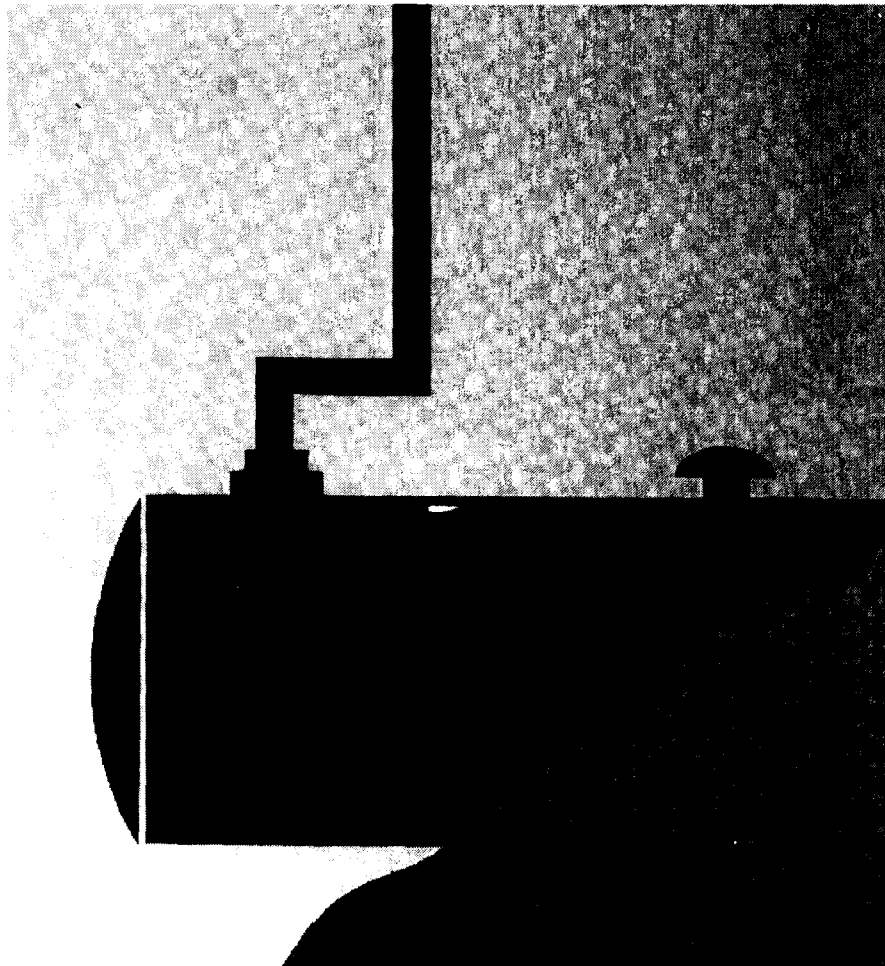




# UST Program Facts

## Implementing Federal Requirements For Underground Storage Tanks



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*This publication is primarily designed to help federal and state authorities answer the most frequently asked questions about USTs with consistent, accurate information in plain language. Other interested parties will find this publication provides a concise, comprehensive review of regulatory programs for USTs.*

***State and local regulations may be more stringent than the federal regulations. Check with your regulatory authority. You can call EPA's toll-free Hotline at (800) 424-9346 for contact information on your regulatory authority.***

# Overview Of The UST Program

## What's an "UST"?

An underground storage tank system (UST) is a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. The federal UST regulations apply only to underground tanks and piping storing either petroleum or certain hazardous substances.

The U.S. Environmental Protection Agency (EPA) estimates that there are about 1.1 million federally regulated USTs buried at over 400,000 sites nationwide. Nearly all USTs at these sites contain petroleum. These sites include marketers who sell gasoline to the public (such as service stations and convenience stores) and nonmarketers who use tanks solely for their own needs (such as fleet service operators and local governments). EPA estimates about 25,000 tanks hold hazardous substances covered by the UST regulations.

## Why be concerned about USTs?

Until the mid-1980s, most USTs were made of bare steel, which is likely to corrode over time and allow UST contents to leak into the environment. Faulty installation or inadequate operating and maintenance procedures also can cause USTs to release their contents into the environment.

The greatest potential hazard from a leaking UST is that the petroleum or other hazardous substance can seep into the soil and contaminate groundwater, the source of drinking water for nearly half of all Americans. A leaking UST can present other health and environmental risks, including the potential for fire and explosion.

## How have Congress and EPA responded to concerns about USTs?

In 1984, Congress responded to the increasing threat to groundwater posed by leaking USTs by adding Subtitle I to the Resource Conservation and Recovery Act (RCRA). Subtitle I required EPA to develop a comprehensive regulatory program for USTs storing petroleum or certain hazardous substances.

Congress directed EPA to publish regulations that would require owners and operators of new tanks and tanks already in the ground to prevent, detect, and clean up releases. At the same time, Congress banned the installation of unprotected steel tanks and piping beginning in 1985.

