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Lesson 1: UST Facility Operator Roles and Responsibilities

Lesson Focus

This lesson focuses on the following topics:

- Roles and Responsibilities of UST Facility Operators
- Operator Certification Process
- Operator Training Deadlines
- Operator Training Re-Certification Requirements
- Documentation of UST Operator Training

Roles and Responsibilities of UST Facility Operators

The TCEQ has written, federally mandated, regulations requiring the training of underground storage tank (UST) facility operators.

There are three classifications of UST facility operators in the State of Texas:

1. Class A Operator
2. Class B Operator
3. Class C Operator

Owners/operators shall identify and designate at least one individual for each class of operator for each UST facility, including unmanned facilities. Persons may be designated in more than one classification as long as they are certified in those classifications.

Class A Operator

The Class A UST Operator of a UST facility is an individual who typically has primary responsibility for insuring the proper operation and maintenance of the UST systems, particularly in the capacity of managing resources and personnel necessary to achieve and maintain compliance with all UST regulations. The Class A UST facility operator can be responsible for one or more facilities, with no limit on the number of facilities.
**Class B Operator**

The Class B operator of a UST facility is an individual who ensures the implementation of all applicable requirements of these regulations in the field and implements the day-to-day aspects of the operation and maintenance of, and recordkeeping for, UST systems. The Class B Operator can be designated for one or more UST facilities, but not more than 50 UST facilities. Certification as a Class B Operator also entitles that individual to certification as a Class A Operator.

An owner/operator may designate as its Class B operator a third party (i.e., an individual who is an independent contractor or consultant and is not affiliated with the facility owner or operator) only if that individual is also a licensed UST On-Site Supervisor who holds a current "A" or "A/B" license and who either is, or is employed by, a registered UST Contractor. However, designation as the Class B Facility Operator in this manner does not also entitle that individual to certification as the Class A operator for a facility.

**Class C Operator**

Class C Operator of a UST facility is a person designated by the UST system owner who typically controls the dispensing of fuel at the facility and is responsible for initial response to alarms, releases, spills, overfills or threats to the public or to the environment. Class C training is provided, or ensured by, the Class B Facility Operator. The Class C certification is facility-specific.

During hours of operation, the UST facility must have at least one certified UST facility operator (Class A, B, or C) present at the facility. This does not apply to unmanned UST facilities. Unmanned facilities are those that, during the normal course of business, routinely do not have an attendant present who could respond to alarms or emergencies.

Unmanned facilities must have weather resistant signage clearly visible from any dispenser which instructs users about basic safety procedures, provides the customer with a 24-hour telephone contact number monitored by a Class A, B, or C operator for the facility, and provides instruction for when to call 911.
Operator Certification Process

Class A and B Operators must complete an operator training course or process performed by, contracted for, or approved by the TCEQ. In order for a non-contracted provider to be approved by the TCEQ, the course must be sponsored by a national or statewide association or industry organization recognized with regard to its affiliation with regulated UST systems.

This course was developed by the TPCA and is approved by the TCEQ for certification of Class A and B UST Facility Operators. The Class B Facility Operator is responsible for providing training to, or ensuring that training which meets TCEQ requirements, is provided to, the Class C facility operators in any format deemed acceptable by the Class B Operator including: in-class, hands-on, or on-line training.

Operator Training Deadlines

No later than August 8, 2012, owners or operators of underground storage tank (UST) facilities must designate at least one Class A, Class B, and Class C Operator, who has completed an acceptable operator training course, for each facility.

After August 8, 2012, Class A or Class B operators must be certified prior to assuming operation and maintenance responsibilities at the UST facility. Class C Operators must be trained prior to assuming unsupervised responsibility for responding to emergencies.

Operator Training Recertification Requirements

Certified Class A, B, and C Facility Operators must be re-trained within three (3) years of their last training date. In addition, Class C training is applicable only at the specific UST facility for which the training was provided.

If a UST facility receives a notice of violation and the agency determines that the UST facility is in significant noncompliance, the designated Class B operators for that UST facility must attend either a TCEQ-approved compliance class that addresses the noted noncompliant areas or an acceptable operator training course, within the timeframe specified by the TCEQ for that violation. However, Class B operators are not required to attend such training more than once every 12 months.
Documentation of UST Operator Training

Owners and operators of UST facilities (except unmanned facilities) must maintain required training certification on-site and must provide it upon request to a TCEQ or TCEQ-authorized investigator. For Class A and B Operators, a written or printable electronic training certificate stating the classification and the date the certification was obtained. For Class C Operators, documentation of training will include a list of all Class C Operators who have been trained for that facility, including the date of the training, signed by a Class B Operator who provided or ensured their training.

Documentation may be maintained electronically off-site if that facility has the capability of producing a clear printed copy on-site which can be provided to a TCEQ or TCEQ authorized investigator, within 72 hours of the time of the investigation. Owners and operators of unmanned facilities must provide documentation as requested by a TCEQ investigator or TCEQ-authorized investigator.

Lesson Summary

This concludes the lesson content for UST Facility Operator Roles and Responsibilities. Now let's review the important points.

✔ The TCEQ has written regulations requiring three classifications of UST facility operators to be trained and certified no later than August 8, 2012.
  1. The Class A operator has primary responsibility for the UST facility including managing personnel and resources and overall compliance with all UST regulations.
  2. The Class B operator ensures the implementation of all applicable regulations and the aspects of the day-to-day operation and maintenance of the UST system. The Class B operator can be designated for up to 50 UST facilities. The Class B UST operator role can be outsourced to a licensed UST On-Site Supervisor who is employed by a Texas-registered UST contractor.
  3. The Class C operator typically controls the dispensing of fuels and is responsible for initial response to alarms, spills, and emergencies.

✔ At least one Class A, B or C operator must be present during all hours of operation for manned UST facilities.
✔ This course and certification has been approved by the TCEQ as a means for Class A and B operators to obtain certification. The Class B operator is responsible for training and certification of Class C operators.

✔ Training and recertification is required every 3 years or may be required sooner by the TCEQ if the facility is determined to be significantly non-compliance with UST regulations. Documentation of training and certification must be maintained by the owner/operator and must be provided to the TCEQ during compliance inspections or with 72 hours of the inspection if the records are kept off site.
Lesson 2: Underground Storage Tank System

Lesson Focus

This lesson focuses on the following topics:

- Introduction to Underground Storage Tank Systems
- Definition of an Underground Storage Tank
- Storage Tanks Exempt from Registration and Regulation
- Distinction between New and Existing USTs
- Overview of Tanks
- Overview of Piping
- Overview Spill and Overfill Prevention Equipment
- Secondary Containment

Introduction to Underground Storage Tank Systems

In an introduction to UST systems, we will discuss some of the major components of an underground storage tank system. This overview will include a discussion about tanks and piping. It will also include ancillary equipment integral to a UST system.

Definition of an Underground Storage Tank

An underground storage tank is any one or combination of underground tanks, and any connecting underground pipes used to contain an accumulation of regulated substances, the volume of which, including the volume of the connecting underground piping, is 10% or more beneath the surface of the ground.

An operator should be familiar with the regulated substances stored in USTs. A regulated substance is a substance, that when released into the environment, may present substantial danger to public health, general welfare, or the environment. With regard to regulated underground storage tanks, contained substances are basically
limited to hazardous substances, petroleum substances, or a combination of the two.

**Hazardous substances** are defined as those substances listed by the Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA, and which are not regulated as hazardous waste. These are substances which have been determined to pose the most substantial risk to human health due to their toxicity. Examples of hazardous substances include chemicals, such as the following, which are frequently stored in USTs:

- Ethyl acetate
- Methanol
- Ethylene glycol
- And many others listed in the CERCLA hazardous substance list

**Petroleum substances** are defined as a crude oil or any refined or unrefined fraction or derivative of crude oil, which is a liquid at standard pressure and temperature, such as:

- Crude oil (unless regulated by Texas Railroad Commission)
- Motor fuel
- Aviation gasoline or jet fuels
- Fuel oils
- Kerosene
- Solvents

**Petroleum products** are substances obtained from distilling and processing crude oil that are liquid at standard temperature and pressure and capable of being used as a fuel for the propulsion of motor vehicle or aircraft, including, but not limited to:

- Motor gasoline
- Alcohol blended fuels
- Aviation gasoline
- Kerosene
- Diesel fuel
Storage Tanks Exempt from Registration and Regulation

There are several types of USTs and UST systems that are exempt, or excluded from regulation. If your UST system is exempt or excluded from regulation, you are not required to certify UST operators for it.

The full list of exempt or excluded tanks is found in 30 TAC Section 334.3 and Section 334.4. Examples of exempt USTs and UST systems include:

- Residential or farm tanks less than 1,100 gallons storing non-commercial motor fuel
- Heating oil tanks
- Storage tanks located on the floor of basements
- Flow-through process tanks
- Storage tanks regulated by the Railroad Commission of Texas
- Storage tanks for electrical transformers
- Septic tanks
- Surface ponds
- Wastewater or storm water collection tanks
- Hydraulic lift tanks (partial exemption/exclusion)

Distinction between New and Existing USTs

There is a distinction between new and existing USTs found in the regulations that should be discussed. The distinction was made so that Existing USTs (essentially those installed on, or prior to, December 22, 1988) would be upgraded with corrosion protection, release detection, and spill and overfill prevention within 10 years. There is an implementation schedule, for those Existing USTs, which required the tanks to be upgraded with all of these requirements no later than December 22, 1998. Because these upgrade requirements have long since passed, we will not cover the implementation schedule that is included in the regulations. However, it is important to understand that all Existing USTs were required to have been upgraded.

Also, all New USTs, those installed after December 22, 1988, were required to be designed and installed in accordance with the following requirements:

- Properly designed, constructed, and installed to include:
- Corrosion protection
- Release detection
- Spill and overfill prevention

From this point forward this training course will not refer to New and Existing USTs as defined in the 1988 upgrade schedule.

**Overview of Tanks**

Obviously, all USTs must be properly designed and constructed. Tanks must also be compatible with the product stored in the tank, whether it's a petroleum product or a hazardous substance that may have additional compatibility requirements. Also, the tanks must be protected from corrosion as follows:

- The exterior tank material is not corroducible and complies with applicable industry standards; or
  - Underwriters Laboratories (UL) Standards
  - Underwriters Laboratories of Canada (ULC) Standards
  - Steel Tank Institute (STI) specifications
- The tank is coated and protected from corrosion with cathodic protection

Tanks may be designed, constructed, and protected from corrosion by an alternate method if that method has been reviewed and found by TCEQ to effectively control corrosion in a manner which is no less protective of human health and safety and the environment as the methods specified in the rules and TCEQ issues a written variance.

USTs are normally designed, constructed, and protected from corrosion according to the following methods:

- Tanks constructed of fiberglass-reinforced plastic, provided that the tank meets the rule requirements.
Tanks constructed of coated steel and equipped with a cathodic corrosion protection system, provided that the tank meets the rule requirements.

Tanks factory-constructed either as: steel/fiberglass-reinforced plastic composite; or as a steel tank with a bonded fiberglass-reinforced plastic external cladding; or as a steel tank with a bonded fiberglass reinforced polyurethane coating. Any tank constructed under this method is not required to be equipped with a cathodic protection system, provided that the tank meets rule requirements.

The tank may be factory-constructed as a steel tank completely contained within a nonmetallic external tank jacket. Any tank constructed under this method is not required to be equipped with a cathodic protection system, provided that the tank meets the rule requirements.

Overview of Piping

The technical standards for new underground piping, just like for underground storage tanks, are very specific. Any piping and associated components that an owner or operator uses for UST systems must be compatible with
the regulated substances stored, suitably designed, constructed, protected from corrosion and installed per manufacturer's requirements, and in compliance with TCEQ rules and, as applicable, with specific codes or standards of practice developed by an independent testing lab or nationally recognized association.

The components that we are concerned with include:

- Piping
- Connectors
- Valves
- Fittings

The piping for UST systems can be constructed of the following materials:

- Coated and cathodically protected steel
- Fiberglass-reinforced plastic
- Flexible or semi-rigid nonmetallic material

**Overview Spill and Overfill Prevention Equipment**

The fuel delivery process is an operational requirement that has a potential for an unauthorized release or spill. Spill and overfill protection equipment are designed to contain a fuel spill and minimize the potential of overfilling the tank.

There are circumstances under which, a UST system is not required to be equipped with spill and overfill prevention, such as:

- For recorded transfers of regulated substances of no more than 25 gallons—each transfer—into the UST system
- If the UST is outfitted with another type of equipment found by TCEQ to prevent overfills and spills of regulated substances, while not being any less safe for the
environment or less capable of protecting human health and the environment, and TCEQ issues a variance in writing

- When TCEQ concurs that installing spill and overfill prevention equipment would be impractical and issues a variance in writing

**Spill Containers**

Spill containers, often referred to as spill buckets, are designed to contain any product spilled during the attachment or detachment of the fuel hose to the UST. Although normally small, repeated small spills can cause large environmental problems.

![Spill Container Diagram](image)

Spill buckets are installed around the top of the fill pipe. The buckets must be sized to contain the size of a potential spill. The containers are designed for temporary containment only. Any liquids, or debris, contained in the bucket, whether fuel or water, must be removed and disposed of properly. Long-term storage of liquids or debris can cause excessive deterioration of the structure, and prevent sufficient space for a potential spill. Texas has instituted a 60-day inspection requirement for spill bucket and sumps. This inspection requirement will be covered in more detail in an upcoming lesson.

**Overfill Prevention**

USTs are required to have overfill prevention equipment, which consists of valves or devices that prevent persons from overfilling tanks. Pieces of equipment you can use for overfill protection include:

- **Automatic shutoff**—floats or flappers that rise as you fill the UST, shutting off the flow of regulated substance.
- **Automatic flow restrictor**—floats normally installed in the vent line, such as a ball float valve, that restrict the flow of fuel into the tank by preventing vapor from exiting the tank.
- **Audible and visible alarm**—must only be used with either an automatic shut off or a flow restrictor set at 98% maximum liquid capacity level.
Operation and settings of the overfill prevention equipment will be discussed in detail in an upcoming Lesson.

Secondary Containment

Secondary containment of UST systems is an effective method for preventing leaks from impacting the environment. The idea behind secondary containment is that there is a primary tank where the product is stored and a secondary containment system designed to capture leaks from the primary tank and to prevent a release to the environment. There is an added benefit of being able to monitor the space between the primary and secondary containment, defined as the interstitial space, to detect a release and to take action prior to a release to the environment. Interstitial monitoring release detection will be discussed in an upcoming lesson.

Operators and owners can use either of the following methods—alone or in combination with another to provide secondary containment for the tanks of their UST systems:

- Double-wall tanks
- Jacketed tanks
- Double wall piping
- Secondarily contained flexible non-metallic piping
- External liners (no longer allowed as of January 1, 2009)

The details and requirements for secondary containment for piping are fairly similar to those for secondary containments for tanks. You can use double-wall or secondarily contained flexible non-metallic piping which must be designed, installed, and operated according to TCEQ requirements and applicable standards.

Under certain circumstances, owners and operators are required to install secondary containment for their UST systems. This requirement applies to:

- All hazardous substance USTs. The rules required all new and existing hazardous substance tanks to be upgraded with secondary containment with interstitial monitoring leak detection no later than December 22, 1998.
UST systems that are located in the Edwards Aquifer recharge or transition zones.

As of January 1, 2009, under-dispenser containment in the form of a dispenser sump is required for any new dispenser. Additionally, replaced piping can also require secondary containment. If more than 35% of the length of an existing single-wall pipeline is replaced or the new line segment connects to a new dispenser, then that new line segment must include secondary containment and its interstitial space must be monitored.

Please note that secondary containment of a UST system can include manways or sumps related to the tank, lines, or dispensers. Any sumps or manways included in a new secondarily contained UST system, which are utilized as an integral part of a UST release detection system to monitor the interstitial space must be:

- Designed compatible with the stored substance(s),
- Installed and maintained in a manner that assures that their sides, bottoms, and penetration points are liquid tight,
- Inspected for tightness annually and tested for tightness immediately after installation and at least once every three years thereafter, and
- Equipped with a liquid sensing probe which will alert the UST system owner or operator if more than two inches of liquid collects in any sump or manway. This is required for all new dispenser sumps.
Lesson Summary

This concludes the lesson content for the Underground Storage Tank System Overview. Now let's review the important points.

✓ An underground storage tank is any one or combination of underground tanks, and any connecting underground pipes used to contain an accumulation of regulated substances, the volume of which, including the volume of the connecting underground piping, is 10% or more beneath the surface of the ground. With regard to regulated underground storage tanks, contained substances are basically limited to hazardous substances, petroleum substances, or a combination of the two.

✓ There are several types of USTs and UST systems that are exempt, or excluded from regulation. Exempted tanks include but are not limited to non-commercial residential or farm motor fuel tanks less than 1,100 gallons, heating oil tanks, flow-through tanks and septic tanks.

✓ There is a distinction between new and existing USTs found in the regulations that was made so that Existing USTs (essentially those installed on, or prior to, December 22, 1988) would be upgraded with corrosion protection, release detection, and spill and overfill prevention within 10 years. Also, all New USTs, those installed after December 22, 1988, were required to be designed and installed with corrosion protection, release detection and spill and overfill prevention.

✓ Today, all USTs are required to either be non-corrodible or properly protected from corrosion. There are several construction methods to protect tanks from corrosion including fiberglass-reinforced plastic, coated steel tanks equipped with cathodic protection, factory-constructed steel/fiberglass composites, steel tanks clad with a polyurethane external coating, or steel tanks completely contained within a nonmetallic external tank jacket.

✓ Similar to tanks, underground and/or totally or partially submerged piping and piping components must be either non-corrodible or properly protected from corrosion. Approved materials include fiberglass-reinforced plastic, flexible or semi-rigid nonmetallic materials, or coated and cathodically protected steel.
All tanks must include spill and overfill prevention equipment unless the delivery of regulated substances is less than 25 gallons or the TCEQ issues a written variance allowing another method or agreeing that the equipment is impractical.

To prevent spill during the delivery of regulated substances, the tank must be equipped with spill containers or spill buckets. The spill buckets must be kept free of liquid and debris.

Overfill prevention is accomplished using automatic shutoff valves, automatic flow restrictors (ball-float valves), or audible alarms used in conjunction with the shutoff valve or flow restrictor.

Secondary containment of UST systems is an effective method for preventing leaks from impacting the environment. Secondary containment of UST systems is required for all existing hazardous substance USTs, any UST systems located in the Edwards Aquifer recharge or transition zone, or circumstances where TCEQ believes secondary containment is necessary to protect the environment, human health and safety.

Any new tank, line, or dispenser installed on or after January 1, 2009, is required to be installed with secondary containment. Except for hazardous substance USTs, this does not include existing USTs installed prior to that date. New dispensers installed after January 1, 2009, must include under-dispenser containment sumps. Also, as of January 1, 2009, replaced piping, greater than 35% of the line segment, or if the replaced line connects to a new dispenser, must be replaced with secondarily contained piping and the interstitial space must be monitored.
Lesson 3: General Operation

Lesson Focus
This lesson focuses on the following topics:

- Installation Standards for New UST Systems
- Construction Notification for USTs and UST Systems
- General Requirements for Management and Operation of USTs and UST Systems
- Registration for USTs and UST Systems
- Certification for USTs and UST Systems
- Inspections of the UST System
- Vapor Recovery Requirements
- Temporary Removal from Service
- Permanent Removal from Service

Introduction
In this lesson, we will discuss the general operation of UST systems. General operation will include a brief introduction to the installation and repair of UST systems, their registration and self-certification, and delivery prohibition regulations. We will also cover inspections of UST systems, vapor recovery regulations, temporary removal, and permanent removal of USTs. These general operation requirements will lead into specific operation of corrosion protection, release detection, and spill and overfill prevention covered in upcoming lessons.

