an approved method of leak detection for both tank and piping and records must be maintained for at least 5 years beyond the operational life of the UST system (*heating oil tanks are exempt from inventory control*);
- 4) UST systems equipped with cathodic protection must be tested within 6 months of installation and at least annually thereafter. Additionally, impressed current cathodic protection systems require monthly inspections of rectifier current and voltage output;

- 5) Fill-pipes on tanks must have means to collect spills from delivery hoses (*heating oil tanks are exempt from this requirement*);
- 6) The tanks must have overfill protection, such as automatic shutoff devices which activate at 95% UST capacity or restrict flow during deliveries at 90% full or trigger a high level alarm (*heating oil tanks are exempt from this requirement*);
- 7) The tanks must be registered with the CT-DEP (on the Notification Form “*Underground Storage Facility Notification Form, EPHM-6*”); and
- 8) Operators of gasoline, diesel fuel, kerosene, and used oil UST systems will be required to be trained by August 8, 2012.

Release detection methodologies that use a dipstick are not allowable unless the UST system is less than 10 years old. However, manual tank gauging may continue to be used for tanks with a capacity of 550 gallons or less.

Tanks not meeting these requirements must be properly closed [RCSA Section 22a-449(d)-107]. Failure to properly close non-upgraded USTs can result in monetary fines.

UST Reporting and Record Keeping

You must submit the following information to the CT-DEP:

1. Copies of all Notification Forms;
2. Reports of all suspected releases and corrective actions; and
3. Notification before permanent closure or change-in-service. Sampling under the tank, lines and dispensers is required at time of closure. If contamination is discovered, it must be reported immediately to the CT-DEP and corrective action reports must be submitted.

You must keep and maintain the following records at the UST site and make them immediately available for inspection by CT-DEP:

1. Copies of all Notification Forms;
2. Documentation of annual tests of corrosion protection equipment;
3. Documentation of UST system repairs;
4. Documentation of compliance with release detection requirements; and
5. Results of the site investigation conducted at permanent closure.

These records must be maintained at the UST site for at least five years beyond the operational life of the UST system. Records, if greater than 5 years old, or with written approval by the Commissioner of the CT-DEP, may be kept at a readily available, alternative site, but must be made immediately available to CT-DEP inspectors upon request. Owners or operators of more than 10 facilities have limited off-site record storage options.

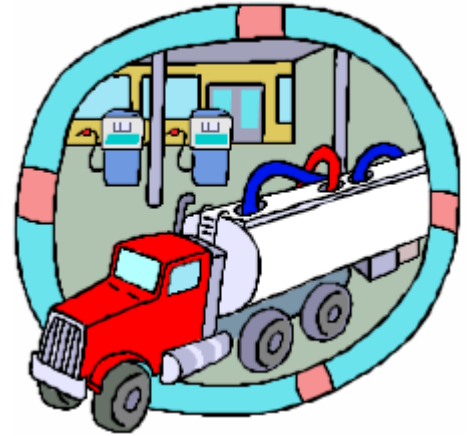
Contact the CT-DEP’s [Underground Storage Tank Program](#) at (860) 424-3374 for copies of the Notification Form and for additional information on UST requirements.

- ◆ **Aboveground Petroleum Storage:** If your facility stores oil (includes any kind or form, including gasoline) in aboveground tank(s) with a total aggregate volume of over 1,320 gallons (containers of less than 55 gallons are exempt) it may require a Spill Prevention, Control and Countermeasure (SPCC) Plan [40 CFR 112.1]. The SPCC Plan outlines a facility’s oil containment systems and procedures to prevent spills and contingency plans in

case of spills. (See the SPCC Plans Fact Sheet for more information.) The aboveground storage tank should be located within a dike or over an impervious storage area with containment volumes equal to 110% of the capacity of the storage tank.