In 1986, Congress amended Subtitle I of RCRA and created the Leaking Underground Storage Tank Trust Fund, which is to be used for two purposes:

- To oversee cleanups by responsible parties.
- To pay for cleanups at sites where the owner or operator is unknown, unwilling, or unable to respond, or which require emergency action.

The 1986 amendments also established financial responsibility requirements. Congress directed EPA to publish regulations that would require UST owners and operators to demonstrate they are financially capable of cleaning up releases and compensating third parties for resulting damages.

## **Do all tanks have to meet EPA regulations?**

The following USTs are excluded from regulation and, therefore, do not need to meet federal requirements for USTs:

- Farm and residential tanks of 1,100 gallons or less capacity holding motor fuel used for noncommercial purposes;
- Tanks storing heating oil used on the premises where it is stored;
- Tanks on or above the floor of underground areas, such as basements or tunnels;
- Septic tanks and systems for collecting storm water and wastewater;
- Flow-through process tanks;
- Tanks of 110 gallons or less capacity; and
- Emergency spill and overfill tanks.

## **What are the federal requirements for USTs?**

In 1988, EPA issued regulations setting minimum standards for new tanks and requiring owners of existing tanks to upgrade, replace, or close them. The UST regulations are divided into three sections: technical requirements, financial responsibility requirements, and state program approval objectives.

### ***Technical requirements***

EPA's technical regulations for USTs are designed to reduce the chance of releases from USTs, detect leaks and spills when they do occur, and secure a prompt cleanup. New USTs must meet technical standards when installed. To meet the technical requirements, owners must upgrade, replace, or close UST systems installed before December 1988 by December 1998. Tanks remaining in operation must have leak detection and leak prevention components.

UST owners and operators are responsible for reporting and cleaning up any releases. (See subsequent sections on "Preventing Releases," "Detecting Releases," and "Cleaning Up Releases.")

### ***Financial responsibility regulations***

The financial responsibility regulations ensure that, in the event of a leak or spill, an owner or operator will have the resources to pay for costs associated with cleaning up releases and compensating third parties. (See subsequent section on "Financial Responsibility.")

### ***State program approval objectives***

EPA recognizes that, because of the large size and great diversity of the regulated community, state and local governments are in the best position to oversee USTs. Subtitle I of RCRA allows state UST programs approved by EPA to operate in lieu of the federal program, and EPA's state program approval regulations set standards for state programs to meet. (See the subsequent section on "State UST Programs.")

**States may have more stringent regulations than the federal requirements. People who are interested in requirements for USTs should contact their state UST program for information on state requirements.**

*EPA provides a free 36-page booklet called **Musts For USTs** that clearly presents the regulatory requirements to UST owners and operators. See inside the back cover for information on ordering free EPA publications.*

# Preventing Releases

## How can releases be prevented?

EPA designed part of the technical regulations for USTs to prevent releases from USTs. The regulations require USTs to be protected from spills, overfills, and corrosion.

Spills and overfills result from bad filling practices. Unprotected steel tanks and piping corrode and release product through corrosion holes.

## What is spill protection?

Many releases at UST sites come from spills made during delivery. Human error causes most spills, which can be avoided by following standard tank filling practices. In addition, USTs must have catchment basins to contain spills. Basically, a catchment basin is a bucket sealed around the fill pipe. USTs installed after December 22, 1988 must have catchment basins when they are installed. USTs installed before December 1988 must add catchment basins by December 1998 or properly close.

## What is overfill protection?

When a tank 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. Overfills can be avoided by good filling practices and the installation of overfill protection devices. USTs must have one of the following devices that guard against overfills: automatic shutoff devices, overfill alarms, or ball float valves. USTs installed after December 22, 1988 must have overfill protection devices when they are installed. USTs installed before December 1988 must add overfill protection devices by December 1998 or properly close.

## What is corrosion protection?

Unprotected steel USTs corrode and release product through corrosion holes. All USTs installed after December 22, 1988 must meet one of the following performance standards for corrosion protection:

- Tank and piping completely made of noncorrodible material, such as fiberglass.
- Tank and piping made of steel having a corrosion-resistant coating AND having cathodic protection. (Cathodic protection is described below.)
- Tank made of steel clad with a thick layer of noncorrodible material (this option does not apply to piping).

USTs must also be designed, constructed, and installed in accordance with a national code of practice.

## What about USTs installed earlier?

USTs installed before December 1988 must have corrosion protection by December 1998. These USTs must meet one of the corrosion protection standards listed above, meet one of the upgrade options described below, or close properly. Use ONE of the following THREE options to add corrosion protection to existing steel tanks:

### **Add cathodic protection**

Add cathodic protection to a tank that has been proven to be structurally sound. For example, cathodic protection can be provided by adding an impressed current system that protects the UST by introducing an electrical current into the soil around the UST. Cathodic protection systems need to be periodically inspected and tested.

### **Add interior lining**

Add a thick layer of noncorrodible material to the interior of the tank. This interior lining must be periodically inspected.