Installation Standards for New UST Systems

General Installation Procedures
The TCEQ and tank system manufacturers have very specific requirements regarding the installation of UST systems. As a UST facility operator, you should be aware of the requirements because you have overall responsibility for environmental compliance.
However, this training does not cover specific installation requirements that a UST contractor and on-site supervisor must follow when installing or repairing UST systems.

In addition to TCEQ rules, all of the tanks, piping, and related equipment that is installed for a UST system must be installed in compliance with one of these industry standards, at a minimum:

- PEI Publication RP-100, "Recommended Practices for Installation of Underground Liquid Storage Systems"
- API Publication 1615, "Installation of Underground Petroleum Storage Systems"
- Other standards of practice or codes developed by an independent testing laboratory or a nationally recognized association that TCEQ has reviewed and determined to be no less protective of human health, safety, and the environment than the specifically identified standards above.

Installation Personnel

Only qualified personnel and contractors can install, repair, or remove UST systems. A Texas-licensed UST On-Site Supervisor employed by a TCEQ-registered UST Contractor is required for installation, repair, or removal of UST systems. Generally, the registered on-site supervisor and UST contractor will know the details of how to comply with TCEQ standards; however, compliance is ultimately the owner's responsibility. It is helpful for the owner to know the basic requirements and to become familiar with terminology and options.

Installation Certification

Each UST system owner and operator must make certain that the installation was performed in accordance with TCEQ's installation standards and requirements.

The person who installs a UST system must fill out the installation certification section of TCEQ's UST Registration and Self-Certification Form (TCEQ-0724), certifying with a signature that the
installation activities were performed in accordance with applicable TCEQ regulations. The UST registration form will be discussed further in an upcoming lesson.

**Installation Testing**

Owners and operators are required to ensure that new tanks and piping are tested during installation in accordance with TCEQ rule requirements and the manufacturer's requirements and instructions.

**Installation of Cathodic Protection Systems**

Only qualified corrosion technicians or qualified corrosion specialists can test the cathodic protection systems of underground UST system equipment such as steel tanks, but only a qualified corrosion specialist can design a cathodic protection system.

A qualified corrosion specialist must review the test results and comprehensively inspect the UST system to determine how much corrosion protection it actually has, if the test reveals that the cathodic protection system is inoperable or inadequate. The owner or operator of any UST system not sufficiently protected from corrosion must assure that one of the following procedures is completed:

- Repair or modify the equipment to restore its cathodic corrosion protection to the proper level, or
- Replace the cathodic protection system with another working cathodic protection system able to give the equipment sufficient corrosion protection.
Construction Notification for USTs and UST Systems

General Requirements

Before beginning any construction associated with USTs and UST systems, the person must give notice to the TCEQ, using the TCEQ Construction Notification form (TCEQ-0495), at least 30 days before commencing the construction activities.

The original construction notification form must be submitted, via mail or other direct method, to the TCEQ Central Office, as specified on the form, and copied to the TCEQ Regional Office in which the construction will take place.

If the UST construction is done because of the release/leak of substances (suspected or confirmed) or the construction itself causes or contributes to a leak, owner/operators are required to satisfy the release reporting, investigation, and corrective action requirements.

Construction activities that require prior notice include:

- Installation of a replacement or new UST.
- Removal of a UST from the ground.
- Permanent abandonment in-place of a UST.
- Other major construction activities listed in TCEQ rules.

Only the following parties can give valid notice of construction:

- UST Owners.
- UST Operators.
- Authorized representatives or agents of the UST owner or operator—for example consultants and/or contractors, contracted for construction.

Owners/operators of UST systems located, or to be located, in the transition zone or recharge zone of the Edwards Aquifer are required to get prior approval from TCEQ before engaging in particular UST activities.
## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
### UNDERGROUND & ABOVEGROUND STORAGE TANK CONSTRUCTION NOTIFICATION FORM

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<th>Facility Name:</th>
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<td>Address/Location:</td>
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### TYPE OF CONSTRUCTION: (INDICATE ALL THAT APPLY)

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<td>☐ Return to Service</td>
<td>☐ Stage II</td>
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<td>☐ Replacement (Tank)</td>
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<tr>
<td>☐ Abandonment</td>
<td>☐ Installation</td>
<td>Tank Capacity:</td>
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### SCHEDULED DATE(S) FOR PROPOSED CONSTRUCTION:

____________

### GENERAL DESCRIPTION OF PROPOSED UST/AST ACTIVITY


## OWNER INFORMATION

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## CONTRACTOR INFORMATION

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## CONSULTANT INFORMATION

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### SUBMITTED BY (PRINT NAME):

<table>
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<th>COMPANY:</th>
<th>Date:</th>
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### SIGNATURE:

Mail completed forms to:  
Texas Commission on Environmental Quality  
PST Registration & Self-Certification Team (MC-138)  
PO Box 13087  
Austin, TX 78711-3087

TCEQ Staff Use Only

Date Received:  
Region:  
Remarks:  
Logged by:  

TCEQ-0455 (1/21/2011)
Major Construction Activities

As stated before, owner/operators must file written construction notification of major UST construction with TCEQ a minimum 30 days before starting construction. The construction notification is valid for only 180 days after the original notification date or 150 days after the originally anticipated construction start date, whichever is earlier.

Major construction activities that require prior notice include activities such as:

- Installing, replacing, or adding new or used UST systems at new or existing facilities.
- Permanently or temporarily removing existing UST systems from the ground.
- Making tank repairs.
- Installing replacement or new piping.
- A permanent change-in-service or abandonment in-place of existing UST systems.
- Adding secondary containment equipment for UST systems.
- Performing activities that require a person to enter into a tank.
- Replacing or adding the following:
  - Release detection systems
  - Spill and overfill prevention equipment
  - Monitoring well
  - Cathodic protection systems

**Note:** Minor and routine maintenance activities associated with USTs and piping systems do not require prior notification. These activities include:

- Performing routine inspections and tests.
- Tightening loose fittings and joints.
- Calibrating and adjusting equipment.
- In-kind replacements or substitution of malfunctioning or obsolete UST system components (not upgrades).

Within 24-72 hours before construction activity is to start, the owner/operator or authorized contractor or representative, must contact the applicable TCEQ regional office to confirm the start time. If the start date or the scope of the construction activities needs to be changed, the owner/operator immediately must report those changes to the regional office in the area.
Construction activities must be completed by a TCEQ-licensed UST Contractor. The on-site work on the UST system must be under the supervision of a TCEQ-licensed On-Site Supervisor. There are two levels of On-Site Supervisor: Class A Supervisor able to supervise the installation, repair or upgrade of UST systems; and the Class B Supervisor able to supervise the removal of UST systems. The On-Site Supervisor must be supervising the construction activities during the critical junctures:

- Preparing the tank bedding
- Setting the tank and or piping
- Connecting pipe to the tank
- Pressure testing the UST or piping during installation
- Backfilling around the tank or piping
- Anytime during the removal of the tank

Owner/operators are permitted to revise their construction start dates to a later time with notification to TCEQ and renewal of the original written notifications. Revision to an earlier start date by waiver request is permitted so long as the owner/operator has good cause for accelerating the construction schedule. The owner/operator must make the request directly to the regional TCEQ office, after which the regional director will approve or deny the request based on:

- A showing of good cause for an earlier start date for construction by the owner/operator
- Arrangement and scheduling of a satisfactory inspection of construction activity

Following receipt of a construction notification by the TCEQ of the pending installation of a new tank, or the return to service of an existing tank, the TCEQ will issue temporary delivery authorization. Temporary delivery authorization will allow the temporary delivery of regulated substances for no more than 90 days after the first delivery of regulated substance into the UST system.
**General Requirements for Management and Operation of USTs and UST Systems**

During the operation of the UST system, the owner/operator must manage, maintain, and operate the system so that regulated substances are not released from the system into the environment by:

1. Preventing releases of regulated substances, such as gasoline and diesel.
2. Detecting releases of these substances.
3. Correcting problems created and caused by such releases.

More specifically, these requirements focus on:

- Prevention of leaks/releases of petroleum products and other regulated substances.
- Proper UST system management that follows accepted industry practices.
- Use of effective inventory control procedures for UST systems which must utilize it (such as retail service stations) and keeping accurate and complete inventory records for those systems.
- Spill and overfill prevention and control.
- Proper release detection equipment maintenance, inspection, service, and if required, periodic testing and monitoring.
- Protection of all UST system components from corrosion and properly inspecting and testing corrosion protection systems.
- Properly maintaining UST system operation and maintenance records.

**Registration for USTs and UST Systems**

**Basic Requirements**

Owners and operators must register all regulated USTs with TCEQ on the TCEQ UST Registration and Self-Certification Form unless the tanks have been specifically exempted or excluded from registration. Additionally, the registration must be revised and submitted to the TCEQ for changes to the UST system.
### 1. TANK OWNER INFORMATION

<table>
<thead>
<tr>
<th>TANK OWNER BUSINESS OR LAST NAME</th>
<th>TANK OWNER FIRST NAME</th>
<th>TYPE OF TANK OWNER:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>□ Individual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Corporation</td>
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<td></td>
<td>□ Sole Proprietorship</td>
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<td>□ Federal Gov't</td>
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<td>□ County Gov't</td>
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<td></td>
<td></td>
<td>□ City Gov't</td>
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<tr>
<td></td>
<td></td>
<td>□ Other (specify):</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCATION OF RECORDS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ At facility</td>
</tr>
<tr>
<td>□ Offsite</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COUNTRY (OUTSIDE USA)</th>
<th>E-MAIL ADDRESS</th>
<th>RECORDS CUSTODIAN/CONTACT PERSON</th>
<th>TELEPHONE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Owner's Authorized Representative: Title</th>
<th>TELEPHONE NO.</th>
<th>FAX NO.</th>
<th>INDEPENDENTLY OWNED &amp; OPERATED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ YES  □ NO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATE FRANCHISE TAX ID</th>
<th>DUNN NO</th>
<th>NUMBER OF EMPLOYEES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>□ 0-20 □ 21-100 □ 101-250 □ 251-500 □ 501 &amp; HIGHER</td>
</tr>
</tbody>
</table>

** For Self-Certification only this form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. **

### 2. FACILITY INFORMATION

<table>
<thead>
<tr>
<th>FACILITY NAME:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>TYPE OF FACILITY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Retail</td>
</tr>
<tr>
<td>□ Farm or Residential</td>
</tr>
<tr>
<td>□ Wholesale</td>
</tr>
<tr>
<td>□ Fleet Refueling</td>
</tr>
<tr>
<td>□ Aircraft Refueling</td>
</tr>
<tr>
<td>□ Indian LandMario</td>
</tr>
<tr>
<td>□ Indus./Mfg./Chem. Plant</td>
</tr>
<tr>
<td>□ Watercraft Fueling</td>
</tr>
</tbody>
</table>

Number of regulated "USTs at this facility: ____________
Number of regulated "ASTs at this facility: ____________

<table>
<thead>
<tr>
<th>CITY:</th>
<th>ZIP CODE:</th>
<th>COUNTY:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>PHYSICAL LOCATION:</th>
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</thead>
<tbody>
<tr>
<td>TEXAS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ON-SITE CONTACT PERSON</th>
<th>TITLE</th>
<th>TELEPHONE NO:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>E-MAIL ADDRESS:</th>
<th>FAX NUMBER:</th>
</tr>
</thead>
<tbody>
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</table>

<table>
<thead>
<tr>
<th>LATITUDE</th>
<th>LONGITUDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degrees</td>
<td>Degrees</td>
</tr>
<tr>
<td>Minutes</td>
<td>Minutes</td>
</tr>
<tr>
<td>Seconds</td>
<td>Seconds</td>
</tr>
</tbody>
</table>

### 3. TANK OPERATOR* INFORMATION *

* "Operator" means any person in day-to-day control of, and having responsibility for, the daily operation of the UST system.

<table>
<thead>
<tr>
<th>TCEQ Operator ID No.:</th>
</tr>
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<tbody>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>TANK OPERATOR NAME (DO NOT LIST EMPLOYEES OF OPERATOR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>MAILING ADDRESS:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CITY:</th>
<th>STATE:</th>
<th>ZIP CODE:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TYPE OF TANK OPERATOR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Individual</td>
</tr>
<tr>
<td>□ Corporation</td>
</tr>
<tr>
<td>□ Sole Proprietorship</td>
</tr>
<tr>
<td>□ Federal Gov't</td>
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<td>□ State Gov't</td>
</tr>
<tr>
<td>□ County Gov't</td>
</tr>
<tr>
<td>□ City Gov't</td>
</tr>
<tr>
<td>□ Local Gov't</td>
</tr>
<tr>
<td>□ Other (specify):</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operator's Authorized Representative: Title</th>
<th>TELEPHONE NO:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date listed person became operator: / /
4. REASON FOR THIS FILING

PART A. UST REGISTRATION INFORMATION (Mark all that apply):
1. Initial Registration
2. UST Ownership Change (New Owner indicate effective date)
3. Amendment of: Owner Information Operator Information Facility Information
4. Other (specify):

PART B. UST COMPLIANCE SELF-CERTIFICATION INFORMATION (Mark all that apply):
1. Initial Certification at Facility (Including Tank Ownership Change)
2. Annual Renewal
3. New Tank at Facility
4. Other (specify):

5. TCEQ PROGRAMS IN WHICH THIS REGULATED ENTITY PARTICIPATES

- Animal Feeding Operation
- Petroleum Storage Tank
- Water Rights
- Title V - Air
- Wastewater Permit
- Industrial & Hazardous Waste
- Water Districts
- Municipal Solid Waste
- Water Utilities
- New Source Review - Air
- Licensing - Type (S)

6. INSTALLER/ON-SITE SUPERVISOR CERTIFICATION

NOTE: This section must be completed and signed by the Installer or On-Site Supervisor. Leave blank if no tank or underground line installation activity is involved.

Was tank and/or line testing completed during and after installation? [ ] Yes [ ] No

DATE(S) INSTALLATION ACTIVITIES PERFORMED: ____________________________

CONTRACTOR (COMPANY OR FIRM): ____________________________

TCEQ CRP NO.: ____________________________

CRP: ____________________________

INDIVIDUAL INSTALLER/ON-SITE SUPERVISOR: ____________________________

TCEQ ILP NO.: ____________________________

ILP: ____________________________

- I hereby certify that the information provided concerning recent installations were conducted by me or under my direct supervision, that I am familiar with the TCEQ requirements applicable to such activities, and that to the best of my knowledge and belief such activities were performed in conformance with applicable TCEQ UST regulations.

- Signature of Installer/Supervisor: ____________________________

DATE OF SIGNATURE: ____________________________
### 7. SELF-CERTIFICATION OF COMPLIANCE WITH UST REQUIREMENTS

Important: Completion of this section is required before TCEQ issues a UST Delivery Certificate. Delivery of regulated substances into regulated USTs is prohibited by state law unless a valid, current Delivery Certificate is available and displayed at the UST facility. Any responses marked "NO," or any incomplete submissions will result in non-issuance of a Delivery Certificate for this facility.

#### INDICATE RESPONSES TO EACH QUESTION BY MARKING X IN THE APPROPRIATE SPACE AT THE RIGHT.

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REGISTRATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does this facility meet TCEQ requirements as described in Chapter 37 Subchapter I of TCEQ rules for first-party corrective action, third-party bodily-injury, and third-party property damage in the event of a petroleum release from these UST systems?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FINANCIAL ASSURANCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does this facility meet Financial Assurance (FA) requirements for both first-party corrective action and third-party bodily injury/property damage liability?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TECHNICAL STANDARDS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For regulated UST systems at the facility indicated below, are all in compliance with technical standards as described in TCEQ rules in §334.49 (relating to Corrosion Protection), §334.50 (relating to Release Detection), §334.51 (relating to Spill and Overfill Prevention and Control) and §334.43 (relating to Variances and Alternative Procedures) if a written variance to all or part of the requirements of the previous three sections has been granted by the TCEQ?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I am certifying that the following UST systems at this facility are in compliance: Tank ID #s:

**This Self-Certification will not be processed or Delivery Certificate created unless Proof of Financial Assurance has been provided with this form. (State & Federal Entities Exempt)**

### 8. FINANCIAL ASSURANCE INFORMATION

**Financial Assurance (Petroleum USTs only)**

- Does this facility meet Financial Assurance (FA) requirements for both first-party corrective action and third-party bodily injury/property damage liability? [ ] Yes [ ] No [ ] Exempt (state and federal entities only)

- If YES, identify FA mechanism(s): [ ] Insurance (or risk retention group) [ ] Financial test [ ] Guarantee [ ] Letter of credit [ ] Surety bond [ ] Local Gov. financial test [ ] Local Gov. guarantee [ ] Trust fund

- *Also requires stand-by trust fund. **Only available to local governments (county, municipalities, and special districts).

- Information pertaining to the financial assurance mechanism(s) used to demonstrate financial assurance under Chapter 37, Subchapter I of Title 30, Texas Administrative Code is as follows:

#### Name of Issuer: ______________________

#### Phone # of Issuer: ______________________

#### Policy or mechanism #: ______________________

#### Coverage period

- Beginning: __/__/___
- Ending: __/__/___

#### Coverage Amount: ______________________

#### Insurance Premium pre-paid for entire year? [ ] Yes [ ] No

**For questions regarding Financial Assurance, call the Financial Assurance Section at (512) 389-2650**

### 9. TANK OWNER/OPERATOR SELF-CERTIFICATION (for Delivery Certificate)

I hereby certify under penalty of law to the following:

- I am the [mark one]: [ ] owner [ ] legally-authorized representative of the owner
- [ ] operator [ ] legally-authorized representative of the operator

- of the regulated underground storage tank (UST) systems at this facility; AND
- I have personally examined and am familiar with the information included in Sections 1 through 4, AND 7; AND 8.
- Based on my current knowledge and understanding, the submitted information is true, accurate, and complete; AND
- I understand that any person who intentionally or knowingly submits false information on this form is subject to criminal prosecution.

**PRINTED NAME OF OWNER/OPERATOR (OR AUTHORIZED REPRESENTATIVE): ______________________

**SIGNATURE OF OWNER/OPERATOR (OR AUTHORIZED REPRESENTATIVE): ______________________

**DATE OF SIGNATURE (PLEASE PRINT): __/__/___**

### 10. TANK OWNER/OPERATOR REGISTRATION (for Initial Registration or Changes)

I hereby represent the following:

- I am the [mark one]: [ ] owner [ ] legally-authorized representative of the owner
- [ ] operator [ ] legally-authorized representative of the operator

- of the regulated underground storage tank (UST) systems at this facility; AND
- I have personally examined and am familiar with the information included in Sections 1 through 4, and Sections 8, 11 - 12; AND
- Based on my current knowledge and understanding, the submitted information is true, accurate, and complete; AND
- I understand that any person who intentionally or knowingly submits false information on this form is subject to criminal prosecution.

