

UST RELEASE

Serving Underground Storage Tank
Owners and Operators in Utah



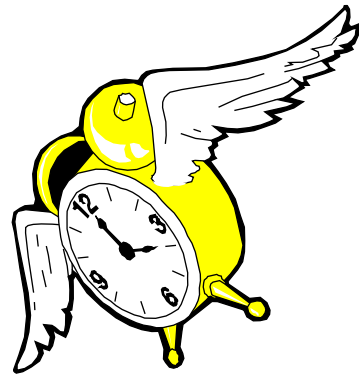
INSIDE:

| | |
|----------------------------------|---|
| Tank Testing & Inventory Control | 2 |
| Routine Maintenance | 3 |
| Record Keeping | 3 |
| New Web Search Engine | 3 |
| Certificate of Compliance | 4 |
| SIR Results | 5 |
| Fueling Portable Containers | 6 |
| New Lab Methods | 7 |
| UST Conference | 8 |

Published by the Utah Department of Environmental Quality
Division of Environmental Response and Remediation,
UST Branch

Dianne R. Nielson, Department Director
Kent P. Gray, Division Director
Dale Marx, UST Branch Manager
Tamie Call, Editor

FALL 1999

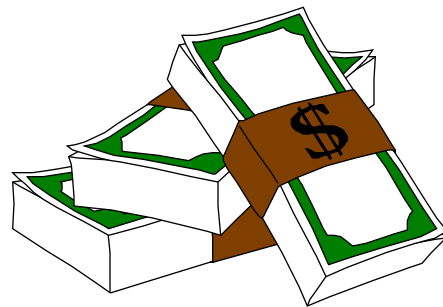


Time Is Fast Approaching...

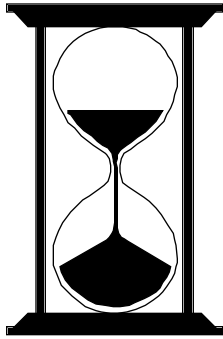
...When You Must Address Those Temporarily
Closed Tanks!

If you have a temporarily closed tank that does not meet the federal upgrade requirements, the time is fast approaching when you must either upgrade it or permanently close it. By December 22, 1999 all regulated temporarily closed underground storage tanks which do not have corrosion, spill and overfill protection must be upgraded or permanently closed. No extensions will be given. Any regulated tank that does not meet these requirements by December 22, 1999 will have its certificate of compliance revoked. You will be unable to make a claim against the Petroleum Storage Tank Fund for releases from tanks without certificates of compliance. Fines and penalties for non-compliance may be levied. ☹

Money Is Still Available



You can still apply for a low interest loan to help you upgrade, replace, or close your temporarily closed UST. The deadline for applying has been extended to December 31, 1999. To be eligible to apply for a loan, you must demonstrate current compliance with UST rules or achieve compliance with the loan proceeds. If you want to apply for a loan, submit the loan eligibility application form, available off the DEQ web site at <http://www.deq.state.ut.us/eqerr/UST.htm>, or call Gary Astin or Diane Hernandez at (801) 536-4100. ☹



Time Limit On The Use of Tank Tightness Testing with Inventory Control

The UST regulations require that owner/operators perform leak detection on all regulated USTs except emergency generator tanks. Owner/operators must monitor the UST system monthly or perform periodic tank tightness testing combined with monthly inventory control (TTT/IC).

Manual Tank Gauging (MTG) is another method allowed for smaller tanks. It is a stand-alone permanent method for USTs of 1000 gallons or less, and a temporary method combined with Tank Tightness Testing for tanks of 1000 to 2000 gallon capacity. It is not allowed for USTs over 2000 gallons.

The acceptable monthly monitoring methods are:

- Automatic Tank Gauging (ATG)
- Groundwater Monitoring
- Interstitial Monitoring (double-walled system)
- Vapor Monitoring
- Statistical Inventory Reconciliation (SIR)
- Other approved methods

Tank Tightness Testing and Inventory Control (TTT/IC) involves sticking the tank each operating day and performing an inventory reconciliation at the end of the month. Tightness testing is required every five (5) years. This method may only be used for a specified time period based upon when the tank was upgraded or installed.

| Tank Status | How long can TTT/IC be used: |
|---|---|
| UST system fully upgraded (corrosion protection, spill and overfill prevention) | For 10 years after the TANK is upgraded with corrosion protection |
| New tank standards | 10 years after installation |
| <small>TTT = tank tightness testing IC = inventory control</small> | |

TTT/IC and MTG with tightness testing are temporary methods which may be used only for:

- 10 years after a new tank is installed **or**
- 10 years after a TANK meets corrosion protection requirements, or until December 1998, whichever is later.