### **Combine cathodic protection and interior lining**

Combine cathodic protection and interior lining at the same time. USTs using this option are not required to have the interior lining periodically inspected. If cathodic protection and interior lining are installed at different times, you may need to periodically inspect the interior lining (your state regulatory authority can answer questions on this matter).

### **What about piping?**

Steel piping must have cathodic protection. Piping entirely made of (or enclosed in) noncorrodible material does not need cathodic protection.

### **How do you properly close an UST?**

To properly close an UST:

- Notify the regulatory authority at least 30 days before you close your UST.
- Determine if contamination from your UST is present in the surrounding environment. If there is contamination, you may have to take corrective action. For at least 3 years, keep a record of the actions you take to determine if contamination is present at the site (or you can mail this record to your regulatory authority).
- Either remove the UST from the ground or leave it in the ground. In both cases, the tank must be emptied and cleaned by removing all liquids, dangerous vapor levels, and accumulated sludge. These potentially very hazardous actions need to be carried out carefully by trained professionals who follow standard safety practices. If you leave the UST in the ground, have it filled with a harmless, chemically inactive solid, like sand.

### **Are there reporting and recordkeeping requirements?**

UST owners must notify state or local authorities of the existence of an UST and its leak prevention measures, or of the permanent closure of an UST. Technical regulations also set guidelines for notifying authorities of spills of more than 25 gallons.

Owners and operators must also keep records on:

- Inspection and test results for the cathodic protection system.
- Repairs or upgrades.
- Site assessment results after closure.

### **Is there financial help to comply with prevention requirements?**

Some states have established financial assistance programs that can provide funds or low-interest loans to help owners upgrade or replace their tanks.

*EPA provides a free 16-page booklet called **Don't Wait Until 1998** that clearly presents these regulatory requirements to UST owners and operators. EPA also provides a booklet on **Financing Underground Storage Tank Work: Federal And State Assistance Programs**. See inside the back cover for information on ordering free EPA publications.*

# Detecting Releases

## Why have release detection?

EPA designed part of the technical regulations for USTs to make sure releases or "leaks" from USTs are discovered quickly before contamination spreads from the UST site. Owners and operators are responsible for detecting leaks from their tanks and piping.

## Who needs leak detection?

All USTs must now have leak detection. USTs installed after December 22, 1988 must have leak detection when they are installed. USTs installed before December 22, 1988 had compliance deadlines that varied with the age of the USTs. By December 22, 1993, **all** of these "older" USTs had to be in compliance with leak detection requirements.

## What are the leak detection methods?

Owners and operators of petroleum USTs must use at least one of the seven leak detection methods below, or other methods approved by their state agency.

**1. Secondary containment and interstitial monitoring** involves placing a barrier between the UST and the environment. The barrier provides "secondary" containment and can be a vault, liner, or double-walled structure. Leaked product from the UST is directed toward a monitor located in the "interstitial" space between the UST and the outer barrier. Interstitial monitoring methods range from a simple dip stick to automated vapor or liquid sensors permanently installed in the system. New USTs holding hazardous substances must use this method.

**2. Automatic tank gauging systems** use monitors permanently installed in the tank. These monitors are linked electronically to a nearby control device to provide information on product level and temperature. During a test period when nothing is put into or taken from the tank, the gauging system automatically calculates the changes in

product volume that can indicate a leaking tank. This method does not work on piping.

**3. Vapor monitoring** senses and measures product vapor in the soil around the tank and piping to determine the presence of a leak. This method requires installation of carefully placed monitoring wells. Vapor monitoring can be performed periodically using manual devices or continuously using permanently installed equipment.

**4. Groundwater monitoring** senses the presence of liquid product floating on the groundwater. This method requires installation of monitoring wells at strategic locations in the ground near the tank and along the piping runs. To discover if leaked product has reached groundwater, these wells can be checked periodically by hand or continuously with permanently installed equipment. This method is effective only at sites where groundwater is within 20 feet of the surface.

**5. Statistical inventory reconciliation** uses sophisticated computer software to determine whether a tank system is leaking. The computer conducts a statistical analysis of inventory, delivery, and dispensing data collected over a period of time and provided by the operator to a vendor.

**6. Manual tank gauging** can be used only on tanks 2,000 gallons or smaller. **This method does NOT work on tanks larger than 2,000 gallons or on piping.** This method requires taking the tank out of service for at least 36 hours each week to take measurements of the tank's contents. Tanks 1,000 gallons or less can use this method alone. Tanks from 1,001 to 2,000 gallons can use this method only when it is combined with periodic tank tightness testing and only for 10 years after installation of the UST or the addition of corrosion protection to the UST. After 10 years, these USTs must use one of the leak detection methods listed above in 1-5.

