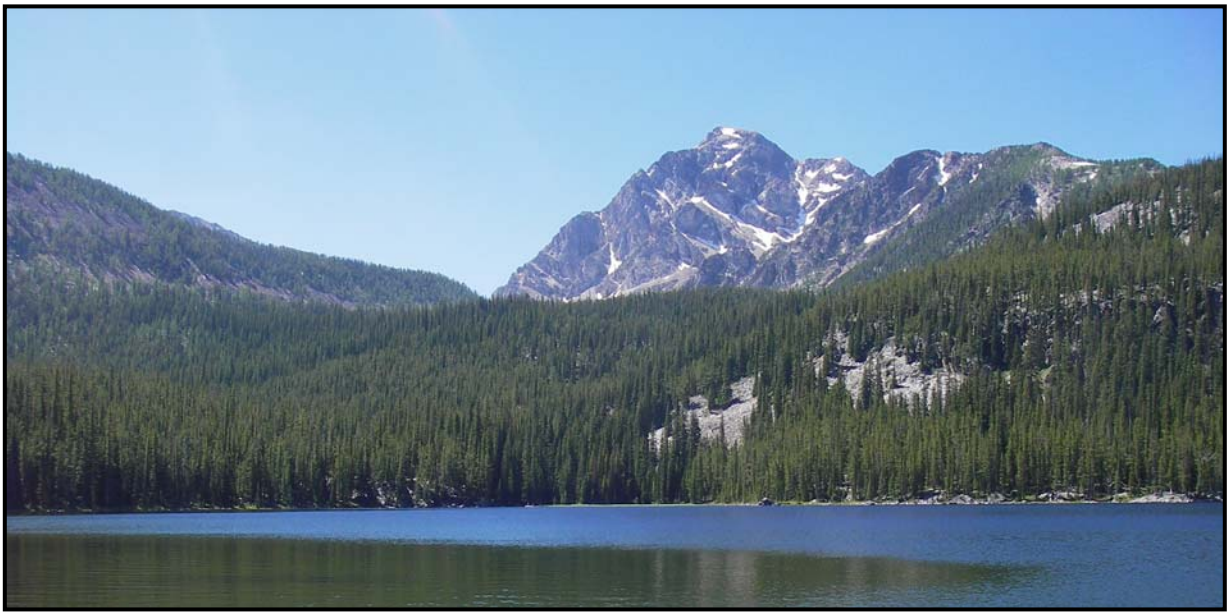


Montana
Underground Storage Tank
Class A Operator Training Manual

DEQ
Montana Department
of Environmental Quality

Reminder Of Required Ongoing Activities For USTs

Keep the appropriate records of these activities

Release Detection Activities (may vary depending on the types of release detection you use)		
Release Detection (See Sections 3.5 and 3.6)	**Activity**	**Minimum Frequency**
Automatic Tank Gauging, Groundwater Monitoring, Vapor Monitoring, And Interstitial Monitoring	**Release Detection Monitoring**	Every 30 days
Inventory Control	**Inventory Measurements**	Daily
	Reconcile Daily Inventory Control Measurements	Every 30 days
	Check Tank For Water	Every 30 days
	Tank Tightness Test	Every 5 years
Statistical Inventory Reconciliation (SIR)	**Inventory Measurements**	Daily
	Release Detection Monitoring	Every 30 days
Manual Tank Gauging	**Testing**	Weekly
	Reconcile Weekly Manual Tank Gauging Tests	Every 4 weeks
	Tank Tightness Test (if required)	Every 5 years
Interstitial Monitoring	**Operability check for Sump Sensors**	Every 12 months
Line Leak Detector	**Test To Demonstrate Proper Function Of Line Leak Detector**	Every 12 months
Line Tightness Test	**Line Tightness Test - for pressurized piping**	Every 12 months
	Line Tightness Test - for U.S. suction piping	Every 3 years
For All Release Detection	**Periodic Calibration And Maintenance Of Release Detection Equipment**	Per manufacturer's instructions
Cathodic Protection Activities (may vary depending on the type of cathodic protection you use)		
Cathodic Protection (See Section 3.6)	**Activity**	**Minimum Frequency**
Impressed Current	**Rectifier Inspection** - keep records of the last 3 inspections	Every 60 days
For Both Impressed Current And Galvanic (Sacrificial) Anodes	**Cathodic Protection Test** - performed by a qualified cathodic protection tester - keep records of the last 2 tests	Within 6 months of installation
		Every 3 years
		Within 6 months of any repairs

Contents

1. Introduction 1

1.1. What Is The Purpose Of This Workbook? 1
1.2. What Is Class A Operator Training? 1
1.3. Why Participating In UST Operator Training Is Important 2

2. How To Use This Workbook 3

2.1. Organization Of The Workbook 3
2.2. Steps For Completing Each Section In Chapter 3 3
2.3. Example: Joe And The A&B Gas Station 4
2.4. Symbols For Chapter 3 4

3. Regulatory Requirements And Best Management Practices For UST Systems At Your Facility 5

3.1. Spill Protection 8
3.2. Correct Filling Practices 9
3.3. Overfill Protection 10
3.4. Corrosion Protection For Your UST System 12
3.4.1 Corrosion Protection for Underground Storage Tanks 13
3.4.2 Corrosion Protection for Underground Piping 15
3.4.3 Cathodic Protection 17
3.5. Release Detection for Tanks 19
3.6. Release Detection for Piping 24
3.7. What To Do For Suspected Or Confirmed Releases 27
3.8. Repairs 29
3.9. Product Compatibility 30
3.10. Class B and Class C Operators 31
3.11. Permanently and Temporarily Closed UST's 32
3.12. Fincancial Responsibility 34
3.13. Notification of New UST's and Changes to UST's 39
3.14. Inspections and Operating Permits 40

Appendices

A. For More Information A-1
B. Definitions B-1
C. Emergency Contacts List C-1
D. Notification of Temporarily Closed Tanks. D-1
E. Montana Certificate of Financial Responsibility E-1
F. Notification Of Underground Storage Tanks F-1
G. Change Of Ownership Notification Form G-1

Reminder Of Required Ongoing Activities For USTs ..... Inside Back Cover

Questions About Completing The Workbook? ..... Outside Back Cover

Chapter 1: Introduction

1.1 What Is The Purpose Of This Workbook?

This workbook is designed to train Class A Operators by:

- clearly explaining the Montana Department of Environmental Quality (DEQ) record keeping, environmental, operation and maintenance requirements for Underground Storage Tanks (USTs) contained in existing DEQ regulations.
- clearly explaining voluntary actions that you can take to improve environmental performance and reduce financial risk regarding your UST.
- helping owners and operators of regulated USTs determine if they are in compliance with existing DEQ UST regulations through compliance checklists.
- meeting Montana DEQ regulations for operator training.

1.2 What Is Class A operator training?

A Class A Operator is the individual who ensures someone is conducting the proper operation and maintenance on the UST facility. The operator training course focuses on educating owners and operators about their UST systems. This includes the State of Montana regulations that apply to them and encourages stewardship of the environment around UST tanks and piping systems. The training allows users of the workbook to understand and determine their compliance with existing Montana DEQ requirements.

Understanding the requirements and best management practices in this workbook and complying with UST regulations will help you be more proactive in protecting the environment around your USTs. Montana environmental laws already require that you follow the requirements described in this workbook.

As a participant in Class A UST operator training, you will:

- use this **workbook** to understand DEQ requirements and best management practices for your USTs and determine compliance for USTs at your facility,

- **complete, sign, and send** the completed workbook quiz to DEQ. Once we receive the quiz, it will be graded. If you receive an 80% or better cumulative score you will be issued a Class A Operator Training certificate. Keep this certificate on file at your facility. This certificate is your proof that you have been trained. After passing the quiz you will be trained as a Class A Operator for any facility in the State of Montana.

- **If the department determines that an UST system does not meet the Environmental Protection Agency's (EPA) significant operational compliance requirements for release prevention and release detection measures identified at http://www.epa.gov/oust/cmplastc/soc.htm, you will have to be retrained in the subjects in which the UST was found to be in significant non-compliance.**

1.3 Why Participating In UST Operator Training Is Important

There are several reasons why your participation in this training is valuable to you.

You are helping to protect **public health and the environment.** Releases from USTs – spills, overfills, leaking tanks and piping – can contaminate groundwater. Your local community may depend on that groundwater as a source of drinking water. Leaking UST's have been described as the most dangerous threat to the countries drinking water. In addition, leaks from USTs can result in fires or explosions, which threaten public safety.

You are protecting your **economic investment**. It is important to quickly detect, report, and clean up releases, as required by the UST regulations. Preventing releases protects your real estate investment. Any product that is lost in a release may cost you in terms of cleanup costs, potential penalties, the lost revenue of product not sold, and resale value of your property. By responding quicky and containing a release, you may be able to reduce cleanup costs and environmental damage.

You are following **environmental laws** by complying with UST regulations. **If you are the owner or operator of one or more USTs, you are legally responsible for preventing and quickly detecting releases from your USTs**. You are also responsible for reporting and cleaning up any releases that occur. You will be held accountable if your UST leaks. So it's in your best interests to prevent leaks or, if they do occur, minimizing damage to the surrounding environment.

Each facility must have at least one Class A operator, one Class B operator and one Class C operator. An individual may be certified in more than one class. Most facilities will have only one Class A, one or two Class B operators and several Class C operators.

This document is not a substitute for the State of Montana law and regulations, nor is it a law or regulation itself. For a comprehensive and complete understanding of the law and regulations, please refer to http://mt.gov.

If you have any questions as you go through this workbook, please refer to Appendix A for other resources or call the Department of Environmental Quality at 406-444-5300. There is also information on the DEQ UST Section website at http://deq.mt.gov/UST/index.asp.

