

UTAH TANK NEWS

SPRING 2001

UST Branch



USTs and Common Sense

by Paul Harding

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Leak detection equipment used in monthly monitoring of USTs is becoming more sophisticated with every passing year. Many new facilities and existing facilities required to phase out Inventory Control and Tank Tightness Testing have opted to install Automatic Tank Gauges (ATGs). Electronic Line Leak Detection for monthly monitoring of product piping is now in widespread use at UST facilities across Utah. This equipment has proven effective in detecting problems, alerting UST operators, and reducing the potential of a release of petroleum to the environment. How is it then possible that catastrophic petroleum releases continue to occur and go undetected even at facilities with the latest UST technologies?

The answer may be found with a release of 20,000 gallons that occurred in the Salt Lake Valley at a facility that had recently upgraded to state-of-the-art equipment. The free product plume associated with the release is now over 300 feet long. An adjacent residence was evacuated after vapors from the plume were detected. Sewer lines in the area have also been impacted. The release was caused by defective functional elements on two of the three submersible pumps at

the facility. This occurred following the replacement of the diaphragms in the functional element as directed for an upgrade to Electronic Line Leak Detection. The premium pump leaked at the diaphragm and the regular unleaded pump leaked through a compromised o-ring. Both releases occurred at a location in the UST system that is not monitored by either the Electronic Line Leak Detection System or Automatic Tank Gauge. Indications of a new release, including the detection of vapors and the discovery of free product in monitoring wells, were initially discounted based on the absence of electronic alarms.

Over \$800,000 has already been spent in mitigating the release. The cost of the cleanup, not including third party claims will likely reach or exceed two million dollars. It could take a number of years to accomplish the entire cleanup even though a major portion of this work should be completed by years end. The tanks located at this facility were covered under the Petroleum Storage Tank (PST) Fund during the time that these releases occurred. Through the participation of their tanks on the PST Fund, the owners are eligible for reimbursement of cleanup costs of up to \$1 million per release less a \$10,000 deductible.

What are the take home messages illustrated by this story? First, it is important for owners and operators to

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be diligent in monitoring their USTs. Owners and operators are required to monitor their tanks for leaks on a monthly basis. Sophisticated leak detection equipment is helpful in meeting this requirement and identifying problems but it is not a total solution. Visual checks of dispensers, subpumps, and other ancillary equipment should still be conducted at least monthly. Inventory records should be checked frequently for irregularities. Technology should not replace common sense. Finally, even the most diligent UST owners and operators are not immune from petroleum releases. Don't underestimate the value of proper financial assurance for your USTs. For most tanks in the State of Utah this is provided by the PST Fund. Should all else fail at least there is significant financial assistance available for those who are properly covered. ■

What About My Heating Oil Tank ?

By Gary Harris

According to Federal Regulations Heating Oil Tanks regardless of size are excluded by definition. A heating oil tank is a tank used for storing heating oil for consumptive use on the premises where stored. (40 CFR 280.12). Accordingly, this exclusion applies to tanks at residential, commercial and industrial facilities storing heating oil that is used at the same site. The heating oil exclusion does not apply to the storage of heating oil for resale, marketing, or distribution. On the premises is not limited to the building where the heating oil is stored. Thus, centralized heating units using heating oil that serve more than one building on the same property would be exempt.

Some facilities use used oil in their furnace or boilers. As long as all of this used oil is used for the intended purpose to be burned in a furnace or boiler for heating purposes, these tanks are considered heating oil tanks and not waste oil tanks.

Before removing a heating oil tank from the ground contact

your local Health Department and Fire Marshall as they may require permits.

What if I find contamination from my Heating Oil Tank?

Although heating oil tanks do not have to be registered with the State of Utah nor do they require leak detection, they are subject to regulations regarding contamination. **All** contamination should be reported.

The Division of Environmental Response and Remediation (DERR) Leaking Underground Storage Tank (LUST) program will assume regulatory oversight of all reported petroleum releases from underground heating oil tanks, aboveground storage tanks (not regulated by other agencies) and other petroleum releases that present a direct and immediate threat to public health or the environment.

If you have questions concerning your heating oil tank, please contact the DERR at (801)536-4100. ■

Utah's Used Oil Program

Why Have a Used Oil Program ?

