

**KANSAS STORAGE TANK PROGRAM  
OVERVIEW OF UNDERGROUND STORAGE TANK REQUIREMENTS**

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<http://www.kdheks.gov/tanks/index.html>

**Copies of this document are available at:**

[http://www.kdheks.gov/tanks/download/ust\\_overview.pdf](http://www.kdheks.gov/tanks/download/ust_overview.pdf)

As the state's environmental and public health agency, KDHE promotes responsible choices to protect the health and environment for all Kansans.

Through education, direct services, and the assessment of data and trends, coupled with policy development and enforcement, KDHE will improve health and the quality of life. We prevent illness, injuries and foster a safe and sustainable environment for the people of Kansas.

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# OVERVIEW OF KANSAS UNDERGROUND STORAGE TANK REQUIREMENTS

## 1. INTRODUCTION

Federal regulations were developed by the Environmental Protection Agency (EPA) and became effective December 23, 1988 that establish requirements for underground storage tanks (UST) storing petroleum and hazardous chemicals. State, and federal statutes and regulations pertaining to USTs are summarized in this document. Copies of the actual regulations can be downloaded from the Kansas Department of Health and Environment (KDHE) Storage Tank Section Web Site at:

<http://www.kdheks.gov/tanks/regs.html>

### **Underground Storage Tank Compliance Act of 2005**

On August 8, 2005, President George W. Bush signed the Energy Policy Act of 2005 into law. KDHE has to meet provisions of the Underground Storage Tank Compliance Act, Part of the Energy Policy Act, if it is to continue to receive funding from EPA to run the UST Program in Kansas. KDHE already meets some provisions of the Underground Storage Tank Compliance Act and has had to make changes to meet other provisions. Details on how KDHE meets or will meet the Act will be mentioned in this Overview. Specifically, KDHE addresses the following aspects of the Act:

- Contractor Certification.
- UST Inspections every three years.
- Financial Responsibility.
  - Installers of USTs.
  - Manufacturers of tanks and pipes used in UST systems.
- Pre-approval of UST Work.
- Delivery Prohibition.
- UST Operator Training.
- Public Record.

### **What are Regulated Tanks?**

Regulated tanks include storage tanks containing petroleum or other regulated substances in which 10% or more of the volume, including the pipes, is below the surface of the ground. Following are several types of tanks that are exempt from UST regulations.

1. Farm and residential tanks of 1,100 gallons or less.
2. Single family residence heating oil storage tanks.

3. Tanks situated above the floor of a basement or underground area, where the tank can be visually inspected on all sides.
4. Flow through process tanks.
5. Septic tanks.
6. Tanks with a capacity of 110 gallons or less.
7. Buried tanks field-constructed with concrete.

## **2. COMPATIBILITY CONCERNS AND UST SYSTEMS**

K.A.R. 28-44-13 (40 CFR 280.11 (a) (3)) requires that UST systems be constructed or lined with materials that are compatible with the substances these systems store. In other words, UST systems should not store substances that cause tanks and pipes to degrade or leak, or cause problems with fuel contamination resulting from how these fuels interact with components of UST systems. Fuels containing higher concentrations of alcohol (>10%) and biodiesel (>2 %) could cause compatibility problems with UST systems.

## **3. UST CONTRACTOR, INSTALLER, REMOVER, AND TESTER LICENSING**

No company, firm, or individual may install, remove, modify, or test USTs without first obtaining a license to do so. To become a licensed UST contractor, an application must be submitted to KDHE with the applicable fees and proof of insurance. The individuals who supervise the work on USTs for the contractor must submit an application, pay the applicable fees, and pass a licensing examination covering the type of work to be supervised. Licensed contractors certified as UST installers and removers must be on site at least 75% of the time; licensed UST testers must be on site 100% of the time.

The Underground Storage Tank Compliance Act of 2005 requires that states certify contractors who install, upgrade, or repair UST systems. KDHE has licensed contractors since November 26, 1990. The Act also requires that contractors involved with the installation of tanks and pipe have pollution liability insurance policies offering minimum coverage of \$1,000,000 with an aggregate of \$2,000,000. Starting July 1, 2007, UST Installation Contractors must provide KDHE with certificates of pollution liability insurance with the appropriate levels of coverage before obtaining or renewing licenses. Licensed UST installers who also own the UST systems they work on are not subject to this requirement.

Also starting on July 1, 2007, manufacturers of tanks and pipes used in new installations of or piping upgrades to USTs in Kansas must supply KDHE with a policy and subsequent annual certificates of pollution liability insurance. These manufacturers also must have policies offering minimum coverage of \$1,000,000 with an aggregate of \$2,000,000. KDHE will not allow the installation of tanks or piping from manufacturers that have not supplied insurance policy or certificates.

## 4. UNDERGROUND STORAGE TANK PERMITS

The Underground Storage Tank Compliance Act of 2005 also requires the certification of workers who install tanks and pipes associated with underground storage tank systems. KDHE has issued Installer Licenses to Companies and individual workers who install UST systems since November 26, 1990. License holders must provide information on their certifications and experience with UST installation as part of their initial and renewal license applications.

### Installation Permits

Owner/operators who want to have USTs installed must first hire the services of a Kansas-licensed contractor licensed by KDHE to install underground storage tanks. The Kansas-licensed contractor will submit to KDHE a "New Underground Storage Tank Installation Application (UST006)" and a \$20.00 per tank application fee (includes registration fee of \$10.00 per tank). **KDHE must approve the "Installation Application" before the tanks are placed in the ground.** The Installation Contractor and owner will receive the "Installation Permit" after KDHE approves the application. Installation permits are good for 120 days and the UST owner is authorized a one-time delivery of product for tank and line tightness testing. **Be advised that Installation Permits do not authorized the owner to operate the newly installed UST.** KDHE will grant UST Temporary Operating Permits after the Installation Contractor and owner provide the following documentation:

1. The completed "Kansas Registration Notification for Underground Storage Tanks (UST007)" form (page 1);
2. The completed "Kansas Registration Notification Page 2 - Compliance Verification Information" (page 2);
3. Documentation of financial responsibility for compensating third parties for bodily injury and property damage arising from releases from UST systems;
4. Passing tank and line tightness tests documented on the Tightness Test (UST011) form and signed by the licensed tightness tester,
5. Passing corrosion protection test results (for metallic tanks and/or product lines) documented on the "Sacrificial Anode Cathodic Protection Certification (UST010)" form, signed by the corrosion protection tester.

