Underground Storage Tank Regulations
Fact Sheet

REGULATORY SUMMARY

These regulations govern storage of hazardous materials and hazardous and non-hazardous wastes in underground storage tanks (USTs). This fact sheet focuses on requirements for tank upgrading, monitoring, recordkeeping, and closure. **Any small business that stores either new or used chemicals in tanks should be concerned with these requirements.** There are separate fact sheets for hazardous waste requirements (*Hazardous Waste Management – Selected RCRA Regulations – Fact Sheet)* and spill preparedness for petroleum tanks (*Spill Prevention, Control, and Countermeasures Fact Sheet*).

WHERE TO FIND TANK REGULATIONS

Statutory Authority: *Resource Conservation and Recovery Act (RCRA)* and amendments.

Regulations: The sections of regulations specific to storage of materials in underground storage tanks are found in 40 CFR, Subtitle I, "Solid Wastes." They are:

- **Part 280** – Technical standards and corrective action requirements for owners and operators of USTs;
- **Part 281** and **Part 282** – Approval of state UST programs and details of approved programs.

This fact sheet focuses on the requirements of Part 280. Hazardous waste tanks are excluded from regulation under 40 CFR Parts 280-282. They are instead regulated under hazardous waste regulations under 40 CFR, Subtitle I:

- **Part 262.34** (a)(1)(ii) – Requirements for hazardous waste generators who have hazardous waste storage tanks; and
- **Part 264.190-200** – Requirements for hazardous waste Treatment, Storage, and Disposal (TSD) Facilities that have hazardous waste storage tanks.

LEARNING THE LINGO

Cathodic Protection is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. The metal that forms the main structure of the tank is coated in a different metal that acts as an anode. The metal used as the anode is more readily corroded, reacts first and thus provides protection for the main structure.

What About Aboveground Storage Tanks?

Aboveground storage tanks (ASTs) are regulated separately from USTs and generally have to meet state and local fire and flammable liquid storage codes. Requirements usually address construction, installation, operation, and maintenance and are intended to prevent fires and other hazards caused by mismanaged or substandard ASTs. For more information, check with your local code authority, such as your local fire marshal.

Flow-through Process Tank is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process, or for the storage of finished products or by-products from the production process.

Impressed Current Corrosion (Cathodic) Protection makes use of a permanent long life anode, also known as a "sacrificial anode," supplying a continuous current to the surface of a metal. Corrosion is prevented by canceling the reaction between the metal and the surrounding soil and the anode is consumed instead of the metal surface.

Regulated Substance is any substance defined in section 101(14) of the *Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA*). It includes petroleum, crude oil, or any fraction thereof, that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). Note, this does not include regulated hazardous wastes.

Tank is a stationary device designed to contain an accumulation of regulated substances and constructed of non-earthen materials (e.g., concrete, steel, plastic) that provide structural support.

Underground Storage Tank (UST) is any one or a combination of tanks used to contain regulated substances which are 10 percent or more by volume beneath the surface of the ground. This includes connected underground pipes.

Wastewater Treatment Tank is a tank designed to receive and treat wastewater using physical, chemical, or biological methods.

KEY PROVISIONS OF INTEREST TO SMALL BUSINESSES

1. Exemptions Based on Size and Use

There are many exemptions that exclude certain types of tanks from being subject to the UST regulations:

- Equipment or machinery containing regulated substances for operational purposes, such as hydraulic lift tanks and electrical equipment tanks;
- USTs with less than 110-gallon capacity;
- Tanks storing heating oil that is used on the premises;
- Surface impoundments, pits, ponds, lagoons, or storm water and wastewater collection systems; and
- Flow-through process tanks.

2. Age of Tanks

The goal of RCRA UST regulations is to minimize releases due to overfills, spills and corrosion of tanks and piping. Owners of regulated metal USTs were required to upgrade their tanks to have corrosion protection by December 22, 1998. Owners of regulated tanks of any construction (metal, fiberglass, composite) were required to install spill prevention and overfill protection by the same date. Heating oil tanks installed after August 1, 1985 and larger than 1,100-gallons should have been installed with the necessary corrosion protection and are not subject to the spill and overfill protection standards. Other tanks that were not upgraded by the December 22, 1998 deadline should have been removed, replaced, or closed. Any new tanks installed after these dates must be fully compliant with UST requirements.