**PRINTED NAME OF OWNER/OPERATOR (OR AUTHORIZED REPRESENTATIVE): ______________________

**SIGNATURE OF OWNER/OPERATOR (OR AUTHORIZED REPRESENTATIVE): ______________________

**DATE OF SIGNATURE (PLEASE PRINT): __/__/___**
### 11. TANK IDENTIFICATION/DESCRIPTION

<table>
<thead>
<tr>
<th>Tank Identification</th>
<th>/</th>
<th>/</th>
<th>/</th>
<th>/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tank Installation Date (Month/day/year)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Tank Capacity (in U.S. gallons)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Tank Status (Mark One Status &amp; Indicate Date, If Applicable)</td>
<td>1-</td>
<td>2-</td>
<td>3-</td>
<td>4-</td>
</tr>
<tr>
<td>1. Currently in Use</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>2. Temporarily out of service</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
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<tr>
<td>- Meets TCEQ Definition of Empty? Yes or No</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
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<tr>
<td>3. Perm filled in place w/sand, concrete, etc. (date)</td>
<td>/</td>
<td>/</td>
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<td>/</td>
</tr>
<tr>
<td>4. Permanently removed from the ground (date)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current/Last Substance Stored (Mark All that Apply)</th>
<th>1-</th>
<th>2-</th>
<th>3-</th>
<th>4-</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gasoline</td>
<td>3-</td>
<td>3-</td>
<td>3-</td>
<td>3-</td>
</tr>
<tr>
<td>2. Diesel</td>
<td>4-</td>
<td>4-</td>
<td>4-</td>
<td>4-</td>
</tr>
<tr>
<td>5. New Oil</td>
<td>5-</td>
<td>5-</td>
<td>5-</td>
<td>5-</td>
</tr>
<tr>
<td>6. Other Petroleum Substance</td>
<td>7a</td>
<td>7a</td>
<td>7a</td>
<td>7a</td>
</tr>
<tr>
<td>7b. CERCLA Hazardous Substance</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>7c. Chemical Abstract Service (CAS) No.</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>7d. Hazardous Substances Mixture</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>7e. Petroleum Haz. Substances Mixture</td>
<td>/</td>
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<tr>
<td>7f. Other (Specify)</td>
<td>/</td>
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<td>/</td>
</tr>
</tbody>
</table>

### 12. UST SYSTEM TECHNICAL INFORMATION

<table>
<thead>
<tr>
<th>Tank &amp; Piping Design (Mark One for Tank &amp; Piping)</th>
<th>1-</th>
<th>2-</th>
<th>3-</th>
<th>4-</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Single-Wall</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>2. Double-Wall</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>External Containment (Mark all that apply)</td>
<td>3-</td>
<td>3-</td>
<td>3-</td>
<td>3-</td>
</tr>
<tr>
<td>4a. Synthetic Tank-Pit/Piping-Trench Liner</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>4b. Tank Vault/Rigid Trench Liner</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Type of Piping (Mark One)</td>
<td>5b</td>
<td>5b</td>
<td>5b</td>
<td>5b</td>
</tr>
<tr>
<td>5a. Pressurized</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>5b. Suction</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>5c. Gravity</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Tank Internal Protection</td>
<td>6-</td>
<td>6-</td>
<td>6-</td>
<td>6-</td>
</tr>
<tr>
<td>6a. Internal Tank Lining: (Indicate date)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tank &amp; Piping Materials (Mark all that apply)</th>
<th>1-</th>
<th>2-</th>
<th>3-</th>
<th>4-</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Steel</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>2. FRP (fiberglass-reinforced plastic)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>3. Composite tank (steel with embedded FRP cladding)</td>
<td>/</td>
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<tr>
<td>4. Concrete</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>5a. Jacketed (steel w/external nonmetallic jacket)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>5b. Coated (steel w/external polyurethane cladding)</td>
<td>/</td>
<td>/</td>
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<td>/</td>
</tr>
<tr>
<td>5c. Nonmetallic flexible piping</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>6. Shear/Impact Valves (under dispenser)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>7. Steel swing-joints (at ends of piping)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>8. Flexible connectors (at ends of piping)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>
### 12. UST SYSTEM TECHNICAL INFORMATION - continued from page 4

<table>
<thead>
<tr>
<th>Tank Identification (e.g. 1, 2, 3, 4, etc.)</th>
<th>Tank</th>
<th>Piping</th>
<th>Tank</th>
<th>Piping</th>
<th>Tank</th>
<th>Piping</th>
<th>Tank</th>
<th>Piping</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-External dielectric coating/laminatetape/wrap</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
</tr>
<tr>
<td>2a-Listed/certified factory-installed cathodic protection</td>
<td>2b</td>
<td>2b</td>
<td>2b</td>
<td>2b</td>
<td>2b</td>
<td>2b</td>
<td>2b</td>
<td>2b</td>
</tr>
<tr>
<td>3a-Field-installed cathodic protection</td>
<td>3a</td>
<td>N/A</td>
<td>3a</td>
<td>N/A</td>
<td>3a</td>
<td>N/A</td>
<td>3a</td>
<td>N/A</td>
</tr>
<tr>
<td>4b-Listed FRP tank or piping (noncorrosive)</td>
<td>4b</td>
<td>N/A</td>
<td>4b</td>
<td>N/A</td>
<td>4b</td>
<td>N/A</td>
<td>4b</td>
<td>N/A</td>
</tr>
<tr>
<td>5a-Listed/certified external nonmetallic jacket</td>
<td>5b</td>
<td>N/A</td>
<td>5b</td>
<td>N/A</td>
<td>5b</td>
<td>N/A</td>
<td>5b</td>
<td>N/A</td>
</tr>
<tr>
<td>5b-Isolated in open area (e.g., sump, foot, etc.)</td>
<td>5b</td>
<td>N/A</td>
<td>5b</td>
<td>N/A</td>
<td>5b</td>
<td>N/A</td>
<td>5b</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tank &amp; Piping Release Detection (Mark all that apply)</th>
<th>Tank</th>
<th>Piping</th>
<th>Tank</th>
<th>Piping</th>
<th>Tank</th>
<th>Piping</th>
<th>Tank</th>
<th>Piping</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-External vapor/tracer monitoring</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
</tr>
<tr>
<td>1-External groundwater monitoring</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
<td>1-</td>
</tr>
<tr>
<td>3-Monitoring of secondary containment barrier</td>
<td>3-</td>
<td>3-</td>
<td>3-</td>
<td>3-</td>
<td>3-</td>
<td>3-</td>
<td>3-</td>
<td>3-</td>
</tr>
<tr>
<td>4-Automatic tank gauge test &amp; inventory control</td>
<td>4-</td>
<td>4-</td>
<td>4-</td>
<td>4-</td>
<td>4-</td>
<td>4-</td>
<td>4-</td>
<td>4-</td>
</tr>
<tr>
<td>5-Intermittent monitoring within secondary wall/jacket</td>
<td>5-</td>
<td>5-</td>
<td>5-</td>
<td>5-</td>
<td>5-</td>
<td>5-</td>
<td>5-</td>
<td>5-</td>
</tr>
<tr>
<td>6a-Monthly electronic monitoring (@ 0.2 gph)</td>
<td>6a</td>
<td>N/A</td>
<td>6a</td>
<td>N/A</td>
<td>6a</td>
<td>N/A</td>
<td>6a</td>
<td>N/A</td>
</tr>
<tr>
<td>6b-Annual piping tightness test (@ 0.1 gpm)</td>
<td>6b</td>
<td>N/A</td>
<td>6b</td>
<td>N/A</td>
<td>6b</td>
<td>N/A</td>
<td>6b</td>
<td>N/A</td>
</tr>
<tr>
<td>6c-Annual tightness test for suction/gravity piping</td>
<td>6c</td>
<td>N/A</td>
<td>6c</td>
<td>N/A</td>
<td>6c</td>
<td>N/A</td>
<td>6c</td>
<td>N/A</td>
</tr>
<tr>
<td>6d-Auto. line leak detector (3.0 gpm for pressure piping)</td>
<td>6d</td>
<td>N/A</td>
<td>6d</td>
<td>N/A</td>
<td>6d</td>
<td>N/A</td>
<td>6d</td>
<td>N/A</td>
</tr>
<tr>
<td>7a-Weekly manual tank gauging (tanks ≤ 1,000 gal)</td>
<td>7a</td>
<td>N/A</td>
<td>7a</td>
<td>N/A</td>
<td>7a</td>
<td>N/A</td>
<td>7a</td>
<td>N/A</td>
</tr>
<tr>
<td>7b-Monthly tank gauging (for emitter, generator tanks)</td>
<td>7b</td>
<td>N/A</td>
<td>7b</td>
<td>N/A</td>
<td>7b</td>
<td>N/A</td>
<td>7b</td>
<td>N/A</td>
</tr>
<tr>
<td>8-SIR-Statistical Inventory Reconciliation &amp; inventory control</td>
<td>8-</td>
<td>8-</td>
<td>8-</td>
<td>8-</td>
<td>8-</td>
<td>8-</td>
<td>8-</td>
<td>8-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spill Containment &amp; Overfill Prevention Equipment</th>
<th>1- Tight-fitting containment</th>
<th>1- Factory-built spill container/bucket/sump</th>
<th>1- Flow restriction valve, e.g., vent ball-float (less than 50% cap)</th>
<th>1- Alarm (set at ≤ 90%), with or without manual override</th>
<th>4- N/A - All deliveries to tank are ≤ 25 gal. each</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Tight-fitting containment</td>
<td>1- Factory-built spill container/bucket/sump</td>
<td>1- Flow restriction valve, e.g., vent ball-float (less than 50% cap)</td>
<td>1- Alarm (set at ≤ 90%), with or without manual override</td>
<td>4- N/A - All deliveries to tank are ≤ 25 gal. each</td>
<td></td>
</tr>
</tbody>
</table>

**Stage 1/Stage 2 Vapor Recovery (Mark all that apply)**

*See instructions for rule 367 (367.197) on exemption information*

1- Stage 1 (UST to tanker truck): Installation date:

- Type: 1a-Stage 1 two-point system
- 1b-Stage 1 coaxial system
- Exempt by: 1c-TCEQ Rule*

2- Stage 2 (vehicle to UST): Installation date:

- Type: 2a-Stage II balance system
- 2b-Stage II assist system
- Exempt by: 2c-TCEQ Rule*

---

*****MAKE A COPY OF FORM FOR YOUR RECORDS***

For Self-Certification Annual Renewal, Sections 1, 2, 3, 4, 7, 8, & 9 must be completed. If there is a change of ownership along with the renewal of the delivery certificate, Sections 1, 2, 3, 4, 7, 8, 9, 10, & 11 must be completed.

For Registration Purposes, Sections 1, 2, 3, 4, 10 must be completed and Sections 6, 8, 11, 12 should be completed only if applicable.

For data verification purposes, please check our web page PST Registration Database (www.tceq.state.tx.us/permitting/registration/pst/pst_query.html).

*If you have any questions on how to fill out this form or about the PST Registration program, please contact us at 512/239-2160.*

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512-239-2160.
**New or Replacement Tanks**

All new regulated tanks must be registered with the TCEQ within 30 days of regulated substances being placed into the tanks.

**Changes or Additional Information**

Notification of changes to existing UST systems must be made to the TCEQ, also within 30 days of the changes. Changes requiring notification include changes to the following:

- Owner or operator contact information.
- UST system operational status.
- Regulated substances stored in the UST.
- Piping, tanks or ancillary equipment.
- Release detection equipment, spill and overfill prevention equipment, and corrosion protection equipment.
- Financial assurance information.
- Location for facility records.

**NOTE:** The required notification is not limited just to these listed changes or information.

**UST Registration Form and Information Requirements**

The UST Registration Form must be filled out to include all the required information for each regulated UST located at the facility. If you own or operate multiple facilities, you must complete and file separate registration forms for each facility that has a regulated UST. Should TCEQ find a UST registration submission to be incomplete, TCEQ will not issue a delivery certificate to the owner or operator. Incomplete submittals must be resubmitted within 30 days following the request by the TCEQ.

**Certification for USTs and UST Systems**

**Self-Certification Forms**

Part of the UST registration form addresses self-certification requirements. A facility owner/operator or their legally authorized representative certifies that the facility UST systems are in compliance with TCEQ requirements applicable to registration, financial assurance, and
technical standards. Completion of the UST registration and self-certification form, indicating compliance with UST regulations, will result in the issuance of a delivery certificate. If any responses are marked as non-compliant or incomplete, the delivery certificate will not be created.

**Note:** USTs storing regulated substances that are not motor fuels do NOT require Self-Certification or Delivery Certificates.

**UST Delivery Certificate**

Upon submittal of a complete UST registration and self-certification form, the TCEQ will issue a *delivery certificate*, which will be valid until the expiration date indicated on the certificate. For delivery certificate renewal, owners and operators must submit a new UST registration and self-certification form at least 30 days before the expiration date of the delivery certificate. Yearly submission of proof of current financial assurance is required of each owner or operator.

To accept deliveries of regulated substances, UST owners and operators must make available to common carriers making deliveries, a current and valid TCEQ delivery certificate or temporary delivery authorization before they can accept any deliveries. Owners and operators must have current and valid UST delivery certificates or temporary delivery authorizations posted at their facilities where they are clearly visible at all times.

Owners and operators must make sure that each UST at their facility has a clear marking, label, or tag permanently applied upon or affixed to either a spot in the immediate area of the fill tube that cannot be removed or to the top of the fill tube itself. This must be done within 30 days of a new tank's installation. It must clearly show the UST’s identification number, which must be the same as the one given on the UST registration and self-certification form filed with TCEQ. Compartmented tanks must also include an additional alpha identifier for each fill tube of each separate compartment.
Texas Commission on Environmental Quality
Petroleum Storage Tank Program

Delivery Certificate
(Non-Transferable)

This hereby certifies that the underground storage tanks (USTs) at the facility identified herein have been self-certified as compliant with all technical and administrative standards for fuel delivery purposes. This certificate verifies self-certification only, and does not certify that the listed USTs are in compliance with TCEQ's Technical and Administrative requirements. Prior to retail sale of fuel to the public using measured dispensing devices, any meter must be registered with the Texas Department of Agriculture.

Owner/Operator #: Facility #:

Self-Certified UST's

For the specific time period and the Underground Storage Tanks (UST's) indicated, this certificate verifies self-certification by the tank owner or operator of compliance with TCEQ rule requirements listed at 30 TAC Sec. 334.8(c)(3)(D) (regarding tank registration, payment of registration fees, UST financial responsibility, e.g., insurance, and technical standards [release detection, spill/overfill prevention, corrosion protection & variances issued by the agency to any of these standards]). The Texas Water Code Sec. 26.346 requires the tank owner or operator to accurately complete the parts of the registration and self-certification form pertaining to the self-certification of compliance with UST administrative requirements and technical standards.

- After 12/22/98, the state's petroleum storage tank remediation (PSTR) fund is no longer an acceptable UST financial responsibility mechanism for corrective actions. Owners or operators of regulated petroleum USTs must now maintain required coverage for BOTH corrective action AND third-party bodily injury/property damage by other allowable mechanisms (e.g., insurance).

- If a confirmed petroleum release from an eligible storage tank was first discovered and reported to the TCEQ after 12/22/98, none of the associated cleanup costs are eligible for reimbursement or payment from the state's PSTR fund. (Water Code 26.3512(b)(3)).

http://www.tceq.state.tx.us/permitting/registration/pst/pst_query.html
Delivery Prohibitions

Owners/Operators are prohibited from allowing the delivery of regulated substances into their UST system unless certain conditions are met and documentation is available.

With regards to UST systems that require self-certification (in other words those tanks used for storing motor fuels), delivery must not occur unless the following conditions are met:

1. For existing systems, the owner/operator has filed a UST registration and self-certification form, certifying compliance with TCEQ rules, and received a current delivery certificate from the TCEQ; or
2. For newly installed systems, the owner/operator has received a temporary delivery authorization from the TCEQ, which is valid for 90 days after the first date a regulated substance was deposited.

For all regulated UST systems, whether or not self-certification is required, delivery must not occur unless the owner or operator has a valid, current registration certificate or temporary delivery authorization issued by the TCEQ.

Inspections of the UST System

Daily wear and tear, accidents, and abuse will occur during the normal operation of UST system equipment, and damaged or faulty equipment can lead to potential fire hazards, safety hazards to the public and employees, and releases of regulated substances. Inspections of the UST system are an important step to identifying damaged or inoperable equipment and to protecting the public and the environment from releases of regulated substances. Inspections may be required by regulations, recommended as industry practices, required by the equipment manufacturer, or decided upon by the owner/operator. The most stringent inspection requirement should be followed.

The Petroleum Equipment Institute (PEI) has published Recommended Practices for the Inspection and Maintenance of UST Systems (PEI RP900), which is a valuable resource for UST operators conducting inspections. The PEI recommended practice includes Daily, Monthly, and
Annual UST system inspection checklists. The checklists are attached to this course player as a free download for UST operators.

Additionally, the TCEQ also maintains a compliance checklist used for their PST Modified Compliance Evaluation Investigation.