Used oil is a valuable resource

Used oil can be re-refined as a lubricating oil, used as a clean fuel and reprocessed to create many petroleum-based products. Recycling saves this non-renewable resource for future use. One gallon of used oil can be re-refined into 2.5 quarts of lubricating oil. It takes 42 gallons of crude oil to produce this same amount of lubricating oil.

Improperly Disposed of Used Oil Is Harmful:

America's worst oil spill was not in Alaska. Unfortunately it is spread all over the U.S. The EPA estimates that 200 million

gallons of used oil are dumped on the ground, tossed in the trash (ending up in landfills), and poured down storm sewers and drains every year. Just one gallon of used oil, the amount from a single small auto engine, has the potential to contaminate up to one million gallons of fresh water - a year's supply for 50 people.

A single gallon of used oil can create an *eight-acre oil slick*. Used oil can be more of a problem than new oil because of the contaminants that used oil contains. Used oil that is dumped on the ground or is put in storm drains can contaminate ground water which can be very difficult to cleanup. Used oil in surface water has the potential to harm wildlife by depleting the oxygen supply for fish and other aquatic life, and by hindering the ability of birds to fly.

National Statistics

The nation consumes around 252 billion gallons of petroleum products annually, primarily as fuel. Approximately one percent is refined into various industrial and engine-related oils. Approximately 1.35 billion gallons of used oil are generated yearly. Approximately 200 million gallons of the total used oil generated each year comes from do-it-yourself oil changers. About 800 million gallons are collected by recyclers for reuse (about 59% recycling rate).

Utah Statistics

Approximately 2 million gallons of the total used oil generated each year in Utah comes from do-it-yourself oil changes. Approximately 10,500,000 gallons of used oil are collected by recyclers for reuse.

How Do I Become A Collection Center?

1. Follow the regulations.

Requirements pertaining to used oil collection centers are found in the Utah Standards for the Management of Used Oil (R315-15). The main requirements are that the collection center must be registered with the State of Utah, the containers to store the used oil are in good condition, not leaking, and labeled with the words "Used Oil".

2. Keep a log sheet.

Everyone dropping off used oil at a collection center must sign a sheet indicating that the used oil meets the standards for used oil recycling, i.e., has not been mixed with certain contaminants. This log will be used for verification of the amount to be refunded to the collection center and also helps in deterring the deposit of substances other than used oil.

3. Furnish equipment.

A used oil collection center must have a tank that is in good condition in which to store the used oil that is collected. If a collection center does not have a tank, the Division of Solid and Hazardous Waste (DSHW) may supply one. If fencing, concrete pads or other supplies are needed, the collection center can apply for a grant from the DSHW for these items. You must also display in a prominent place in your establishment "USED OIL ACCEPTED HERE" signs which will be provided.

4. Arrange for transportation.

Each collection center is responsible for getting the used oil collected and transported off-site. A transporter that is registered with the state must be used. This service is currently free for do-it-yourselfers used oil, a list of transporters to choose from will be provided to each collection center. It is the collection center's responsibility to make sure that the used oil is picked up.

5. Provide liability.

You should accept only used oil that has not been knowingly contaminated with other substances. The tank at the collection center should be supervised and only facility personnel should fill the tank-do not let customers add the oil themselves. The State of Utah will not, however, accept any responsibility for a center that is not well maintained and has not complied with the rules.

For more information about the Used Oil Program, please contact Cheryl Prawl at (801)-538-6170 or email her at cprawl@deq.state.ut.us. ■

UST Installations

by Jason Wilde

As the owner/operator of an Underground Storage Tank (UST), you have legal responsibility for the tank. Therefore, it is to your benefit to understand as much as possible about the installation and operation of the USTs at your facility. If you don't understand your tank system, ask questions! Observe as much of the installation as possible. Make sure that the tanks and piping are tested before being put into service and that all monitoring equipment is working. Keep and maintain a copy of all final tests and operating instructions. You should be provided with adequate instructions on test procedures, preventive maintenance schedules, and proper tank charts. Train all personnel on the use of the tank system, including the release detection and monitoring systems. You should also establish a program of preventive maintenance and periodic testing.

*If you don't understand,
ask questions!*

Equipment Requirements for New Underground Storage Tanks.