As a new owner or operator of an UST you must complete and return the operator training to the Department of Environmental Quality within 30 days of acquiring responsibility of the facility.

Chapter 2: How To Use This Workbook

This chapter will tell you:

- the organization of the workbook,
- how to complete Class A operator training,
- how to finish the quiz for each section in Chapter 3, and
- what the symbols in chapter 3 mean.

2.1. Organization Of The Workbook

You have already read chapter 1. Chapter 1 explained what the Class A Operator Training is and why it is important to comply with the existing DEQ regulations. This chapter will help you understand the rest of the workbook. There are two remaining parts of the workbook, chapter 3 and the appendices.

Chapter 3 will help you understand what you have to do to comply with existing DEQ UST regulations and to improve the environmental performance of your facility. Chapter 3 contains an introduction and 14 sections. The introduction includes a table to help you identify the USTs at your facility. Each of the 14 sections covers a different part of the existing DEQ UST requirements. **Read each section and complete the quiz** in the separate workbook titled Class A Operator Training Quiz.

The appendices contain information to help you understand the workbook and comply with existing DEQ regulations. They include sample forms that can help you stay in compliance, and a list of definitions for technical words used in the workbook.

If you have any problems filling out the workbook, consult the outside back cover to find DEQ contact information.

2.2. Steps For Completing Each Section In Chapter 3

Directions: Important directions are provided in gray boxes like this one. There are specific directions to follow in each section of chapter 3. Make sure you read the directions before starting a section.

The steps for completing each section in chapter 3 are:

1. Read each section in this workbook. Each section will cover a different regulatory aspect of your underground storage tank. **Remember, you must complete and understand all parts of every section.**

2. After reading all the sections, then go to the Class A Operator Training Quiz and complete the quiz as follows:
   - Answer all the questions in the quiz.
   - Circle the multiple choice answer you believe is correct.
   - If you need help, refer back to the workbook or in Appendix B which contains a list of definitions to help you understand the technical terms used in chapter 3.

3. **After you have finished all the applicable sections and signed the Class A Operator Training Quiz, send the completed quiz to DEQ.**

2.4 Symbols For Chapter 3

You will see symbols next to some parts of this workbook. The symbols are used to highlight key information. Below are the symbols and the meaning of each.

What The Symbols In Chapter 3 Mean

Requirement

- What you **must** do by law; requirements you, as an owner or operator, must meet to be in compliance with federal and state regulations

Best Management Practice

- What you **should** do to help prevent leaks; actions or activities you, as an owner or operator, are encouraged to take in order to reduce the potential of leaks

Important Information

- Information to help you better understand an UST regulatory option

Chapter 3: Regulatory Requirements And Best Management Practices For USTs At Your Facility

This chapter contains the following:

Intro	Identifying Your Tanks
Section 3.1	Spill Protection
Section 3.2	Correct Filling Practices
Section 3.3	Overfill Protection
Section 3.4	Corrosion Protection For Your UST System
Section 3.5	Release Detection for Tanks
Section 3.6	Release Detection for Piping
Section 3.7	What To Do For Suspected And Confirmed Releases
Section 3.8	Repairs
Section 3.9	Product Compatibility
Section 3.10	Class B and Class C Operators
Section 3.11	Permanently and Temporarily Closed UST's
Section 3.12	Financial Responsibility
Section 3.13	Notification of New UST's and Changes to UST's
Section 3.14	Inspections and Operating Permits

Workbook Quiz

This workbook has a **quiz that must be completed** with it to finish the operator training. The quiz is located in the Class A Operator Training Quiz booklet that should accompany this workbook. Each section from this workbook should be read and the quiz questions answered. Make sure to also fill out the information about you and your facility at the beginning of the quiz. Before sending in the completed quiz to DEQ, make sure to **sign and date** it.

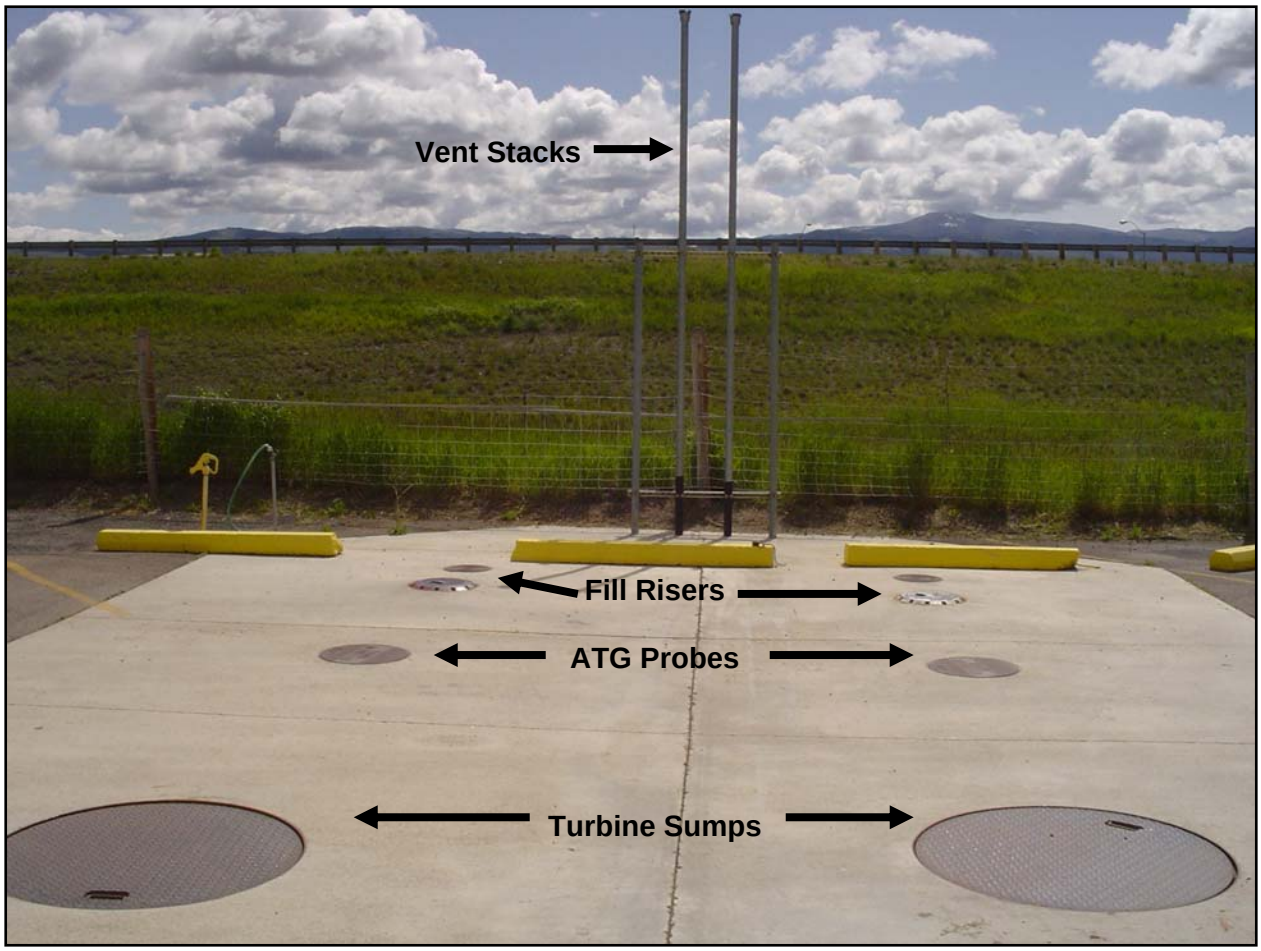
Identifying The USTs At Your Facility

Complete the table on the first page of the Class A Operator Training Quiz to identify facilities you are training for.

- Find the facility ID numbers for the facilities you are training for. This number should be on any letter or other paperwork you have received from DEQ.
- The UST's you train for should include all UST systems at your facility, including temporarily inactive tanks and aboveground tanks with underground piping.

Special Instructions - The following are special considerations for cases where your facility has one or more of the following conditions listed below.

- **Compartmentalized Tanks -** A compartmentalized tank is a tank that has several separated sections to contain different products. Each section is called a compartment. If you have a compartmentalized tank, treat each compartment as a **separate UST** as you complete this workbook.



- **Manifolded Tanks -** Manifolded tanks are two or more tanks connected together by piping. These tanks contain the same product. The piping connecting the tanks allows the product to move from one tank to another as product is added or removed from one of the tanks. If you have Manifolded tanks, treat each Manifolded tank as a **separate UST** as you complete this workbook.

- **Temporarily Closed USTs –** If they are closed properly, temporarily closed USTs do not have to meet the spill and overfill requirements in sections 3.1 and 3.3 or the release detection requirements for tanks and piping in sections 3.5 and 3.6. These tanks must meet the corrosion protection requirements.

- **Aboveground Storage Tanks with Underground Piping –** Enter these facilities into the table as you would with an underground tank. You must meet all the requirements for the underground piping of these facilities. Aboveground tanks do not need to have to meet the spill and overfill requirements in sections 3.1 and 3.3, the corrosion protection for tanks section in Section 3.4, or release detection for tanks in Section 3.5. Aboveground tanks are regulated by the Montana Fire Marshall and the EPA.

Montana UST Facility

Registration Fees

For each of your tanks that is regulated by the UST Section of DEQ, you will be assessed an annual fee of $108 for every tank of 1100 gallons or more and $36 for every tank under 1000 gallons. This includes all types of tanks mentioned in this section. Fees will be due annually until your tanks are permanently and properly closed. This means you will have annual fees even if the tank is temporarily out of use (Inactive).

Section 3.1: Spill Protection

Spill protection devices are used at fill pipes to catch drips and small spills that may occur when the delivery hose is disconnected from the fill pipe. Spill protection devices are also called spill buckets or catchment basins.