Owner/operators are still using TTT/IC on several hundred tanks in Utah. Many of these tanks will have to convert to monthly monitoring in the next 1 to 2 years. The deadline for converting has already passed for some. If you have questions about what form of monthly leak detection is right for you contact DERR at (801) 536-4100. ☎

If you change the method of leak detection, notify DERR within 30 days.

Routine Maintenance and State Inspections

On a regular basis, State or local health department inspectors conduct routine leak detection inspections at regulated facilities. They are verifying that leak detection systems, cathodic protection systems, spill and overfill devices are being operated and maintained properly. Many facilities are doing well, however there are numerous other facilities which are failing in several areas. The following is a short list of things that inspectors often find wrong and that owners/operators should be checking:

- √ **Leaks are often discovered in the dispensers.** Remove the dispenser cover and check for leaks while the system is on. Visually check for stains, drips, wet or damp areas, also check for a strong odor of fuel. If you find a leak, fix it immediately!
- √ **Spill buckets are often found full** of debris, water and/or fuel. Routinely empty spill buckets, sumps and any other areas where product may collect.
- √ **Leaks are often found at the line leak detector on pressurized systems.** Check them monthly or after any service work by lifting the access to the submersible pump, pressurize the system by turning on the dispenser without actually pumping fuel and check for leaks, stains, drips etc.
- √ **Failed leak detector tests** must be investigated immediately. If it is a false alarm then document it, if not notify DERR.

Record Keeping

Records that should be available for inspections include:

- Tank tags and/or a current Certificate of Compliance
- Notification information: date of installation, tank and piping material, tank capacity and substance stored, date of any upgrades made to the system, etc.
- Release detection records for tank and piping specific to the release detection method used at the facility
- Line leak detector test results for pressurized piping, tested annually
- Corrosion protection test results for cathodically protected tanks. Tests should be conducted 6 months after installation and every 3 years thereafter. An additional system check is required every 60 days for impressed current systems.
- Written documentation of tank system repairs and maintenance
- Tank closure documentation
- Results of site assessments

Environmental Search Engine for the Web

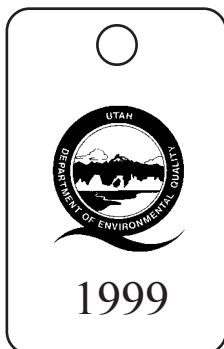
Are you tired of trying to find environmental services, equipment and technology providers through normal web browsers, then check out Envirobiz Search (www.envirobiz.com).

Envirobiz Search focuses exclusively on environmental companies and technologies, which eliminates the need to browse through non-environmental websites. Users can search for words that have particular reference in the environmental field.

(Envirobiz is a division of Environmental Information Ltd.)

Obtain a Certificate of Compliance by submitting the following:

- EPA registration form
- Registration fee
- Passing tank and line tightness tests
- Test indicating that the line leak detectors are functional
- Previous pollution incident form
- Financial responsibility declaration form
- Petroleum Storage Tank Fund application and fee, if applicable
- Alternative financial assurance mechanism application and fee, if applicable



Obtaining a Certificate of Compliance

If you are installing new tanks make sure you receive a certificate of compliance before you dispense fuel from them! Fuel distributors will not deliver fuel to tanks without compliance tags. The only exception is if you have a “one time drop” letter, which allows you to receive fuel in order to conduct tank and line tightness tests. However, before you dispense the fuel you still should have a Certificate of Compliance. The following six steps will help you get a certificate of compliance:

1. Register the USTs using Notification for Underground Storage tanks, EPA Form 7530-1. The notification must be complete with the owner’s signature and must include the tank installer’s signature certifying that the USTs meet all state and federal requirements for proper installation.
2. Pay the registration fee of \$150 per tank.
3. Conduct a tank and line tightness test and test the line leak detectors to make sure they are functioning as per manufacturer’s specifications. Submit copies of the results. The tests must be conducted by a Utah certified UST Tester. To receive fuel in order to conduct a tank tightness test you must first obtain a “one time drop” letter from DERR. Contact DERR at least one week in advance of when you want to receive fuel to allow sufficient time for the letter to be generated.
4. Submit the Previous Pollution Incident form. If you participate in the PST Fund, failure to report previous releases could void your coverage. Payment of any clean-up costs from previous releases is your responsibility.
5. Submit the Financial Responsibility Declaration form and declare whether you will participate in the PST Fund or demonstrate financial responsibility for your USTs by another mechanism.

6. If you choose to participate in the PST Fund
- Submit a completed PST Application and indicate the financial assurance mechanism you will use for your share of eligible cleanup costs not covered by the Fund
 - Pay the PST Fund fee. USTs installed at new facilities pay \$50 per tank. USTs installed at facilities with existing USTs pay the rate assessed to these USTs for the current fiscal year, either \$50 or \$150 per tank based on volume of fuel dispensed. If the new UST is replacing a previously existing tank, the PST Fund fee paid for the original tank can be applied to the new UST.