KDHE will issue UST Operating Permits to owners that satisfy the conditions of their Temporary Operating Permits by providing inventory control records for each tank after the first 30 days of operation and release detection reports covering the first 90 days of operation.

## UST Upgrades

Owner/operators of USTs who want to make changes to their systems must first hire the services of Kansas-licensed contractors certified as installers. These certified installers must submit "UST Upgrade/Modification Application (UST012" forms to cover the proposed work to KDHE for approval. **Such upgrades should not start until after KDHE has approved the UST work.** Owner/operators of USTs being upgraded will receive an approval letter and a copy of the approved application if KDHE has approved the upgrade work.

## UST Repairs

K.A.R. 28-44-15 (b) (1) authorizes Licensed UST Contractors to make repair applications by telephone if the repair is essential to protect public health and the environment. KDHE should be informed within 24 hours of making the repair. In addition to using the telephone, contractors may make contact with KDHE by fax or email when a repair is deemed necessary. Should repairs be made during non-work hours or on the weekend, the contractor must make contact with KDHE on the first workday following that repair. After notifying KDHE of the repair, contractors may submit the Repair Notification (UST009) forms up to 30 days following the completion of the work. Contractors also should use the Repair Notification (UST009) forms to cover "in kind" replacements of failed components for underground storage tank systems. The individual completing the Repair Notification (UST009) form should be a Kansas-licensed Installer.

The Underground Storage Tank Compliance Act of 2005 also requires pre-approval of work completed by Licensed UST installers. KDHE has required the pre-approval of the installation, repair, or upgrade of UST systems since November 26, 1990.

## Annual Renewals and UST Operating Permits

Owner/operators of existing USTs will receive annual renewal notices around March 15 of every year for existing USTs. After reviewing and/or making changes, owner/operators must send the UST renewal notices to KDHE with fee payments of \$10 per tank by April 30 each year KDHE issues UST permits for a period of one calendar year: August 1 to July 31 of the following year. Owner/operators of UST will not receive permits for USTs that do not fully comply with KDHE regulations.

According to Kansas Administrative Regulation 28-44-17 (b), "After June 1, 1991 no person shall place a regulated substance in a regulated underground storage tank unless a valid permit is openly displayed at the facility." Furthermore, subsection (a) of that regulation states that the tank owner has responsibility to continuously maintain permits for the tanks. Anyone engaged in any activity that violates K.A.R. 28-44-17 is subject to fines in an amount of up to \$10,000 per violation per tank. Such activity includes (1) accepting delivery of regulated products into storage tanks lacking permits

[the delivery company is also subject to a fine], (2) storing regulated products in storage tanks lacking permits, and (3) dispensing of regulated products from storage tanks lacking permits.

The Underground Storage Tank Compliance Act of 2005 does not permit the delivery of regulated substances to tanks that do not comply with KDHE and federal regulations. KDHE has long enforced this “delivery prohibition” through issuing Underground Storage Tank Operating Permits to owner/operators whose UST systems comply with KDHE and federal regulations. KDHE inspectors will collect drop tickets, bills of lading, or ask who delivers fuel at times when underground storage tanks are being operated without permits. Following K.S.A. 65-34,109 (b) (6), transporters making deliveries to USTs without permits will receive certified letters informing them that KDHE inspectors have determined that the USTs at a given facility are being operated without permits and deliveries of fuel should cease. Transporters could face fines if KDHE determines they have continued deliveries of fuel to facilities after receiving certified letters.

In an effort to increase compliance with the delivery prohibition part of the Act, KDHE lists whether or not owners of USTs at facilities have operating permits, or have temporary operating permits, or have not received operating permits. The first step in determining whether or not USTs at a given facility have operating permits involves going to a map showing counties that make up the administrative districts of KDHE:

[http://www.kdheks.gov/tanks/ust\\_map.html](http://www.kdheks.gov/tanks/ust_map.html)

After selecting the KDHE district, the user can select from lists of “Permitted UST’s,” “Temporary UST’s” (USTs with Temporary Operating Permits), and “Unpermitted USTs” for each district.

The list of “Permitted UST’s” has the following heading information:

### **Kansas Department of Health and Environment Permitted USTs**

Owner/operators of USTs listed below have received UST Operating Permits valid for the period **August 1, 20xx, through July 31, 20xx. These USTs are eligible to receive deliveries of regulated substances.** According to K.A.R. 28-44-17 (b), no person shall place a regulated substance in a regulated underground storage tank unless a valid permit is openly displayed at the facility.

The time period “August 1, 20xx, through July 31, 20xx” will be updated for each new permit cycle. **(Please insert the proper year for the xx in dates)**

The list of “Temporary UST’s” has the following heading information:

### **Kansas Department of Health and Environment USTs with Temporary Permits**

Owner/operators of USTs listed below have received Temporary UST Operating Permits that are valid until the date shown in the "Temporary Permit Date" column. **These USTs are eligible to receive deliveries of regulated substances until the date that the UST Temporary Operating Permit**

**expires.** According to K.A.R. 28-44-17 (b), no person shall place a regulated substance in a regulated underground storage tank unless a valid permit is openly displayed at the facility.

Facilities with expired UST Temporary Operating Permits are listed on the “Unpermitted UST’s” list for that District.

The list of “Unpermitted UST’s” has the following heading information:

### **Kansas Department of Health and Environment Unpermitted USTs**

**Owner/operators of USTs listed below have not received 20xx/20xx UST Operating Permits. These USTs are not eligible to receive deliveries of regulated substances.** Owner/operators without current UST permits are in violation of K.S.A. 65-34,109 (a) and could be subject to administrative action from KDHE if they are found to be operating these USTs during a KDHE inspection. Transporters delivering regulated substances to these USTs are in violation of K.S.A. 64-34,109 (b) (6). Such transporters could be subject to administrative action if KDHE determines they have made additional deliveries to facilities after receiving notice via certified mail that these USTs were unpermitted. These transporters also may face additional Federal penalties under the Under Ground Storage Tank Compliance Act of 2005 for delivering regulated substances to USTs not eligible for delivery. According to K.A.R. 28-44-17 (b), no person shall place a regulated substance in a regulated underground storage tank unless a valid permit is openly displayed at the facility.

