UST RELEASE

Serving Underground Storage Tank Owners and Operators in Utah

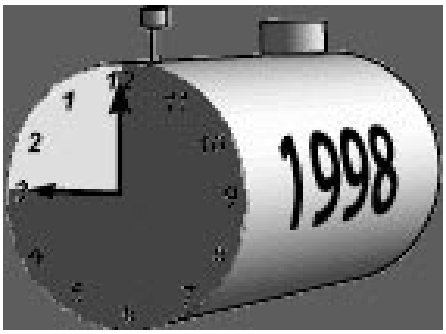
INSIDE:

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
Bryan Whitaker, UST Branch Manager
Tamie Call, Editor

FALL 1998

Are You Ready For December 22, 1998?



Tanks installed prior to December 1988 must have the following: (Tanks installed after this date should already meet these requirements).

Spill Protection

Catchment basins to contain spills from delivery hoses.

Overfill Protection

Must have ONE of the following:
Automatic shutoff devices
Overfill alarms
Ball float valves (pressurized piping only)

Corrosion Protection

The following types of tanks meet the requirements for corrosion protection:
Steel tanks which have corrosion-resistant coating and cathodic protection (such as a sti-P3 tank)
Fiberglass reinforced plastic (FRP) tanks
Steel tanks clad with noncorrodible material (such as an ACT-100 tank) or tank enclosed in noncorrodible material.

Bare steel tanks must have ONE of the following:
Cathodic protection system (either sacrificial anodes or impressed current) *note: sacrificial anodes not effective with bare steel tanks
Interior lined with noncorrodible material
Cathodic protection and tank lining

Existing piping must have ONE of the following:
Bare steel piping has cathodic protection
Steel piping has a corrosion-resistant coating and cathodic protection
Piping made of, or enclosed in, fiberglass or other non-corrodible material

AFTER THE UPGRADE: THE IMPORTANCE OF MANAGMENT, MONITORING AND MAINTENANCE

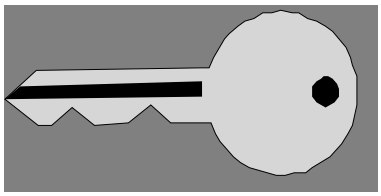
Now that you have upgraded your underground storage tank system to meet the December 22, 1998 deadline, you may feel that you no longer need to worry about your system leaking. But in fact you have only just started. Leak detection, spill and overfill protection and corrosion protection are only the front line of defense against petroleum releases.

The key to preventing leaks is to manage, monitor and maintain your leak detection system. It is important that you understand the capabilities and limits of your leak detection system. Many owners/operators do not fully utilize the fuel management capabilities of their systems. Some common problems are ignoring a failed test, not responding to alarms or retesting with another method instead of finding out why the first test failed.

The following story helps illustrate the importance of understanding what the leak detection system is telling you. A tank owner installed an automatic tank gauge (ATG) on his tanks that were a few years old. For the first few months everything was going fine, until one day the ATG printout showed that the super unleaded tank had failed the test. The owner called in the service person. The service person got a reading of the product level from the tank gauge, confirmed the reading with a gauge stick and declared that everything was working fine. But the next morning, the printout again indicated another failed test. The service person was called again. This time he removed the probe from the tank. A few days later the service person was again called because the pump on the super unleaded tank was not working. The service person determined that the pump was fine, but that the tank was empty. The owner said this was impossible since he had not sold that much fuel. The service person suggested that the previous delivery of super unleaded must have been put in the wrong tank. The owner ordered 3000 gallons of fuel. Within a few weeks, the pump stopped working again and the tank was determined to be empty. This time the service person suggested that someone was stealing the fuel. So the owner ordered another 3000 gallons and waited, under cover for a week trying to catch the thief. The thief never appeared and within a few weeks the tank was once again, prematurely empty. The owner began to suspect that something was wrong with the tank, but the service person said that was impossible. Another 3000 gallons of fuel was ordered, the owner then locked the fill pipe and dispenser and monitored the tank with a gauge stick. No doubt about it, he was losing product. When the tank was finally pulled, the problem became apparent: the steel tank had split a seam.