The TCEQ also requires owner/operators to inspect overspill containers installed at any time and secondary containment sumps installed prior to January 1, 2009. For those sumps, including dispenser sumps, pipe sumps, or any other sumps, which are utilized as an integral part of the UST release detection system to monitor secondary contained piping, the sump, or container, must be inspected at least once every 60 days to assure that its sides, bottoms, and any penetration points are maintained liquid tight. Any liquid or debris found in the sump or container during the inspection must be removed and properly disposed within 96 hours of discovery.
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Answer</th>
<th>Citations</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Were required records being maintained?</td>
<td></td>
<td>334.10(b)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Is the UST(s) registered with the Commission?</td>
<td></td>
<td>334.7(a)(1)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Has the facility’s tank registration been amended or changed as required?</td>
<td></td>
<td>334.7(d)(3)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Has a Self-Certification form been submitted in a timely manner to the Commission?</td>
<td></td>
<td>334.8(c)(4)(B)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Has a previously issued TCEQ Delivery Certificate been renewed?</td>
<td></td>
<td>334.8(c)(5)(B)(i)(i)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Did the facility make available, upon request, a valid TCEQ Delivery Certificate for the UST(s) at the facility?</td>
<td></td>
<td>334.8(c)(5)(A)(ii)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Did the owner/operator receive a fuel delivery without a current delivery certificate?</td>
<td></td>
<td>334.8(c)(5)(A)(ii)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Did the new facility (or returning to active out of service banks) receive a temporary delivery authorization prior to receiving fuel?</td>
<td></td>
<td>334.8(c)(5)(D)(i)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Could the facility demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum USTs?</td>
<td></td>
<td>37.815(a)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>TOOS TANKS: Were the tanks properly emptied of petroleum product as defined in 334.54(d) within 90 days of termination of their Financial Assurance policy? (For Active tanks with no PA cite 37.815)</td>
<td></td>
<td>37.815(b)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>If #10 is no, is there existing proof of insurance on the DOH tank(s)? (Applies to Active tanks in addition to 37.815)</td>
<td></td>
<td>37.815(a)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Was the UST system equipped with corrosion protection?</td>
<td></td>
<td>334.43(a)</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Was the corrosion protection system(s) inspected and tested within 3 to 6 months after the date of installation &amp; once every 3 years?</td>
<td></td>
<td>334.49(c)(4)</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Was the rectifier (impressed current systems) checked once every 60 days?</td>
<td></td>
<td>334.49(c)(2)(C)</td>
<td></td>
</tr>
</tbody>
</table>

07/13/2011
PST MODIFIED COMPLIANCE EVALUATION INVESTIGATION (update 01/27/2009)
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Did the line leak detector(s) receive an annual performance test?</td>
<td>334.50(b)(2)(A)(v)(ii)(III)</td>
</tr>
<tr>
<td>16</td>
<td>Was release detection for piping being performed (either by tightness testing or by monthly monitoring)?</td>
<td>334.50(b)</td>
</tr>
<tr>
<td>17</td>
<td>Was release detection for all tanks being conducted on a monthly basis by one of the approved methods?</td>
<td>334.50(b)(1)(A)</td>
</tr>
<tr>
<td>18</td>
<td>If the Regulated Entity uses Vapor Monitoring or Groundwater Monitoring as a release detection method, was the site assessed by qualified personnel?</td>
<td>334.50(d)(5)(F) 334.50(d)(6)(E)</td>
</tr>
<tr>
<td>19</td>
<td>Was daily inventory control and monthly reconciliation being conducted as required for the release detection method and/or retail facility?</td>
<td>334.48(c) 334.50(d)(1)(B)(d) 334.50(d)(1)(D)(iii)(i)</td>
</tr>
<tr>
<td></td>
<td><strong>EQUIPMENT</strong></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Were all tanks numbered according to registration/self-certification form?</td>
<td>334.8(c)(3)(C)</td>
</tr>
<tr>
<td>21</td>
<td>Was the UST system equipped with a fill pipe that had a tight-fill fitting?</td>
<td>334.51(b)(2)(A)</td>
</tr>
<tr>
<td>22</td>
<td>Was the UST system equipped with spill containment equipment?</td>
<td>334.51(b)(2)(B)</td>
</tr>
<tr>
<td>23</td>
<td>Was the UST system equipped with overfill prevention equipment? (In the case of bail floats, can the facility provide documentation of installation?)</td>
<td>334.51(b)(2)(C)</td>
</tr>
<tr>
<td>24</td>
<td>Can the facility provide documentation of inspections every 60 days for liquids in sumps, manways, overspill containers and catchment basins? (liquids must be removed within 96 hrs of discovery)</td>
<td>334.42(g)</td>
</tr>
<tr>
<td>25</td>
<td>For UST systems installed on or after January 1, 2009, can the facility document that all sumps and manways that are part of system’s release detection system sumps and manways are inspected annually?</td>
<td>334.45(b)(1)(E)(iv)</td>
</tr>
<tr>
<td>26</td>
<td>For UST systems installed on or after January 1, 2009, can the facility document that tightness tests are performed every 3 years on sumps and manways that are part of secondary containment?</td>
<td>334.45(d)(1)(E)(iv)</td>
</tr>
<tr>
<td>27</td>
<td>Can the facility provide documentation that not more than 35% of the total original length of an existing line has been replaced with single walled line on or after January 1, 2009?</td>
<td>334.45(h)(1)(E)(i)</td>
</tr>
<tr>
<td>28</td>
<td>Was the spill and overfill equipment maintained in good operating condition?</td>
<td>334.51(a)(6)</td>
</tr>
<tr>
<td>29</td>
<td>Is pressurized piping equipped with a line leak detector?</td>
<td>334.50(b)(2)(A)(ii)</td>
</tr>
<tr>
<td>30</td>
<td>If the facility has pressurized piping, are shear valves present and anchored?</td>
<td>334.45(e)(3)(A)</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Code</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>31</td>
<td>For UST systems installed on or after January 1, 2008, can the facility document that the new system components are equipped with required secondary containment?</td>
<td>334.4.2(h)</td>
</tr>
<tr>
<td>32</td>
<td>Is the Texas Department of Agriculture Annual Registration Form present and current?</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Are the Texas Department of Agriculture Inspection Approval Stals present and current (TDA inspection within last 3 years)?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OTHER</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Other violation noted during the investigation?</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Other violation noted during the investigation?</td>
<td></td>
</tr>
</tbody>
</table>
Vapor Recovery Requirements

TCEQ and the EPA require that gasoline vapor emissions be reduced at all Gasoline Dispensing Facilities (GDF) in Texas. There are two ways that gasoline vapors have to be controlled at service stations.

Stage I Vapor recovery

This vapor control strategy captures gasoline vapors that are released when gasoline is delivered to the UST. The delivery truck will use two hoses, one for fuel delivery to the UST and one to capture vapors discharging from the UST. The gasoline vapors are returned in the delivery truck to the terminal for processing.

Stage II Vapor recovery

This vapor control strategy captures gasoline vapors that are released when gasoline is delivered from the fuel nozzle to the vehicle’s gas tank. The vapors are captured at the fuel nozzle and returned to the UST through the fuel hose.

There are two types of systems for Stage II Vapor Recovery:

1. Assisted Stage II Vapor Recovery uses a vacuum pump, installed at the dispenser or connected to the tank vent lines, to draw any vapors back to the UST.
2. Balanced Stage II Vapor Recovery Requires a tight seal between the vehicle fuel tank and the nozzle. This provides a path for any vapors to flow back to the UST.
In addition to capturing the vapors at the nozzle connection, all new vehicles are equipped with onboard refueling vapor recovery equipment, or ORVR, that captures vapors during vehicle refueling.

- Facilities in *attainment counties* surrounding the Dallas-Fort Worth area (Ellis, Johnson, Kaufman, Parker, and Rockwall County), require Stage I Vapor Recovery if the facility has dispensed more than **10,000** gallons of gasoline in any one month.
- Facilities in the Austin and San Antonio *attainment counties* (Bexar, Comal, Guadalupe, Wilson, Bastrop, Caldwell, Hays, Travis, and Williamson) require Stage I Vapor Recovery if the facility has dispensed more than **25,000** gallons of gasoline in any one month.
- Additionally, for the *attainment counties* (those counties East of the line bordered by IH-35 to the Arkansas/Louisiana border and North of the line bordered by IH-37 and to Oklahoma border, listed in 30 TAC 115.10(9)), Stage I Vapor Recovery is required at facilities that have dispensed more than **125,000** gallons of gasoline per month that have tanks greater than 1,000 gallons of capacity.

**Texas Stage II Vapor Recovery Requirements (30 TAC Chapter 115, Subchapter C, Division 4)**

Stage II Vapor Recovery is required in all Texas non-attainment counties at motor vehicle fuel dispensing facilities with a monthly throughput of 10,000 gallons or more gasoline per month. Facilities where 95% or more of the motor vehicle fleet is equipped with ORVR, can request an exemption from this requirement from TCEQ.

**Federal Stage I Vapor Recovery Regulations (40 CFR Part 63 Subpart CCCCC)**

For facilities located in all other Texas counties, other than the non-attainment and attainment counties described before, the federal EPA regulations apply.

- Facilities with monthly throughput below 10,000 gallons must keep the facility clean and tank openings closed (except for tank vents).
- Facilities with monthly throughput over 10,000 gallons but less than 100,000 gallons were required to install a submersible drop tube in all tanks over 250 gallon capacity by January 1, 2011. All tanks have to be filled through the drop tube after installation.
• Facilities with monthly throughput over 100,000 gallons must install a Stage I Vapor Recovery system on all tanks including all drop tubes, caps, adaptors and vent P/V valves.

The owner/operator, at the time of installation and every three years thereafter, must test the Stage I vapor recovery system as outlined in 40 CFR 63.11120.

Vapor Recovery Testing and Training

Stage II systems require periodic testing that has to be conducted in the presence of a TCEQ local inspector or a person registered with the TCEQ to conduct vapor recovery tests. Each facility must have at least one person complete a training course approved by the TCEQ. That person is responsible for training all other facility employees how the system operates. These systems also require daily, monthly, and annual inspections to be conducted. Your local petroleum equipment supplier and/or maintenance company can provide you the necessary information for compliance with these provisions.

Temporary Removal from Service

At times, a UST must be removed from service. If that is necessary, owners and operators must follow the procedures for removing their UST from service.

A UST system is temporarily out of service if:

• For any reason, the UST system's normal use and operation is temporarily and intentionally suspended or terminated.
• Its infrequent use cannot be sufficiently justified as being part of the UST system's purpose.
• The UST's maintenance, operation, and/or release detection procedures are established as being inconsistent with the usual monitoring procedures for similar in-service systems or are inadequate.

The following requirement applies to all UST systems. Regardless of whether regulated substances remain in the UST system, for the remainder of time that a UST system remains temporarily out of service, each UST owner or operator must make certain that they continue to satisfy these requirements
• Keep all vent lines open and functioning.
• Cap, lock, plug, and secure all tank access points, piping, pumps, manways, and ancillary equipment to keep unauthorized persons from tampering with, vandalizing, or accessing them.

So long as you satisfy the requirements during the time it is out of service, you can keep an UST system out of service indefinitely, provided that you:

• Protect the UST system from corrosion.
• Monitor the UST system for releases, unless you have emptied it of all regulated substances such as gasoline, diesel, and other fuel products when it was temporarily removed from service. (Financial assurance is also required if the UST system is not empty.)

Empty Systems

Empty UST systems, which are temporarily out of service, are exempt from the release detection requirements.

A UST system is regarded as being empty when residue from stored substances still in the system following removal is neither greater than 1 inch at the deepest point, nor more than 0.3% by weight of the UST system at its full capacity.

Returning a UST System to Service

Before returning protected and empty UST systems that were temporarily out of service for more than six months to operation, the UST's owners or operators are responsible for making sure that the system's integrity is sound by performing tightness tests of both the tanks and piping. Likewise, they also must make sure that the UST systems are in compliance or brought back into compliance with release detection, spill and overfill prevention and financial assurance requirements. Lastly, owners and operators must comply with construction notification requirements form before returning any UST system to service."
Other Requirements

Additional owner and operator requirements for temporarily removing a UST from service follow:

- Temporarily out of service USTs are assessed the same fees as active USTs by TCEQ.
- Records documenting items specified by rule for temporarily out of service USTs shall be kept for at least five years after the date of temporary removal from service.
- Owners and operators must notify the TCEQ when USTs are temporarily removed from service and when they are returned to service.

Permanent Removal from Service

Owners and operators can permanently remove a UST from service in three ways:

1. Physically removing the UST from the ground.
3. Abandonment in-place.

A minimum of 30 days before permanently removing USTs from service, owners and operators must turn in a completed construction notification form. Within 24 to 72 hours before removal, UST owners and operators must call their regional TCEQ office to give construction notice. Of course, before starting any construction or tank removals, owners and operators must get any required permits from, and give notice to, local authorities (i.e., local and state fire marshals), and city and county government.

Removal of Stored Substances

Before any UST can be permanently removed from service, it must be emptied and cleaned of all regulated substances, as well as any residue or sludges that have built up, and the waste residues or sludges must be properly disposed of in accordance with TCEQ regulation. Further, the tanks must also be purged of vapors to prevent an explosion or fire. Emptying, cleaning, and purging of USTs must be properly done in accordance with accepted industry procedures.
UST Removal from the Ground

To remove an UST from the ground, owners and operators must follow specific procedures and meet state requirements, including the use of a TCEQ registered UST contractor who uses a TCEQ licensed on-site supervisor.

WHEN REMOVING A TANK FROM THE GROUND:

1. Properly notify the TCEQ and local authorities.
2. Drain fuel piping into the tank. Disconnect and remove fuel lines.
3. Empty, clean and purge the tank of fuel, residues, and vapors. *
4. Excavate to the top of the tank.
5. Disconnect fill pipe, pumps, and other tank equipment.
6. Keep vent lines in place; and temporarily plug all tank holes so that vapors exit through vent lines until the tank is purged.
7. Purge and inert the atmosphere inside the tank. *
8. Test the tank to make sure it is free of vapors. *
9. Excavate around the tank.
10. Remove the tank and place on a level surface.
11. Within 24 hours, properly transport the tank from the site and properly dispose of tanks and all wastes. (Prior to transport, plug all holes in the tank except for one 1/8” hole at the top of the tank.)
12. Backfill and return site to original condition.

* Tanks must be kept non-explosive/non-flammable during the entire removal process.
During the removal, a site assessment must be conducted as discussed in an upcoming section.

**Abandonment In-Place**

Abandonment in-place can be used to permanently remove a tank from service without actually removing it from the ground.

A tank which is abandoned in-place must be filled with solid inert materials, as follows:

- You can only use solid inert materials that do not include harmful pollutants or contaminants. Acceptable materials include:
  - Sand
  - Fine gravel
  - Sand and gravel mixtures
  - Cement/concrete-based slurries

- Unacceptable fill materials include:
  - Commercially marketed fill materials
  - Native soils
  - Drilling muds
  - Water

- You must ensure that both the materials used to fill the tank and the filling procedures must be sufficient to guarantee:
  - Once the tank is filled, it will not surface.
  - Ground surface settling or instability after abandonment in-place completion is minimized or eliminated.
  - Materials used to fill the tank must form a permanent and solid inert filler that you can rely on staying structurally stable enough in the ground to prevent cave-ins, even after the tank walls deteriorate.
  - You must disconnect, cap, and/or seal the filled tank and associated piping so that they cannot be used in the future for storage or disposal.

**Note:** Tanks abandoned in place must be cleaned, purged and kept non-explosive/non-flammable during the entire abandonment process.
**Release Determination**

The UST owner and/or operator is responsible for finding out if gasoline, diesel, etc., has either leaked or been released from the UST system. To confirm a UST release or leak, a visual inspection of the excavation zone, both inside and in the surrounding area, must be made to check for releases above ground and exposed below-ground, and either:

- Documenting the CONTINUAL operation of at least one EXTERNAL release monitoring and detection method which demonstrates no release has occurred. (Note that "continual" means never interrupted during the life of the UST system, a condition that is almost never met.
- Performing a comprehensive site assessment.

Once the release determination concludes, you must:

1. Report suspected/confirmed releases to TCEQ and follow the release investigation and corrective action steps and requirements.
2. Organize and develop detailed written records of the release/leak inspection and your findings.

Owners and/or operators must keep records of the leak/release determination and file a copy with TCEQ.
Texas Commission on Environmental Quality
PETROLEUM STORAGE TANK PROGRAM
RELEASE DETERMINATION REPORT FORM

FORM INSTRUCTIONS: Use this form to report 1) the results from the investigation of a suspected or confirmed release, or 2) to report the results of the permanent removal from service of a UST, or 3) the results of the routine removal of an AST from service, and/or 4) any routine environmental site assessment (ESA) at PST sites where a ‘no further action’ letter from TCEQ is desired (routine AST removals and routine ESAs are not specifically regulated by TCEQ). Refer to Investigating and Reporting Releases from Petroleum Storage Tanks (RG-411) for more information. Note, the initial report of a suspected or confirmed release must be made within 24 hours of discovery using the form, PST Program Incident Report (IR) form (TCEQ-20097). Submit completed forms to PST-RPR, TCEQ, MC 137, P.O. Box 13087, Austin, Texas 78711-3087. DO NOT MODIFY THIS FORM IN ANY WAY. Complete all applicable blanks. Incomplete forms, including forms missing relevant attachments, will be returned without review.

RDR FORM CHECKLIST

PLEASE NOTE: The following documents are required to be attached to this form upon submittal. Complete the checklist and attach each listed document to the back of the form, or provide a written statement explaining why a particular item on the checklist is not applicable/not available:

☐ Copy of original Construction Notification form filed with the TCEQ regional office for the field construction activity.

☐ Scaled site diagram(s) showing location & layout of tank system(s) including pipe chases, dispensers, and any remote fill ports, all sampling points, North arrow, scale, nearest intersection of main roads. Previously removed tank systems should also be indicated.

☐ Written description of tank removal activities, including removal of substances from tanks, tank cleaning/purging/meting activities, and tank condition (corrosion holes, tears, rust, etc.). Include description of piping and dispenser equipment condition.

☐ Written description of site sampling activities, including sample equipment used, decontamination procedures, sample collection and handling methods, sampling locations and summary of overall sampling rationale.

☐ Copies of signed laboratory reports, complete chain-of-custody and laboratory check-in sheet documentation including sample receipt temperature, sample preservation methods, date and time of sample collection, laboratory QA/QC etc.

☐ Waste disposal, treatment, recycling or reuse documentation, including waste manifests signed and dated by all relevant parties. Manifests should have all required signatures and dates, and show waste type, quantities and units.

☐ Photographs (originals or high resolution color copies) of the site showing all parts of tank system (tanks, dispensers, piping, etc.), all excavated areas including excavation bottoms, stockpiles, etc.

☐ Tank destruction documentation (no. of tanks, size(s), former contents, tank composition [e.g., steel, fiberglass, etc.] including date of disposal and facility name, address and contact information.

☐ Copy of amended UST or AST Registration and Self-Certification form (TCEQ-00724 or TCEQ-00659, respectively) as applicable. Originals should be sent to the PST Registration Team (MC-138), TCEQ, P.O. Box 13087, Austin, TX 78711-3087.

☐ Boring logs and well completion diagrams/well reports, as applicable. Logs should include field screening.

☐ RCAS/CAPM and/or LOSS signatures are required on page 7 of this form.

☐ A statement certifying that at the time the data in this report were generated, the laboratory was NELAC-accredited through the Texas Laboratory Accreditation Program for the environmental matrices, analytical methods, and parameters analyze or cite the exception allowed under 30 Texas Administrative Code §255.6.
SUMMARY
Based on the information obtained during this release determination and by comparing the nondetected results and the detected results to the method quantitation limits (MQLs) and the PST Program action levels, check all that apply:

☐ No detected or nondetected results for a contaminant exceeded the respective MQL or background.

☐ The detected or nondetected results for one or more contaminants exceeded the respective MQLs/background, but did not exceed the PST Program action levels.

☐ The detected or nondetected results for one or more contaminant exceeded the PST Program action levels.

☐ Tank pit water was present. If present, was water sampled? ☐ Yes ☐ No

☐ A groundwater sample representative of the first water-bearing zone was collected and analyzed (i.e., monitoring well installed).

☐ A representative groundwater sample was collected and analyzed and one or more contaminants exceeded action levels.

☐ This site is a new LPST site.

☐ This site is an existing LPST case, there is no new release, and this Release Determination Report is being submitted as the tank removal from-service documentation.

☐ The laboratory was NELAC-accredited through the Texas Laboratory Accreditation Program for the data in this report at the time the data were generated. If not, then cite the applicable 30 TAC §25.6 rule exception(s) that apply to the data.

Is the responsible party financially able to complete the next appropriate step? ☐ YES or ☐ NO If no, and an LPST number is assigned to this case, you may contact the PST-RPR Section at 512/239-2200 to request information on the State-Lead option. Pursuit of this option requires submittal of detailed financial information including recent tax returns and other IRS documentation. Please note that pursuit of this option is only possible once an LPST number has been assigned.