The span in years (20xx/20xx) will be updated for each permit cycle. **(Please insert the proper year for the xx in dates)**

### **Transfer of Permits (Ownership Changes)**

K.S.A. 65-34,106 (b) states “Permits may be transferred upon acceptance of the permit obligations by the person who is to assume the ownership or operational responsibility of the storage tank from the previous owner or operator.” Additionally, owners of USTs should submit “transfer of permit” forms to KDHE “not less than seven days prior to the transfer of ownership or operational responsibility of the storage tank.” KDHE uses the Underground Storage Tank System Change of Ownership (UST013) form as the “transfer of permit form” mentioned in K.S.A. 65-34,106 (b). Although statute requires that Change of Ownership (UST013) forms be submitted to KDHE before such transfers take place, KDHE finds out about these changes after the fact.

In addition to the Change of Ownership (UST013) form, KDHE requests that owners also provide a real estate transfer agreement and demonstrate financial responsibility for damage to property and bodily injury caused by releases from USTs. Other issues must be taken care of before KDHE processes the ownership change:

- payment of registration fees,
- line and/or tank tightness testing, and
- tank and/or line corrosion protection testing (if required).

UST Operating Permits are transferable as long as the new UST Owner submits the Change of Ownership (UST013) form, real estate transfer agreement, and certificate of

3<sup>rd</sup> party liability insurance or equivalent state approved mechanism to show financial responsibility. KDHE will issue UST Operating Permits with correct information to the new owner provided all items mentioned earlier are taken care of. New owners who fail to inform KDHE of ownership changes do not have valid UST Operating Permits. These owner/operators could have the delivery of fuel to those USTs stopped and be fined by KDHE.

## 5. RELEASE DETECTION

**Release detection for all tanks** has been required since December 23, 1993. Methods of complying with the release detection requirements are described in the release detection methods section of this document.

**Release detection for all pressurized lines** has been required since December 23, 1990. Release detection for buried lines can be accomplished by performing annual line testing or by installing line-monitoring equipment: automatic line monitors, interstitial monitors, or vapor monitors. In addition to release detection, a flow restrictor, continuous alarm, or an automatic shut off must be present which will detect a release of 3 gallons per hour from a pressurized line.

**Release detection for a conventional suction line** is required once every three years.

**Safe suction lines** must contain only one check valve immediately below the suction pump with the piping sloping toward the tank. Most suction systems are not the safe type, unless they were installed after 1988. Release detection is **not** required for safe suction lines.

Kansas-licensed UST testers must submit results of tightness tests to KDHE immediately after completion. Prior to the installation of or the changing of release detection equipment, Kansas-licensed contractors certified as UST installers must submit an "Upgrade/Modification Application" to KDHE for approval. KDHE must approve the application before any work can proceed.

### Tank/Line Release Detection Methods

Release detection methods being used in Kansas must be third party certified following protocols of the U.S. Environmental Agency and be listed with the National Working Group of Leak Detection Evaluations ([www.nwglde.org](http://www.nwglde.org)). Release detection requirements can be met by any of the following:

- 1. Tightness testing** - Tightness testing must be capable of detecting a release of 0.1 gallons per hour from any portion of the tank or line that routinely contains product. Pressurized product lines that lack monthly monitoring equipment must be tightness tested once every year.

New UST systems can be tightness tested every 5 years for a total of 10 years provided that:

- KDHE receives tank tightness testing results immediately after installation, and
- The owner/operators conduct daily inventory control.
- After 10 years begin a monthly monitoring method (items 2 through 5 below) of release detection

Owner/operators of USTs who upgraded to meet 1998 standards for corrosion protection, spill prevention, and overfill prevention prior to December 22, 1998, also could have their tanks tightness tested every 5 years for a total of 10 years.

Specifically:

- The first tightness test needed to take place after the upgrade work was completed,
- A direct entry internal inspection was used to assess the structural integrity of the UST before lining the tank, and
- The owner/operators conduct daily inventory control.

Note: Owner/operators of USTs who upgraded to meet 1998 standard for corrosion protection must use one of the monthly monitoring methods listed below if their USTs were assessed for structural integrity with alternative methods under ES-94 or American Society of Testing Methods (ASTM) G 158 standards.

As of December 22, 1998, The U.S. Environmental Protection Agency and KDHE stopped recognizing annual tank tightness testing as a sole means of release detection for USTs. However, KDHE can order tank and line tightness testing if owner/operators have not performed release detection or if an existing UST system is brought back to service after being out of service for six or more months.

**2. Automatic tank gauging** - The automatic gauging system must be capable of detecting a release of 0.2 gallons per hour from any portion of the tank that routinely contains product. UST owner/operators using automatic tank gauges must be able to show evidence of one passing Leak Test per tank per month. Some owner/operators may need to (1) fill their USTs to some minimum capacity (dependent on the model) that will allow the ATG to show a passing Leak Test, and/or (2) may need to shut their systems down to allow the ATG to show a passing Leak Test.

**3. Statistical Inventory Reconciliation (SIR)** - Statistical Inventory Reconciliation is monthly monitoring method that meets the leak detection for tanks and lines. Line tightness testing is not required if SIR is used for release detection. UST owner/operators send SIR service providers copies of monthly inventory control records. The SIR service providers then perform a statistical analysis on these inventory control records to determine if the tanks and product lines are not leaking at a rate of 0.2 gallons per hour during a given month. KDHE keeps a list of approved SIR service providers.

**4. Soil vapor monitoring method** - A soil vapor monitoring system is only useful at sites where soil or backfill materials are sufficiently porous and the stored substance is volatile enough to produce a vapor level which is detectable by the monitoring device. This method is not applicable if the monitoring device will be adversely affected by moisture or background contamination at the site. A Phase II site assessment must be conducted to determine if there is any background contamination. Locations of tanks and product lines will determine the number, placement, and construction of wells. Owner/operators may use their own equipment for vapor monitoring or hire a service that does vapor monitoring.

**5. Groundwater monitoring method** - For groundwater monitoring to be used as a release detection method, a number of conditions must exist. The groundwater must intersect the tank excavation and the backfill material must have a hydraulic conductivity of not less than 0.01 cm/sec. A Phase II site assessment must be conducted to determine if there is any background contamination. Locations of tanks and product lines will determine the number, placement, and construction of wells. Groundwater samples also must be sent to a KDHE approved analytical laboratory each month for analysis.