Spill protection is typically not designed to contain product for long periods of time. Fuel can degrade the material the spill buckets are constructed of. Spill buckets are considered a maintenance item that need to be periodically replaced, however you can extend the life of your spill buckets by making sure they are kept clean.

Directions For Completing The Spill Protection Section

Step 1: Determine if you have spill protection.

Step 2: Read the requirements and best management practices below.

Step 3: After reading this section, continue to the next section.

Take the following steps to figure out what is at your facility:

- Lift each fill port lid and look to see if you have spill protection around your fill pipe.
- Look through your old records to check if you had spill protection installed.
- Ask the contractor who installed your UST.

Requirements And Best Management Practices For Spill Protection

Any UST that receives more than 25 gallons in a single delivery **must** have spill protection at each fill port where product delivery could occur.

Spill protection must prevent the release of product to the environment when the transfer hose is detached from the fill pipe. The spill protection cannot meet this requirement if it is not able to contain liquid or if it is full of liquid or solid debris when the tank is being filled.

Spill Bucket and Fill riser with cap off

Even though tanks that ***never*** receive deliveries of more than 25 gallons of product at a time are not required to have spill protection, you should consider using spill protection as part of good UST system management. Many used oil tanks fall into this category.

Section 3.2: Correct Filling Practices

Requirements And Best Management Practices For Correct Filling Practices

As an owner or operator, **you are responsible for any release of product** that occurs due to spilling or overfilling during product delivery.

- You must ensure the amount of product to be delivered will fit into the available empty space in the tank.
- You must make sure the transfer operation is monitored constantly to prevent overfilling and spilling.

A good management practice that will help you meet the correct filling practice requirements is to make sure the activities below are performed each time you have product delivered to your tank. The table below describes activities to perform before, during, and after product delivery. Human error such as ordering too much fuel, filling the wrong tank, ignoring alarms and disabling overfill equipment are the most common causes of overfills.

Activities To Perform Before, During, And After Product Delivery	
What To Do Before Your Tanks Are Filled	Determine and record accurate readings for product and water in the tank before product delivery. Order only the quantity of product to fill 90 percent of the tank. **Remember, the formula for determining the amount of product to order is:** **[tank capacity (gallons) X 90%] — gallons of product in tank now = amount to order** **Example:** You have a 10,000 gallon tank and currently have 2,000 gallons in the tank. **(10,000 gal X 0.9) — 2,000 gal = 7,000 gal (amount to order)** Make sure the delivery person knows which type of overfill device is on the tank and what actions to perform if it activates. Review and understand the spill response procedures. Make sure the spill bucket is empty, clean, and will contain spills. Create an action plan in the case there is an overfill.
What To Do While Your Tanks Are Being Filled	Have an accurate tank capacity chart available for the delivery person. Have a person responsible for monitoring the delivery available each time tanks are being filled. The delivery person makes all hook-ups. The person monitoring the delivery should be prepared to stop the flow of product from the truck to the tank at any time and respond to any unusual condition, leak, or spill. Make sure spill response supplies are available in case a spill or overfill occurs. Make sure there are safety barriers around the delivery area. Make sure there is adequate lighting around the delivery area.
What To Do After Your Tanks Are Filled	Have a person available to monitor the disconnection of hook-ups following delivery. The delivery person disconnects the hook-ups. Determine and record accurate readings for product and water in the tank after delivery. Verify the amount of product received. Make sure fill ports are properly secured. Make sure the spill bucket is free of product and clean up any small spills.

Continue to Section 3.3

Section 3.3: Overfill Protection

Information

Overfill protection equipment installed on USTs helps prevent your tanks from being overfilled during product delivery. Overfill protection is designed to stop product flow, reduce product flow, or alert the delivery person during delivery **before** the tank becomes full and begins releasing product into the environment. The department recommends you test your overfill protection at least once a year for functionality.

There are three common types of overfill protection:

- overfill alarms
- automatic shutoff devices (flapper valve)
- ball float valves

Directions For Completing The Overfill Protection Section

Step 1: Determine if you have overfill protection.

Step 2: Read the requirements and best management practices below.

Step 3: After reading this section, continue to the next section.

Identifying The Types Of Overfill Protection You Have

Take the following steps to figure out what is at your facility.

- Read the descriptions below to determine if you have overfill protection.
- Look through your old records to see if you had overfill protection installed. Check for the names of the overfill protection type.
- Ask the contractor who installed your UST.

You must have overfill protection for every UST that is filled with more than 25 gallons of product at one time.

The overfill alarm must be located so it can be seen and/or heard from where the UST is filled. This ensures that the person responsible for monitoring the delivery will know when the tank is almost full.

Fuel Drop Into An UST

Descriptions Of Different Types Of Overfill Protection

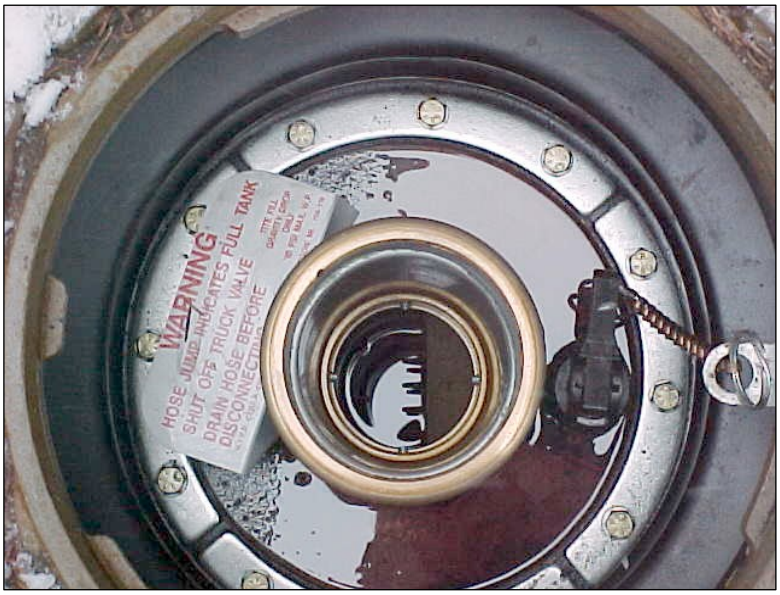
Overfill Alarms - An overfill alarm has a sensor in the tank. The sensor is typically connected to a monitoring device such as an automatic tank gauge (ATG). An overfill alarm provides a warning that can be seen or heard (or both) by the person delivering the product when the tank is close to being full.

Sample Overfill Alarm

Ball Float Valves – A ball float valve is located inside the tank where the vent line exits the tank. You might find it difficult to determine whether or not you have this device because of where it is located. You might be able to find an extractor port for the ball float valve. Otherwise, you will need to look through your paperwork to determine whether your tank has this device; or you should ask the contractor who installed your tanks. Ball float valves will slow down and then stop the flow of fuel into the tanks once the fuel reaches a certain level. Ball float valves will only work if the top of your tank is air tight. If air is allowed to escape the tank during delivery, then fuel can still flow into the tank.

Sample Ball Float Valve

Automatic Shutoff Devices (Flapper Valve) - An automatic shutoff device is located at the fill pipe of your tank. Look down your fill pipe to see part of this device. You will see what appears to be a line cutting through your fill pipe (or a half moon shape in your fill pipe). Automatic shutoff devices will slow down and then stop the flow of fuel into the tanks after fuel reaches a certain level.



Looking down a fill pipe at a flapper valve

Section 3.4: Corrosion Protection for your UST system

Information All of your regulated tanks and piping that are underground and routinely contain product must be protected from corrosion.

You can protect your underground tank systems from corrosion in several ways. Your tank systems may be:

- made of fiberglass reinforced plastic (FRP) or flexible plastic,
- steel that is coated and cathodically protected,
- steel that is jacketed or clad with a non-corrodible material (such as fiberglass),
- steel that is cathodically protected and/or internally-lined (this option is only allowed for older tanks installed on or before December 22, 1988),
- metal components that are secondarily contained by a non-corrosive material,
- metal without additional corrosion protection (if specific criteria are met).

Internal lining and cathodic protection require periodic operation and maintenance activities.

All underground tanks installed after December 22, 1988 need to meet all appropriate construction standards and must be installed according to a standard code of practice and manufacturer's instructions.

✓ Keep all paperwork related to your corrosion protected tanks and piping (examples include paperwork related to: installation, cathodic protection, integrity assessment, repair, and internal lining).

Directions For Completing The Corrosion Protection Section

Step 1:	Determine what method of corrosion protection you have on your UST system. Different parts of your UST system may use different methods of corrosion protection.
Step 2:	Read the requirements and best management practices for each type of system, remember the quiz will cover all types of systems.
Step 3:	Continue to Section 3.5

3.4.1: Corrosion Protection for Underground Storage Tanks

Identifying The Types Of Tanks You Have

Take the following steps to figure out what is at your facility.

- Read the descriptions below to determine which tank types you have.
- Look through your old records to see if you have tank installation information. Check for the names of the tank types.
- Ask the contractor who installed your tank.

Tank Type Descriptions

Fiberglass Reinforced Plastic (FRP) Tank - This tank is made of fiberglass reinforced plastic. Examples of current and past FRP tank makers include Owens Corning, Xerxes, Cardinal, Fluid Containment, and Containment Solutions. FRP tanks meet the corrosion protection requirements without additional equipment or operation and maintenance.

Sample FRP tanks

Jacketed Steel Tank - This is a steel tank that is encapsulated (or jacketed) in a non-corrodible, nonmetallic material such as fiberglass or polyethylene. This tank is secondarily contained. There is a space between the steel wall and the jacket material. This space may be monitored for a breach of either the inner wall or outer jacket. Examples of jacketed tank brands include: Permatank®, Glasteel II®, Titan®, Total Containment®, and Elutron®. Jacketed steel tanks meet the corrosion protection requirements without additional equipment or operation and maintenance.