Answer the following question for all LPST cases subject to 30 TAC 334. Is this case eligible for reimbursement of necessary corrective actions? ☐ YES or ☐ NO If not, appropriate corrective action in accordance with applicable rules and guidance may continue without specific direction or approval from the PST-RPR Section; however, coordination with PST-RPR is recommended. If the site is eligible for reimbursement, all corrective action activities, with the exception of initial NAPL recovery and emergency abatement activities must be preapproved prior to initiation.
## A. GENERAL INFORMATION

Pre-existing LPST ID No? □ NO or □ YES: ______________________ (LPST no[s])  
TCEQ Region: ______________________

Facility ID No: ______________________ Required unless one of the following applies:

☐ Check here if tank registration is not required for this site (per 30 TAC §334.7), and check one of the following as applicable:

☐ The tank(s) are partially excluded or exempted from jurisdiction under 30 TAC Chapter 334. Specify type or usage of tank(s): ______________________

☐ The tank(s) were permanently removed from the ground before May 8, 1986 (provide date of removal: ______________________)

☐ The tank(s) remained in the ground but were emptied, cleaned, and filled with inert substance before January 1, 1974 (provide date of activities: ______________________)

☐ The tank(s) were out of operation, their existence was unknown (i.e., “ghost tank”), and they were permanently removed from service within 60 days of their discovery (provide date of discovery: ______________________ and describe method of discovery: ______________________)

### Tank Owner:

Tank Owner Mailing Address: ______________________

Tank Owner City: ______________________ State: _____ Zip: ______________________

Tank Owner Contact Person: ______________________ Phone: ______________________ Fax no.: ______________________

### Tank Operator (if different from tank owner):

Tank Operator Mailing Address: ______________________

Tank Operator City: ______________________ State: _____ Zip: ______________________

Tank Operator Contact Person: ______________________ Phone: ______________________ Fax no.: ______________________

### Land Owner (if different from tank owner and operator):

Land Owner Mailing Address: ______________________

Land Owner City: ______________________ State: _____ Zip: ______________________

Land Owner Contact Person: ______________________ Phone: ______________________ Fax no.: ______________________

If site is a pre-existing LPST site with no new releases or is a new LPST site, which of these parties will oversee the corrective actions at this site? □ Tank Owner □ Tank Operator □ Land Owner □ Other (not the contractor or consultant):

Name: ______________________

Address: ______________________

City: ______________________ State: _____ Zip: ______________________

Contact Person: ______________________

Phone: ______________________ Fax: ______________________

Please note that no matter which party conducts corrective action, the tank owner and the tank operator are jointly responsible for the necessary corrective actions.

### Facility Name:

Facility Physical Address: ______________________

Facility City: ______________________ County: ______________________ County Code (see p. 8): ______________________
A. GENERAL INFORMATION (continued)

Indicate ALL tanks currently and formerly located at this site (attach pages as necessary):

<table>
<thead>
<tr>
<th>Type (UST/AST)</th>
<th>Product Type</th>
<th>Size (approx. gal)</th>
<th>Date Removed from Service</th>
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B. SUSPECTED RELEASE INFORMATION

Complete only this section and sections L through G as appropriate when a release is suspected to have occurred and it was documented that a release had not occurred.

Date suspected release discovered: ___________________ Reason release suspected: ___________________

Date suspected release reported to TCEQ: _______________ Reported to: ________________________

Possible source(s) of release: (check all that apply) 

- USTs
- ASTs
- Piping
- Overfills/spills
- Unknown
- Other: ________________________

Type of substance(s) suspected released (check all that apply):

- Gasoline
- Diesel
- Used Oil
- Aviation Gasoline
- Jet Fuel (type: ________________________)
- Alcohol-blended fuel (Type and percentage of alcohol: ________________________)
- Other: (be specific) ________________________

Were UST/AST system tank and/or line tightness tests performed? □ YES or □ NO If yes, attach test data and results.

Did the tests indicate that all tanks and piping were tight? □ YES or □ NO If No, specify the portion of the tank system(s) that were found not to be tight: ________________________

Were any repairs conducted on the tank system(s)? □ YES or □ NO If yes, describe type(s) and location of repairs: ________________________

Were tightness tests performed after repairs were conducted? □ YES or □ NO If yes, attach test data and results.

Did the tests indicate that the repaired items were tight? □ YES or □ NO If No, specify the portion of the tank system(s) that were found not to be tight: ________________________

Were any soil confirmation samples collected? □ YES or □ NO If yes, were all potential source areas investigated?

□ YES or □ NO If samples were collected, attach descriptions of sample locations, collection methods, and laboratory results.

Were any groundwater confirmation samples collected? □ YES or □ NO If yes, were all potential source areas investigated?

□ YES or □ NO If samples were collected, attach descriptions of sample locations, collection methods, aquifer name, and laboratory results. (Groundwater sampling is not required at this point unless there is reason to suspect impact.)
<table>
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<tr>
<th>Date release confirmed:</th>
<th>Date release reported to TCEQ:</th>
<th>Reported to:</th>
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</table>

Is this the first release from a UST or AST discovered at this site? □ YES or □ NO

Are there any other contamination or potential impacts to human health from any source other than the tank systems at this site? □ YES or □ NO If yes, indicate type and location of contamination.

Reported to TCEQ by: ______________________ Representing: ______________________

Method of release discovery:
- □ Samples collected during tank removal-from-service activities
- □ Samples collected during other tank system construction activities
- □ Samples collected during release determination investigation
- □ Other: ______________________

Method of release confirmation: (check all that apply)
- □ Soil samples
- □ Groundwater samples
- □ Surface water samples
- □ Documentation of presence of NAPL

Source(s) of release (check all that apply):
- □ USTs
- □ ASTs
- □ Piping
- □ Dispenser
- □ Submersible Turbine Pump Area
- □ Overfills/spills
- □ Unknown
- □ Other: ______________________

Substance(s) released (check all that apply):
- □ Gasoline
- □ Diesel
- □ Used Oil
- □ Aviation Gasoline
- □ Jet Fuel (type: ______________________)
- □ Other: (be specific: ______________________)

Amount of product released: ______________________ Chemical Abstract Service registry #: (for hazardous substances: ______________________)

Were any soil samples collected? □ YES or □ NO (check one) If yes, attach descriptions of sample locations, collection methods and laboratory results.

Type of native soil: (check one)
- □ Clay or silt
- □ Sand, gravel or rock

Were any groundwater confirmation samples collected? □ YES or □ NO (check one) If yes, attach descriptions of sample locations, collection methods, aquifer name, and laboratory results.

Known Impact(s) (check all that apply):
- □ Soil
- □ GW
- □ Surface Water
- □ Subsurface Utilities - type: ______________________
- □ Buildings
- □ Water wells
- □ Other sensitive receptors

Was the land owner (if different from the tank owner) notified of the contamination? □ YES or □ NO (check one) If yes, attach copy of the letter which provided the notification. If no, documentation that notification was provided must be submitted within 30 days from the date the impact is discovered.

Possibly Threatened: (check all that apply)
- □ GW
- □ Surface Water
- □ Subsurface Utilities - type: ______________________
- □ Buildings
- □ Water wells
- □ Other sensitive receptors

Was NAPL detected (greater than 0.01 feet)? □ YES or □ NO (check one) If yes, describe how and where it was detected, the thickness detected, and the recovery actions taken: ______________________
**D. ABATEMENT MEASURES**

Were abatement measures initiated to stop the release or to recover the released substance? ☐ YES ☐ NO (check one) If yes, describe the abatement and/or recovery measures taken and the dates and duration of the activities:

Were UST/AST system tank and/or line tightness tests performed? ☐ YES ☐ NO (check one) If yes, attach test results.
Did the tests indicate that all tanks and piping were tight? ☐ YES ☐ NO If No, specify the portion(s) of the tank system(s) that were found not to be tight:

Were any repairs conducted on the tank system(s)? ☐ YES ☐ NO (check one) If yes, describe type(s) and location of repairs:

Were tightness tests performed after repairs were conducted? ☐ YES ☐ NO (check one) If yes, attach test results.
Did the tests indicate that the repaired items were tight? ☐ YES ☐ NO If No, specify the portion of the tank system(s) that were found not to be tight:

**E. FIRE/TCEQ/OTHER OFFICIALS NOTIFIED**

<table>
<thead>
<tr>
<th>Name</th>
<th>Representing</th>
<th>Phone number</th>
<th>Date(s) Notified</th>
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Were any directives issued by the fire or other officials? ☐ YES ☐ NO If Yes, describe directives and actions taken in response to the directive:

**F. WASTE DISPOSITION**

Indicate the status of all wastes and other materials generated:

<table>
<thead>
<tr>
<th>Type of waste (soil, water, product)</th>
<th>Quantity and Units</th>
<th>Method and location of disposal or treatment</th>
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</table>

TCEQ-00621 (revised 08/28/2009) - previous versions obsolete
G. REPORT PREPARATION

A Licensed On-Site Supervisor may complete and sign this form when the supervisor is acting in an approved capacity for tank removal-from-service or tank system repair activities. 

Licensed On-Site Supervisor: ___________________________ ILP Reg. No.: ___________________________ Exp. Date: ___________________________

Company: __________________________________________ FAX No.: ___________________________

Based on the results of the site investigation and the additional information presented herein, I certify that the site investigation activities performed either by me, or under my direct supervision, including subcontracted work, were conducted in accordance with accepted industry standards/practices and further, that all such tasks were conducted in compliance with applicable TCEQ published rules, guidelines and the laws of the State of Texas. I have reviewed the information included within this report, and consider it to be complete, accurate and representative of the conditions discovered during the site investigation. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report, I may be subject to administrative, civil, and/or criminal penalties.

Signature: ___________________________ Date: ___________________________

OR

Project Manager: ___________________________ PM Reg. No.: ___________________________ Exp. Date: ___________________________

Company: __________________________________________ FAX No.: ___________________________

Based on the results of the site investigation and the additional information presented herein, I certify that the site investigation activities performed either by me, or under my direct supervision, including subcontracted work, were conducted in accordance with accepted industry standards/practices and further, that all such tasks were conducted in compliance with applicable TCEQ published rules, guidelines and the laws of the State of Texas. I have reviewed the information included within this report, and consider it to be complete, accurate and representative of the conditions discovered during the site investigation. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report, I may be subject to administrative, civil, and/or criminal penalties.

PM Signature: ___________________________ Date: ___________________________

AND

CAS Representative: ___________________________ CAS Reg No.: ___________________________ Exp. Date: ___________________________

Company: __________________________________________ FAX No.: ___________________________

By my signature affixed below, I certify that I am the duly authorized representative of the Correction Action Specialist named and that I have personally reviewed the site investigation results and other relevant information presented herein and considered them to be in accordance with accepted standards/practices and in compliance with the applicable TCEQ published rules, guidelines and the laws of the State of Texas. Further, that the information presented herein is considered complete, accurate and representative of the conditions discovered during the site investigation. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report, I may be subject to administrative, civil, and/or criminal penalties.

Signature of CAS Representative: ___________________________ Date: ___________________________

Name of Tank Owner or Operator, or property owner contact: ___________________________ 

Telephone No.: ___________________________ FAX No.: ___________________________

By my signature affixed below, I certify that I have reviewed this report for accuracy and completeness of information regarding points of contact and the facility and storage tank system history and status. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report related to the contact information, and the facility and storage tank system history and status information, I may be subject to administrative, civil, and/or criminal penalties. I attest that I have reviewed this report for accuracy and completeness. I understand that I am responsible for addressing this matter.

Signature: ___________________________ Date: ___________________________
<table>
<thead>
<tr>
<th>COUNTY CODE LIST</th>
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<tr>
<td>1  Anderson  38  Childress  75  Fayette  112  Hopkins  149  Live Oak  186  Pecos  223  Terry</td>
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<tr>
<td>2  Andrews  39  Clay  76  Fisher  113  Houston  150  Lamb  187  Polk  224  Throckmorton</td>
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<td>3  Angelina  40  Cochran  77  Floyd  114  Howard  151  Loving  188  Potter  225  Titus</td>
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<tr>
<td>4  Arkansas  41  Coke  78  Foard  115  Hudspeth  152  Lubbock  189  Presidio  226  Tom Green</td>
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Site Assessment

Carrying out a site assessment to determine whether a release has happened is required when:

- The site assessment is selected to meet the release determination requirements for USTs that are permanently removed from service.
- TCEQ decides that a site assessment is needed at an UST site/facility at which an UST was permanently removed from service, and a site assessment or release inspection either did not exist or was insufficient when it was removed from service.
- TCEQ decides that a site assessment is necessary at an UST site/facility at which a release, or suspected release, could potentially cause or create a present or probable risk of harm to the environment or human health or safety.

Note that a TCEQ-licensed UST installer or on-site supervisor, or registered corrective action project manager, must supervise the site assessment.

Also note that if the site assessment determines that the UST has had a release, the owner or operator is required to report the confirmed or suspected release and take the necessary release investigation and corrective action steps.

Lesson Summary

This concludes the lesson content for the General Operation of UST systems. Now let's review the important points.

- TCEQ has very specific requirements and standards for the installation of underground storage tank (UST) systems, which must be followed exactly each time any person installs a new UST system. Only TCEQ registered UST contractors employing licensed on-site supervisors are able to install tanks, piping, and related UST equipment in keeping with well-known and accepted industry practices and TCEQ's requirements.

- Owners/operators who install UST systems must follow TCEQ's requirements exactly, making certain that the UST systems meet all of the requirements for the full operational life. UST systems must be designed, installed, and operated to prevent releases of regulated substances such as gasoline and diesel because of corrosion or structural failure for as long as they are in operation.
Before the installation of a new UST system or major construction activities on an existing UST system, the TCEQ must be notified at least 30 days before commencing the construction activities utilizing the TCEQ Construction Notification form. Major construction activities include most repair, installation, or removal activities, but do not include minor and routine maintenance activities. UST owners and operators must keep all of their UST systems installation records in compliance with TCEQ's reporting and recordkeeping requirements.

Following the receipt of the construction notification, the TCEQ will issue a temporary delivery certification, valid for no more than 90 days after the first delivery of regulated substances. All new regulated tanks must be registered with the TCEQ within 30 days of regulated substances being placed into the tanks. TCEQ must be notified of changes to UST system information within 30 days of those changes. Registration and notification of changes to the UST system are made with the TCEQ UST Registration and Self-Certification Form. Part of the registration form is the self-certification for facilities storing motor fuels. Upon receipt of the registration form, the TCEQ will issue a delivery certificate which must be made available to common carriers making deliveries of regulated substances.

Inspections of the UST system are an important practice to identify damage or inoperable equipment and to prevent leaks or spills from the UST system. The TCEQ requires a 60-day inspection of ALL spill containers and of any secondary containment sumps that are an integral part of the UST release detection for monitoring secondarily contained piping. Any liquids or debris found during the inspection must be removed and properly disposed of within 96 hours of discovery.

TCEQ and USEPA require that gasoline vapor emissions be reduced at all gasoline dispensing facilities in Texas. Stage I vapor recovery controls vapor emissions during the delivery of fuel to the UST. Stage II vapor recovery controls vapors emissions during the fueling of vehicles at the fuel dispenser. Stage I and II vapor recovery requirements for each facility depend on the location of the facility and the monthly throughput.

At times, a UST must be removed from service, temporarily or permanently. If that is necessary, owners and operators must follow the procedures for removing their UST from service. Owners and operators must keep records sufficient to show that they have satisfied the removal requirements.
Owners and operators can permanently remove USTs from service in three ways:

- Physically removing from the ground
- Making a permanent change-in-service
- Abandonment in-place

Before any UST can be permanently removed from service, it must be emptied and cleaned of all regulated substances and accumulated sludge and residue and purged of all residual vapors in accordance with accepted industry practices.
Lesson 4: Corrosion Protection

Lesson Focus

This lesson focuses on the following topics:

- General Requirements
- Corrosion Protection Methods
- Corrosion Protection Records

General Requirements

Owners and operators must ensure that the UST system is continuously protected from corrosion. Corrosion results when bare metal and soil and moisture combine to produce an electric current that destroys the bare metal. Over time, corrosion creates holes in metal tanks and components and leaks develop.

The UST system components that must be provided with corrosion protection are underground, and/or totally or partially submerged metal components, which are designed to convey, contain, or store regulated substances. Examples of these components are:

- Tanks
- Piping including fittings, valves, flexible connectors, swing joints, and impact/shear valves
- Secondary containment devices
- Spill containers
- Fill pipes and riser pipes
- Vent lines, manways, and manholes
- Submersible pump housings and risers


**Corrosion Protection Methods**

Allowable methods of corrosion protection owners and operators can use to protect their UST systems are:

- UST systems are completely constructed of noncorrodible materials.
- Components are electrically isolated from the corrosive elements of the surrounding soil, backfill, and water.
- Tanks are steel with either a:
  - Bonded fiberglass reinforced plastic cladding or laminate,
  - Bonded fiberglass reinforced polyurethane coating,
  - Bonded polyurethane external coating, or
  - Completely contained within a nonmetallic external jacket.
- Tanks and components are protected with a cathodic protection system.

Once installed, UST systems are vulnerable to corrosive elements of the surrounding soil, water, groundwater, and backfill. You can use materials that will not rust (corrode) or breakdown when they are exposed to water or soil. Such materials include fiberglass reinforced plastic (FRP).

Owners and operators can decrease the likelihood of UST corrosion from other metallic components by electrically isolating UST system components from other metallic components and the corrosive elements of soil, water, and backfill, by installing the UST components in:

- Open areas where the components can be periodically visually inspected for the presence of corrosion, such as manways, sumps, pits and vaults.
- Secondary containment device that is non-corrodible or protected from corrosion and free of soil, backfill or water.

Owners and operators can protect some underground UST system components (other than tanks and piping) that do not normally contain regulated substances by coating or wrapping them in suitable and compatible dielectric material. Components this is acceptable for are:

- Vent lines
- Spill containment vessels
- Fill risers
- Tank fittings
Cathodic Protection Systems

Another way owners and operators can protect UST system components from corrosion are to coat the components with a suitable dielectric material, equip the components with appropriate dielectric fittings for electrical isolation, and protect the system with a cathodic protection system.

The two types of allowable cathodic protection systems are:

1. Sacrificial Anode System
2. Impressed Current System

Sacrificial Anode Systems

Sacrificial cathodic protection systems utilize an anode, typically composed of magnesium or zinc, which is firmly attached and electrically connected to the tank or metal components to protect them from corrosion. The anodes are more electrically active and corrode, or are "sacrificed", in place of the tank or metal components.

Impressed Current Systems

Impressed current cathodic protection uses an electrical current to stop UST metal components from corroding. A low-voltage direct current is pushed through anode emitters by a rectifier. The anodes are metal, mixed metal, or graphite probes buried in the soil near the UST system.

The current flows through the anodes, through the soil to the UST system, and returns to the rectifier through an insulated wire attached to the UST. You use this type of protection for metal components with large surface areas because it can provide the necessary higher levels of protection, and the emitter anodes deteriorate very slowly.
As with all UST system equipment, cathodic protection systems must be designed, made, installed, maintained, and operated following the standards of practice or codes developed by an independent testing laboratory or nationally recognized association. Cathodic protection is either factory-installed or field-installed. TCEQ rules require that field-installed cathodic protection systems be designed by corrosion specialists.

Owners and operators using impressed current cathodic protection systems need to make sure that they have been designed and outfitted with the necessary equipment that can show the system's operational status at all times. Cathodic protection systems must include test stations to allow for periodic testing.

Inspection and Testing Requirements

Owners and operators who use electrical isolation to protect UST system components from corrosion without the added protection of cathodic protection must visually inspect or test their electrically isolated components three to six months after installation and every three years thereafter. If full visual inspection, is not possible, isolation must be verified by testing performed by a corrosion technician or specialist.

Corrosion technicians or specialists must test all installed cathodic protection systems three to six months following installation and then every three years. To make sure that the rectifier is properly functioning, owners or operators must inspect the impressed current system every two months (60 days).

If a corrosion technician determines that metal components are no longer adequately protected from corrosion, the results must be verified by a corrosion specialist and the owner or operator must make sure that the appropriate repairs are made or a field-installed cathodic protection system is installed within the period specified by TCEQ.
Corrosion Protection Records

UST owners and operators must keep all corrosion protection records, and these records must show that they have followed the corrosion protection requirements. Records that owners must keep for the operational life of the system include:

- All installation records for the corrosion protection system including:
  - Contact info—names, telephone numbers, addresses—and corrosion protection credentials for the designers of the cathodic protection system
  - Drawings or plans that show locations for all cathodic protection system components and test stations
  - Operating instructions and warranty information
  - Maintenance schedules

- Testing procedures for the cathodic protection systems' working components must be kept for at least 5 years

Owners and operators must keep the following records for a minimum five-year period after applicable tests/inspection:

- Impressed current cathodic protection system 60 day inspection results
- Tests and inspection results for cathodic protection system adequacy
- Results for electrically isolated component tests and inspections

Lesson Summary

This concludes the lesson content for the Corrosion Protection of UST systems. Now let’s review the important points.