**6. Interstitial monitoring** - Interstitial monitoring is used with double wall UST and/or product lines or where a secondary barrier is present to retain the contaminant until detected by a monitoring system.

**7. Manual tank gauging** - Manual tank gauging is only approved for tanks not containing used oil of 1000 gallons or less and used oil tanks 2000 gallons or less. This method involves two consecutive tank stick readings both before and after a rest period each week. A leak is subject to reporting if a loss of greater than 10 gallons in a weekly test is indicated or if a monthly average indicates a loss of 5 gallons or greater. The following table shows what losses should be reportable for Manual tank gauging.

Tank Size	Minimum Duration Of Test	Weekly Standard (1 test)	Monthly Standard (4-test average)
111 up to 550 gallons	36 hours	10 gallons	5 gallons
551-1,000 gallons	36 hours	13 gallons	7 gallons
1,001-2,000 gallons	36 hours	26 gallons	13 gallons

**8. Standby heating fuel tanks** - Backup heating fuel supply tanks for heating can meet release detection requirements by conducting inventory control, if fuel is dispensed from the tank a total of 24 hours or less each month and less than 500 gallons of fuel per month are used. If these levels are exceeded at any time during the year, the owner must meet tank/line release detection requirements during the time of high usage by

using tightness testing or another approved method.

**9. Backup generator tanks** - Tanks used only as a fuel source for a backup generator are deferred from tank/line release detection requirements. However, these tanks are subject to inventory control.

**KDHE must approve the installation, upgrading, or repair of any tank and line release detection equipment.**

## **6. INVENTORY CONTROL REQUIREMENTS**

**Inventory control must be performed for all tanks that store or dispense product regardless of the method of release detection used by owner/operators on their USTs.** Inventory control must be performed every operating day for all UST systems that store and dispense fuel. If no fuel is dispensed from a tank on a regular basis, the inventory must be performed and reconciled a minimum of once a month. A release is subject to reporting if a shortage of greater than 1% of the flow-through plus 130 gallons in a one-month period is indicated. Inputs, withdrawals, and remaining volume must be recorded each operating day with measurements made before and after each delivery. Product level measurements must be within one-eighth of one inch with product metering to within 6 cubic inches for each 5 gallons. The water level within the tank must be determined and recorded a minimum of once a month. Manual gauging will provide a substitute to inventory control requirements for waste oil storage tanks with capacities of 2000 gallons or less. Please see the following publication, "Doing Inventory Control Right for Underground Storage Tanks in Kansas" for more details. This document can be downloaded from the KDHE Website at the following address:

[http://www.kdheks.gov/tanks/download/ks\\_inventory\\_control\\_booklet.pdf](http://www.kdheks.gov/tanks/download/ks_inventory_control_booklet.pdf)

## **7. RELEASE PREVENTION**

The U.S. Environmental Protection Agency requires that USTs be equipped with measures that prevent releases. These measures include corrosion protection, spill prevention, and overfill prevention.

### **Corrosion Protection**

Corrosion protection of metallic pipes and steel tanks in contact with the soil has been required since December 23, 1998. Many owners elected to upgrade existing UST systems or replace old unprotected metal systems before the compliance date. KDHE must approve the installation of new cathodic protection systems, as well as, upgrades and repairs made to existing systems. Corrosion protection of existing tank systems must meet the following requirements:

1. Corrosion protection systems protecting tanks and/or product lines must be designed by a corrosion expert and approved by KDHE before being added to an existing UST system. Cathodic protection plans are required for the addition of anodes to tanks with failed sacrificial anodes, the replacement of failed cathodic protection systems, and the new installation of cathodic protection systems.

2. Bare-steel tanks greater than 10 years in age must have an internal inspection to insure that the tank is structurally sound, before the cathodic protection systems can be added. KDHE also allows alternative assessments of the structural integrity of USTs under the current American Society of Testing Methods (ASTM) G 158 standards prior to the addition of cathodic protection to USTs. Owner/operators of these UST systems must demonstrate release detection through tank and/or line tightness testing or monthly monitoring before the addition of cathodic protection. Assessments of structural integrity will also be required for the reinstallation of cathodic protection systems on failed systems if KDHE has no previous assessment on file or an owner operator chooses to have impressed current cathodic protection installed on tanks equipped with internal lining before any of the inspection requirements mentioned in the next paragraph are required.

3. Internal lining of tanks will satisfy corrosion protection requirements if

- The first internal inspection of a lined tank is due 10 years after the lining was installed.
- After 10 years, the internal lining of a UST must be inspected every 5 years.
- No additional internal lining inspections are required if cathodic protection is added to the tank within 10 years of installing the internal lining.

Note, the addition of cathodic protection will eliminate the need for internal inspections of lined tanks. However, owner/operators of USTs who wait more than 10 years after the installation of an internal lining will need to have all required inspections completed before the addition of cathodic protection.

4. All metallic lines must be electrically isolated from the tank and other unprotected structures. Fiberglass tanks and lines are non-corrosive materials and do not require corrosion protection.

5. Cathodic protection is also required on metallic flex connectors that come into contact with the soil. Flex connectors can be protected with either spike or clip on anodes, or nonmetallic boots. No cathodic protection design work is required for the installation of clip or spike anodes to protect steel flex connectors. However, KDHE must approve of any work to install corrosion protection on flex connectors.

## **Spill Prevention**

Spill protection is designed to eliminate releases caused by spillage from the transport hose while filling a tank. State and federal regulations have requires that all active regulated USTs have spill buckets installed around fuel risers since December 23, 1998. Spill buckets should hold a minimum of 5 gallons of fuel, but 10 to 25 gallon

buckets are commonplace. To be effective, spill buckets should be kept clean and free of debris. Spill buckets full of water or fuel should be emptied as soon as practical.

## **Overfill Prevention**

Overfill protection must either automatically shut off the flow of product into a tank when the tank is 95% full or alert the operator when the tank is 90% full. All tanks that receive more than 25 gallons of product at one time through deliveries or additions have been required to have overfill prevention since December 23, 1998. For this reason most waste oil tanks will not need spill and overfill equipment. Owners have chosen to upgrade existing tanks or install this equipment at the time of tank installation.