Clad Steel Tank - This tank is a steel tank that has a thick layer of non-corrodible material such as fiberglass or urethane that is mechanically bonded (clad) to the outside of the steel tank. This cladding helps protect the outside of the steel wall from corroding. Examples of clad tank brands include: ACT-100®, ACT-100-U®, Glasteel®, and Plasteel®. Clad steel tanks meet corrosion protection requirements without additional equipment or operation and maintenance.

Sample Clad Tank

Internally-Lined Steel Tank - This is a steel tank with an internal lining. Typically, this type of tank was originally installed as a bare steel tank before December 22, 1988 and had an internal lining installed at some later date. Internally-Lined steel tanks meet corrosion protection requirements only if the tank was installed before December 22, 1988.

Internally-Lined And Cathodically Protected Steel Tank - This is a steel tank that has both an internal lining and cathodic protection. Typically, this type of tank was originally installed as a bare steel tank before December 22, 1988 and had cathodic protection and internal lining installed at some later date. Usually this type of tank will have an impressed current cathodic protection system. Internally-Lined and cathodically protected steel tanks meet corrosion protection requirements if they were installed before December 22, 1988 and also meet the cathodic protection requirements in Section 3.4.3.

Cathodically Protected Steel Tank - This is a steel tank that has a cathodic protection system but does not have an external coating. Typically, this type of tank was originally installed as a bare steel tank before December 22, 1988 and had cathodic protection installed at some later date. Tanks installed after December 22, 1988 are required to be both coated and cathodically protected. Usually this type of tank will have an impressed current cathodic protection system. Cathodically protected steel tanks meet the corrosion protection requirements if they were installed before December 22, 1988 and also meet the cathodic protection requirements in Section 3.4.3.

Coated And Cathodically Protected Steel Tank - This is a steel tank that has both an external coating and cathodic protection. An example of a coated and cathodically protected tank brand is the sti-P_3® tank. This type of tank is usually installed with galvanic (sacrificial) anodes for cathodic protection. However, these tanks may have an impressed current cathodic protection system if the galvanic (sacrificial) anodes no longer protect the tank from corrosion. Coated and cathodically protected steel tanks meet corrosion protection requirements if they also meet the cathodic protection requirements in Section 3.4.3.

Metal Tank With No Additional Corrosion Protection - This is a tank made of metal such as steel or copper. It does not have cathodic protection, internal lining, or any non-corrodible material that encapsulates or bonds to the outside of the tank. This type of tank does not meet DEQ UST rules and regulations.

Corroded Metal Tank

Hole in a metal tank from corrosion

3.4.2: Corrosion Protection for Underground Piping

Metal components, such as **flex connectors**, on any type of product piping must be protected from corrosion. They may be isolated from the soil or be cathodically protected by one of the methods discussed in Section 3.4.3.

Sample Flex Connector

Identifying The Types Of Piping You Have

Take the following steps to figure out what is at your facility.

- Read the descriptions below to determine which types of piping you have.
- Look in your dispenser sumps and turbine sumps (these are areas under your dispenser and above your tank where piping and other equipment are located) to see if you can identify the piping. Some piping may have metal flexible connectors in these areas. Look for the piping beyond the metal flexible connectors.
- Look through your old records to see if they match any of the names in the descriptions.
- Ask the contractor who installed your piping.

<u>Piping Type Descriptions</u>

Fiberglass Reinforced Plastic (FRP) Piping - This piping is nonmetal and is made of fiberglass reinforced plastic. It is a rigid piping (not flexible). Examples of FRP piping makers include Ameron and Smith Fiberglass Products Inc. This piping type may also have metal connectors associated with it. FRP piping meets the corrosion protection requirements without additional equipment or operation and maintenance.

Sample FRP Piping

Coated And Cathodically Protected Steel Piping - This is steel piping that has both an external coating and cathodic protection. Coated and cathodically protected steel piping meets corrosion protection requirements if it also meets the cathodic protection requirements in Section 3.4.3.

Cathodically Protected Metal Piping - This is metal piping without an external coating that has a cathodic protection system. Typically, this type of piping was originally installed as a bare metal before December 22, 1988 and had cathodic protection installed at some later date. Piping installed after December 22, 1988 must be both coated and cathodically protected. Cathodically protected steel piping meets the corrosion protection requirements if it was installed before December 22, 1988 and also meets the cathodic protection requirements in Section 3.4.3.

Coated Steel Piping

Metal Piping With No Additional Corrosion Protection - This is metal piping that does not have any additional corrosion protection. This type of piping does not meet DEQ UST rules and regulations..

Flexible Plastic Piping - This type of piping is made of plastic that is flexible. Examples of nonmetal flexible piping brand names include: Poly-Tech, Dualoy 3000, EnviroFlex, GeoFlex, Perma-Flexx, Omniflex, and Co-Flex™. This piping type may also have metal connectors associated with it. Flexible plastic piping meets the corrosion protection requirements without additional equipment or operation and maintenance.

Roll of Flexible Plastic Piping

Information

Most leaks of UST systems occur in the piping. No matter which type of piping is present at your facility, the piping requires proper maintenance to ensure its operation. It is good practice to periodically check your sumps by visually checking for any kind of release or other problems.

Booted Vent Stacks (meets Corrosion Protection Requirements for Vent Stacks)

3.4.3: Cathodic Protection

Information

Cathodic protection is one option for meeting the corrosion protection requirements for metal tank and piping components that are in contact with the ground and may contain product. Components of your UST that may have cathodic protection include: metal tanks, piping, and piping components such as turbine pump heads, flexible connectors, and swing joints.

You must have your cathodic protection system tested periodically to make sure it is working properly. The test must be conducted by a qualified cathodic protection tester within six months of installation and then at least every three years. In addition, if you have any repairs conducted to your cathodically-protected UST, you must have a cathodic protection test conducted within six months of that repair.

- You must keep records of the last two cathodic protection tests.
- If your cathodic protection system does not pass the test, have your cathodic protection system evaluated and fixed by a corrosion expert. Keep all records of the corrosion expert's evaluation and repairs to your cathodic protection system.

There are two types of cathodic protection: impressed current and galvanic (or sacrificial) anodes. They are described on the next page

Your cathodic protection system must operate continuously to protect the metal tank and piping components in direct contact with the ground.

- If your cathodic protection system is disconnected or turned off, your underground UST components are not protected from corrosion.
- **Never** turn off your rectifier and **never** disconnect a galvanic anode, **unless** contractors need to turn off or disconnect your cathodic protection for short periods during testing or for repairs.

Take the following steps to figure out what types of cathodic protection you use at your facility.

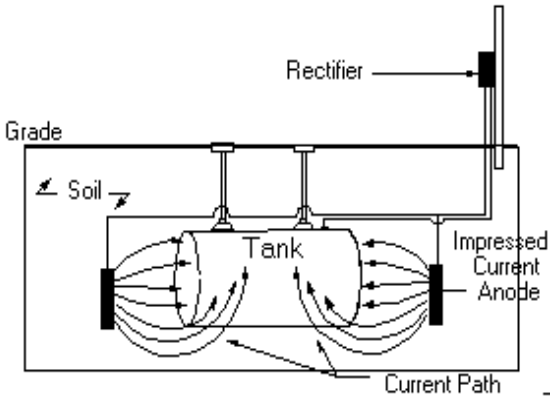
- Read the descriptions on the next page to determine the types of cathodic protection you use.
- Look through your old records to see if they match any of the names in the descriptions.
- Ask the contractor who installed your cathodic protection system.

<u>Cathodic Protection Descriptions</u>

Impressed Current Systems

An impressed current system uses a rectifier (a device for converting alternating current into direct current) to provide direct current through anodes to the metal tank, piping, or other underground components to achieve corrosion protection. The diagram below illustrates impressed current cathodic protection.

How to tell if you have an impressed current system: You should have a rectifier located somewhere at your facility. You must check that your rectifier is functioning every 60 days and keep documentation of the 3 most recent rectifier checks. Impressed current cathodic protection systems are typically installed in the field. Impressed current can protect large areas of metal that are in contact with the soil.



Sample Impressed Current System Diagram

Rectifier Box for An Impressed Current System

Galvanic (Sacrificial) Anode Systems

A galvanic (sacrificial) anode system uses anodes that are buried and attached to metal UST components for corrosion protection. The anode is more electrically active and will sacrifice itself (corrode) to protect the metal component from corrosion. A sample picture of an anode attached to a tank is shown on the right. Galvanic anodes can protect small areas of metal in contact with the soil.

How to tell if you have a galvanic (sacrificial) anode system: It is more difficult to tell if you have a galvanic anode system because you typically cannot see the anodes and there is no rectifier. The anodes are attached to the underground component they are protecting and are buried. These anodes are usually installed on tanks at the factory (such as on the sti-P3® tank) and can be installed on piping and other underground metal components in the field. In order to determine whether you have a galvanic system, look at any installation paperwork you might have or contact the contractor who installed the cathodic protection system.

Tank with Galvanic cathodic protection (Notice the sacrificial anode on the end)

Section 3.5: Release Detection For Tanks

Information

You have several options for meeting release detection (also called leak detection) requirements for your tanks. They include:

- Automatic Tank Gauging
- Interstitial Monitoring (for tanks with secondary containment)
- Groundwater Monitoring
- Vapor Monitoring
- Inventory Control and Tank Tightness Testing (a temporary method)
- Manual Tank Gauging (for small tanks)
- Manual Tank Gauging and Tank Tightness Testing (a temporary method for small tanks)
- Statistical Inventory Reconciliation (SIR)

Directions For Completing The Release Detection For Tanks Section

Step 1: Determine if you have release detection for your tanks.

Step 2: Read the requirements and best management practices for all types of release detection.