If you are installing a new tank, it must meet new tank standards which include spill and overflow protection and corrosion protection for both the tank and the piping. In addition, all regulated USTs except for emergency generator tanks are required to have leak detection. Leak detection options should be considered before installing an underground storage tank as this could influence the selection of leak detection equipment. For example, stations that expect a high throughput should consider installing double-walled tanks and piping to allow interstitial monitoring since other leak detection systems do not work well with high throughputs.

Notification and Permit Requirements for Installing New USTs

When you install a new tank you are required to notify the Division of Environmental Response and Remediation (DERR) thirty days prior to beginning the work. An installation permit and fee of \$200 per tank is required and should be obtained prior to the installation. The local fire and health department should also be contacted for any requirements that they may have associated with the installation of new tanks.

UST Installation Permit

Information on the installation permit includes:

1. Utah Certified UST installer who is directing all critical operations associated with tank installation
2. Installation company name, address and current UST Installation Company Permit number
3. Date the work will commence
4. Tank owner's name and address
5. Facility name and address
6. Complete description of what is to be installed: tank or piping, capacity, material of construction, substance to be stored, etc.

Hire A Qualified Contractor

The following tips may help you find a reliable contractor to install your tanks:

1. Ask other tank owners who have had tanks installed to recommend contractors they have used
2. Look closely at the contractors' qualifications and experience to make sure you are satisfied with both
3. Get references from the contractor
4. Obtain at least 2-3 bids
5. Verify that the contractor(s) have a current Utah UST Installer certificate and are working for, or sub-contracted with, a company with a current UST Installation Company Permit

Correct Installation Practices Are A Must

Careless installation practices that do not follow standard industry codes and procedures can lead to problems that compromise the integrity and proper functioning of the UST system. Improper installation is a significant cause of failures for tanks and especially for piping.

Critical installation activities include:

- pre-installation tank testing (air pressure test, soaping all surfaces, seams, and fittings while inspecting for bubbles)
- tank site preparation including anchoring, tank placement, backfilling, overburden
- cathodic protection installation, service or repair
- vent and product piping assembly
- installation of tank manholes, catch basins, sumps
- post-installation piping air test prior to putting product into the tank system for the final precision tightness test

Many mistakes can be made during installation. Mishandling of the tank during installation can cause structural failure of FRP tanks or damage to steel tank coatings and cathodic protection. Improper layout of piping runs, incomplete tightening of joints, inadequate cover pad construction, and construction accidents can lead to failure of delivery piping.

One Time Drop Letter and Tank and Line Tightness Testing

Before the tank can be put into use, the integrity of the tank and associated piping must be evaluated through a tank and line tightness test. To receive fuel for the test, the owner or installer must contact the DERR for authorization of a one-time delivery. After the initial drop, the tanks may not receive subsequent deliveries of fuel until they are issued a Certificate of Compliance and are marked with a proper identification tag around the fill pipe.

EPA Registration Form

The tanks should be registered using Notification for Underground Storage Tanks, EPA Form 7530-1, at the completion of the installation. The notification must be complete with the owner's signature and include the tank installer's signature certifying that the tanks meet all state and federal requirements for proper installation. Utah rules also require the owner to submit as-built drawings or site plans. ■

Above-ground Storage Tanks

by Gary Astin

Although the Division of Environmental Response and Remediation does not regulate Aboveground Storage Tanks (ASTs), there are regulatory requirements for these tanks. Many Underground Storage Tank (UST) owners have removed their USTs and installed ASTs. Even some new facilities throughout the state have installed ASTs. Currently there are over 1000 ASTs in Utah.

The principal regulations governing ASTs are the national and local fire codes, and federal regulations which require spill prevention plans for several types of facilities, including those with ASTs and some with USTs. These are known as Spill Prevention, Control and Countermeasures (SPCC) plans. These regulations apply to certain facilities which could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines, and that have (1) an aboveground oil storage capacity of more than 660 gallons in a single container, or (2) a total aboveground oil storage capacity of more than 1320 gallons, or (3) a total underground storage capacity of more than 42,000 gallons. "Oil" is defined to include gasoline, diesel, and other refined products. "Navigable waters" is broadly defined so most facilities with storage tanks could be regulated under the SPCC regulations. Owners of facilities regulated by SPCC must prepare a plan to show what is being done to prevent oil spills. Some facilities with an increased likelihood of a spill are required to develop an additional response plan to deal with a spill if one occurs.