3. Notification Requirements

Companies that have a UST are required to submit a notice of the existence of the tank to their state or local agency. A standard form for notification can be found in Appendix I of 40 CFR 280 although some states have their own. A list of the agencies designated to receive the forms can be found in Appendix II of 40 CFR 280.

4. Corrosion Protection

The corrosion protection systems on regulated metal USTs must be tested to ensure they are operating correctly. If a cathodic protection system is used, it must be tested within six months of installation and every three years thereafter by a qualified cathodic protection tester. Owners are required to keep a record of the last two inspections. UST systems with impressed current cathodic protection systems must also be inspected every 60 days to make sure the equipment is operating correctly. Owners are required to keep a record of the last three inspections.

5. Release Detection

The regulations contain requirements to detect releases from leaking tanks. All new USTs are required to have leak detection at installation and existing USTs were required to meet leak detection requirements by December 1993. Approved leak detection methods include: interstitial monitoring, automatic tank gauging systems, vapor monitoring, ground water monitoring, statistical inventory reconciliation, manual tank gauging for small USTs, and other methods that meet performance standards.

6. Release Reporting

In cases where monitoring or release detection (also called “leak detection”) shows evidence of a leak, owners are required to immediately report the suspected release to the U.S. Environmental Protection Agency (EPA) or the appropriate delegated state agency. The owner must then take steps to determine if the suspected leak is an actual release by conducting tightness testing of the entire UST system.

7. Closure Requirements

Tanks that are not in use must be closed either temporarily or permanently. When an UST is temporarily closed, the owner must continue operation and maintenance of corrosion protection. They must also continue leak detection or empty the UST system. A UST system is considered empty when commonly employed practices have removed all materials so that no more than 2.5 centimeters (one inch) of residue or 0.3 percent of the total capacity weight of the UST system, remains in the system. Additionally, if the UST system is temporarily closed for three months or more, the owner must leave vent lines open and functioning, and cap and secure all other lines, pumps, manways, and ancillary equipment.

UST systems not in use for 12 months or more must be permanently closed unless the regulatory agency provides an extension. To permanently close a tank, the small business owner must arrange to have it emptied and cleaned by removing all liquids and accumulated sludge. Recommended protocols for tank closure are cited in 40 CFR 280.71. The cleaned tank must then be managed in one of three ways:

- Completely removed;
- Filled with a solid inert material; or
- If a site assessment has been conducted and contamination issues have been addressed, the tank system may be used for storage of an unregulated material.

FIRST QUESTIONS FOR THE SMALL BUSINESS OWNER

- Do you store any chemicals used in your business processes in tanks? If so, is all or part of the tank or its piping located underground?
- What type of chemicals do you store in these tanks?
- When were the storage tanks installed?
- How do you monitor your underground storage tanks? Are you monitoring for tank integrity?
- How do you verify that your tank is not leaking? How could you detect a leak if it occurred? What type of records do you keep for leak detection monitoring?
- Do you have any USTs on your property that are not in use?

WHAT TO LOOK FOR

- Fill pipes or vent pipes attached to underground tanks, partially buried tanks, or piping that leads underground.

- Fuel delivery records that indicate larger quantity deliveries than observed on site.