- Owners and operators must provide corrosion protection for underground UST system tanks, piping and metal components, which are designed to convey, contain or store regulated substances. Corrosion protection slows, stops, and prevents UST system metal components from corroding or rusting and prevents the release of petroleum substances.

- Acceptable corrosion protection methods:
  - Non-corrodible materials
  - Electrical isolation
• Cathodic protection

 ✓ Two types of cathodic protection systems are sacrificial anode and impressed current. Sacrificial anode systems typically use a magnesium or zinc anode firmly attached and electrically connected to the tank or metal components. The anodes corrode in place of the protected metal components. Impressed current systems use an electrical current to stop UST metal components from corroding. A low-voltage direct current is pushed through anode emitters by a rectifier.

 ✓ Corrosion protection systems must be designed by corrosion specialists and must include the ability to show the system's operation status and must include test stations to allow for periodic testing. Corrosion technicians or specialists must test all installed cathodic protection systems after installation and before beginning system operation, three to six months following installation and then every three years. To make sure that the rectifier is properly functioning, owners or operators must inspect the impressed current system every two months (60 days). If you use electrical isolation without the added protection of cathodic protection, you must inspect and, if necessary, test all electrically isolated components three to six months after installation and every three years thereafter.

 ✓ You must keep all corrosion protection installation records for the operational life of the system, and testing/inspection records, demonstrating compliance with the corrosion protection requirements, for at least five years.
Lesson 5: Release Detection

Lesson Focus

This lesson focuses on the following topics:

- Overview of Release Detection for UST Systems
- Release Detection for Tanks
- Piping Release Detection
- Release Detection Records

Overview of Release Detection for UST Systems

All regulated UST systems must have leak detection, also called "release detection," in place to not only satisfy federal and state leak detection requirements, but more importantly, to monitor the UST system and make you aware of leaks and releases. Leak detection is needed only for the UST system components that are installed underground—i.e., underground storage tanks and underground piping.

Benefits of Leak Detection

Release detection helps to prevent and cut down on the release of regulated substances into the environment. However, using leak detection offers UST owners and operators a number of other crucial benefits they might not consider, including:

- An opportunity and ability to quickly respond to signs of leaks and suspected leaks
- Minimization of harm/threat to the health and safety of people
- Minimization of harm or damage to the environment
- Avoidance of high cleanup costs
- Avoidance of high costs from third-party liability claims
- Avoidance of and minimization of the loss of product (gasoline, diesel, used oil, etc.)

Requirements of Release Detection

- All owners and operators of underground storage tanks must use at least one release detection method allowable under TCEQ rule to determine whether the UST system is
leaking. They can also choose to use a combination of detection methods. Any release detection method must meet TCEQ requirements.

- There are separate release detection requirements that must be satisfied for the tanks and the piping.
- If, and when, the utilized release detection method reveals or shows that a release of regulated substances may have or has taken place, the UST operator and owner must follow the required release reporting, investigation, and corrective actions, which will be covered in an upcoming lesson.

Release detection methods that owners/operators use must be:

1. Able to detect a release from any part of the UST system that contains regulated substances (such as gasoline, diesel, or other fuel products).
2. Installed, maintained, operated, and calibrated according to the manufacturer's or methodology provider's specifications and instructions, as well as TCEQ's requirements, by persons who have the essential training, competence, and experience to correctly use the equipment.
3. Able to meet the specific third-party verified performance requirements applicable to the chosen method.
4. Designed, operated, listed and approved in compliance with standards of a nationally recognized association or independent testing lab like UL.

**Release Detection for Tanks**

**Release Detection for Tanks**

All USTs must be monitored so that any releases are detected. Owners and operators are responsible for making sure that the acceptable release detection method used for the UST will be monitored to detect any releases from the tank at least once a month (not to exceed 35 days between each monitoring). Owners and operators can use one, or more, of the following types of release detecting equipment or methods to monitor the tanks in their UST system:

- Manual Tank Gauging
- Monthly Tank Gauging
- Automatic Tank Gauging and Inventory Control
- Vapor Monitoring
- Groundwater Monitoring
- Interstitial Monitoring for Double-Wall or Jacketed UST Systems
• Interstitial Monitoring with Secondary Containment Barriers
• Statistical Inventory Reconciliation (SIR)

Inventory Control

Before discussing each allowable release detection method, we will go over inventory control. Inventory control by itself is not an allowable method for release detection; however, it is a critical part of detecting leaks/releases. If you use automatic tank gauging or statistical inventory reconciliation as your release detection method, you are additionally required to perform inventory control. If you own or operate a retail facility that sells fuel products to the public, you are required to perform inventory control in addition to any allowable method of release detection being utilized. In addition, inventory control can be directed by the TCEQ, especially at facilities with a suspected release.

With inventory control, owners/operators take daily measurements in gallons of UST contents, deliveries, and sales. Calculations are made by using the data to find out whether the tank is leaking by comparing the stick inventory (measured inventory) with book inventory (the inventory their records say they should have). Anytime the difference between these two is significantly large, it is possible that the UST is releasing product or has a leak.

Each of the inventory control steps must be performed consistently, as specified in USEPA *Doing Inventory Control Right, November 1993*. The steps to performing inventory control include:

• Step 1: Measure the Tank’s Contents
• Step 2: Record the Amount Pumped
• Step 3: Record Fuel Deliveries
• Step 4: Calculate Daily Changes in Inventory
• Step 5: Calculate Monthly Changes in Inventory
The measurements that you will be using to calculate changes in inventory are:

- Stick inches
- Stick inventory (start and end)
- Amount pumped
- Amount delivered
- Water in tank
- Book inventory

**Measure Tank Contents**

On a daily basis, the owner/operator must measure the contents of the USTs if anyone removes or adds fuel on that day. To measure the tank’s contents, the person taking tank measurements can use either of the following:

- A gauge stick
- A tank level monitor—electronic or mechanical

Other equipment needed for performing inventory control includes:

- Water- or fuel-finding pastes
- Inventory forms
- Tank charts—tables for converting the number of inches of liquid in your tanks into the number of gallons

Inventory control must include a monthly check on the water in your USTs to determine how much water is in the tanks. While you should expect to find small quantities of water in your tanks, you must remove it from the USTs as soon as you spot it because it can interfere with dispensing fuel products and adversely affect fuel quality. There are two types of water-finding paste that operators and/or staff can put on the bottom of a gauge stick to check for water:

1. For conventional fuels
2. For ethanol-blended fuels
Because water has the potential to mix with ethanol, separate from the gasoline, and settle to the bottom of the tank, it is important to make sure the paste used is compatible with the product stored in the tank.

If you use gauge sticks, they should be able to measure over the full range of the tank's height to the nearest 1/8 of an inch and neither be warped, nor should their ends be cut off. Further, they should be made of materials like wood, or other non-sparking materials.

**Record the Amount Pumped and Fuel Deliveries**

After taking measurements, these are recorded onto a daily inventory worksheet. Utilize a Daily Inventory Worksheet, equivalent to the one found in Doing Inventory Control Right, USEPA. Additionally, operators must ensure that on a daily operational basis, someone records the inventory volume measurements of regulated substances for:

- Inputs
- Withdrawals
- Any leftover amounts in the tank

After taking measurements, they must record them, making any necessary changes to the inventory records. Each time that they receive a fuel delivery into an UST, employees must check how much fuel has been delivered. First, measure the level of liquid product in the tank before delivery. Then, after the fuel has been delivered and the fuel level has had time to stabilize in the tank, take liquid fuel levels once again.

Anytime stored substances are dispensed from an UST, this must be metered and recorded at an accuracy of no more than six cubic inches for each five gallons of product that is withdrawn.

**Calculate Daily Changes in Inventory**

In this step of inventory control, on a daily basis, you must first copy the measurements recorded onto the daily inventory worksheet to the monthly inventory record. To come up with the daily changes in inventory, owners and operators have to make calculations based on the data from the monthly inventory record as outlined in Step 4 of Doing Inventory Control Right. In this step, you will subtract the "Book Inventory" from the "End Stick Inventory: to calculate the "Daily Over or Short Inventory".
This number will usually be a positive or negative number, and rarely will be zero. If you calculate a substantial change in this number from previous days, or if you consistently calculate positive or negative numbers, you should check for problems with your calculations and/or for the presence of a leak of product out of your UST or water into your UST. In which case, you must report to TCEQ, within 24 hours, that you may have a leak and/or a suspected release of fuel products from your UST.

**Monthly Inventory Control**

Perform monthly inventory control in accordance with the explanations, example, and blank form provided in the EPA publication "Doing Inventory Control Right for Underground Storage Tanks."

This calculation to determine changes in monthly inventory is called the "math test." The math test helps owners and/or operators to determine the maximum change in inventory that the federal regulations allow. The formula for the math test is shown below:

\[
\text{Monthly throughput (total gallons pumped)} \times 1\% + 130 \text{ gallons} = \text{leak check}
\]

If the total number of gallons over and/or short is larger than the leak check for two months in a row, then your tank may be leaking. In which case, you must report to TCEQ, within 24 hours, that you may have a leak and/or a suspected release of fuel products from your UST.

Now we will go over the allowable release detection methods, one of which must be performed, in addition to inventory control.

**Manual Tank Gauging**

Owners and operators of petroleum substance tanks, having a maximum capacity of 1,000 gallons, are allowed to use the manual tank gauging release detection method as their release detection methodology. Its use is not acceptable for tanks with a larger capacity.

The tank is manually gauged once per week at the beginning and at the end of a 36- to 58-hour gauging period, depending on tank size, during which no regulated substance is added or
removed from the tank. When either the weekly or the monthly volume deviation, specified in the TCEQ rules, for the size of the tank being gauged is exceeded, a suspected release must be reported.

**Monthly Tank Gauging**

Monthly tank gauging is only allowed for emergency generator tanks. The gauging period for monthly tank gauging is a minimum of 36 hours during a period when product is not delivered to or removed from the tank. Owners and operators take separate liquid level measurements in the tank at least once a month at the start and the conclusion of the gauging period. Then the monthly deviation is found using those measurements. A release may have occurred if the monthly deviation is higher than the maximum allowable specified in the TCEQ rules, and the owner must report the suspected release.

**Automatic Tank Gauging and Inventory Control**

This form of release detection uses a monitoring system to continuously and automatically measure and analyze the temperatures and petroleum substances. This includes an inventory mode and a test mode which do the following:

- The collection of data for inventory control purposes
- The performance of automatic tests for the loss of substances

Some automatic tank gauges (ATGS) perform continuous system self-tests. Most ATGs require UST system operation to be suspended to perform a system self-test. When performing an automatic test for substance loss, the ATG must be able to detect a release of 0.2 gallon an hour from any portion of the tank that holds regulated substances.

**Note:** Owners and operators can use this form of release detection for emergency generator tanks without inventory control. However, in addition to the basic requirements, the automatic tank gauging equipment also must be able to perform continuous automatic tests for the loss of substances during those times when the emergency generator engine is not in use. ("Continuous" basically means that the ATG must be programmed to start another self-test as soon as it completes one.)
Except for emergency generator tanks, inventory control must be performed separately in addition to automatic tank gauging.

**Vapor Monitoring**

Vapor monitoring release detection consists of equipment and procedures designed to monitor and test the soil gas of the backfilled excavation zone for the presence of vapors originating from leaking petroleum substances or a tracer substance introduced into the UST system. If petroleum vapors above background concentrations, or tracer substances are detected, then a suspected release has occurred. To perform vapor monitoring release detection, applicable requirements include:

- Substances stored in tanks, as well as tracer substances placed in UST systems, must be volatile enough that they can readily be detected.
- Qualified personnel must assess the site to determine the positioning and number of monitor wells so that releases can be detected within one month of release, not to exceed 35 days.
- The equipment must also be able to detect any increases in vapor concentration higher than the background levels already present.
- Bedding and backfill materials within the excavation zone must be porous enough to allow the vapors from released substances to rapidly diffuse throughout the excavation zone.
- Owners and operators must clearly mark and secure their monitoring wells.
- Releases must not go undetected because the vapor monitoring equipment's has been affected by the presence of rainfall, groundwater, soil moisture or pre-existing contamination.
- Vapor monitoring devices must be properly calibrated and in good working condition.

Groundwater monitoring consists of equipment or procedures to monitor for the presence of regulated substances dissolved in, or floating on, groundwater in the excavation zone. This release detection method uses permanent monitoring wells positioned in the UST excavation zone and checked monthly (either manually or with automatic equipment) for leaked regulated substance such as gasoline or diesel products that are floating on or dissolved in the groundwater.
The UST system and groundwater monitoring equipment must meet the following requirements:

- Qualified personnel must design the monitoring well system so that releases are detected within one month.

- Monitored wells must be installed in accordance with TCEQ regulations.

- Any regulated substances stored in the UST must be immiscible in water and have a specific gravity lower than one.

- If automatic, the equipment must be able to detect the presence of 1/8 inch (or less) of leaked (free) product on top of the groundwater in the monitoring and/or observation well.

- If visually inspecting for a release, you must be able to detect a visible accumulation of regulated substances (i.e., sheen) either on, or in, the groundwater within the monitoring and/or observation well.

- The UST must have the proper bedding and coarse backfill materials such as gravel and sand.

- You should position monitoring wells in the backfill because it allows you to detect leaks quickly.

- The natural groundwater level (water table) must never be more than 20 feet below the ground surface.

- Releases must not go undetected because of interference from any already existing background contamination.

- Equipment must also be able to detect significant increases in substances in, or on, groundwater higher than the background levels already present.

- All monitoring wells and observation wells must be secured and clearly marked.
Interstitial Monitoring for Double-Wall or Jacketed UST Systems

Interstitial monitoring is used for USTs that are double-walled or are jacketed. Interstitial monitoring consists of equipment designed to test or monitor for the presence of regulated substances (vapors or liquids) and water in the interstitial space between the inner and outer wall of the UST system.

The space between the inner and outer walls must be monitored at least once a month, not to exceed 35 days, using methods and/or equipment capable of detecting the following:

- Release of stored regulated substances from any part of the UST system’s primary tank or piping
- Entrance of water (i.e., groundwater) into the interstitial space due to a breach in the secondary containment

On or after January 1, 2009, any sumps or manways included in a secondarily-contained UST system, which are utilized to monitor the interstitial space of secondarily contained piping or under dispenser sumps, must be equipped with a liquid sensing probe, which will alert the UST system owner or operator if more than two inches of liquid collects in any sump or manway. The monitoring of the sumps or manways must be capable of detecting any release of regulated substances within one month (not to exceed 35 days) of the release. (Note that continuous monitoring with immediate alert is required over the Edwards Underground Aquifer.)

Monitoring of UST Systems with Secondary Containment Barriers

Owners and operators can monitor for the presence of released regulated substance into the excavation zone between the UST system and a barrier such as a liner, which isolates the excavation zone from the surrounding soils. Secondary containment liners must be properly designed, constructed, and installed and they must be monitored in a manner which will detect the release of regulated substance within one month, not to exceed 35 days of any release from the UST system. As a reminder, secondary containment liners are no longer an approved method for secondary containment for new UST systems.
**Statistical Inventory Reconciliation (SIR) and Inventory Control**

To determine whether the UST system is leaking, an owner or operator can use an approved vendor for Statistical Inventory Reconciliation (SIR) to analyze monthly inventory control records.

Each day that the UST system is in operation, employees measure the levels of gasoline, diesel, and fuel products using either a tank level monitor or gauge stick. Owners and operators must record and save this data on all deliveries to, and withdrawals from, the UST using Inventory Control. Once the inventory information is collected for the set time-period, it is given to the SIR provider or vendor who performs a statistical analysis using computer software. The owner/operator is given a report of the analysis once completed.

**Note:** Owners and operators can perform SIR themselves if they become a franchise of an SIR vendor with a third party approved methodology.

When using SIR, the methodology must evaluate the inventory control records and be able to detect a release of 0.2 gallons an hour from any part of the UST system. SIR must be performed at least once a month. The UST owner and operator must make sure they receive a monthly analysis report within 15 calendar days from the end of the calendar month for which the analysis is performed.

At minimum each monthly analysis report must state:

- SIR provider/vendor name and SIR methodology name and version
- Company name and individual name of analysis performer if performed by authorized franchisees, licensees, or representatives
- Name and address of the facility where analysis is performed
- Descriptions of analyzed UST systems
- For each monitored UST system, state quantitatively in gallons per hour:
  - Leak threshold for the analyzed month:
  - Minimum detectable leak rate for the analyzed month
  - Indicated leak rate for the analyzed month
  - Also state the monthly result for each monitored UST system—"pass," "fail," or "inconclusive"
UST system owners or operators must report any analysis report with a "fail" as a suspected release to the TCEQ within 24 hours of receipt of the report provided by the SIR provider. If the report shows an "inconclusive" finding, the owner or operator has 72 hours to determine if the data was in error and confirm that the report should be a "pass". If a determination cannot be made on the cause of the inconclusive finding, the owner or operator must file a report of a suspected release within 72 hours of the receipt of the inconclusive report.

Also, if SIR analysis provides a passing result, but the inventory control leak check indicates a potential release for two consecutive months, then the owner/operator must still report a suspected release to the TCEQ.

**Piping Release Detection**

Piping must be monitored to detect a release of regulated substances from any part of the system. Release detection requirements vary based on the type of piping that you use in the UST system. The two primary types of piping systems used in UST systems are pressurized piping and suction piping.
Suction piping transports regulated substances using suction or negative pressure. For suction piping systems designed and constructed according to the following TCEQ requirements, the owner or operator is not required to install or use a release detection method:

- Below-grade piping for the system
  - Operates below atmospheric pressure
  - Is sloped, allowing all pipe contents to drain back to the UST if the suction is released
- Each suction line only has one built-in check valve
- Check valve is located aboveground, at a place that is directly underneath and as close as practical to the UST suction pump
- Verification that the standards are satisfied is available in the form signed as-built drawings/plans or written documentation

For any suction line not exempt from having release detection or for any gravity flow line, the owner/operator must use at least one of these methods:

1. Test each line, at a minimum, every three years using a positive or negative pressure tightness test for underground product piping that is able to detect any release of 0.1 gallons each hour from the piping system.
2. Monitor each line for a release, at minimum, once a month using one of the following allowable release detection methods, which were previously discussed:
   - Monthly groundwater monitoring
   - Monthly vapor monitoring
   - Monthly interstitial monitoring
   - Monthly statistical inventory reconciliation

Remember, any piping used within a hazardous substance UST system is required to be secondarily contained and interstitially monitored.

**Pressurized Piping**

Pressurized piping transports regulated substances under pressure. Each of the separate pressurized lines must be equipped with an automatic line leak detector that can detect piping system releases of three gallons per hour at an equivalent piping pressure of 10 pound/square inch. Within one hour of a release, the line leak detector must be able to alert UST system
operators of release by either substantially limiting or shutting off the flow of regulated substances.

An acceptable automatic line leak detector is:

- **An automatic flow restrictor**—limits the flow of gasoline, diesel, and other fuel products through the piping to a substantially reduced flow rate when it detects a leak

- **An automatic flow shutoff**—either shuts down the pump or totally shuts off the flow of gasoline, diesel, and other fuel products when it detects a leak

As with all other UST equipment, owners and operators must maintain, calibrate, and test equipment as necessary to ensure proper performance and reliability.