If you choose to demonstrate financial responsibility by another mechanism you must:

- Submit documentation for each mechanism you will use. The document must conform to the format and wording specified in 40 CFR 280 subpart H. The state UST rules (R311-206) have additional requirements. The mechanism must be approved by DERR before the Certificate of Compliance can be issued. Documentation should be submitted several weeks in advance of the time the tanks will go into service to allow for the approval process.
- Pay the process fee of \$420 for each mechanism document submitted, plus \$75 per tank to be covered by the mechanism. If you already have an approved method on file, submit a revised list of facilities that are using this method.
- The documentation for each financial responsibility mechanism used must be updated and resubmitted with a renewal process fee each fiscal year. ☎

SIR Results: Understanding What They Mean

Pass = According to the analyzed data, the tank system tests tight.

Fail = Analyzed data indicates something is wrong with the system and needs to be investigated.

Inconclusive = Analyzed data cannot determine if the tank system is tight.

If your tank system passes then you do not need to do anything else to meet federal leak detection requirements for that month. However, if you get an “inconclusive” or “failed” result you must do the following:

- Investigate why your tank system did not pass and fix it so that it will pass, **and**
- Report it to DERR

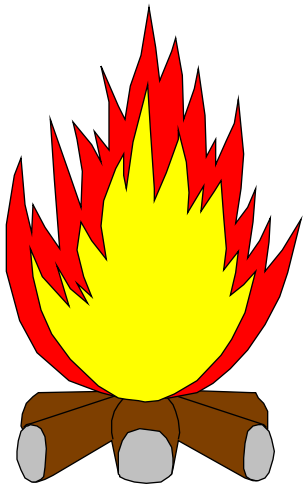
If you are getting numerous “inconclusive” results you are not doing proper leak detection for those months and you may need to use another form of leak detection.

A suspected release is:

- Two (2) consecutive months of “failed” results, or
- Four (4) months of “inconclusive” results

DERR requires a tank system tightness test if a suspected release is created based on SIR results. If your system continues to have “failed” and “inconclusive” results, then environmental sampling may be required. If you have any questions about your SIR results, contact Jason Wilde at (801)- 536-4100. ☎





Warning! Fire Hazard


In recent years incidents have been reported to the National Institute for Occupational Safety and Health (NIOSH) and the Petroleum Equipment Institute (PEI) in which fires spontaneously ignited when people attempted to fill portable gasoline containers in the backs of pickup trucks equipped with plastic bed liners or in cars with carpeted surfaces. The fires are caused by a combination of gasoline vapors and the buildup of static electricity. Static electricity is the electric charge generated when there is friction between two objects made of different materials. Electrical charges can build up on an object or liquid when certain liquids (e.g., petroleum solvents, fuels) move in contact with other materials. Gasoline flowing through a pump nozzle, then splashing into a portable container can generate static electricity. Static electricity is also generated as the container slides around in the back of a truck with a plastic bed liner. The plastic bed liner acts as an insulator, preventing the static electricity from dissipating. When it has built up enough of a charge, the static electricity can dissipate as a spark. If the gasoline vapors are within the flammable range (1.4% - 7.6% by volume for gasoline in air) the vapors may ignite. Both ungrounded metal and plastic gas containers have been involved in these incidents.

The Petroleum Equipment Institute has documented 25 fires involving the filling of portable gasoline containers between 1990 and 1995. Most of them occurred in 1994 and 1995. Here is the breakdown of the 20 fires for which they have first-hand reports.

| Number of Incidents | Type of Container | Location of Container |
|---------------------|-------------------|--|
| 12 | Metal | On plastic bed liner |
| 1 | Metal | On carpeted bed of truck |
| 1 | Metal | On carpeted floor of car |
| 4 | Plastic | On plastic bed liner |
| 1 | Plastic | Removed from plastic bed liner and set on pavement |
| 1 | Plastic Pail | On pavement |

It should be noted that fires can also start when fueling jet skis or snowmobiles on trailers. To reduce the risk of fire either fill the equipment from a portable container or make sure the dispenser nozzle is in contact with the fuel tank fill tube.

To prevent a fire, certain steps should always be followed when filling portable containers and filling equipment on trailers such as snowmobiles, lawnmowers etc.

1. Dispense gasoline only into approved containers.
2. Remove the container from the vehicle and place it on the ground a safe distance from the vehicle. Cement or dirt are better conductors of electricity than asphalt and, therefore, better grounding surfaces.
3. Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Contact should be maintained until the filling operation is complete.
4. Do not use a nozzle lock-open device while filling the container to prevent the possibility of overfilling the container; also the slower the flow the less static electricity is generated.
5. Fill the container up to 95%, the remaining air space allows room for the gasoline to expand if it warms up later. 