The ironic part of this story is that had anyone bothered to look, the ATG would have revealed at the press of a few buttons that a delivery had been made to the correct tank and that no one was stealing product at night. Instead, thousands of dollars were spent to cleanup over 9,000 gallons of fuel.

Keys to Help You Manage, Monitor and Maintain Your Upgraded System



Release Detection

Automatic Tank Gauging

- Do you run a test at least once a month? Does the test show a pass or fail result?
- Do you respond to alarms?
- Are you following maintenance and calibration schedules?
- Is the product level in the tank always within the test method standards during a test?

Interstitial Monitoring

- Do you keep a written log of the monthly checks?
- Do you respond to and document alarms?

Statistical Inventory Reconciliation (SIR)

- Have you reported any month of inconclusive or failed results to the DERR?
- Do you collect data according to vendors' instructions?

Inventory Control

- Is the tank gauged every operating day?
- Do you gauge the tank through a drop tube and use a tank stick calibrated to 1/8 inch increments?
- Have your dispensers been properly calibrated?
- Do you check for water once a month and write it down?
- Are you recording all deliveries?
- Do you reconcile at the end of each month (this is what tells you if you have a leak)?
- Do you test the dry portion of the tank (ullage test) during the required annual tightness test?

Manual Tank Gauging

- Do you gauge the tank at required times?
- Do you gauge the tank through a drop tube and use a tank stick calibrated to 1/8 inch increments?
- Do you reconcile at the end of each month (this is what tells you if you have a leak)?

Tightness Testing

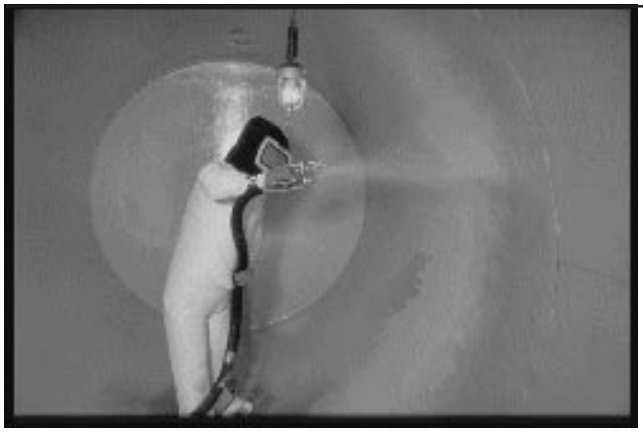
- When using a volumetric test, do you make sure that the product level in the tank is at the level which routinely contains product when the test is performed?
- Have line leak detectors been tested?
- Do you use only currently certified UST testers?
- Do you have a copy of the third-party approval that is required for each of the tank and line tightness test methods that you use?

Cathodic Protection

- Is the cathodic protection system turned on? Are you sure?
- Is there cathodic protection on the piping?
- Are you monitoring the system, and recording the results, every 60 days (impressed current only)?
- Did you conduct a cathodic protection test within 6 months following the installation of the cathodic protection system? Do you test it every 3 years after installation?
- Do you correct the system if it fails?

Spill and Overfill Protection

- Is there an "external" overfill alarm system or automatic shutoff device? Does it work?
- Do you check for, and remove, dirt, trash or water/snow from the spill bucket?



Tank Lining

To meet the requirements for corrosion protection for the December 22, 1998 deadline, non-coated steel tanks must have either:

- internal lining;
- cathodic protection to the outside of the tank, or
- both internal lining and cathodic protection.

Tank lining can be a good option for meeting the upgrade requirements if it is done by experienced, professional contractors. However, if it is done by contractors who don't know what they are doing, you could end up spending more for the repairs than if you had replaced the old tank with a new one. There have been cases where the tank lining has failed within a few years of application.