*The additional method below can be used temporarily at petroleum UST sites:*

**7. Tank tightness testing and inventory control** combines two methods. **Tank tightness testing** requires periodic tests conducted by vendors who temporarily install special equipment that tests the soundness of the tank. Tank tightness testing must be used in combination with **inventory control**. Inventory control is an ongoing accounting system, like a checkbook, kept by the UST owner or operator to detect leaks. Inventory control requires taking daily accurate measurements of the tank's contents and performing monthly calculations to prove that the system is not leaking. **Tank tightness testing and inventory control can be used only for 10 years after installation of an UST or the addition of corrosion protection to an UST.** After 10 years, these USTs must use one of the leak detection methods listed above in 1-5.

#### **What does piping need?**

**Pressurized piping** needs automatic line leak detectors (these can be automatic flow restrictors, automatic flow shutoffs, or continuous alarm systems). Pressurized piping also needs one of the following: groundwater monitoring, vapor monitoring, secondary containment and interstitial monitoring, or an annual tightness test of the piping.

**Suction piping** needs no leak detection if it meets two design requirements: 1) piping slopes so that the product drains back into the tank when suction is released, and 2) piping has only one check valve located closely beneath the pump in the dispensing unit. Suction piping not meeting these design requirements must use one of the following: tightness test of the piping every 3 years, groundwater monitoring, vapor monitoring, secondary containment and interstitial monitoring, or statistical inventory reconciliation.

#### **Reporting and recordkeeping necessary?**

UST owners and operators need to report to the regulatory authority data about the UST, including description of the leak detection method. If operation of the leak detection method indicates a possible leak, UST owners and operators need to report the potential release to the regulatory authority. UST owners and operators must keep records on leak detection performance and upkeep. These include the previous year's monitoring results, the most recent tightness test results, performance claims by the leak detection device's manufacturer, and records of recent maintenance and repair.

*EPA provides the following free booklets that clearly present leak detection requirements to UST owners and operators: **Straight Talk On Tanks, Doing Inventory Control Right, Manual Tank Gauging, and Introduction To Statistical Inventory Reconciliation.** See inside the back cover for information on ordering free EPA publications.*



# Cleaning Up Releases

## What is the cleanup program?

In Subtitle I of the Resource Conservation and Recovery Act, Congress directed EPA to establish regulatory programs that would prevent, detect, and clean up releases from USTs. EPA regulations require UST owners and operators to respond to a release by:

- Reporting a release,
- Removing its source,
- Mitigating fire and safety hazards,
- Investigating the extent of the contamination, and
- Cleaning up soil and groundwater as needed to protect human health and the environment.

EPA developed the UST regulations and program to be flexible and to be implemented by state and local agencies. Every state and many local governments now have active UST cleanup programs.

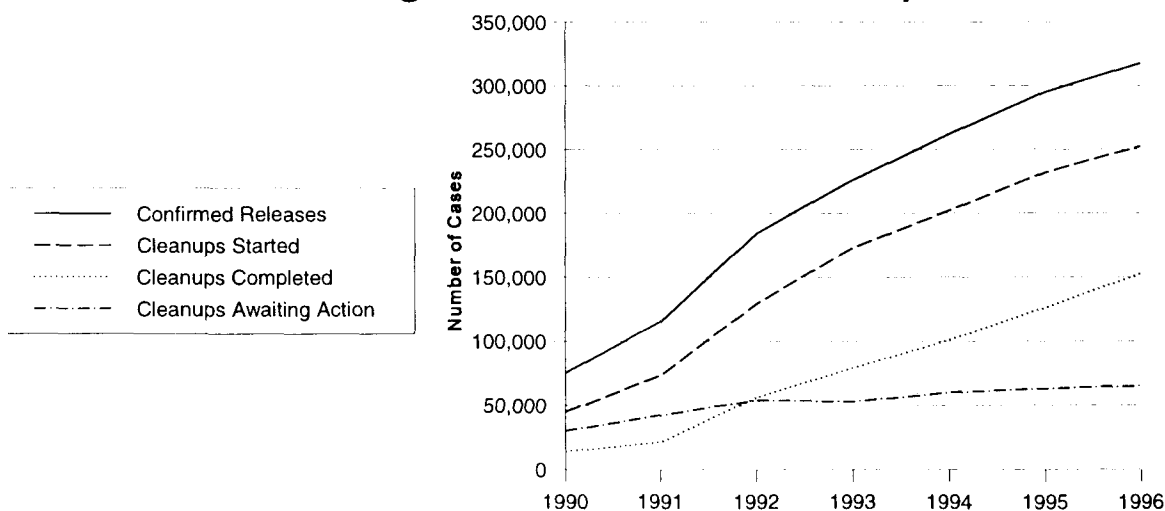
## How many releases need attention?

As of October 1996 almost 318,000 UST releases had been confirmed. As the graphic below shows, many of these releases have been cleaned up, but much work remains to be done. The number of new releases reported continues to outpace the number of sites cleaned up.

EPA estimates that the total number of confirmed releases could reach 400,000 in the next several years, primarily releases discovered during the closure or replacement of USTs. After this peak, EPA expects fewer releases as USTs comply with requirements.