## **8. UNDERGROUND STORAGE TANK INSPECTIONS**

The Underground Storage Tank Compliance Act of 2005 will require that facilities with USTs be inspected once every three years starting on August 8, 2007. Previously, KDHE had inspected most USTs once every four years. Some USTs have been inspected more often because ongoing permitting and compliance issues. By law, KDHE is only concerned with the parts of the UST system below the fire valve that routinely contain product.

A typical inspection starts out at the facility where the USTs are buried beneath the ground. KDHE inspectors open the covers of spill buckets where the tanks are filled. They check the condition of spill buckets, drop tubes, and any automatic shutoff devices, if present. These inspectors also will look for overfill alarms mounted outside buildings, if present. If overfill alarms or automatic shutoff devices are not present, the KDHE inspector will make a determination if ball float valves were installed or the facility lacks overfill prevention equipment.

KDHE inspectors also look under manholes covering submersible pumps, and may need assistance in moving heavy manholes safely. They will determine if the submersible pump pit is contained or uncontained. Contained pits have submersible pump sumps, which are optional in Kansas. Most pits are uncontained where the submersible pump is fully visible or partially buried by tank fill. Inspectors look for leak detectors, product lines, and check on the condition of flex connectors or rigid steel pipe found in submersible pump pits. The presence of any leaking equipment or free product in contained or uncontained pump pits is considered to be a release and reportable to KDHE. Persistent staining and petroleum odors in the tank fill surrounding submersible pumps also should be reported to KDHE.

Other items KDHE inspectors look for in the tank basin are observation tubes and other types of manholes or covers. KDHE has required that observation tubes be installed in tank basins of USTs installed since 1981. By regulation, one observation tube is required for every 400 square feet or fraction thereof of excavated area occupied by the tank basin. Locations of observation tubes should be marked with clearly identifiable lids, and the caps to observation tubes should be locked. Ideally, observation tubes should contain water if that is present in the tank basin. Any presence of free product in tank basins should be considered a release and immediately reported to KDHE. Risers for automatic tank gauge probes and vapory recovery equipment (if required) are found beneath other manholes or covers in tank basins.

After working around the tank basin, KDHE inspectors begin looking at gas pumps where fuel is dispensed into vehicles. KDHE inspectors look inside dispenser cabinets and may need assistance in unlocking these. The area beneath dispenser cabinets maybe contained or uncontained. Contained dispenser cabinets have dispenser pans, which are optional in Kansas. In uncontained dispenser cabinets, flex connectors or rigid pipe comes out of the line trench fill and connects with the fire valves. Inspectors look for leaks or staining of the line trench fill inside uncontained cabinets. The presence of free product in dispenser pans or substantial staining of the line trench fill should be considered a release and immediately reported to KDHE.

After inspecting the dispensers, KDHE inspectors next move inside the building to look in the office or behind the counter area of convenience stores to first check on UST Operating Permits. KDHE inspectors will also check to see what records are available and also check on the condition of the tank measuring stick if one is used for both inventory control and release detection. The types of records KDHE inspectors look for will include previous release detection reports. The type of release detection report will depend on the method of release detection being used, commonly automatic tank gauge leak test reports, past statistical inventory reconciliation or vapor monitoring reports. KDHE inspectors will also request to see both current and past inventory control records. Past inventory control records should include totals for gallons sold and gallons over or short for the month. More importantly, the inventory control leak check calculation should be completed. KDHE inspectors will also request to see rectifier logs if the UST systems being inspected include impressed current cathodic protection systems. Under K.A.R. 28-44-19 (40 CFR 280.34 (c)), owners and operators can either keep release detection, inventory, and rectifier logs at the UST facility or at an alternate site (frequently the central or corporate office). If these records are not on-site, make sure that these records are sent to KDHE inspectors within the amount of time requested by the inspectors.

## **9. UNDERGROUND STORAGE TANK CLOSURES**

### **Temporarily-Out-of-Service**

Owner/operators who discontinue using USTs must inform KDHE in writing to request that the status of their USTs be changed to a Temporarily-out-of-Service. UST release detection requirements can be deferred for up to 12 months for currently active tanks, if the tanks are temporarily abandoned. The steps to temporarily abandon your regulated underground storage tanks are listed below:

- The tanks must be emptied.
- The fill pipe and gauge opening must be sealed;
- The product lines must be sealed; the pumps locked, and the electrical power shut off;
- The vent lines must remain open.
- If your underground storage tank system includes impressed current cathodic

- protection, do not shut-off electrical power to the rectifier.
- Inform your 3<sup>rd</sup> Party Liability Insurance carrier that you will no longer be storing regulated substances in your underground storage tank system while its status is changed to “Temporary-out-of-Service.” However, do not drop the 3<sup>rd</sup> Party Liability Insurance for these tanks. KDHE requires that owner/operators of USTs continue to demonstrate financial responsibility for USTs that remain in the ground.
  - Please continue to pay yearly tank registration fees for your underground storage tank system while it is “Temporarily-out-of-Service.”

Any work to temporarily abandon underground storage tank systems must be performed by Kansas-licensed UST installers.

### **Temporarily-out-of-Service**

Underground storage tank systems may be brought back into service by upgrading to meet KDHE requirements for tank and line release detection, inventory control, spill prevention, overfill prevention, and corrosion protection.

### **Permanently-Out-of-Service**

KDHE recognizes two methods to permanently close underground storage tank systems: removal or in-place abandonment. Kansas-licensed UST removers must complete the work to permanently close UST systems and notify KDHE of the permanent closure with a “Permanent Tank Abandonment (UST008)” form.

An environmental site assessment is required for any UST to be permanently closed. KDHE must be notified before an UST can be removed or abandoned in place. With adequate notice, the KDHE field staff can inspect a tank removal site and perform a site assessment at no cost to the owner. If a tank is to be abandoned in place, the owner must hire an environmental professional to perform a Phase II site assessment prior to abandonment. Once KDHE has evaluated the site assessment and approved the closure, Kansas-licensed UST removers may fill the tank with an inert solid material such as sand. If contamination, exceeding KDHE standards, is discovered at any closure site, remedial action will be required.