In addition to the line leak detector, the pressurized lines must be tested at least one a year for tightness or monitored for releases at least once a month using the following allowable release detection methods, which were previously discussed:

- Monthly interstitial monitoring (continuous on the Edwards Aquifer)
- Electronic leak monitoring
- Monthly groundwater monitoring
- Monthly vapor monitoring
- Monthly statistical inventory reconciliation and inventory control

As with all other UST equipment, owners and operators must maintain, calibrate, and test equipment as necessary to ensure proper performance and reliability.

In addition to the line leak detector, the pressurized lines must be tested at least once a year for tightness or monitored for releases at least once a month using the following allowable release detection methods, which were previously discussed:

- Monthly interstitial monitoring (continuous on the Edwards Aquifer)
- Electronic leak monitoring
- Monthly groundwater monitoring
- Monthly vapor monitoring
- Monthly statistical inventory reconciliation and inventory control.
Release Detection Records

Owners and operators must maintain records demonstrating compliance with the release detection requirements including:

- Installation records and third-party evaluations maintained for the life of the release detection system.
- Testing, including sampling or monitoring records for at least five years after the tests are performed.
- Inventory control reconciliation records for at least five years after the date of reconciliation.
- Service, calibration, and maintenance records for at least five years after the work is completed.

Lesson Summary

This concludes the lesson content for Release Detection. Now let's review the important points.

✓ All UST systems operators/owners must use leak/release detection for their UST system underground storage tanks and underground piping to discover and help to reduce and prevent UST leaks and releases of regulated substances such as gasoline, diesel, used oil, and other fuel products into the environment. Leak detection offers UST owners and operators crucial benefits:
  - Quick response to suspected leaks and releases
  - Minimizes and prevents the loss of product (gasoline, diesel, used oil, etc.)
  - Minimizes harm/threat to the health and safety of people and damage to the environment
  - Helps avoid high clean-up cost and third-party liability claims

✓ All owners and operators of underground storage tanks must use at least one release detection method allowable under TCEQ rule to determine whether the UST system is leaking. They can also choose to use a combination of detection methods. Any release detection method must meet TCEQ requirements.

✓ Release detection methods must be:
  1. Able to detect a release from any part of the UST system that contains regulated substances (such as gasoline, diesel, or other fuel products).
2. Installed, maintained, operated, and calibrated according to the manufacturer's or methodology provider's specifications and instructions, as well as TCEQ's requirements, by persons who have the essential training, competence, and experience to correctly use the equipment.

3. Able to meet the specific third-party verified performance requirements applicable to the chosen method.

4. Designed, operated, listed and approved in compliance with standards of a nationally recognized association or independent testing lab like UL.

✓ There are separate release detection requirements that must be satisfied for the tanks and piping.

✓ To monitor tanks, owners and operators can use one, or more, of the following types of release detecting equipment or methods:
  - Manual Tank Gauging (tanks equal to or less than 1,000 gallons of capacity)
  - Monthly Tank Gauging (emergency generator tanks only)
  - Automatic Tank Gauging and Inventory Control
  - Vapor Monitoring
  - Groundwater Monitoring
  - Interstitial Monitoring for Double-Wall or Jacketed UST Systems
  - Interstitial Monitoring with Secondary Containment Barriers
  - Statistical Inventory Reconciliation (SIR) and Inventory Control

✓ If you use automatic tank gauging or statistical inventory reconciliation as your release detection method, you are additionally required to perform inventory control. If you own or operate a retail facility that sells fuel products to the public, you are required to perform inventory control in addition to any allowable method of release detection being utilized. The steps to performing inventory control include:

  • **Step 1:** Measure the Tank's Contents
  • **Step 2:** Record the Amount Pumped
  • **Step 3:** Record Fuel Deliveries
  • **Step 4:** Calculate Daily Changes in Inventory
  • **Step 5:** Calculate Monthly Changes in Inventory
If the total gallons over or short is larger than the leak check for two months in a row, then your tank may be leaking. In which case, you must report to TCEQ, within 24 hours, that you may have a leak and/or a suspected release of fuel products from your UST.

Piping must be monitored to detect a release of regulated substances from any part of the system. Release detection requirements vary based on the type of piping that you use in the UST system. The two primary types of piping systems used in UST systems are pressurized piping and suction piping.

For certain suction piping systems designed and constructed in accordance with specific TCEQ requirements, the owner or operator is not required to install or use a release detection method. If the UST's suction line is not exempt from having release detection or if it is a gravity line, the line must be pressure tested every three years or a monthly release detection method must be employed.

Pressurized pipelines must be equipped with an automatic line leak detector that can detect piping system releases of three gallons per hour at an equivalent piping pressure of 10 pound/square inch. In addition to the line leak detector, the pressurized lines must be tested at least once a year for tightness or monitored for releases at least once a month using the following allowable release detection methods:

- Monthly interstitial monitoring (continuous on the Edwards Aquifer)
- Electronic leak monitoring
- Monthly groundwater monitoring
- Monthly vapor monitoring
- Monthly statistical inventory reconciliation and inventory control

Owners and operators must maintain records demonstrating compliance with the release detection requirements including installation records for the life of the release detection system and testing, monitoring, reconciliation and service and maintenance records for five years after the work was completed.
Lesson 6: Spill and Overfill Prevention and Control (Protection)

Lesson Focus

This lesson focuses on the following topics:

- General Spill and Overfill Control Requirements
- Fuel Delivery Procedures
- Spill and Overfill Prevention Equipment Requirements
- Design and Installation Requirements
- Spill and Overfill Control Records
- Reporting and Cleanup of Surface Spills and Overfills

General Spill and Overfill Control Requirements

As stated earlier, spill and overfill prevention is required in all new and existing USTs. In addition, UST system owners and operators must ensure spills and overfills do not occur and that there is available volume in the tank to greater than the volume of regulated substances to be transferred into that tank. This lesson will go over owner/operator responsibilities in more detail.

Related requirements include:

- Installing spill and overfill prevention equipment
- Making sure that all UST systems satisfy the equipment requirements for spill and overfill prevention equipment throughout their entire operational life

Should regulated substances be released because of overfills or spills, UST owners and operators are required to follow the required release investigating, reporting, and corrective actions.
Fuel Delivery Procedures

As the Class B operator, you should instruct the Class C operator in the proper procedures to prevent the spilling or overfilling of the USTs during fuel delivery. The person conducting the fuel transfer, normally the delivery driver, is required to monitor the fuel transfer procedures, but the UST facility operators must ensure that proper procedures are being implemented. The person conducting the delivery must be physically on location at the facility during the entire operation. This person should have a clear and unhindered view of the delivery points. That way the person can watch the process and prevent or deal with any overfills or spills.

The following procedures should be followed during the delivery of fuel to the USTs:

- Setup safety barriers around the fueling zone
- Have spill kit or response materials available in case a spill or overfill occurs
- Make sure there is adequate lighting
- Ensure the amount of fuel to be delivered will fit into the available empty space in the tank
- Make sure the spill bucket is empty and will contain spills
- Properly connect the hoses to the fill and vapor recovery ports
- Constantly monitor the transfer of fuel from the truck to the tanks
- Record the amount of fuel delivered to the tank by sticking the tank before and after the delivery
- Following the delivery, disconnect the hoses, clean the spill bucket, secure the fill ports, and return the spill kit and safety barriers to their original location

Spill and Overfill Prevention Equipment Requirements

Owners and operators are required by TCEQ to have specific types of spill and overfill prevention equipment or devices installed onto, or in, their UST systems. The required types of equipment or devices are:

1. *Liquid-tight connection* between the fill port and delivery hoses
2. *Spill container* to contain small spills during the hose disconnection (spill containment equipment).
3. **Overfill device** to prevent delivery of too much fuel to the tank (overfill prevention equipment).

Spill containers must be designed to prevent regulated substances from being released into the environment when you disconnect the transfer line or hose from the UST’s fill pipe. Spill containers or sumps must be outfitted with liquid-tight covers or lids made to keep foreign substances such as surface water or groundwater from getting inside of the container, or at least minimize the amount that gets inside.

As discussed earlier in General Operation, you must inspect each of your spill containers to ensure that they are liquid tight, at minimum, every two months (60 days). This includes inspecting all penetration points, the sides, and the bottoms of these containers for liquid-tightness. If debris or liquid is discovered in the containers during inspection, it must be removed and properly disposed within a maximum of 96 hours.

Three pieces of equipment you can use for overfill prevention are:

1. Automatic shutoff valve
2. Automatic flow restrictor (or ball float)
3. Audible and visible alarm

Each of these types of overfill prevention equipment work as their names suggest and their operation will be shown in the upcoming slides.

Once the tank’s inner liquid level reaches a preset level, the:

- **Automatic shutoff valve** automatically shuts off the flow of regulated substances into an UST at a maximum 95% of the tank’s capacity level.
- **Automatic flow restrictor** automatically restricts the flow of regulated substances into an UST at a maximum 90% of the tank’s capacity level.
- **Audible alarm** emits a visible and audible alarm to warn the person making a deposit or delivery at a maximum 90% of the tank’s capacity level—must also have a device or valve made to either shut off automatically or to limit the flow of substances into the UST once its liquid level reaches a maximum preset 98% capacity level.
**Note:** Any flow-restricting device you use must additionally warn the person making a delivery or deposit once the substances in the tank reach the preset liquid level.

**Automatic Shutoff Valve**

Automatic shutoff valves, often referred to as flapper valves, are installed in the fill pipe of the underground storage tanks and automatically stop the flow of regulated substances in the tank during delivery. The flapper is designed to float on the liquid which activates a shutoff valve in the drop tube when the liquid reaches a maximum capacity of 95% of the tank’s capacity level. In this demonstration, the fuel truck is delivering the fuel with Stage I vapor recovery.

**Automatic Flow Restrictor**

Automatic flow restrictors, normally referred to as ball float valves, automatically alert the delivery person and restrict the flow of regulated substances at a preset level no more than 90% of the total capacity of the tank. Ball float valves are installed inside the tank just below the vent opening. As fuel reaches the preset level, the ball floats on the liquid level and seals off the vent, which restricts air that is being displaced from escaping the tank. When this occurs, the fuel delivery is restricted which alerts the delivery person.

**Note:** Any flow-restricting device you use must additionally warn the person making a delivery or deposit once the substances in the tank reach the preset liquid level.

**Overfill Alarm**

Overfill alarms consist of an audible and visible alarm capable of alerting the delivery person when the liquid level in the tank reaches a maximum preset level no higher than the 90% capacity level for the tank. Overfill alarms must also be equipped with a valve or other device which is designed to automatically shut-off or automatically restrict the flow of regulated substances into the tank when the liquid level reaches a preset level no higher than the 98% capacity level for the tank.
Design and Installation Requirements

Owners and operators must install all spill and overfill prevention equipment according to the manufacturer's instructions and a code or standard of practice developed by a nationally recognized association or independent testing lab. They must act appropriately to make certain that all of the underground components of the spill and overfill prevention equipment are protected from corrosion. Any surfaces of the equipment that make direct contact with regulated substances need to be either lined with or made of materials that are compatible with those substances.

Spill and Overfill Control Records

Owners and operators of UST systems must maintain spill and overfill control records in accordance with TCEQ requirements. At a minimum, this requires:

- Owners and operators to keep proper installation records for the entire time that the spill and overfill prevention equipment is used.
- A UST owner and operator to keep the records for a minimum five-year period after the following work has been completed on, or for, spill and overfill prevention equipment:
  - Servicing
  - Repair
  - Maintenance
  - Calibration
- Owners and operators must document the 60-day sump inspection and the disposal documentation of liquids and debris.

Whenever an UST operator or owner qualifies for an exemption from TCEQ’s spill and overfill equipment requirements, the owner/operator must keep proper inventory or transfer records as documentation of the grounds for the exemption for a minimum of five years.

Reporting and Cleanup of Surface Spills and Overfills

When spills and/or overfills happen, the owners and operators of the UST system must clean up the spills and/or overfills at once, notify TCEQ within 24 hours of reportable spill or overfill occurrence, and begin the required corrective action. Suspected or confirmed spills, overfills, or releases must be reported to TCEQ on the Texas Petroleum Storage Tank Incident Report Form (TCEQ-20097).
Forms may be:

- E-mailed (pstrpr@tceq.state.tx.us)
- Faxed (512/239-2216) or
- Phoned in (512/239-2200). Call 512/239-2120 for emergencies during regular business hours, or if after hours, page 512/606-9197.

Types of spills and overfills where reporting and cleanup is required include:

- Spills and overfills of petroleum substances from the UST, that:
  - Cause a sheen on the surface water close by.
  - Result in an environmental release of more than 25 gallons or a lesser amount not cleaned up within 24 hours, if subject to 30 TAC Chapter 334.
- Spills or overfills of hazardous substances, resulting in an environmental release from the UST that is equal to, or higher than, its reportable quantity under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)—40 Code of Federal Regulations (CFR) Part 302.

**Note:** If you experience a spill or overfill of a regulated substance from an UST that you own or operate, which is lower than CERCLA’s reportable quantity, you must control it and clean it up right away. When you cannot clean up the spill or overfill within a 24-hour period, you are required to notify TCEQ immediately.

An important distinction needs to be made between spills from activities regulated by (Title 30 TAC Chapter 334, “Underground and Aboveground Storage Tanks”) and spills that result in a release to the environment within the territorial limits of the State of Texas that are not specifically related to the management or operation of the USTs regulated by Title 30 TAC Chapter 327, “Spill Prevention and Control.” Spills not related to the UST regulations could include a tanker truck spill in a gas station parking lot, which is unrelated to the UST system.

For petroleum product spills of reportable quantity (RQ), not related to the management of the USTs, the owner/operator should notify the State Emergency Response Commission (SERC) in the State of Texas. The TCEQ is part of the SERC. The responsible person shall notify one of the following:

1. TCEQ Emergency Response at: 1-800-832-8224
2. During normal business hours only, the regional office for the TCEQ region in which the discharge or spill occurred; or

For Chapter 327 spills, the RQ for petroleum product and used oil shall be:

- 25 gallons for spill or discharges onto land, except as noted below.
- For spills or discharges to land from PST exempted facilities—210 gallons (five barrels); or
- For spills or discharges directly into water in the state—quantity sufficient to create a sheen

PST exempted facilities are electric service facilities including generation, transmission, distribution equipment and transformers; petrochemical plants; petroleum refineries; bulk loading facilities; and pipelines that are exempted from the Aboveground Storage Tank (AST) program.

**Lesson Summary**

This concludes the lesson content for Spill and Overfill Prevention. Now, let's review the important points.

✔ All UST system operators/owners are responsible for ensuring that spills and overfills do not cause or result in the release of regulated substances such as gasoline and diesel. Ways to avoid releases from spills and overfills are:
  - Installing spill and overfill prevention equipment.
  - Following equipment requirements for spill and overfill prevention equipment throughout a UST's operational life.
  - Having the necessary volume space for petroleum deposits and transfers before beginning these operations.
  - Having persons physically at, or near, deposit and transfer locations to monitor the transfer/deposit of gasoline, diesel, and other fuel products, and prevent/stop any spills or overfills.

✔ Unless transfers of regulated substance do not exceed 25 gallons per occurrence and transfer records are maintained, all UST owners/operators must install the following overfill prevention equipment or devices onto/in, their UST systems:
  - A tight-fill fitting
• A spill container or spill bucket (spill containment equipment)
• Overfill device (overfill prevention equipment)

✓ Three pieces of equipment you can use for overfill prevention are:
  • Automatic shutoff valve to shutoff delivery at a maximum of 95% of the tank's capacity.
  • Automatic flow restrictor (ball float) to restrict delivery at a maximum of 90% of the tank's capacity.
  • Audible and visible alarms to warn the delivery person set at a maximum of 90% of the tank's capacity and must include shutoff or restriction of flow at 98% capacity.

✓ If a spill or overfill occurs, the owners and operators of the UST system must clean up the spill or overfill at once, notify TCEQ within 24 hours of reportable spill or overfill occurrence, and begin the required corrective action. The type of spills or overfills that must be reported include releases that cause a sheen on nearby surface water or result in a release of more than 25 gallons (or a lesser amount if not cleaned up within 24 hours).

✓ UST system owners/operators must keep proper installation records for as long as the spill and overfill prevention equipment is used and keep service, repair or maintenance records for a minimum of 5 years following the inspections or maintenance.
Lesson 7: Financial Assurance

Lesson Focus

This lesson focuses on the following topics:

- Introduction to Financial Assurance
- Required Financial Assurance Amount and Scope
- Demonstrating Financial Assurance
- Financial Assurance Provider Cancellation or Non-renewal
- Reporting, Registration, and Certification
- Financial Assurance and Recordkeeping

Introduction to Financial Assurance

Financial Assurance Basics

Financial assurance, also called "financial responsibility," is critical for dealing with releases of gasoline, diesel, and other fuel products from USTs because it provides a way to pay for the cleanup of releases, or leaks. If you own or operate a UST, TCEQ requires you to have the financial resources to pay for both the corrective action and third-party liability costs resulting from releases of gasoline, diesel, and other fuel products, from your facility's operation of the UST.

In Texas, evidence of financial assurance is documented on the TCEQ–UST Registration and Self-Certification Form TCEQ-0724. This will be discussed in more detail later in this lesson.

Financial assurance must be verified before TCEQ will issue delivery certificates to UST owners and operators. Therefore, you cannot accept delivery or deposits of gasoline and fuel products without financial assurance.
Owners/operators must keep financial assurance for their USTs for the entire time they are in operation as follows:

- Until the tanks have been appropriately removed from service
- Until corrective action has been completed, if required

Although TCEQ requires only one party (owner or operator) to show financial assurance, both the owner and operator will be held responsible for not meeting the financial assurance requirements, if the owner and operator are different persons or companies. For this reason, they must determine who will take and show financial responsibility, or financial assurance.

While local governments are required to demonstrate financial assurance, federal and state governments and their agencies that own USTs, on the other hand, are not. Local governments wishing to self-insure should use a local government financial test.

**Required Financial Assurance Amount and Scope**

Financial Assurance mechanisms must meet two separate limits:

- Per occurrence—sum of money that must be available to cover the costs associated with each occurrence of a UST release or leak.
- Annual aggregate—total sum of money that must be available to cover the costs of all UST releases or leaks that might happen in a year.

The table below summarizes the financial assurance coverage requirements based on the business operation (petroleum marketer (retailer) or all other UST owners), the throughput and the number of owned tanks.
<table>
<thead>
<tr>
<th>Group Of UST Owners and Operators</th>
<th>Per Occurrence Coverage</th>
<th>Aggregate Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Marketers (Retailers), Petroleum Refiners, Petroleum Producers</td>
<td>$1 million</td>
<td>$1 million for owners of 100 or fewer tanks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$2 million for owners of more than 100 tanks</td>
</tr>
<tr>
<td>All Other UST Owners</td>
<td>$500,000 if throughput is 10,000 gallons monthly or less OR $1 million if throughput is more than 10,000 gallons monthly</td>
<td>$1 million for owners of 100 or fewer tanks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$2 million for owners of more than 100 tanks</td>
</tr>
</tbody>
</table>

**Demonstrating Financial Assurance**

TCEQ permits several options for demonstrating financial responsibility:

- Obtain insurance coverage - Insurance available from a private insurer or a risk retention group.
- Obtain a guarantee - You may secure a guarantee for the coverage amount from a parent corporation. The provider of the guarantee has to pass one of the financial tests.
- Obtain a surety bond - A surety bond is available through your insurance agent.
- Obtain a letter of credit - A letter of credit is available from a bank or other financial institution.
- Pass a financial test - If your firm has a tangible net worth of at least $10 million, you may be able to prove your financial responsibility by passing one of the two financial tests. Your company’s Chief Financial Officer must complete a new worksheet annually based on the latest financial statements.
- Set up a trust fund - You may set up a fully-funded trust fund administered by a bank or other financial institution.