The State of Iowa conducted a study of tanks that had been lined. These tanks were of various sizes, ages, lined by a number of different vendors from 1990 to 1995 and both cathodically and non-cathodically protected. 54 tanks at 38 different sites were actually inspected. Of those 54 tanks, 20 failed. This study suggested that tank owners should have their lined tanks inspected prior to the 10-year warranty expiration date. It also suggested that tank owners carefully select the lining contractors–check their credentials and performance history!

So before contracting with any tank lining contractor, here are a few things that you should check out:

- Check the contractor's references and reputation
- Verify that their workers have the proper certification for confined space entry
- Verify that the contractor is filling out an entry permit every day which documents that proper procedures have been followed for confined space entry.

The procedure for lining a tank:

- Empty the tank of all liquids
- Free the tank of explosive vapors
- Excavate to the top of the tank
- Cut an entry hole approximately two feet square in the top of the tank
- Clean out all sludge
- Sandblast the tank to remove all scale, oil, corrosion products, etc. and to provide a rough surface for the lining to adhere to
- Visually check for corrosion holes or split welds
- Determine the thickness of the tank walls
- Measure the diameter to verify that the tank is structurally sound (not collapsing)
- Patch any small corrosion holes
- Apply the lining of epoxy or polyester resin with a nominal thickness of 1/8 inch
- Seal entry hole.

After the tank is lined, and if no cathodic protection has been added, it is required to be inspected when the lining is 10 years old, and every 5 years thereafter. It is a good practice to inspect the lining prior to the expiration of the 10 year warranty. ***Don't wait until the warranty has expired to inspect the lining!***

Update on RBCA

The leaking underground storage tank (LUST) staff worked closely with private industry, consultants, owners, bankers, attorneys, EPA and other stakeholders in a partnership known as Partners in Risk-Based Corrective Action (RBCA) Implementation (PIRI). A primary objective of this partnership was to develop the RBCA Tier 2 process which enables owners to develop site-specific risk-based cleanup levels.

In April 1998, the guidelines for the RBCA Tier 2 process were completed. The document is entitled "Guidelines for Utah's Corrective Action Process for Leaking Underground Storage Tank Sites".

In May and June 1998, the LUST staff held conferences for environmental consultants and UST owner/operators to discuss Utah's RBCA process. The conferences provided the regulated public and their consultants with the long-awaited Tier 2 process and technical details on how it fits into the traditional corrective action process. The conferences were well attended and participants took home a better understanding of how risk management and risk assessment issues fit into the LUST program.

The main benefits of the RBCA Tier 2 process to the owner/operator:

- Development of site-specific cleanup levels at LUST sites based on site specific conditions.
- Cost savings for owners and State appropriated cleanup funds.
- More efficient use of time and resources.

The LUST section wants to thank all those involved with the development of the RBCA process and welcomes any comments or suggestions that you may have so that we can continue to improve the Utah RBCA process. Comments can be directed to Paul Zahn at (801) 536-4100.

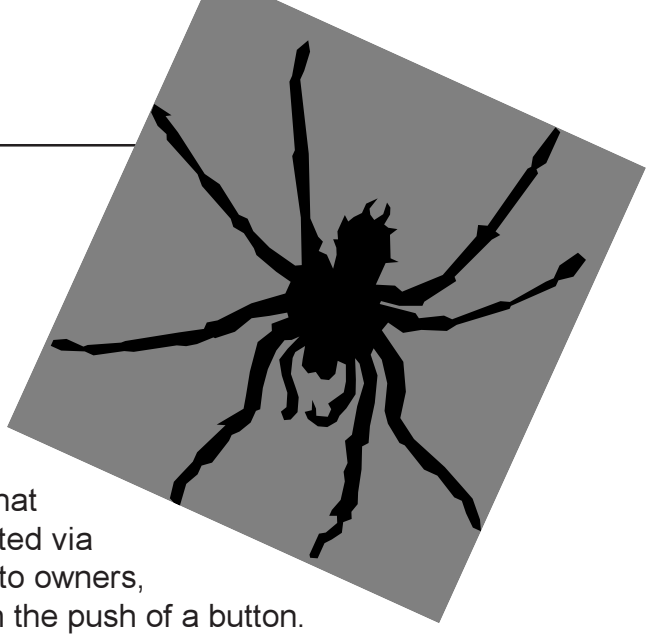
Copies of the "Guidelines for Utah's Corrective Action Process for LUST Sites and a disk with the equations and worksheets are available for a fee of $50.00 at