Step 3: Continue to Section 3.6.

FRP Tanks on Trucks

Take the following steps to figure out what methods you use at your facility.

- Read the descriptions below to determine which tank release detection method you use.
- Look through your old records to see if they match any of the names in the descriptions.
- Ask the contractor who installed your release detection system.

Requirements And Best Management Practices For All Tank Release Detection Methods

You must keep records of release detection testing for at least one year. For most leak detection methods you are required to have **monthly** passing results from the past 12 months. The only exception to this is if you meet all requirements to be allowed to do annual manual tank gauging on a small tank.

Your method of release detection must meet specific performance requirements.

- You must keep documentation from the manufacturer, vendor, or installer for at least five years which shows your release detection equipment can meet performance requirements.
  - One way to obtain copies of this documentation is to access the National Work Group for Leak Detection Evaluations list. This list may be found at: http://www.nwglde.org

Your release detection must be installed, calibrated, operated, and maintained according to the manufacturer's instructions.

- Keep all schedules of required calibration and maintenance provided by the equipment manufacturer for at least five years.
- Keep all records of calibration, maintenance, and repair for at least one year after the activity occurred.

✓ Make sure your vendor or installer provides you with the information and training necessary to make sure your release detection equipment works effectively to detect leaks.

✓ Keep all of your records and paperwork for the life of the tank.

Tank Nest and Vent Stacks

✓ Periodically have a qualified UST contractor, such as the vendor who installed your release detection system, service your leak detection equipment according to the manufacturer's service instructions.

- Components can wear out and must be checked periodically. Many vendors recommend or require this maintenance activity at least once annually.

✓ Make sure employees who run, monitor, or maintain the release detection system know how to run, monitor, or maintain the equipment and to who to report problems to. Develop and maintain regular training programs for all employees.

Directions For Completing The Release Detection For Tanks Section

Step 1: Determine if you have release detection for your tanks.

Step 2: Read the requirements and best management practices below.

Step 3: After reading this section, fill out the checklist for spill protection in the Class A Operator Training Checklist.

Take the following steps to figure out what methods you use at your facility.

- Read the descriptions below to determine which tank release detection method you use.
- Look through your old records to see if they match any of the names in the descriptions.
- Ask the contractor who installed your release detection system.

Release Detection Descriptions

Automatic Tank Gauging (ATG) Systems - An ATG system is a sensor permanently installed in a tank and wired to a monitor to provide information such as product level and temperature. You should have a monitor (sometimes called an ATG) mounted somewhere at your facility. ATG system monitors automatically calculate the changes in product volume that can indicate a leaking tank and can be set to activate an alarm when there is a suspected problem with your tank.

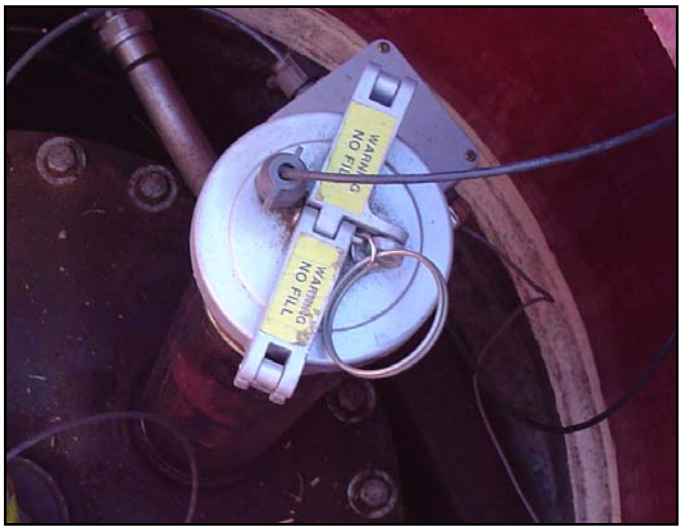
Sample ATG in Alarm

Inventory Control And Tank Tightness Testing - This method involves measuring the contents of the tank, recording the amount of product pumped each day, and reconciling that data with measurements and records of product delivery. Typically, a measuring stick is used to take the measurements. This combined method also includes tightness testing every five years. **This method may only be used for up to ten years after installing a new tank.**

Secondary Containment With Interstitial Monitoring - Secondary containment is an additional barrier between the portion of an UST that contains product and the outside environment. **Hazardous substance tanks must have secondary containment with interstitial monitoring or a waiver from DEQ.** Examples of secondary containment include the outer tank wall of a double-walled system, an excavation liner, and a bladder inside a tank. The area between the inner and outer barriers is called the interstitial space and can be monitored manually or automatically. You may have interstitial monitoring ports on the pavement at your facility.

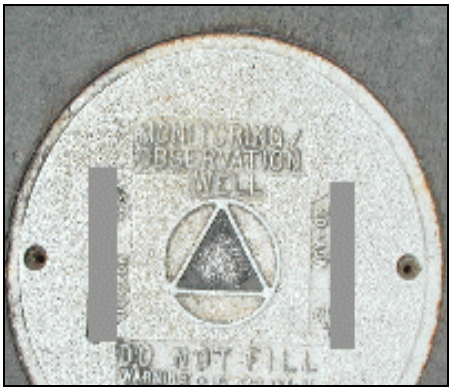
You might perform interstitial monitoring by doing one of the following:

- manually checking the interstitial space for product or water.
- manually checking the interstitial space for the appropriate liquid level (for interstitial spaces designed to be filled with liquid).
- manually checking a vacuum or pressure level maintained in the interstitial space.
- electronic sensors in the interstitial space that are connected to and monitored by electronic monitoring equipment.



Tank ATG Riser

Groundwater Monitoring - Groundwater monitoring uses monitoring wells placed around your tank field to look for the presence of liquid product floating on the groundwater at the UST site. You should be able to see monitoring well covers at your facility. There are two ways you can perform groundwater monitoring:



Sample Monitoring Well Cover

Bailing A Groundwater Monitoring Well

- **Manual** - use a bailing device (see picture above) to check each well for product at least once every 30 days.
- **Electronic** - use an electronic monitor at your facility connected to electronic sensors in the monitoring well that checks for the presence of product at least once every 30 days.

Vapor Monitoring - Vapor monitoring uses monitoring wells to look for the presence of vapors in the soil at the UST site. Vapor monitoring will not work well with product that does not easily vaporize (such as diesel fuel). You should be able to see monitoring well covers at your facility. There are two ways you can perform vapor monitoring:

- **Manual** - use a hand-held device such as a photo-ionization detector (PID) or flame-ionization detector (FID) to check for vapors at each monitoring well at least once every 30 days.

- **Electronic** - use an electronic monitor at your facility connected to electronic sensors in each monitoring well that check for the presence of vapors at least once every 30 days.

Manual Tank Gauging - Manual tank gauging alone may be used only for tank that meet certain requirements and are 1,100 gallons or less. It involves taking your tank out of service for the testing period each week, during which the contents of the tank are measured at the beginning and end of the test period. Typically, a measuring stick is used to take the measurements. The measurements are then compared to weekly and monthly standards to determine if the tank is tight.

Manually Measuring the Fuel Level In a Tank

Manual Tank Gauging And Tank Tightness Testing - This method is for tanks of 2,000 gallons or less capacity. Manual tank gauging involves taking your tank out of service for the testing period each week, during which the contents of the tank are measured at the beginning and end of the test period. Typically, a measuring stick is used to take measurements. The measurements are then compared to weekly and monthly standards to determine if the tank is tight. This combined method also includes tightness testing every five years. **This method may only be used for up to ten years after installing a new tank.**

Statistical Inventory Reconciliation (SIR) - SIR is a method of release detection where computer software is used to conduct a statistical analysis of inventory, delivery, and dispensing data you collect every 30 days. A measuring stick or an ATG is commonly used to gather the inventory data. Depending on the vendor, you may either have to send your data to the vendor and receive a report or enter the data into a computer program that provides you with the results. The result of the analysis may be *pass*, *inconclusive*, or *fail*.

Section 3.6: Release Detection For Piping

Information

When looking at release detection requirements for piping, we must look at how product is delivered through the piping. There are several types of product delivery systems for piping that could be used with underground storage tanks. A product delivery system is piping that delivers product from one tank to another tank or from a tank to a dispenser. Product delivery systems may be either pressurized or operate by suction. In addition, piping could either be above ground or underground. The release detection requirements apply to piping delivery systems that are underground only. The release detection requirements are different depending on whether the piping delivery system is pressurized or suction.

Directions For Completing The Release Detection For Piping Section

Step 1: Determine if you have release detection for your underground piping.

Step 2: Read the requirements and best management practices for all types of release detection for piping.

Step 3: Continue to Section 3.7.

Identifying the types of product delivery you have

Take the following steps to figure out what is at your facility.

- Read the descriptions on the next page to determine which types of piping you have.
- Look through your old records to see if they match any of the names in the descriptions.
- Ask the contractor who installed your piping system.