More information on the permanent closure of UST systems can be found in the “Corrective Action Policy Manual.” This document is available from KDHE and can be downloaded from the Storage Tank Section Download Page at:

[http://www.kdheks.gov/tanks/download/Corrective\\_Action\\_Policy\\_Manual.pdf](http://www.kdheks.gov/tanks/download/Corrective_Action_Policy_Manual.pdf)

## **10. REPORTING OF UST SYSTEM RELEASES**

All releases from UST systems and associated piping must be reported to KDHE immediately after discovery. It is very difficult to accurately estimate the quantity of an underground release and for that reason KDHE requires that all releases be reported.

Aboveground spills of petroleum must be reported if water or soil pollution is caused or threatened. UST releases should be reported to Roger Boeken (785) 296-1674 or to the appropriate district office for your area. Spills of 25 gallons or more or those that cause a sheen on water should be reported to (785) 296-1679.

Alarms on release detection equipment should not be ignored. Likewise, devices that slow the delivery of regulated substances when USTs are filled should not be ignored or tampered with. Ignoring alarms or overfill equipment, or tampering with overfill equipment could result in the leakage of regulated substances from USTs. Appropriate penalties will be assessed if these and other reportable releases from USTs are not reported to KDHE.

### **Safety and Responding to Emergencies**

The Hazard Communication Standard of the Occupational Safety Health Administration (OSHA) requires companies that manufacture hazardous substances make Material Data Safety Sheets (MSDS) available to customers. MSDS sheets detail the hazards posed by these substances. Besides being flammable, most regulated substances in underground storage tanks are hazardous.

Owners of USTs holding regulated substances should have a MSDS sheet for each product stored available to their employees. KDHE suggests that a MSDS sheet for each product dispensed from USTs be kept in Compliance Ring Binders maintained at each facility. Everyone at facilities with USTs holding regulated substances should be familiar with the following sections of MSDS:

- Hazards Identification
- Fire Fighting Measures
- Accidental Release Measures
- Handling and Storage

Additionally, the Kansas State Fire Marshal's Office through K.A.R. 22-7-10 requires training for employees involved in the transfer of fuel into vehicles at retail service stations. Such training should include proper procedures to be followed in case of fire, overfills, or spills. This training should also include how to handle the improper transfer of fuel, types of improper and illegal containers, and instruction of the proper use of fire extinguishers. Retail service stations also should have "emergency instructions covering fire, overfill, or fuel spill procedures posted and readily available in the vicinity of all control consoles or attendant locations." The Kansas State Fire Marshal's Office requires that all systems that dispense fuel be equipped with a "clearly identified and easily accessible switch or circuit breaker" that "will shut off the power to all dispensers in the event of an emergency." The switch should be located in an area away from places where fuel is pumped into vehicles. All employees at the facility should be trained where the switch is located and when to use the switch in the event of a fire, spills, or USTs that suddenly appear above ground. Starting on July 1, 2007, KDHE will

require that operators of all regulated USTs (retail and non-retail) receive training on emergency procedures following K.A.R. 22-7-10.

## 11. FINANCIAL RESPONSIBILITY REQUIREMENTS

All owners of USTs must have met financial responsibility requirements by October 26, 1991. The Kansas Legislature passed Senate Bills 398 and 554, during the 1989 and 1990 legislative sessions, to provide UST owners in Kansas a method to meet the federal financial responsibility requirements. The Petroleum Storage Tank Release Trust Fund was created during the 1989 legislature to provide pollution liability coverage for tank owners who had no other means of meeting these federal requirements. The attached summary of Petroleum Storage Tank Release Trust Fund provides more details about the Trust Fund.

Coverage for third party claims for personal injury and property damage caused by releases from USTs, as required by the federal law, are not addressed by the Trust Fund. Senate Bill 554 established a program to provide third party liability coverage for tank owners. The insurance coverage for third party liability, in compliance with the Kansas Storage Tank Act, can be arranged through your current insurance agent. Your agent should contact the Servicing Carrier through its representative, Haake Insurance Agency, INC. (4650 College BLVD, Suite 300, Overland Park, KS 66211-1626) at 1-800-651-1999. An average fee of \$300 per tank per year will be required for tank owners to participate in this program.

The amount of coverage required for third party claims depends on the amount of fuel that is pumped from the UST system each month. Owner/operators that pump an average of more than 10,000 gallons a month based on annual throughput from the previous calendar year must carry at least \$1,000,000 of coverage. Owner/operators that pump an average of less than 10,000 gallons a month must carry at least \$500,000 of coverage.

Besides the third party liability insurance discussed in the previous paragraph, owners of USTs can use any of the alternative mechanisms listed in K.A.R. 28-44-27 to cover third party claims for personal injury and bodily injury. These alternative mechanisms and the appropriate citation to the Code of Federal Regulations are listed below:

Name	Federal Citation
Financial Test of Self Insurance	40 CFR 280.95
Guarantee	40 CFR 280.96
Insurance and Risk Retention Group Coverage	40 CFR 280.97
Surety Bond	40 CFR 282.98
Letter of Credit	40 CFR 280.99
Trust Fund (no relation to Petroleum Storage Tank Release Trust Fund)	40 CFR 280.102
Standby Trust Fund	40 CFR 280.103

Copies of 28-44-27 and other storage tank guidance materials are available from KDHE

or posted on the Storage Tank Section Download Page:

<http://www.kdheks.gov/tanks/download.html>

## **12. TRAINING FOR OPERATORS OF UNDERGROUND STORAGE TANKS**

The Underground Storage Tank Compliance Act 2005 requires that employees who work at facilities where USTs are located at be trained in the operation of those USTs. Specifically, the Act specifies three levels of training:

- Persons having primary responsibility for on-site operation and maintenance of underground storage tank systems. [Class A UST Operators]
- Persons having daily on-site responsibility for the operation and maintenance of underground storage tank systems. [Class B UST Operators]
- Daily, on-site employees having primary responsibility for addressing emergencies presented by a spill or release from an underground storage tank system. [Class C UST Operators]

KDHE considers Class A UST Operators to be those individuals who have the responsibility to obtain storage tank operation permits from KDHE. Class A UST Operators also work with Kansas-licensed UST contractors during the installation, repair, and upgrade of USTs. Class A Operators maybe owners of UST systems or upper level managers in companies or governmental bodies that own USTs.

KDHE considers Class B UST Operators to be those individuals who are on-site managers of facilities with USTs. These include retail facilities where fuel is sold or bulk plants. Class B Operators can also manage UST systems at companies or governmental bodies that fuel privately- or government-owned vehicles. Responsibilities of these employees include monthly and daily release detection reporting, as well as, the performance of inventory control.