Currently, state and local UST cleanup program staff oversee an increasing caseload of active cleanups. State staff frequently have 50 to 400 cases to manage at any given time. Staff work is often further complicated by administrative bottlenecks in oversight processes. At the same time, state staff face an increasing backlog of sites awaiting response.

## Growing Number Of Cleanups



## How is EPA meeting the cleanup challenge?

One of EPA's top priorities in the UST program is to help state and local governments make cleanups faster, cheaper, and more effective. EPA's ongoing efforts focus on three approaches to reach this goal: encouraging risk-based corrective action programs in the states, promoting the use of alternative cleanup technologies, and supporting activities that streamline state administrative procedures.

### ***Risk-Based Decision-Making***

EPA is encouraging UST implementing agencies to use a risk-based decision-making process to make the most of state and cleanup contractor resources. Employing tools such as exposure assessment and risk assessment, people using risk-based decision-making can consider the current and potential risks posed by an UST release and use this knowledge to make decisions about corrective action processes and site management. UST implementing agencies can use risk-based decision-making to:

- Focus site assessment data gathering,
- Conduct initial response actions,
- Categorize or classify sites,
- Determine what, if any, further action is necessary to remediate a site,
- Help establish cleanup goals, and
- Decide on the level of oversight provided to cleanups conducted by UST owners and operators.

Several states are using risk-based approaches in their corrective action programs and the American Society for Testing and Materials has issued a "Standard Guide For Risk-Based Corrective Action Applied At Petroleum Release Sites" (ASTM E1739-95).

## ***Alternative Cleanup Technologies***

In cooperative efforts with contractors, consultants, tank owners, and states, EPA is also continuing to promote the use of alternatives to traditional site assessment and cleanup technologies. EPA is using a variety of training, demonstration, and outreach projects to increase the acceptance and use of technologies that can help make cleanups faster, less costly, or more effective.

### ***Streamlining***

EPA staff and consultants can help states to streamline cleanup oversight processes. They can teach Total Quality Management techniques that identify opportunities for improvement. They can show state managers and staff how to use flowcharts and performance indicators to document, analyze, and improve their programs.

## ***Are EPA's efforts helping?***

By using risk-based decision-making to maximize resources, promoting wider use of alternative technologies for site assessment and cleanup, and streamlining cleanup oversight processes, many states have made improvements. States have reduced delays in permitting, site assessment, corrective action, and reimbursement processes. States are providing clearer guidance to consultants and contractors, which is resulting in better plans and reports, speeding up the work, and cutting paperwork costs. As training and demonstration projects progress, alternative technologies such as soil vapor extraction, air sparging, and bioremediation are being used more often.

*EPA provides a free publication about corrective action called **An Overview Of Underground Storage Tank Remediation Options**. See inside the back cover for information on ordering free EPA publications. Also, see the box on page 16 for information on two corrective action publications available for a charge.*

# Financial Responsibility

## **What are financial responsibility requirements?**

When Congress amended Subtitle I of the Resource Conservation and Recovery Act in 1986, it directed EPA to develop financial responsibility regulations for owners and operators of underground storage tanks.

Congress wanted owners and operators of USTs to show that they have the financial resources to clean up a site if a release occurs, correct environmental damage, and compensate third parties for injury to their property or themselves. The amount of coverage required depends on the type and size of the business, as explained in the chart on page 11.

## **How can owners and operators demonstrate financial responsibility?**

Owners and operators have several options: obtain commercial environmental impairment liability insurance; demonstrate self-insurance; obtain guarantees, surety bonds, or letters of credit; place the required amount into a trust fund administered by a third party; or rely on coverage provided by a state financial assurance fund. Local governments have four additional compliance mechanisms tailored to their special characteristics: a bond rating test, a financial test, a guarantee, and a dedicated fund.

## **When is financial responsibility required?**

The chart on page 11 presents five groups of UST owners and operators, compliance deadlines for each group, and required coverage amounts.

## **What is the cost of demonstrating financial responsibility?**

EPA acknowledges that the cost of complying with the technical and financial responsibility requirements may be a burden to some owners and operators, especially those with older tanks.

Because underwriting criteria for most private insurance and eligibility requirements for some state assurance funds require that tanks be in compliance with federal or state technical standards, many owners and operators are faced with the costs of meeting technical requirements at the same time they meet financial responsibility costs.

The cost of meeting technical requirements generally accounts for the majority of regulatory compliance costs incurred by UST owners and operators. Some states have established financial assistance programs that can provide funds or low-interest loans to help owners meet technical requirements.

In terms of the costs for meeting financial responsibility requirements, insurance premiums for a facility with three to five upgraded tanks may range from about \$1,000 to \$1,500 per year. Owners and operators who participate in a state financial assurance fund generally pay annual tank fees of from \$100 to \$250 per tank.

In developing the regulations, EPA has been sensitive to the financial impact of the regulations on small business. EPA phased in compliance deadlines, allowing the smallest businesses the longest time to comply. It has since responded to business owners' concerns by delaying compliance dates for the smallest owners and operators. EPA also has worked with states to develop state financial assurance funds and grant and loan programs.