Alpha Graphic
140 South Main St.
Salt Lake City, UT
(801)-364-8451

Loan Application Period Extended

The December 22, 1998 deadline to upgrade or remove older, non-upgraded USTs is almost here. To help owner/operators meet the deadline, an application period for applying for low-interest loans from the PST Loan program has been open since December 1997. The application period will be extended so owner/operators may apply until January 30, 1999. The application process normally takes several weeks, so it is critical to apply as soon as possible if you are interested. If you have questions about the loan program or would like an application, please call Gary Astin at (801) 536-4103 or Diane Hernandez at (801) 536-4116. The application form may be downloaded from the DERR web site at www.eq.state.ut.us/eqerr/errhmpg.htm.

Caught in the Internet Web?



Have you taken the time to visit the underground storage tank (UST) Web Page? This is a quick and easy way to get information and forms. Not to mention the fact that some of the forms on the Home Page cost money if requested via mail, but are free to download. Many of the forms sent out to owners, operators, and consultants are available within minutes with the push of a button. This saves you the time of waiting for the forms or having to physically go down to the Department of Environmental Response and Remediation (DERR). You can also e-mail project managers if you have their e-mail address.

So the question arises, "How would I get to the UST's section of the Home Page?" The address is http://www.deq.state.ut.us/eqerr/errhmpg.htm which will put you at the DERR's Home Page. The UST section of the page encompasses request forms for reviewing records on file (GRAMA), information about reporting spills, the certification process, forms, remediation and abatement information, PST loan fund information, PST fund information on remediation reimbursement, recent copy of the newsletter, a list of facilities with underground storage tanks, and a list of sites with releases from underground storage tanks. Many of these topics have more than one article available. For example, under Remediation and Abatement, you can find a copy of the Subsurface Investigation Guide, Risk Assessment Guide, Corrective Action Plan Guide and other useful guides.

The Home Page is updated as often as possible when information or forms are revised at the DERR. There will naturally be some lag time until the Home Page is updated, but this is usually minimal and at any given time the majority of (if not all) the information is current. If you are in doubt, you can call and check with the DERR.

Besides the DERR homepage, there are countless sites out there with information that may be useful to you. Some of the addresses that may be of interest are:

Name of the Web Site	Web Address
The Petroleum Equipment Institute	http://www.peinet.org
Petroleum Marketers Association of America	http://www.pmaa.org
Steel Tank Institute	http://www.steeltank.com
The EPA's Office of Underground Storage Tanks	http://www.epa.gov/OUST/
The Underground Storage Tank Guide	http://www.thompson.com/tankdir/home.html

Take some time to visit our Home Page and see what is there and explore some of the other sites available to you. If you have questions or need help using the DERR homepage, contact Mike Pecorelli or David Wilson at (801)-536-4100.

Proposed UST Rule Changes

The Division of Environmental Response and Remediation is proposing changes to the Underground Storage Tank rules.