Exposed Underground Piping System

Product Delivery System Descriptions

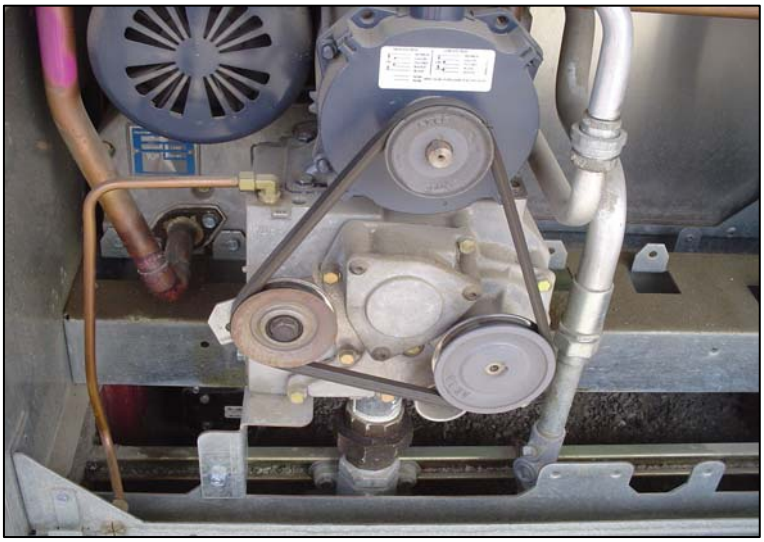
Sample Sump and Lid cover

Pressurized product delivery pushes product from the tank to the dispenser through piping. Pressurized piping delivery commonly uses a submersible turbine pump (STP) located inside the tank. You should be able to tell if you have a pressurized piping system by looking for a STP head in a sump above the tank. These sumps are usually covered with a lid and may also have a sump cover under the lid. In rare cases, pressurized piping delivery may be by gravity feed. Gravity feed has no pump and relies on the downward slope of the piping to transport product.

Sample Sump of a Pressurized System

Sample Sump of a Suction system (U.S. Suction)

Suction product delivery pulls product from the tank to the dispenser through the piping by using a suction pump located at the dispenser. Suction piping operates at less than atmospheric pressure. You should be able to tell if you have suction piping by looking for a suction pump (you may see pulleys and belts) inside the dispenser. There will not be a STP pump head in a sump above the tank.



Example Of A Suction Pump Inside A Dispenser

Requirements For Release Detection of Piping

Pressurized piping must have leak detection for two different criteria. Piping must have at least one method for:

- Continuous catastrophic leak detection (3 gallons per hour or more) and;
- Monthly leak detection (.2 gallons per hour or more)
  - A line tightness test may substitute for the monthly method if it can detect a leak of .1 gallons per hour or less.

LLD Installed on a Submersible Turbine Pump

Pressurized piping must have an automatic line leak detector (LLD) or *continuous* interstitial monitoring installed for catastrophic (3 gallons per hour or more) leak detection.

Suction piping may only require a monthly method of leak detection.

Release detection requirements for continuous interstitial monitoring must be met if your suction piping meets both the following conditions (this piping is considered to be pressurized piping):

- the piping is sloped so that some of the piping goes below the top of the tank
- the piping is not visible (underground)

To meet piping release detection requirements you may have any of the following on your UST system

- **monthly vapor monitoring**
- **monthly groundwater monitoring**
  If you are using groundwater or vapor monitoring for your tank, you may be using these methods for your piping too.
- **monthly SIR** - check your monthly SIR reports to see if this method is also being used for your piping.
- **monthly LLD monitoring** that tests for at least a .2 gallon per hour leak
- **interstitial monitoring** - to use this method, your piping must be secondarily contained and you must be monitoring the interstitial space at least once every 30 days for releases. If you have a **hazardous substance UST**, you must either use interstitial monitoring or have a waiver from DEQ.
- **line tightness test** - you must have a line tightness test conducted at least every 12 months for pressurized piping or every 3 years for U.S. suction piping.

No release detection is required for suction piping that meets the following conditions:

- the piping is sloped so product will drain back to the tank when suction is lost, **and**
- there is only one check valve located as close as practical to the suction pump beneath the dispenser.

Piping that meets these two criteria is sometimes called **safe suction or European suction**.
If safe suction loses its prime then you should conduct a line tightness test.
Piping that does not meet these conditions is called U.S. suction or American suction.

Section 3.7: What To Do For Suspected Or Confirmed Releases

Information Personnel at your facility should be fully prepared to respond to releases before they occur. In addition, employees need to know what to do when release detection methods indicate a suspected or confirmed release.

Requirements And Best Management Practices For Suspected Or Confirmed Releases

You must respond to, investigate, and report suspected or confirmed releases when they occur.

Most petroleum releases originate from the piping of your UST system.

The following steps will assist you in responding to suspected or confirmed releases.

Step 1. Stop The Release

- Take immediate action to prevent the release of more product.
- Turn off the power to the dispenser and tie a plastic bag around the nozzle.
- Make sure you know where your emergency shutoff switch is located.
- If necessary, empty the tank. Be careful to avoid further contaminating the site. You may need the assistance of your supplier or distributor.

Step 2. Contain The Release

Contain, absorb, and clean up any surface release. You should keep enough absorbent material at your facility to contain a spill or overfill of petroleum products until emergency response personnel can respond to the incident.

The suggested supplies include, but are not limited to, the following:

- Containment devices, such as containment booms, dikes, and pillows.
- Absorbent material, such as kitty litter, chopped corn cobs, sand, and sawdust. Be sure you properly dispose of used absorbent materials.
- Mats or other material capable of keeping spill or overfill out of nearby storm drains.
- Spark-free flash light.
- Spark-free shovel.
- Buckets.
- Reels of caution tape, traffic cones, and warning signs.
- Personal protective gear.

Step 3. Identify Any Hazards

Identify any fire, explosion, or vapor hazards and take action to neutralize these hazards.

Step 4. Call For Help

Contact your local fire or emergency response authority. Make sure you have these crucial telephone numbers prominently posted where you and your employees can easily see them.

Step 5. Report To Authorities

If you observe any of the following, **contact DEQ Remediation at 1-800-457-0568** to report a suspected or confirmed release as soon as possible (within 24 hours):

- Any spill or overfill of petroleum that exceeds 25 gallons or causes a sheen on nearby surface water. Spills and overfills under 25 gallons that are contained and immediately cleaned up do not have to be reported. If they cannot be quickly cleaned up, they must be reported to your regulatory authority.
- Any released product at the UST site or in the surrounding area — such as the presence of liquid petroleum; soil contamination; surface water or groundwater contamination; or petroleum vapors in sewer, basement, or utility lines.
- Any water or product is found in the interstitial space of tanks.
- Product is found in your containment sumps.
- Any unusual operating conditions you observe — such as erratic behavior of the dispenser, a sudden loss of product, or an unexplained presence of water in the tank. However, you are not required to report if the system equipment is found to be defective, but not leaking, and is immediately repaired or replaced.
- Results from your release detection system indicate a suspected release, including, but not limited to, ATG leak detection alarms, LLD alarms, inconclusive results from SIR and alarms from your interstitial monitoring sensors. However, you are not required to report this if:
  - Within 24 hours the monitoring device is found to be defective and is immediately repaired, recalibrated, or replaced and further monitoring confirms the initial suspected release did not happen.
- Any other reason that leads you to believe there is a leak in underground or aboveground UST equipment.

✓ Keep a list of emergency contacts and make sure everyone at your UST facility is familiar with the list of contacts. **Appendix D contains a blank list for names and phone numbers of important contacts.** Fill out this information for your facility so you will know who to call in case of an emergency. Remove or copy this page from the manual, fill it out, and post it in a prominent place at your facility.

Continue to Section 3.8

Section 3.8: Repairs

Directions For Completing This Section

Step 1: Read the Requirements for Repairs.
Step 2: Continue to Section 3.9

Requirements For Repairs

A code of practice must be followed when repairs are performed on your UST system.

If you have a fiberglass-reinforced plastic tank, repairs may be made by the manufacturer's authorized representative or according to a code of practice.

Metal piping sections and fittings that have released product must be replaced. Fiberglass pipe and fittings may be repaired according to manufacturer's specifications.

Repaired FRP Piping

Repaired tanks and piping must meet one of the following:

- Be tightness tested within 30 days of the repair.
- Be internally inspected according to a code of practice.
- Be monitored monthly for releases.

Cathodically protected UST systems that are repaired must have a cathodic protection test performed within six months of the repair to make sure the cathodic protection system is working properly.

You must keep records of all repairs for the remaining operating life of the UST system.

All tanks and piping that are new or replaced must be double walled systems. An exception to this is if you are replacing a small percentage of your single walled piping with similar piping.

A Montana licensed installer/remover is required for most work on your UST system. They can assist you with getting into compliance and submitting the paperwork for a permit, if it is needed, for your repair work. To see a list of the licensed professionals that can work on your UST system go to http://deq.mt.gov/UST/licensees.asp

Section 3.9 – Product Compatibility

All components and equipment used for storing and dispensing motor fuels must be compatible with the product stored.

✓ If you are switching the type of fuel in your tank, make sure all of the components of that UST system are compatible with the new fuel you are storing. For example, some mechanical line leak detectors will only work for diesel and some will only work for gas.

✓ If you are switching to a biodiesel or ethanol blend of 10% ethanol or more it is recommended that you first clean your tank and piping of all fuel and sludge. Over time sludge deposits in your tank and when ethanol blend is put into the tank, the ethanol will break down the sludge. This causes the sludge to start plugging your dispenser filters and showing up in vehicles.

Ethanol gasoline has increased in popularity in recent years. However ethanol can cause problems with your system. Ethanol blends of gasoline have been found to be more corrosive than traditional forms of gasoline. Check with your manufacturer to make sure your tank, piping and other components are all compatible with the blend of ethanol you are using (E10, E85 and so forth) Ethanol has a strong effect on soft metals such as lead and galvanized zinc. It also has a higher tendency to deteriorate or dissolve gaskets, alcohol based glues and other related materials with your UST system.

Is your UST system Ethanol Compatible?

Ethanol also has problems with water that enters your tank system. The ethanol in your fuel system has a tendency to bond with the water that forms in your tank. This creates problems because it will create layers of different fuel in your tank. The water will sit at the bottom of the tank with the ethanol that has bonded with it just above it. This results in fuel at the top of the tank that does not have the proper amount of ethanol blend.

Continue to Section 3.10

Section 3.10 – Class B and Class C Operators

A Class B operator is the individual who conducts the operation and maintenance at the UST facility. They must be trained by a DEQ approved training course.