Most UST owners and operators purchase insurance coverage for financial assurance. Owners and/or operators buy insurance from either an insurer or a risk retention group. An insurance company provides the owner and/or operator with insurance coverage and issues a certificate of insurance as evidence of coverage. The insurance coverage must include pollution liability insurance. General liability insurance does not provide the required coverage. When purchasing a new facility, the new owner must immediately obtain their own financial assurance. The previous owner's policy will not provide coverage.

Understanding the basics of your policy and taking certain advance actions can maximize your chances for ensuring the policy pays for any claims.

1. Keep documentation of due diligence such as environmental studies and inventory records obtained prior to purchase of the facility. Insurance will generally exclude coverage for any prior releases.

2. Provide complete information on insurance applications. Inaccurate information may be grounds for claims denial.

3. Know and follow TCEQ regulations. Underwriting of insurance policies assumes regulatory requirements are being followed. Many policies have exclusions for willful and knowing noncompliance with regulations.

4. Maintain records for as long as possible, perhaps in excess of TCEQ requirements. To substantiate claims, insurance companies may require: records regarding maintenance, repair and testing of tanks and lines for leak detection; daily inventory control records; monthly reconciliations; automatic tank gauging system printouts; environmental reports (Phase I or II); copies of all compliance testing for cathodic protection; and all reports filed with TCEQ. They may want these records dating back to at least the retroactive date on your insurance policy (discussed below).

5. If you change insurance carriers, discuss retroactive dates with your insurance agent. Policies generally provide coverage only during the policy period. A retroactive date on an insurance policy sets the date at which coverage begins under the policy. You may be able to arrange prior coverage by using a retroactive effective date of coverage. This may be critical if your facility has had a slow release.
6. Review your policy or ask your agent the maximum allowable time to report a suspected release to the insurer. Failure to quickly notify your insurer of a suspected release may result in a claim denial.

**Financial Assurance Provider Cancellation or Non-renewal**

Your financial responsibility method must specify that the provider may cancel your coverage only after sending you advance written notice. TCEQ will also be notified. Before allowing financial assurance to terminate, tank owners and operators should ensure new coverage with no time gaps.

If a tank owner's financial assurance terminates for any reason and is not replaced within 90 days, tanks must be emptied in accordance with TCEQ rules.

**Reporting, Registration, and Certification**

Each UST owner and/or operator must report and make the required forms and records (showing evidence of financial assurance) available to the executive director as required.

- In response to TCEQ requests
- Within 30 days of identifying a release from an UST, unless current financial assurance documentation already is on file with TCEQ
- Provide new financial assurance coverage within 30 days of the date an owner or operator receives notice that a previous financial assurance provider is unable to meet its obligations
- When required self-insurance or cancellation by a financial provider

**Registration and Self-Certification**

*Section 8 of the UST Registration and Self-Certification Form includes the Financial Assurance Form.* On the form, the owner or operator states whether or not Financial Assurance covers both first party corrective action and third party bodily injury/property damage liability or if the owner/operator is exempt. The form includes a check box to select the financial assurance mechanism including the name and contact number of the issuer, the coverage period, and the coverage amount. Owners and operators utilize this form to document changes in financial assurance, within 30 days of the change. The forms must be accompanied with proof of financial assurance.
Financial Assurance and Recordkeeping

All UST owners and/or operators are required to keep proof of all of the assurance mechanisms they use to show financial assurance for each of their petroleum USTs. Evidence that they are using assurance mechanisms must be kept either onsite of the UST or at the owner's or operator's place of business. If these records are kept off-site, owners and operators must timely provide them when TCEQ requests.

Lesson Summary

This concludes the lesson content for Financial Assurance. Now, let's review the important points.

✓ Financial assurance is critical for dealing with petroleum product releases from USTs because it provides a way for owners and operators to pay for the cleanup. It is also called "financial responsibility." TCEQ requires UST owners and operators to show financial assurance for corrective action and third-party liability.

✓ The amount of financial assurance depends upon:
  - The type of business operation an owner/operator has
  - The throughput amount of the tanks
  - The number of tanks an owner/operator has and/or uses

✓ Financial Assurance mechanisms must meet two separate limits:
  - Per occurrence—sum of money that must be available to cover the costs associated with only one occurrence of a UST release or leak.
  - Annual aggregate—total sum of money that must be available to cover the costs of all UST releases or leaks that might happen in a year.

✓ UST owners and operators may use any of the following mechanisms for UST systems:
  - Insurance Coverage (most common)
  - Guarantee from a parent corporation
  - Surety Bond
  - Letter of Credit
  - Pass a Financial Test
  - Trust Fund
✓ If a tank owner's financial assurance terminates for any reason and is not replaced within 90 days, tanks must be emptied in accordance with TCEQ rules.

✓ Whenever you install a new tank or experience changes in either financial assurance coverage amounts or mechanisms, you must register and update the registration for those changes on TCEQ form TCEQ-0724, within 30 days. All UST owners and/or operators are required to keep proof of all of the financial assurance mechanisms they use to show financial assurance for each of their petroleum USTs.
Lesson 8: Release Reporting, Investigation, and Corrective Action

Lesson Focus

This lesson focuses on the following topics:

- Reporting of Suspected Releases
- Investigation Due to Off-Site Impacts
- Release Investigation and Confirmation Steps
- Initial Release Response
- Initial Abatement Measures and Site Check
- Site Assessment
- Removal of Non-Aqueous Phase Liquids (NAPL)
- Investigation for Soil and Groundwater Cleanup
- Corrective Action
- Corrective Action by TCEQ
- Management of Wastes

Reporting of Suspected Releases

Using TCEQs Incident Report Form, owners and operators of UST systems and Aboveground Storage Tanks (ASTs) must report to the agency within 24 hours and follow the procedures of the Release Investigation and Confirmation Steps for any of the following conditions:

- The discovery by owners and operators, or written notification by others, of released regulated substances from the UST or AST site or in the surrounding area;
- Unusual operating conditions observed such as the erratic behavior of product dispensing equipment that is consistent with or indicates a release, the sudden loss of product from the UST system or AST or an unexplained presence of water in a UST, unless the system equipment is found to be defective but not leaking;
- Monitoring results from a UST release detection method that indicates a release may have occurred unless:
  - The monitoring device is found to be defective and is immediately repaired, recalibrated, or replaced;
The monitoring procedure is found to be ineffective, and is modified, and additional monitoring does not confirm the initial result; 
• In the case of inventory control, a second month of data does not confirm the initial result; 
• For secondarily contained UST systems, in which interstitial monitoring is being employed, whenever monitoring or observation indicates a breach in either the primary wall or secondary barrier (whether or not a release of regulated substance into the environment has occurred), unless the primary or secondary barrier is determined to be intact, and the monitoring equipment is found to be defective, and is immediately repaired, recalibrated, or replaced, and additional monitoring does not confirm the initial result.

Note that although this lesson focuses primarily on releases from USTs, suspected or confirmed releases from ASTs must also be reported, investigated, and cleaned up in accordance with TCEQ requirements.

Investigation Due to Off-Site Impacts

When required by the TCEQ, owners and operators of UST systems must follow the Release Investigation and Confirmation Steps in TCEQ rule to determine if the UST system is the source of off-site impacts. These impacts include the discovery of regulated substances (such as the presence of Non-Aqueous Phase Liquids (NAPLs) or vapors in soils, basements, sewer and utility lines, and nearby surface and drinking waters) that have been observed by agency staff or brought to the agency's attention by another party.

Non-Aqueous Phase Liquids (NAPLs) are free-standing petroleum products which can be found floating on water or groundwater or in the bottom of the tank excavation, pits, vaults, etc.
Release Investigation and Confirmation Steps

Unless corrective action for a confirmed release is required by TCEQ rule and initiated, owners or operators must immediately investigate and confirm all suspected releases of regulated substances. They do have a 30-day period in which to do it. The release investigation and confirmation process, includes the following steps:

1. **System check and tightness test if necessary** – First, the UST owner/operator is required to perform system checks, including release detection checks and, if necessary, to perform tightness tests to find out if a leak is actually present in the portions of the tank that normally hold regulated substances and products, any attached delivery piping, or both the tank and the piping. This involves finding out whether the leak detection equipment is defective and/or whether the tanks and piping are tight. If the tests of any of these components reveal defects and/or a leak, owners and operators must either repair or replace the defective components and immediately initiate corrective action. When the tightness test results for the system, tank, and delivery piping fail to reveal a leak and environmental contamination is not the starting place for suspecting a release, owners and operators are not required to take any further action.

2. **Site check** - Alternatively, if environmental contamination is the cause for suspecting a release, but the tests do not point to an existing leak, owners and operators must perform a site check. The site check involves measuring for the presence of a release in the places where contamination is most likely to exist at an UST site. An important part of performing an accurate and productive site check is taking into consideration the following:
   - The nature of the substances it stores
   - The kind of initial alarm or cause for suspecting a leak
   - The type of backfill used on-site
   - The depth to groundwater
   - Any other factors appropriate for identifying both the existence and source of the release

3. **File report**

If testing the UST system, tanks and piping, and performing a site check does not provide evidence of a release, owners or operators must file a report with a detailed description of each of the investigative procedures taken to investigate and confirm the release. The report must
also include all test results and monitoring and a signed statement from the owner or operator certifying that he/she has followed and satisfied the release investigation and confirmation requirements. Within 45 days of first seeing (observing) the suspected release, the owner or operator must file the report with TCEQ.

**Note:** Owners and operators can use alternative procedures approved by TCEQ to satisfy the release investigation and confirmation requirements.

### Initial Release Response

Once owners and operators have confirmed or identified a release from a UST system, they are required to respond to the release within 24 hours. Initial response actions that an owner/operator must take or perform at once after confirming or identifying a release of regulated substances include:

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<td><strong>1.</strong> Taking swift action to stop the release and prevent any additional release of regulated substances into the environment—i.e., shutting down the leaking UST system and removing regulated substance from tanks if necessary.</td>
<td><strong>4.</strong> Removing the UST system from service until the owner/operator can repair it, or have someone else do it.</td>
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| **2.** Identifying, monitoring, and reducing safety hazards from:  
  * Fire  
  * Explosion  
  * Vapors  
  * Petroleum products | **5.** Removing any gasoline, oil, and other fuel product that has leaked, or been released into the environment, as efficiently and as thoroughly as possible. |
| **3.** A potential safety hazard exists if petroleum products or vapors are found in or near any of the following places:  
  * Buildings  
  * Drinking-water wells  
  * Storm sewers  
  * Utility tunnels/manways | **6.** Reporting the confirmed release to TCEQ within 24 hours:  
  * Completed telephone call  
  * Sending a fax  
  * Sending e-mail |
Sometimes, spills or the release of regulated substances present safety hazards (i.e., fire and explosion) that owners and operators will need to report to local fire departments and emergency response officials.

Releases or suspected releases should be reported as required by your policy to your insurance carrier as soon as possible.

**Initial Abatement Measures and Site Check**

After a release, UST owners and operators are responsible for stopping and decreasing the release of regulated substances. They must do so by taking the following abatement measures:

- Remove as much of the regulated substance from the UST system as is necessary to prevent further release to the environment;
- Visually inspect any aboveground releases or exposed below ground releases and prevent further migration;
- Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements);
- Remedy hazards posed by contaminated soils that are excavated or exposed;
- Measure for the presence of a release where contamination is most likely to be present at the UST site, if the source has not been confirmed, and
- Investigate to determine the possible presence of NAPL and begin NAPL removal as soon as practicable.

Owners and operators have 20 days after they have confirmed the release to submit a report to TCEQ summarizing the initial abatement steps they have taken.

**Site Assessment**

After confirming the release and completing the initial abatement measures, the owner/operator may be required to perform a site assessment which must include the following:

- Nature, cause, and estimated quantity of release;
• Surrounding populations, water quality, use and approximate locations of wells potentially affected by the release, subsurface soil conditions, locations of subsurface sewers, climatological conditions, and land use;
• Results of the site check;
• Results of the NAPL investigations;
• Lateral and vertical extent of the on-site contaminated area (soil and groundwater);
• Identification of all potential exposure pathways;
• Site classification;
• An evaluation of Risk-Based Criteria For Establishing Target Concentrations; and
• Any other related information required or requested by the agency.

Within 45 days of the release confirmation, owners and operators are required to submit the site assessment report in the form of a Release Determination Report. The Site Assessment will need to be conducted by a Licensed On-Site Supervisor or a Corrective Action Project Manager working for a Corrective Action Specialist.

Removal of Non-Aqueous Phase Liquids (NAPL)

If owners and operators discover the presence of non-aqueous phase liquid (NAPL), they must remove it to the maximum extent TCEQ determines practicable and continue the required investigations, clean up, and corrective actions.

This must include the following:

• Remove NAPL in a manner that minimizes the spread of contamination into areas that have not been contaminated.

• Make the reduction of NAPL migration a primary objective of the NAPL recovery system.

• Handle regulated substances safely and competently to avoid:
  o Fires
  o Explosions
  o Other health hazards

• Preparing and submitting a product recovery report to TCEQ, within 45 days of release confirmation. The report should include:
o Names of person(s) responsible for using NAPL removal measures
   o Estimated quantities, kinds, and thickness of NAPL measured/observed on site—in wells, boreholes, and excavations
   o Detailed information about the type of NAPL recovery system used
   o Whether the recovery operation will involve on-site or off-site discharge and locations
   o Kinds of treatment applied
   o Steps for getting permits or authorizations for discharge
   o How recovered NAPL is treated/disposed of
   o Related information requested by the agency

**Investigation for Soil and Groundwater Cleanup**

To respond appropriately to a release of regulated substances, including petroleum and other fuel products, you need to know the degree of contamination and the areas affected by the release. The concern here is for:

- Risk associated with the release
- Soil contamination
- Groundwater contamination

Examining and investigating the release site and the surrounding area (i.e., bordering areas) will aid owners and operators in discovering the degree of damage and harm caused by the release. They need to find out the exact locations and concentrations of gasoline, diesel, and other regulated substances that have dissolved into and contaminated groundwater and soil. Often this requires owners and operators to investigate adjacent areas that they do not own that could be affected by the migration of the released substances.

UST owners and operators need to be aware of situations which require an investigation to determine the extent, concentrations, and risk associated with soil and groundwater...
contamination caused by a release. Examples of such situations include:

- Finding that non-aqueous phase liquids need to be recovered.
- Evidence that groundwater wells have been affected by the release.
- Evidence that contaminated soils may have been in contact with groundwater.
- TCEQ requests an investigation because of potential effects of contaminated groundwater/soil on groundwater resources or nearby surface water.

Owners and operators must submit any information collected as a result of such investigations as quickly as possible or by any TCEQ specified deadline.

**Corrective Action**

**Corrective Action Plan**

Sometimes after reviewing release reports, TCEQ requests additional information from site owners and operators about their response to releases, abatement measures they have taken, site checks, and site assessments.

In addition to this additional information, TCEQ might also require UST owners and operators to develop and submit a corrective action plan for how they will respond to contaminated groundwater and soil in accordance with a schedule and format established by TCEQ. An owner or operator may also choose to voluntarily supply a plan which meets TCEQ requirements.

**Public Participation**
Anytime you experience a confirmed release requiring you to take corrective action, you are required to give public notice to those who are affected directly by that release.

**Corrective Action by TCEQ**

Examples of conditions where TCEQ may perform corrective action in response to a release, or a threatened release, are:

- When a UST owner or operator cannot be located
- When the UST owner or operator is unwilling to take the appropriate corrective action themselves
- When TCEQ believes that the UST owner or operator is unable to take the corrective action needed to protect the environment and public health and safety
- When an eligible owner or operator has applied to have a corrective action site placed in TCEQ's Petroleum Storage Tank State Lead Program by July 1, 2011, has granted state contractors and state personnel access to the site, and TCEQ has placed that corrective action site in the State Lead Program
- When TCEQ determines that more expeditious corrective action is necessary

**Management of Wastes**

Owners and operators must, in accordance with all applicable federal and state requirements, manage and dispose of any waste generated as a result of the release of regulated substances from their UST or AST in a manner so that the release does not impact the environment or human health and safety.

**Lesson Summary**

This concludes the lesson content for Release Reporting, Investigation, and Corrective Action. Now, let's review the important points.

✓ Anytime an owner/operator of a UST or AST observes, suspects, or receives notice that regulated substances have leaked or released from the UST or AST, that owner/operator must report it to TCEQ within 24 hours and must follow all TCEQ release investigation and confirmation steps.

✓ UST owners and operators must follow the release investigation and confirmation steps
and procedures to confirm all suspected releases, which are:

- System check and tightness test if necessary
- Site check
- File report

First, the UST owner/operator is required to perform system checks, including release detection checks and, if necessary, to perform tightness tests to find out if a leak is actually present in the portions of the tank that normally hold regulated substances and products, any attached delivery piping, or both the tank and the piping.

The site check involves measuring for the presence of a release in the places where contamination is most likely to exist at a UST or AST site. If testing the UST system, tanks and piping, and performing a site check do not provide evidence of a release, owners or operators must file a report with a detailed description of each of the investigative procedures taken to investigate and confirm the release. The owner or operator must file the report with TCEQ within 45 days of suspecting that a release has occurred.

If you have confirmed or identified a release from a UST system, it is crucial that you respond to the release immediately—within 24 hours.

Proper initial release response is to:

1. Take swift action to stop additional regulated substances from being released into the environment
2. Identify, reduce, and monitor safety hazards
3. Remove the UST system from service until it can be repaired or replaced, if necessary
4. Contain and clean up any regulated substance surface spills or visible releases, as thoroughly as possible
5. Report the release to TCE.

After a release, UST owners and operators are responsible for taking abatement measures, including investigation for the presence of a release where contamination is most likely to be present and removal of non-aqueous phase liquids, or free-standing petroleum products. Owners and operators have 20 days after they have confirmed the release to submit a report to TCEQ summarizing the initial abatement steps they have taken.
After confirming the release and completing the initial abatement measures, the owner/operator may be required to perform a site assessment. The site assessment should determine the nature, cause and estimated quantity of the release, the extent of soil and groundwater contamination, and potential exposure pathways. The site assessment must be documented in the Release Determination Report which must be submitted within 45 days of the release confirmation.

After reviewing release reports, TCEQ may request additional information from site owners/operators about their release response, abatement measures, site checks, and site assessments. UST or AST owners/operators might choose, or be required, to develop and submit corrective action plans for how they will respond to contaminated groundwater and soils.

Anytime you experience a confirmed release that requires taking corrective action, you must give public notice to those affected directly by that release.

At times TCEQ will perform corrective action in response to a release or risk of a release if, for example, owners cannot be located or are unwilling to take corrective action themselves.

Owners/Operators must manage and dispose of any waste generated as a result of releases to prevent impact on the environment or human health and safety. They need to find out the exact locations and concentrations of gasoline, diesel, and other regulated substances that have dissolved into and/or contaminated groundwater and/or soil, and be aware of conditions where they might need to investigate soil and groundwater for cleanup.