## How can state financial assurance funds help?

Many states have developed financial assurance funds to reduce the economic hardship of compliance with financial responsibility requirements and to help cover the costs of cleanups. State financial assurance fund programs, which supplement or are a substitute for private insurance, have been especially useful for small-to-medium sized petroleum marketers. Other characteristics of the funds appear below:

- Financial assurance funds are created by state legislation and must be submitted to EPA for approval before they can be used as compliance mechanisms.
- In most cases, states generate money for the funds with tank registration and petroleum fees.
- Legislatures delegate authority for the fund to a state agency addressing health, environmental, or insurance issues.
- Some state assurance funds incorporate eligibility requirements, such as demonstrations that facilities are in compliance with technical requirements.
- Most state funds contain some deductible that the owner or operator is responsible for paying. Details on the funds are specific to each state.

Nationwide, these state funds raise over \$1 billion annually.

## How many states have financial assurance funds?

As of September 1996, 42 state funds qualified as financial assurance mechanisms. One additional state (Washington) has a reinsurance program that enables insurance companies to offer lower-cost premiums to the state's UST owners.

*EPA provides a free 16-page booklet called **Dollars And Sense** that clearly presents these requirements to UST owners and operators. See inside the back cover for information on ordering free EPA publications.*

# Financial Responsibility Requirements

Group Of UST Owners And Operators	Compliance Deadline	Per Occurrence Coverage	Aggregate Coverage
<b>GROUP 1:</b> Petroleum marketers with 1,000 or more tanks <b>OR</b> Nonmarketers with net worth of \$20 million or more (for nonmarketers, the "per occurrence" amount is the same as Group 4-B below)	January 1989	\$1 million	\$1 million if you have 100 or fewer tanks  <b>OR</b>  \$2 million if you have more than 100 tanks
<b>GROUP 2:</b> Petroleum marketers with 100-999 tanks	October 1989		
<b>GROUP 3:</b> Petroleum marketers with 13-99 tanks	April 1991		
<b>GROUP 4-A:</b> Petroleum marketers with 1-12 tanks	December 1993		
<b>GROUP 4-B:</b> Nonmarketers with net worth of less than \$20 million	December 1993	\$500,000 if throughput is 10,000 gallons monthly or less	
<b>GROUP 4-C:</b> Local governments (including Indian tribes not part of Group 5)	February 1994	<b>OR</b>  \$1 million if throughput is more than 10,000 gallons monthly	
<b>GROUP 5:</b> Indian tribes owning USTs on Indian lands (USTs must be in compliance with UST technical requirements )	December 1998		

# State UST Programs

## What is the role of states in regulating underground storage tanks?

EPA recognizes that, because of the size and diversity of the regulated community, state and local governments are in the best position to oversee USTs:

- State and local authorities are closer to the situation in their domain and are in the best position to set priorities.
- Subtitle I of the Resource Conservation and Recovery Act (RCRA) allows state UST programs approved by EPA to operate in lieu of the federal program.
- The state program approval regulations set criteria for states to obtain the authority to operate in lieu of the federal program. Approved state programs must be at least as stringent as EPA's.

## How do states receive program approval?

EPA's regional offices coordinate the state program approval process for states and territories under their jurisdiction. EPA regional officials work closely with state officials while state programs are under development.

Once state legislatures enact statutes and state agencies develop regulations in accord with EPA requirements and put other necessary components of a program in place, states may apply for formal approval. EPA must respond to applications within 180 days.

A state program is approved if it is judged to meet three criteria:

- It sets standards for eight performance criteria that are no less stringent than federal standards.

- It contains provisions for adequate enforcement.
- It regulates at least the same USTs as are regulated under federal standards.

## Which states have approved programs?

The following 23 states have approved programs: Arkansas, Connecticut, Delaware, Georgia, Iowa, Kansas, Louisiana, Maine, Maryland, Massachusetts, Mississippi, Montana, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Rhode Island, South Dakota, Texas, Utah, Vermont, and Washington.

## What are the benefits of state program approval?

Owners and operators in states that have an approved UST program do not have to deal with two sets of statutes and regulations (state and federal) that may be conflicting. States take pride in obtaining federal approval of their programs. Once their programs are approved, states have the lead role in UST program enforcement. In states without an approved program, EPA will work with state officials in coordinating UST enforcement actions.

## Need more information about a particular state's program?

Contact the EPA regional office or the UST/LUST program in your state, usually located in the state environmental department. Program staff will provide information or referrals.

# Leaking Underground Storage Tank Trust Fund

## What is the "LUST" Trust Fund?

Congress created the Leaking Underground Storage Tank (LUST) Trust Fund in 1986 by amending Subtitle I of the Resource Conservation and Recovery Act.

The LUST Trust Fund has two purposes. First, it provides money for overseeing corrective action taken by a responsible party, who is the owner or operator of the leaking UST. Second, the Trust Fund provides money for cleanups at UST sites where the owner or operator is unknown, unwilling, or unable to respond, or which require emergency action.