- ◆ **Gasoline Vapor Recovery:** Gasoline vapors contain significant amounts of air toxics, including volatile organic compounds. To control emissions of these vapors, the following regulations were implemented:

Stage I vapor recovery - Gasoline tank trucks are required to collect gasoline vapors displaced during delivery. All gasoline storage tanks with a capacity of 250 gallons or more must have a permanent submerged fill pipe (drop tube) with a discharge point eighteen (18) inches or less from the bottom of the storage tank unless it is a pressure “tank”. [RCSA Section 22a-174-20(a)(3)]



Note: This CT-DEP requirement may not meet the U.S.EPA's new regulations for gasoline dispensing facilities, issued in January 2008 and updated in March and June 2008 [40 CFR Part 63 Subpart CCCCC]. For more information about the specific requirements, go to these EPA websites: [Summary of Regulations Controlling Air Emissions from GDFs](#); [Federal Register, January 2008](#); [Federal Register, March 2008](#); [Federal Register, June 2008](#).

Stage II vapor recovery - Gasoline stations that pump more than 10,000 gallons of gasoline per month are required to install vapor recovery systems on gasoline pumps, which recover vapors when vehicles are refueled. The Stage II systems must be tested when installed and every 3 years or when there is a major modification. [RCSA Sections 22a-174-30]

Find more information on [vapor recovery requirements](#) on the CT-DEP web site or contact the CT-DEP Bureau of Air Management at (860) 424-3027.

- ◆ **MTBE:** The use of MTBE in gasoline was banned in Connecticut in 2004 and fuel suppliers replaced it with ethanol. Nevertheless, MTBE remains a ground water contaminant at gas station sites as well as other sites in the State. Find more information on [MTBE](#) on the CT-DEP website or call the Bureau of Air Management at (860) 424-3027.
- ◆ **Gas Cans:** All portable fuel containers sold in Connecticut must meet certain “no-spill” requirements and be CARB approved. For more information about [gas cans](#), visit the CT-DEP web site or contact the CT-DEP Bureau of Air Management at (860) 424-3027.
- ◆ **Spills:** Any spill or release of oil or petroleum product, chemical or waste must be reported to the CT-DEP's Oil and Chemical Spill Response Division at (860) 424-3338 [CGS Section 22a-450]. See the Spill Reporting Fact Sheet for more information on the requirements.

A hazardous waste determination must be conducted on any materials resulting from the clean-up of a spill to determine whether or not disposal of the materials is subject to hazardous waste regulations [40 CFR 262.11; RCSA Section 22a-449(c)-102(a)(2)(A)]. See Appendix A for information on hazardous waste determinations.

- ◆ **EPCRA:** If your facility stores 10,000 pounds or more of gasoline, diesel fuel, kerosene, and/or fuel oil, either above- or underground for dispensing or for on-site use, you may have to report storage of that substance under EPCRA (The Emergency Planning and Community Right-to-Know Act of 1986). [42 USC 11001, and 42 CFR 355] For specific reporting requirements, see Appendix B.

Best Management Practices

- ★ Keep all information about registered underground storage tanks on file in a central location at the UST site.
- ★ Remove debris (e.g., leaf litter, sand) regularly from the spill bucket surrounding the fill pipe. If liquid petroleum does spill from the hose into the bucket during delivery or removal, a clean spill bucket will allow for the material to be drained back into the tank.
- ★ If possible, cover the outdoor aboveground tanks with a roof to prevent rainwater from filling the containment area.
- ★ Install a permanent submerged fill pipe (drop tube) with a discharge point of 6 inches from the bottom of the tank.

Pollution Prevention Checklist

- ✓ Is debris regularly removed from the spill bucket to prevent contamination?
YES NO N/A
- ✓ Are outdoor aboveground tanks covered to prevent rainwater from filling the containment area? YES NO N/A



Did You Know? Your business could incur substantial economic loss as a result of a leaking tank including loss of property value from contamination and the expense of cleanup.