If you have ASTs or are considering installing them, you should contact your local fire department or the state fire marshal's office at (801) 284-6350. You can also get information about the SPCC regulations from the EPA office in Denver. Contacts are Martha Wolf at (303) 312-6839 or Jane Nakad at (303) 312-6202. ■

Utah's USTFields Program

by Dale Urban

Background Information

This article is designed to better acquaint you with the Underground Storage Tank (UST) USTFields pilot program currently underway in Utah. Nationally, approximately a million USTs contain petroleum or hazardous chemicals. Approximately 315,000 are leaking and many more are expected to leak in the future. In Utah, there have been well over 16,000 USTs, with currently 4,300 registered and in use, and approximately 3,940 confirmed releases as of March 2001.

The Underground Storage Tank Program works to ensure that tanks are safely managed. Besides the dangers of fire or explosion, or the accumulation of cancer causing vapors in enclosed spaces (such as buildings), Leaking Underground Storage Tanks (LUSTs) can contaminate nearby groundwater. More than 96% of Utah's population relies on groundwater as a drinking source. Leaking tanks are a serious problem that need proper attention (such as abatement, investigation, or cleanup) ensuring that our limited natural resources are protected.

Almost every town or city in Utah has at least one abandoned UST facility, which may or may not have tanks in the ground. Many of these facilities have confirmed releases, or LUSTs, which have not been properly investigated or cleaned up. Due to unknown UST and general site conditions and liability concerns regarding LUST compliance issues, investigation and cleanup costs, these sites often remain abandoned and undeveloped. These abandoned LUST sites result in an

eyesore for the local community, a loss of tax base or revenue for the city or township, and an underutilized property which may devalue nearby properties.

The goal of the USTFields pilot program is to develop a process to foster redevelopment and to restore abandoned and underutilized LUST sites with environmental contamination back to productive use. The USTFields pilot utilizes risk-based decision making as a tool to facilitate site cleanup and closure to minimize future liability for all stakeholders involved.

EPA's Initiative

EPA's USTFields Initiative will fund pilot programs to assess and clean up petroleum contamination from federally-regulated Underground Storage Tanks at idle or abandoned commercial properties. Petroleum contamination is generally excluded from coverage under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and is therefore not covered under EPA's Brownfields Program. In its USTFields Pilot Program, EPA's Office of Underground Storage Tanks (OUST) has selected 10 state/local pilots in which the state will partner with local governments to assess and clean up petroleum-impacted UST sites. Each pilot state will receive up to \$100,000 of federal funds to be used to assess and clean up the

sites.

EPA has selected Utah as one of the USTFields pilot states. The State of Utah is partnering with Salt Lake City, which has been successful as a Brownfields Assessment and Showcase Community. However, funding through the Brownfields program generally cannot be applied to petroleum-impacted sites. This has created a gap in the city's ability to address abandoned underground storage tanks in its neighborhoods. Economic forces have moved most of the sale of gasoline out of local neighborhoods and into more urban retail outlets. This trend has left many

96% of Utah's population relies on groundwater as a drinking source

abandoned gas stations and their associated health and environmental risks located in or on the edge of low income neighborhoods. Overgrown weeds and graffiti cover abandoned gas stations that are often on highly visible corner lots and have a negative impact on surrounding neighborhoods. Local governments are interested in assessing and cleaning up such properties and returning them to productive use for the community.

Utah's USTFields pilot program will allow the State of Utah

to foster a partnership with the Redevelopment Agency of Salt Lake City to clean up USTFields sites and thereby remove a barrier to economic redevelopment and community revitalization. The state will use federal funding to identify and prioritize potential USTfields sites and to characterize and clean up contamination, including petroleum and MTBE contamination.

If you have questions about the Utah UST program, the USTFields pilot program or have environmental concerns, please contact the UST Branch at (801) 536-4100. ■

CERTIFICATION CLASSES

PETCON

Jul. 9-11, 2001

Nov. 7-9, 2001

1-800-852-8374

Installer Remover Sampler

UVSC

April 24, 2001

June 21, 2001 Aug. 7, 2001

(Sampler only)

801-222-8000 ex. 8677

Re-certification

Tests are given the first Tuesday of each month.

For more information contact David Wilson at
(801-536-4138)

Environmental Consultants

Exam and Renewal

June 15, 2001

Sept 14, 2001

Dec 14, 2001

Contact Hillary Mason at **(801) 536-4162**