## What's in the Trust Fund?

The Trust Fund is financed by a 0.1 cent tax on each gallon of motor fuel sold in the country. Taxing authority for the Trust Fund expired on December 31, 1995. As of April 1996, about \$1.64 billion had been collected.

Of this amount, Congress has given \$595 million to EPA through fiscal year 1996. About \$510 million (or 86 percent of the amount given to EPA) has been dispersed to state programs for state officials to use for administration, oversight, and cleanup work.

The remaining money (about \$85 million or 14 percent) has been used by EPA for negotiating and overseeing cooperative agreements, implementing programs on Indian lands, and supporting regional and state offices.

## How does the Trust Fund work?

To receive money from the Trust Fund, a state must enter into a cooperative agreement with the federal government to spend the money for its intended purpose. Every state has a cooperative agreement with EPA for fiscal year 1997.

Trust Fund money is divided among EPA regional offices based on a formula that uses state data. In fiscal year 1996, each region received a base allocation per state plus additional money depending on the following: the number of confirmed releases; the number of notified petroleum tanks; the number of residents relying on groundwater for drinking water; and the number of cleanups initiated and completed as a percent of total confirmed releases.

## How do states use Trust Fund money?

States use Trust Fund money to oversee corrective action by a responsible party and to clean up sites where no responsible party can be found. Only about 4 percent of all cases have been without a responsible party.

To date, states have used about one-third of their Trust Fund money for administration, one-third for oversight and state-lead enforcement activities, and one-third for cleanups.

## How many USTs are leaking?

As of October 1996, EPA, states, and local agencies have confirmed almost 318,000 UST releases. Over the next several years, EPA expects another 100,000 confirmed releases to be reported, primarily releases discovered during the replacement or closure of USTs. After this peak, EPA expects fewer additional releases as USTs comply with requirements.

## **How much do cleanups cost?**

Cleanup costs depend on a variety of factors, including the extent of contamination and state cleanup standards. The average cleanup is estimated to cost \$125,000.

If only a small amount of soil needs to be removed or treated, cleanup costs can run as low as \$10,000. However, costs to clean more extensive soil contamination can reach \$125,000. Corrective action for leaks that affect groundwater can cost from \$100,000 to over \$1 million, depending on the extent of contamination.

## **What cleanup activities have taken place?**

As of October 1996, states have used Trust Fund and state money to:

- Confirm almost 318,000 releases,
- Oversee or conduct more than 9,200 emergency responses,
- Oversee or initiate more than 252,000 cleanups,
- Oversee or complete more than 152,000 cleanups, and
- Oversee or conduct more than 1,074,000 closures.



# Brownfields Initiative

## What are “brownfields”?

Brownfields are abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. Brownfields can be located in urban, suburban, and rural areas.

EPA's Brownfields Initiative is an organized commitment to help communities revitalize such properties both environmentally and economically, mitigate potential health risks, and restore economic vitality to areas where brownfields exist. EPA's efforts under the Brownfields Initiative can be grouped into four broad and overlapping categories:

- Providing grants for brownfields pilot projects;
- Clarifying liability and cleanup issues;
- Building partnerships and outreach among federal agencies, states, municipalities, and communities; and
- Fostering local job development and training initiatives.

## Brownfields and USTs

While much of EPA's current brownfields work involves Superfund sites, old or abandoned gasoline stations and other commercial or industrial properties with “orphan” USTs may also be brownfields. Many of the estimated 100,000 to 450,000 brownfields sites in the U.S. involve USTs. For example, Illinois estimates that half of the state's brownfields sites are former UST/LUST sites. EPA's Office of Underground Storage Tanks (OUST) is assisting in cleaning up and reusing commercial and industrial sites with USTs and working to prevent future UST brownfields. In a related effort, OUST provided \$50,000 to EPA Region 10 to support a regional brownfields pilot with the Duwamish Coalition in Seattle, WA, to develop new methods for

assessing total petroleum hydrocarbon levels at leaking UST sites.

Regional UST programs also are working with their states on LUST/Brownfields projects. In fiscal year 1995, Region 5's UST program awarded Minnesota \$85,000 to conduct a project in poverty areas of St. Paul and Minneapolis. The project has two goals: To expedite the review of cleanup sites which authorities have identified as having redevelopment potential, and to identify additional petroleum release sites in these areas which have the potential for reuse if contamination is assessed and development can proceed. Region 5 is also planning to provide \$50,000 for a brownfields project in Illinois using the state's new Tiered Approach to Cleanup Objectives. Illinois and Region 5 are currently considering a site for this project.

## Reclaiming brownfields having USTs

At the Brownfields '96 Conference held in Pittsburgh, PA, OUST organized a panel on “Reusing UST Sites” and participated on a panel which discussed “RBCA: Introduction to a Tool for Risk and Cleanup.”