The changes are proposed to implement 1998 changes to the Underground Storage Tank Act, remove language which is repetitive, specify some requirements for UST closure and sampling, and simplify some reporting and document submittal requirements. The changes are shown in the box to the right:

The proposed changes are open for public comment from September 1 to October 1, 1998. There will be a public hearing on the changes at the DERR office, 168 North 1950 West, Room 101, Salt Lake City, Utah, on September 29, 1998, at 2:00 pm. Comments on the proposed changes can be made at the hearing or may be submitted during the public comment period. Comments can be mailed to Kent P. Gray, Executive Secretary (UST), Solid and Hazardous Waste Control Board, PO Box 144840, Salt Lake City, Utah 84114-4840. If you would like a copy of the proposed changes, they are available on the DERR web site at www.eq.state.ut.us/eqerr/errhmpg.htm. You may also request a copy by calling Gary Astin or Mark Crim at (801)-536-4100.

R311-201, Certification Programs- Remove repetitive wording which deals with certification requirements and replace it with shorter statements which deal with all certifications together.

R311-204, Closure- Include in rule the current policy that UST removers notify the Executive Secretary at least 72 hours before beginning UST closure activities; create a new section with UST remediation requirements which had been in other parts of the rules.

R311-205, Site Assessment- Remove the requirement that samples for in-place closures be taken and analyzed before the closure plan is submitted for approval; allow the Executive Secretary to require duplicate or split samples for quality assurance purposes; allow for the use of new laboratory methods for analyzing UST soil and groundwater samples; include naphthalene as a constituent to be analyzed for when assessing contamination from gasoline; and specify that laboratory minimum detection limits for sample analysis must be below the state-established cleanup levels.

R311-206, Financial Responsibility- Remove wording which deals with collection of the environmental assurance fee, which is collected by the State Tax Commission beginning July 1, 1998; allow for the PST Fund fee paid for one tank to be applied to the fee for an UST which replaces it when both tanks are installed in the same fiscal year; and correct some incorrect rule citations.

R311-207, Accessing the Petroleum Storage Tank Fund- Allow UST remediation contractors to submit their Statement of Qualifications yearly instead of with each work plan; remove the *Personnel Qualifications and Task Descriptions* table from the rule text and incorporate it by reference; and allow the Executive Secretary to use cleanup budget projections in authorizing payment of third-party claims on the PST Fund.

R311-209, State Cleanup Appropriation- Include references to the newly-created Petroleum Storage Tank Cleanup Fund so the criteria for use of the fund can be specified.

R311-210, Administrative Procedures- Outline the basic requirements for submitting a request for agency action to the Solid and Hazardous Waste Control Board.

R311-212, Petroleum Storage Tank Loan Fund- Remove the requirement that loan application periods by 30 days long, to allow for longer application periods.

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

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.

Please call **Tamie Call** at (801) 536-4100 or write: UST RELEASE, 168 North 1950 West, 1st floor, Salt Lake City, UT 84116.

Enforcing Compliance with the '98 Deadline

On May 14, 1997, the United States Environmental Protection Agency issued a memorandum which stated that there will be **no extension** to the December 22, 1998 deadline. The Division of Environmental Response and Remediation (DERR) does not have the authority to extend the deadline. To enforce compliance with these rules, the DERR is issuing Certificate of Compliance tags for tanks that meet all compliance requirements. If a tank does not meet the upgrade requirements then no fuel may be legally introduced into that tank. A penalty will be levied against the owner and the fuel delivery contractor if fuel is delivered to a tank without a tag. A list of facilities which have not met the 1998 upgrade requirements will be published and distributed to fuel distributors during the first quarter of 1999. Information about the potential for enforcement actions against distributors who introduce product into tanks without a tag will also be provided to distributors.

Owners of UST systems that are not upgraded due to a shortage of certified contractor availability will **not** be given an extension, nor will they be allowed to operate these tanks. Any tank not upgraded by the deadline must be either permanently closed or temporarily closed for up to 12 months. At the end of 12 months the tank must be properly closed or brought back into service with the tank being upgraded to meet performance standards for new tanks. DERR does not intend to grant extensions for temporarily closed tanks.