A Class C operator is an employee and is generally the first line of response to events indicating emergency conditions. Class C operators are defined to include all of the on-site individuals who may be responsible in the event of an emergency at your facility.

When your facility is manned there must always be a Class A, Class B or Class C operator on the site.

As a Class A operator you are one of the individuals responsible for training the Class C operators at your facility. Class B operators may also train Class C operators.

At a minimum the Class C operators must be able to take action in response to emergencies such as situations posing an immediate danger or threat to the public or to the environment. They must also be able to take appropriate action when alarms activate due to spills or releases from an UST system. They must know what to do at the specific facility they are responsible for.

Class C operators should know all the material included in Section 3.7 – What To Do For Suspected or Confirmed Releases. They should know and be able to complete the 5 steps included in Section 3.7.

It is recommended that you fill out Appendix D of important phone numbers and contact information. It should be posted somewhere it can easily be found in the case of an emergency. Make sure to include contact information for all Class A and Class B operators.

You are required to keep a list of all Class C Operators that have been properly trained. A copy of this list should be at the facility at all times, an inspector may request to see it.

Continue to Section 3.11

Section 3.11: Temporarily and Permanently Closed USTs

Information

USTs in temporary closure must meet the requirements for corrosion protection and, if not emptied, the requirements for release detection. USTs in temporary closure for more than three months must have their vent lines open and all other lines, pumps, manways, and ancillary equipment must be capped and secured.

Directions For Completing The Temporarily Closed USTs Section

Step 1: Determine if you have any temporarily closed tanks or tanks that you may permanently close in the future.

Step 2: Read the requirements and best management practices below.

Step 3: After reading this section, continue to Section 3.12.

Requirements For Temporarily Closed USTs

You must empty your tanks to less than one inch of product and residue if you want to move your tanks into temporary inactive status for more than 90 days. Your tank must also be locked to prevent any fuel from being dumped into it.

If your UST is not empty, it must continue to meet the leak detection requirements for both tank and piping.

- An empty tank means that no more than one inch of residue (including product, sludge, water, etc.) or 0.3 percent by weight of the total tank capacity, remain in the UST. Empty tanks do not require leak detection.

All corrosion protection systems must remain operational on the UST and must continue to be monitored. Vent lines should remain open.

You are still responsible for any releases from these tanks. You must respond to any releases from your temporarily closed UST, just as you would from an UST that you are currently using.

You must notify DEQ in writing if you want to change a tank to temporarily inactive status. A notification form for temporary closure is provided in Appendix D.

You must notify DEQ in writing if you want to change a tank to temporarily inactive status. A notification form for temporary closure is provided in Appendix D.

If you want to bring a tank back into active status that has been temporarily inactive for less than a year, you must notify DEQ in writing at least 30 days prior to brining the tank into service. You must also have a tank tightness test, line tightness test, and functionally tests on all mechanical and electrical components of the release detection equipment and send the results to DEQ.

If you want to bring a tank back into active status that has been temporarily inactive for more than a year then you must have a compliance inspection done on the facility. This enables you to acquire a conditional operating permit to demonstrate the facilities full compliance with all regulations.

Permanent Closure – Tank Removal

Requirements to Permanently Close UST's

Information

To permanently close an UST you must either remove the tank and all piping from the ground or fill it with inert solid material. It is unusual to close a tank system in place and fill it with inert material. You must have approval from DEQ to close a tank in place.

If you want to permanently close a tank you must submit a request in writing to DEQ at least 30 days prior to closing the tank. A permit is required to remove an UST system and the removal must be done by a DEQ licensed remover. Soil Sampling will be done by the remover to determine if there is contamination at the site. To see a list of the licensed professionals that can remove your UST system go to http://deq.mt.gov/UST/licensees.asp

To permanently close an UST system you are responsible for emptying and cleaning it by removing all liquids and sludge that has built up. The contents of the tank must be disposed of properly.

Section 3.12: Financial Responsibility

To be in compliance with UST regulations, you must demonstrate financial responsibility (FR) – the ability to pay for cleanup or third-party liability compensation – for all of your regulated underground storage tank systems.

This section provides a general explanation of the FR requirements. For detailed information on FR, see the Montana DEQ underground storage tank web site at:

http://deq.mt.gov/UST/FinancialResp.asp

Requirements For Financial Responsibility

You must have the appropriate:

- Financial Responsibility mechanism(s),
- amount of coverage
- scope of coverage, and
- certification

Each of these components of financial responsibility is discussed on the following pages.

Some facilities are excluded from these financial responsibility requirements. If you fall under one of the following categories you do not need prove of financial reponsibility:

- **State and Federally owned UST systems**
  - **Schools are considered local government and must meet financial responsibility requirements**
- **Heating Oil Tanks**
- **Underground piping attached to aboveground storage tanks**
- **Hazardous Waste Tanks**
- **Farm or Residential Tanks under 1,100 gallons where gas is not for sale**

Directions For Completing The Financial Responsibility Section

Step 1: Read the requirements you must meet for financial responsibility.

Step 2: Continue to Section 3.13

Requirements For Financial Responsibility Mechanisms

You must have an appropriate FR mechanism at your facility. The following mechanisms may be used to comply with the FR requirements. You may use one or a combination of these mechanisms.

- **Financial Test Of Self-Insurance** - A firm with a tangible net worth of at least $10 million may demonstrate FR by passing one of the two financial tests listed in the federal regulations.
- **Corporate Guarantee** - You may secure a corporate guarantee from another eligible firm. The provider of the guarantee has to pass one of the financial tests listed in the regulations.
- **Insurance Coverage** - You may buy insurance from an insurer or a risk retention group.
- **Surety Bond** - You may obtain a surety bond, which is a guarantee by a surety company that it will satisfy FR obligations if the person who obtained the surety bond does not.
- **Letter Of Credit** - You may obtain a letter of credit, which obligates the issuer to provide funding for corrective action and third-party compensation.
- **Trust Fund** - You may set up a fully-funded trust fund administered by a third party to pay for corrective action and third-party compensation.
- **Stand-by Trust Fund**- Stand-by trust that uses one of these assurance mechanisms (guarantee, surety bond or letter of credit) to fund the trust.
- **State of Montana Petroleum Release Compensation Fund (Petro Fund)** - You may choose to be covered by a state fund that provides a portion of FR to pay for cleanup and third-party compensation costs.

If you are a local government, there are four additional methods that you can use to comply with the FR requirements:

- **Bond Rating Test** - A local government may demonstrate (or guarantee) FR by passing a bond rating test.
- **Financial Test** - A local government may demonstrate (or guarantee) FR by passing a financial test.
- **Guarantee** - A local government may obtain a guarantee from another local government or the state.
- **Dedicated Fund** - A local government may demonstrate (or guarantee) FR by establishing a fund.

You may use one or a combination of mechanisms listed above to meet your FR obligations. Combinations may be used to cover:

- **Different sets of tanks** - For example, tanks in one state may be covered by a state fund, while tanks in another state may be covered by insurance.
- **Different scopes of coverage** - For example, an owner may use a state fund to cover corrective action obligations and a letter of credit to cover third-party liability obligations.
- **Different dollar amounts of coverage** - For example, an owner may have a letter of credit for the first $17,500 (the deductible amount) of coverage and state fund coverage for the rest.

Requirements For Financial Responsibility Amount Of Coverage

Your FR mechanism (or combination of mechanisms) must provide the appropriate amount of coverage. The text and table below describe the appropriate coverage.

The amount of coverage required varies by the type of tank owner or operator and the number of tanks owned or operated. There are two general types of coverage required: per occurrence and annual aggregate.

- **Per occurrence** means the amount of money that must be available to pay the costs for each occurrence of a leaking UST. The amount of per occurrence coverage required depends on the type of facility and, in some cases, on the amount of throughput at the facility.

- **Annual aggregate** means the total amount of FR available to cover all obligations that might occur in one year. The amount of annual aggregate coverage required depends on the number of tanks that are owned or operated.

The amount of coverage required is provided in the table below.

Required Coverage Of Financial Responsibility		
Group Of UST Owners And Operators	**Per Occurrence Amount**	**Aggregate Amount**
Group 1: Petroleum producers, refiners, or marketers	**$1 million**	**$1 million** (for 100 or fewer tanks) **or** **$ 2 million** (for more than 100 tanks)
Group 2: Non-marketers (Non-marketing facilities do not sell or transfer petroleum to the public or any other facility that would sell the petroleum. Additionally, non-marketing facilities do not produce or refine petroleum. An example of a non-marketer is a bus terminal.)	**$500,000** (if throughput is 10,000 gallons monthly or less) **or** **$1 million** (if throughput is more than 10,000 gallons monthly)	

If you choose to use the Petro Fund as your mechanism of coverage then you must have a valid operating permit. The operating permit is issued after a compliance inspection is completed at your facility. This inspection must be done every 3 years.

The Petro Fund pays half of the first $35,000 spent on a petroleum release cleanup and then pays for the rest of the cleanup, up to one million dollars. So if you have a valid operating permit and are eligible for the Petro Fund, your out-of-pocket liability is $17,500. The funding source for this fund is a fee of ¾ of a cent on each gallon of gasoline, aviation gasoline, special fuel or heating oil distributed by the distributors within the state.

Requirements For Financial Responsibility Scope Of Coverage

Your FR mechanism (or combination of mechanisms) must provide the appropriate scope of coverage.

The scope of coverage your insurance must provide includes different types of obligations and releases.

- **Types of Obligations** - FR must cover the costs of corrective action and third-party compensation. Third-party compensation includes bodily injury and property damage.

- **Types of Releases** - Owners or operators must demonstrate FR for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases. FR is not required for intentional releases. An accidental release may be sudden or non-sudden. All releases, whether sudden or non-sudden, must be covered. This is necessary to ensure adequate coverage for USTs in particular, because it is often difficult to determine whether an UST release is sudden or gradual. Therefore, to ensure adequate protection of human health and the environment, both types of coverage are necessary.