OUST continues to encourage the use of scientifically sound, rapid, and cost-effective corrective action at leaking UST sites. OUST sponsored development of a partnership among the American Society for Testing and Materials and six major oil companies to train states and local jurisdictions in implementing a risk-based approach to corrective action. A number of organizations participating in the partnership have chosen UST brownfields sites as demonstration sites for new remediation technologies, contributing to increased cleanups at UST brownfields. OUST has also developed a booklet on effectively managing corrective action through the use of pay-for-performance contracts. The pay-for-performance approach has the potential to obtain greater environmental protection at lower costs.

## Preventing future UST brownfields

Several activities will continue to focus on the prevention of UST brownfields. OUST promulgated a lender liability rule which should encourage lenders to provide loans to UST owners for upgrading, replacing, or closing USTs that otherwise would threaten to contaminate the environment.

OUST is working with regional and state programs to enforce leak detection requirements, and with states and industry groups to inform the entire regulated community about the 1998 deadline and regulatory requirements.

In addition, as part of its initiative to involve the private sector in addressing UST concerns, OUST is working with representatives of the banking and real estate industries to raise their awareness of UST requirements. OUST anticipates that educating commercial realtors, lenders, and insurers about USTs can ultimately result in more sites that comply with requirements and will be suitable for redevelopment and reuse.

**EPA-510-B-96-007**  
**UST program facts:**  
**implementing federal**  
**requirements...**

### ***Publications For Sale***

EPA has two publications on corrective action available for a charge. One is *How To Evaluate Alternative Cleanup Technologies For Underground Storage Tank Sites: A Guide For Corrective Action Plan Reviewers* (\$28). The other is *How To Effectively Recover Free Product At Leaking Underground Storage Tank Sites: A Guide For State Regulators* (\$17). Send orders to Superintendent of Documents, Box 371954, Pittsburgh, PA, 15250-7954 or phone 202-512-1800.

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## **Free Publications About UST Requirements**

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**AVAILABLE FREE...** You can call EPA's toll-free RCRA/Superfund Hotline at 800 424-9346 and order **up to 30 free copies**. Just identify the titles you want. Or you can write and ask for titles by addressing your request to: NCEPI, Box 42419, Cincinnati, OH 45242. Or you can fax your order to NCEPI at 513 891-6685. If you want **more than 30 copies**, contact Jay Evans at 703 603-7149.

### **TITLES**

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#### **Musts For USTs: A Summary Of The Federal Regulations For Underground Storage Tank Systems**

Booklet clearly summarizes federal UST requirements for installation, release detection, spill, overfill, and corrosion protection, corrective action, closure, reporting and recordkeeping. Updated & revised 1995 (36 pages).

#### **Normas y Procedimientos para T.S.A.**

Spanish translation of 1988 edition of **Musts For USTs** (36 pages).

#### **Straight Talk On Tanks: A Summary Of Leak Detection Methods For Petroleum Underground Storage Tanks**

Booklet explains federal regulatory requirements for leak detection and briefly describes allowable leak detection methods. Updated & revised 1995 (28 pages).

#### **Doing Inventory Control Right: For Underground Storage Tanks**

Booklet describes how owners and operators of USTs can use inventory control and periodic tightness testing to meet federal leak detection requirements. Contains reporting forms (16 pages).

#### **Manual Tank Gauging: For Small Underground Storage Tanks**

Booklet provides simple, step-by-step directions for conducting manual tank gauging for tanks 2,000 gallons or smaller. Contains reporting forms (12 pages).

#### **Introduction To Statistical Inventory Reconciliation: For Underground Storage Tanks**

Booklet describes the use of Statistical Inventory Reconciliation (SIR) to meet federal leak detection requirements (12 pages).

#### **Don't Wait Until 1998: Spill, Overfill, And Corrosion Protection For Underground Storage Tanks**

Information to help owners and operators of USTs meet the 1998 deadline for compliance with requirements to upgrade, replace, or close USTs installed before December 1988. Materials available as a 16-page booklet, a tri-fold leaflet, or Spanish translation of the booklet (*No Espere Hasta El 1998!*).

#### **Dollars And Sense: Financial Responsibility Requirements For Underground Storage Tanks**

Booklet clearly summarizes the "financial responsibility" required of UST owners and operators by federal UST regulations (16 pages).

#### **An Overview Of Underground Storage Tank Remediation Options**

Fact sheets provide information about technologies that can be used to remediate petroleum contamination in soil and groundwater (26 pages).

#### **Controlling UST Cleanup Costs**

Fact sheet series on the cleanup process include: *Hiring a Contractor*, *Negotiating the Contract*, *Interpreting the Bill*, *Managing the Process*, and *Understanding Contractor Code Words* (10 pages).

#### **Pay-For-Performance Cleanups: Effectively Managing Underground Storage Tank Cleanups**

Booklet explores potential advantages of using pay-for-performance cleanup agreements to reduce the cost and time of cleanups and more effectively manage cleanup resources (32 pages).

#### **Financing Underground Storage Tank Work: Federal And State Assistance Programs**

Booklet identifies potential sources of financial assistance to cover the costs of upgrading, replacing, or closing an UST, or of cleaning up an UST release (30 pages).