KDHE considers Class C UST Operators to be those employees who work at facilities with USTs. These employees are not considered to be managers. However, they may help out with daily release detection reporting or performing other UST-related duties as requested by their managers. Those employees who work behind the cash registers at convenience stores or who would be the first to notice or find out that there is something wrong with the gas pumps or dispensers should take the Class C UST Operator Training.

Starting on July 1, 2007, KDHE will require that operators of all regulated USTs receive training on the operation of USTs to meet the requirements of the Underground Storage Tank Compliance Act of 2005. The first Operator Training Class took place in September of 2007. Contact Tank Management Services, INC., at 785-233-1414 or 1-800-530-5683 for information on additional classes. The Act requires KDHE to certify to EPA that KDHE has met the operator training requirements by August 8, 2008. The

deadline for completing UST Operator Training is August 1, 2012. KDHE will not issue UST Operating Permits to owners and operators who have not completed Operator Training by this date. After August 1, 2012, new Class A and Class B operators must be trained within 30 days of hire. New Class C operators must receive training prior to assuming responsibility for responding to emergencies.

Refresher training will be offered every four years to UST Operators that have not changed positions in their places of work or have not received duties requiring additional responsibility. However, additional training will be ordered if KDHE determines that a facility has operated UST without permits, or the USTs at that facility have been found to be out of compliance with state and federal UST regulations.

### **13. PUBLIC RECORD FOR USTs**

The Underground Storage Tank Compliance Act 2005 will also require that states post a "Public Record" giving summary information on USTs on their web sites. As required by the U.S. Environmental Protection Agency, KDHE will post information on the number of facilities with USTs, the number of USTs, how many of those USTs have been inspected and are in compliance with state and federal rules and regulations, and provide summary information for releases from USTs. The UST Public Record for KDHE is at KDHE Web Site ([www.kdheks.gov/tanks/index.html](http://www.kdheks.gov/tanks/index.html)).

### **14. THE KANSAS PETROLEUM STORAGE TANK RELEASE TRUST FUNDS**

#### **Overview**

The Storage Tank Act establishes two separate Trust Funds to assist owners and operators of storage tanks with the cost of remedial actions. Both funds are designed to provide financial assistance to owners and operators of facilities where contamination from petroleum storage tanks has occurred. The Trust Funds are financed from a \$.01 fee placed on each gallon of petroleum (except aviation fuel) product manufactured in or imported into the state. The funds will be abolished on July 1, 2014 by the sunset provision unless reenacted by the Legislature. Outlined below is a brief summary of the program.

#### **Who Qualifies for Reimbursement from the State Trust Funds:**

- Owners or operators of underground and aboveground storage tanks. Private businesses, local and state governments who own/operate petroleum storage tanks are eligible.
- To be eligible, the contamination at the site must have been discovered on or after December 22, 1988.
- Owners or operators of farm or residential tanks of 1,100 gallons or less and tanks used to store heating oil at a single family residence may qualify for reimbursement

### **Who Does Not Qualify for Reimbursement:**

- The federal government.
- Owners or operators who meet the federal criteria for self-insurance and whose leaking tank is located on a facility that is engaged in the refining or production of petroleum.
- Owners or operators who knowingly allow a release of petroleum to occur or who do not cooperate in conducting the appropriate corrective action.
- Owners or operators of storage tanks at pipeline facilities where releases have occurred.

### **How to Obtain Reimbursement from the State Trust Funds:**

- Submit an application for assistance from the appropriate fund.
- KDHE Trust Fund Staff will prepare and provide the owner with a pre-approved corrective action plan at a time determined by the priority ranking system. The work-scope will be prepared to assist the owner or operator in obtaining the required competitive bids.
- Three bids for all work associated with the remedial action must be obtained and approved in writing by KDHE Trust Fund Staff prior to the work being conducted.
- KDHE offers a bid assistance program for those who prefer to have KDHE obtain bids for them.
- The applicant must sign a consent agreement with KDHE related to implementation of the corrective action under the applicable fund.

### **Compliance Requirements:**

- To avoid potential fines, all regulated storage tanks must be registered with KDHE and must be in compliance with inventory control, release detection, and release reporting requirements. At the time they are approved for Trust Fund assistance, storage tank owners or operators who are not in compliance will be fined based upon the following:

Failure to register STs: \$50.00 per ST

Failure to maintain inventory control: \$300.00 per ST (first violation)

Failure to perform release detection: \$2,000.00 per ST, \$250.00 per line system

Failure to immediately (within 24 hours) report a release: \$2,500.00 per release

Failure to cooperate with KDHE directives: \$2,500.00 per site Operating STs without a permit: \$2,000.00 per site

Failure to provide financial responsibility (third party liability coverage) for underground storage tanks: \$500 per UST.

### **Petroleum Storage Tank Release Trust Fund Site Ranking System:**

Due to the overwhelming number of applications for assistance from the funds, KDHE has developed a ranking system that evaluates the risk associated with each site. This ranking system takes into account several factors related to each site to determine which sites pose the greatest risk to the public. Using the ranking system KDHE assigns a score to each site. This score will establish the order in which sites are investigated and remediated. By using this method KDHE can focus limited resources on resolving the greatest risks to the public.

### **Costs Covered by the State Trust Funds:**

(Cost must be pre-approved in writing by KDHE Trust Fund staff prior to the start of work)

- Preparation of corrective action plans which address the extent of contamination.
- Investigation and assessment of the contamination or petroleum release.
- Disposal and treatment of contaminated soil, groundwater, and/or surface water.
- Removal of contaminants from soil, groundwater, and/or surface water.
- Monitoring of the soil, groundwater, and/or surface water and maintenance of the monitoring equipment.
- Restoration or replacement of public water supplies.

### **Costs Not Covered by the State Trust Funds:**

- Repair, removal, replacement, or disposal of tanks, product in tanks, lines, or dispensers.
- Costs for the loss of business or costs for third party bodily injury or property damage.
- Work or costs not approved in writing by KDHE Trust Fund Staff prior to the work being conducted.

### **Deductibles:**

The deductible for each release is \$3,000 plus \$500 for each tank (above and below ground) located at the site of the release.