THE POLLUTION PREVENTION CONNECTION

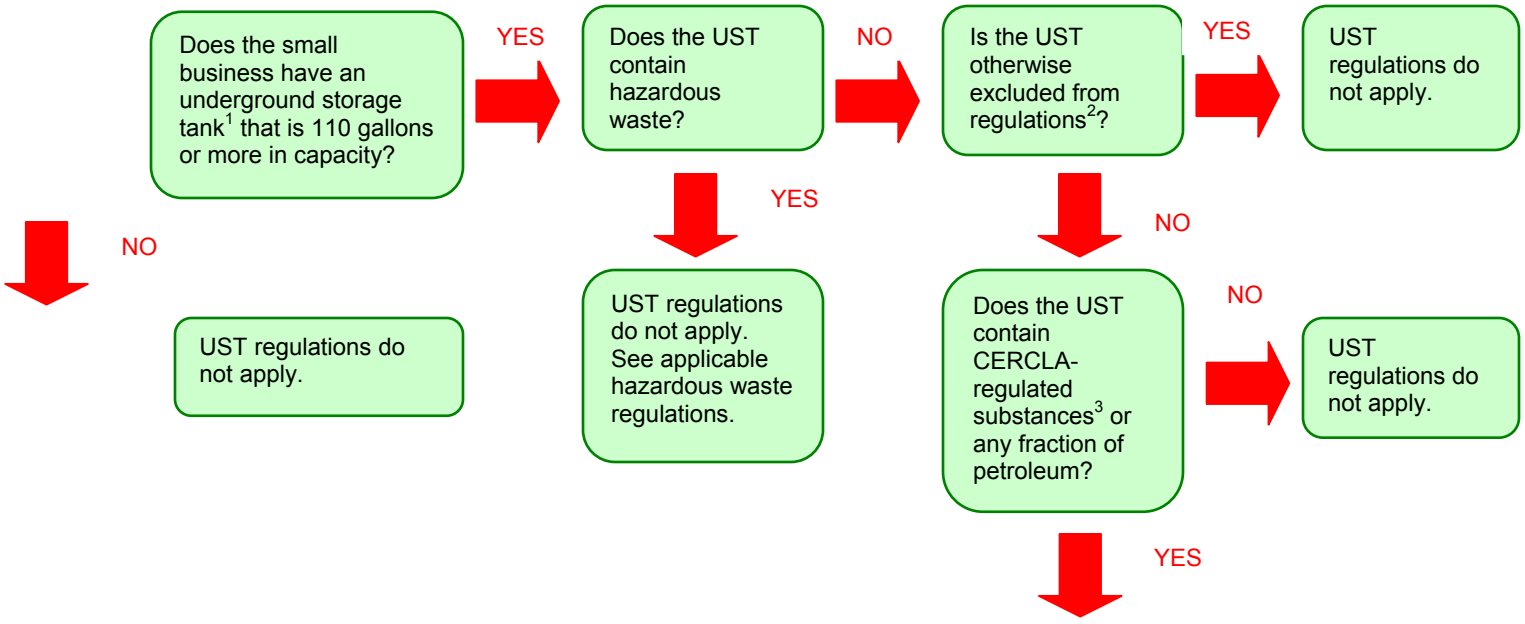
- Monitoring tank conditions through corrosion protection, tightness testing, and leak detection prevents contamination from leaks or allows early detection. This can help small businesses avoid costly and prolonged clean ups.
- Small businesses should take precautions whenever tanks are filled to prevent overspills. This should include observation and oversight of suppliers when they fill the tank. Any overspills should be cleaned up immediately.

FOR FURTHER INFO

- EPA document "*Operating and Maintaining Underground Storage Tank Systems, Practical Help and Checklists*": http://www.epa.gov/OUST/pubs/ommanual.pdf.
- Directory of State UST Program Contacts: http://www.epa.gov/OUST/states/statcon1.htm.

This fact sheet provides a general overview of regulatory requirements. It is not all-inclusive and does not describe specific state and local requirements. Its purpose is to provide state SBAP staff with guidance on key provisions, so that they may recognize potential applicability to small business and be more effective when seeking interpretations from regulatory experts.

Underground Storage Tank Regulations Roadmap



UST regulations apply. Consider:

- Has the small business owner notified regulatory agencies of the UST?
- Does the tank meet current standards for corrosion protection and release detection?
- Is the small business owner maintaining records as required?
- Does the small business owner understand reporting requirements and follow-up actions required if there is a release?

NOTES:

UST: Underground Storage Tank

[1] The definition of Underground Storage Tank does not include tanks that store heating oil used on the premises, septic tanks, storm water or wastewater collection systems, flow-through process tanks, and a few others. See definition in 40 CFR 280.12 for details.

[2] This includes certain wastewater treatment tanks, emergency overflow containment that is promptly emptied, equipment or machinery that contains hazardous substances such as a hydraulic lift, and a few others. See 40 CFR 280.10 for details.

[3] Any substance defined in section 101 (14) of the *Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)*.