New Lab Methods For Environmental Sampling

The Underground Storage Tank (UST) Administrative Rules have recently been amended. These rule changes affect the analytical methods used by UST approved laboratories when testing environmental samples for levels of contamination. These rule changes went into effect on October 4, 1999. However, these methods will not be enforced by the UST program until January 1, 2000 to allow laboratories adequate time to become certified in these newly required methods.

The intent of the rule change is to standardize the analytical methods used by laboratories which should produce more consistent analytical results between different laboratories and between different sampling events, and also provide a basis

for more consistent regulatory review and compliance actions. The addition of the carbon range specification will aid laboratories in providing a uniform distinction between gasoline-range and diesel-range organics within the total petroleum hydrocarbon (TPH) method.

Environmental samples taken after January 1, 2000 must be analyzed by these updated methods, if taken for purposes of compliance with the UST program. Samples which do not meet these new method requirements may be rejected by the Executive Secretary (UST). Call the UST Branch with any questions you may have at (801) 536-4100.

**Table of Analytical Methods for Sampling
(March 31, 1999)**

| Substance or Product Type | Contaminant Compounds to be Analyzed | ANALYTICAL METHODS |
|---------------------------|--|--|
| | | Soil, Groundwater, or Surface water |
| Gasoline | Total Petroleum Hydrocarbons (TPH); and Benzene, Toluene, Ethyl benzene, Xylenes, Naphthalene, (BTEXN) and MTBE | EPA 8015B ¹ and EPA 8021B ¹ or 8260B |
| Diesel | Total Petroleum Hydrocarbons (TPH); and Benzene, Toluene, Ethyl benzene, Xylenes, and Naphthalene (BTEXN) | EPA 8015B and EPA 8021B or 8260B |
| Used Oil | Oil and Grease (O&G) or Total Recoverable Petroleum Hydrocarbons (TRPH); and for Benzene, Toluene, Ethyl- benzene, Xylenes, Naphthalene (BTEXN) & MTBE; and Halogenated Volatile Organic Compounds (VOC's) | EPA 1664 or 5520 ² and EPA 8021B or 8260B |
| New Oil | Oil and Grease (O&G) or Total Recoverable Petroleum Hydrocarbons (TRPH) | EPA 1664 or 5520 |
| Other or Unknown | Total Petroleum Hydrocarbons (TPH); and Benzene, Toluene, Ethyl benzene, Xylenes, and Naphthalene (BTEXN); and Halogenated Volatile Organic Compounds (VOC's) | EPA 8015B and EPA 8021B or 8260B |

¹ The following modifications to these certified methods are considered acceptable by the Executive Secretary (UST):

- A. Dual column confirmation may not be required for TPH & BTEXN/MTBE analysis.
- B. A micro-extraction or scale-down technique may be used for aqueous samples.
- C. Hexane may be used as an extraction solvent.

NOTE: The sample preparation method and any modification(s) to a certified method must be reported by the laboratory on the final analytical report.

² Methods or test procedures allowed for Oil and Grease (O&G) or Total Recoverable Petroleum Hydrocarbons (TRPH) are 5520(b) or 5520(f) respectively.



Utah Division of Environmental
Response and Remediation
168 North 1950 West 1st floor
Salt Lake City, Utah 84116

BULK RATE
US Postage
PAID
Salt Lake City, UT
Permit #4621

UST RELEASE is published periodically, free-of-charge, for underground storage tank owners and operators and other interested individuals and organizations. It is for education and information and is not intended to replace UST regulations or, Utah standards and guidelines.

If you have comments or questions contact Tamie Call at (801) 536-4100; email: tcall@deq.state.ut.us or write to: UST RELEASE, 168 North 1950 West, 1st floor, Salt Lake City, UT 84116.

| Mark This On | Your Calendar |
|--|-------------------------------------|
| Underground Storage Tank Conference | Topics may include: |
| Date: Spring 2000 | UST Topics: |
| Guests: Owners/Operators, Consultants, UST Certified Personnel, Industry Representatives | Petroleum Storage Tank fund |
| More information will be forthcoming | Leak detection methods |
| If there is a particular topic you want addressed or if you have any questions please contact: | Cathodic protection & stray current |
| Morgan Atkinson, Hillary Mason, DeAnn Rasmussen @ (801) 536-4100. | Recordkeeping & State inspections |
| | Financial assurance |
| | Aboveground storage tank issues |
| | LUST Topics: |
| | Petroleum Storage Tank fund |
| | RBCA |
| | Pay for performance |
| | MTBE |
| | Enhanced fluid recovery (EFR) |
| | Bringing LUST sites to closure |