### **Financial Limitations of the Trust Funds:**

- For each petroleum release: one million dollars, less the deductible.
- For owners or operators who own less than 100 tanks: a total annual amount of \$1,000,000 for all sites owned or operated, less any deductibles.
- For owners or operators who own more than 100 tanks: a total annual amount of \$2,000,000 for all sites owned or operated, less any deductibles.

- Reimbursement will not be provided for costs covered by insurance policies, warranties, or other financial assistance.

## **15. ANNUAL PRESSURE LINE RELEASE DETECTION TESTING**

All owners of pressure systems must have their mechanical leak detectors (MLD's) or their automatic line monitors (ALM's) example PLLD's or LLD's tested on an annual cycle. This is regardless of what type of line release method the facility is using. Suction systems (safe or conventional) are exempt from this.

## **16. NEW SYSTEM INSTALLS, UPGRADE, AND REPAIR DOUBLE WALL RULE**

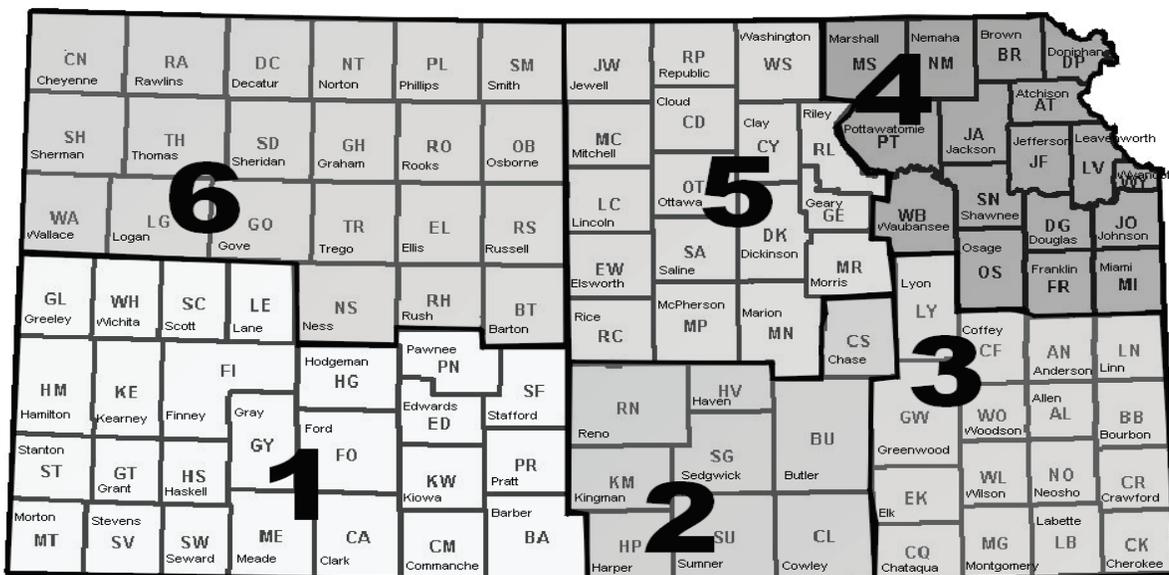
Secondary Containment Regulations K.S.A. 65-34, 138 Underground Storage Tank Systems; Secondary Containment went into effect July 1, 2013.

- All new underground storage tank systems shall be secondarily contained and monitored for leaks (Tanks and Pressurized Product Line)
- Containment sumps are required at the submersible pumps and dispensers
- Interstitial Monitoring required for tanks and lines (sensors in all sumps)

Existing tank systems are not required to upgrade unless the storage tank or product line is upgraded. Product line repairs and upgrades can be made if the work is completed on less than 50% of the existing piping, and the work is preapproved by KDHE.

Safe suction lines are exempt from the secondary containment requirement.

# KDHE ADMINISTRATIVE DISTRICTS



The map above shows the District Number and the counties served by KDHE District Offices. If you should need additional information regarding UST requirements, or if you need to register UST tanks within Kansas, you should contact the appropriate individual listed below:

## CENTRAL OFFICE STAFF

<b>Program Area</b>		<b>Telephone No.</b>
General Program Information		(785) 296-1678
<b>Underground Storage Tank Trust Fund</b>		
Remedial Action	Scott O'Neal	(785) 296-1597
Reimbursements	Marcia Morgan	(785) 296-5625
<b>Underground Storage Tanks (USTs) Prevention</b>		
Unit Chief	Marcus Meerian	(785) 296-6372
Cathodic Protection		
New Installations, Repairs, Upgrades & Release Detection	Chris Eichman	(785) 296-1685
Trust Fund Compliance & Fed. Financial Responsibility Tightness Testing	Gary Richardson	(785) 296-1677
Contractor Licensing	Cathy Herring	(785) 296-1661
UST Status	Robin Ashton	(785) 296-8061
UST Permits & Registration, Fees, Ownership Changes, and Tank Permanently Out of Service	Debbie Clure	(785) 296-1599
<b>Leaking USTs</b>		
Tank Closure, Leaks Tank Removals and Site Assessments	Roger Boeken	(785) 296-1674

## DISTRICT STAFF

1. Southwest District Office - Dodge City – (620) 225-0596  
Ken Diediker Geol Assoc Fax - 3731  
Wade Kleven Geol Assoc
2. South Central District Office - Wichita – (316) 337-6020  
Kyle Parker Prof. Geologist Fax - 6023  
Meer Husain Prof. Geologist  
Stan Marcotte Env. Scientist  
Vince Ressel Env. Scientist
3. Southeast District Office - Chanute – (620) 431-2390  
Renee Brown Env. Scientist Fax- 1211
4. Northeast District Office – Lawrence – (785) 842-4600  
Tom Winn Prof. Geologist Fax - 3537  
Nathan Luna Env Scientist  
Meredith Roth Env. Scientist  
Mike Law Env. Scientist
5. North Central District Office – Salina – (785) 827-9639  
Howard Debauche Prof. Geologist Fax – 1544  
Scott Lang Prof. Geologist
6. Northwest District Office – Hays – (785) 625-5663  
Bill Heimann Prof. Geologist Fax - 4005  
Darrell Shippy Env. Scientist

Kansas Department of Health and Environment  
Storage Tank Section  
1000 SW Jackson, Suite 410  
Topeka, KS 66612-1367