Requirements For Financial Responsibility Certification

You must maintain an up-to-date certification of FR.

The certification of FR must identify the financial assurance mechanism(s) used to demonstrate FR. For each mechanism, the owner or operator must list the following:

- type of mechanism,
- name of issuer,
- mechanism number (if applicable),
- amount of coverage,
- effective period of coverage, and
- whether the mechanism covers taking corrective action and/or compensating third parties for bodily injury and property damage caused by either sudden accidental releases or non-sudden accidental releases or accidental releases.

You must update this certification whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).

See Appendix F for a copy of Montana's Certificate of Responsibility. You should have a copy of this Certificate at your facility at all times.

Requirements For Financial Responsibility Records And Reporting

You must maintain the appropriate records.

- In addition to the certification of FR, you must keep evidence of all financial assurance mechanisms used.
- You must maintain the evidence of all financial assurance at the underground storage tank site or the place of work. Records maintained off-site must be made available upon request of the implementing agency.
- In all cases, you must maintain a copy of documentation for your FR mechanism as worded in the regulations. Depending upon the mechanism used, various other documentation must be maintained as well.

You must submit appropriate FR documentation to the implementing agency in the following circumstances:

- Within 30 days after you identify a release from an UST.
- If you fail to obtain alternate coverage when required.
- At any time, as requested by the implementing agency. Many states require annual reporting of FR documentation.

Section 3.13: Notification of New UST's and Changes to UST's

Directions For Completing This Section

Step 1: Read the Best Management Practices on this page.
Step 2: Continue to Section 3.14

Requirements And Best Management Practices For USTs Brought Into Use And Changes To USTs

Within 30 days of bringing an UST into use, you must submit a notification form (Appendix F contains the State of Montana Notification form or you can download it from the internet at http://deq.mt.gov/UST/NotificationRegist.asp).

New Tanks Must Be Notified To DEQ

You should notify DEQ anytime changes are made to any of your USTs. To notify DEQ you may use a notification form (Appendix F contains the State of Montana Notification form or you can download it from the internet at http://deq.mt.gov/UST/NotificationRegist.asp).

Examples of changes for which you should notify DEQ include but are not limited to:

- change in ownership (see Appendix G for this Notification form)
- change in tank or tank equipment;
- change in tank contents; and
- change in piping or piping equipment.

Section 3.14: Inspections and Operating Permits

Each UST facility in Montana must have a compliance inspection of the facility completed at least every 3 years to obtain an operating permit. The inspection must be completed by a DEQ licensed inspector. To see a list of the current Montana DEQ licensed UST inspectors, go to http://deq.mt.gov/UST/licensees.asp

Compliance Inspections should be done at least 90 days and as much as 6 months prior to your operating permit expiration date. This is done for two reasons. First it allows enough time to fix any major violations that may present themselves at your facility. It also allows plenty of time for the paperwork process of delivering, reviewing, and processing the inspection in order to get a new operating permit back to you. Keep in mind, as the owner, you are responsible for making sure the completed and signed inspection is delivered to the department on time.

Information

Violations may be found and noted on the compliance inspection forms. Your inspector should go over these violations with somebody at the facility. Each violation is assigned a significance which is dependent on the severity of the violation. A time frame to fix the violation is then assigned depending on the significance, as shown in the following table.

Time Frames for Violations found at Compliance Inspections	
Level of Significance	**Corrective Action Time Frames**
Major	90 days after inspection or 14 days before your Operating Permit expires
Moderate	6 months after inspection
Minor	Before next compliance inspection
NA – Not Applicable	Varies according to violation

*These time frames are subject to change at the discretion of DEQ.

✓ After the violation has been corrected you must have a licensed inspector certify the non-compliance item was corrected on an inspection form. Depending on the circumstances, this may not require a site visit and you may be able to send records or pictures to the inspector.

Operating Permits must be obtained by any facility that is operating. For a fueling facility operating is defined as putting any fuel into or taking any fuel out of the tank. For heating oil, waste oil and emergency generator tanks, operation is defined by storing fuel at all. Operating permits are good for 3 years. It is unlawful to operate a UST without a current operating permit. An operating permit may also allow you to be eligible for reimbursement from the Montana Petroleum Tank Cleanup Fund for costs associated with a petroleum release.

✓ The department strongly urges you to get your compliance inspection early. Some violations take more time to correct than others. Correcting a violation may require obtaining a construction permit from the department.

Continue to the Appendices or use the Class A Operating Training Quiz and start the quiz.

Appendix A: For More Information

This section identifies UST program contacts and other resources that can help answer your questions and provide you with information about good UST management.

State Regulatory Agency Information

Department of Environmental Quality
UST Section
1520 East Sixth Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-5300
ustprogram@mt.gov

Internet Resources

State of Montana Links

- State of Montana Home Page: http://mt.gov/
- Department of Environmental Quality Home Page: http://deq.mt.gov/
- UST Section of DEQ Home page: http://deq.mt.gov/UST/index.asp

U.S. Government Links

- U.S. Environmental Protection Agency's (EPA) Office of Underground Storage Tanks Home Page: http://www.epa.gov/oust.
  To go directly to the compliance assistance section of the Home page go to: http://www.epa.gov/swerust1/cmplastc/index.htm.
  To go directly to EPA's listing of publications, go to: http://www.epa.gov/swerust1/pubs/index.htm.
- U.S. EPA Office of Enforcement and Compliance Assurance compliance assistance website: http://www.epa.gov/compliance/assistance/index.html

Professional And Trade Association Links

- American Petroleum Institute (API): http://www.api.org/
- American Society For Testing and Materials (ASTM): http://www.astm.org/index.html
- Fiberglass Tank and Pipe Institute (FTPI): http://www.fiberglasstankandpipe.com
- NACE International - The Corrosion Society: http://www.nace.org/
- National Fire Protection Association (NFPA) : http://www.nfpa.org
- Petroleum Equipment Institute (PEI): http://www.pei.org
- Steel Tank Institute (STI): http://www.steeltank.com/
- Underwriters Laboratories (UL): http://www.ul.com

Free Informative Publications Available From EPA

The publications listed on the next pages are free and available from the U.S. EPA. You can access these publications via EPA's website or you can call, write to, or fax EPA. Keep in mind that some of Montana's UST regulations are more stringent that those of the EPA.

- You can download, read, or order documents from http://www.epa.gov/swerust1/pubs/index.htm.
- To order free copies or ask questions, call EPA's **toll-free** RCRA/Superfund Hotline at 800-424-9346 or call EPA's publication distributor's **toll-free** number at 800-490-9198 or fax 513-489-8695. You can also write and ask for **free** publications by addressing your request to EPA's publication distributor: National Service Center for Environmental Publications (NSCEP), Box 42419, Cincinnati, OH 45242.
- Fax-on-Demand allows you to call 202-651-2098 on your fax to access over 220 UST documents.

Document	Description
General Information About USTs And Your Requirements	
Operating And Maintaining Underground Storage Tank Systems: Practical Help And Checklists (August 2000)	Contains brief summaries of the federal UST requirements for operation and maintenance, as well as practical help that goes beyond the requirements. Checklists prompt the user to look closely at what kinds of equipment are in use and how to keep equipment working properly over the lifetime of the UST. The manual provides record keeping forms to help the UST owner and operator keep equipment operating properly.
Musts For USTs: A Summary Of Federal Regulations For Underground Storage Tank Systems (July 1995)	Plain language summary of federal UST requirements for installation, release detection, spill, overfill, and corrosion protection, corrective action, closure, reporting and record keeping.
Underground Storage Tanks: Requirements And Options (June 1997)	Trifold leaflet alerts UST owners and operators who are nonmarketers (who do not sell stored petroleum) of their responsibilities and choices for complying with federal UST regulations.
Leak Detection Information	
Straight Talk On Tanks: Leak Detection Methods For Petroleum Underground Storage Tanks (September 1997)	Explains federal regulatory requirements for leak detection and briefly describes allowable leak detection methods.
Automatic Tank Gauging Systems For Release Detection: Reference Manual For Underground Storage Tank Inspectors (August 2000)	Contains detailed information on automatic tank gauging (ATG) systems, including information on various types of ATGs, information on certified detectable leak rate/threshold, test period duration, product applicability, calibration requirements, restrictions on the use of the device, vendor contact information, printing and interpreting reports, sample reports, and so on.

Document	Description
Getting The Most Out Of Your Automatic Tank Gauging System (March 1998)	Trifold leaflet provides UST owners and operators with a basic checklist they can use to make sure their automatic tank gauging systems work effectively and provide compliance with federal leak detection requirements.
Doing Inventory Control Right: For Underground Storage Tanks (November 1993)	Booklet describes how owners and operators of USTs can use inventory control and periodic tightness testing to temporarily meet federal leak detection requirements. Contains record keeping forms.
Manual Tank Gauging: For Small Underground Storage Tanks (November 1993)	Booklet provides simple, step-by-step directions for conducting manual tank gauging for tanks 2,000 gallons or smaller. Contains record keeping forms.
List Of Leak Detection Evaluations For UST Systems, 9th Edition (November 2001) ***Available through the EPA website**	A summary of specifications, based on third-party certifications, for over 275 systems that detect leaks from USTs and their piping. Each summary provides information on such items as certified detectable leak rate/threshold, test period duration, product applicability, calibration requirements, restrictions on the use of the device, and so on.
Introduction To Statistical Inventory Reconciliation: For Underground Storage Tanks (September 1995)	Booklet describes how Statistical Inventory Reconciliation (SIR) can meet federal leak detection requirements.
Information On Closing Underground Storage Tanks	
Closing Underground Storage Tanks: Brief Facts (July 1996)	Trifold leaflet presents brief facts on properly closing USTs in order to comply with federal closure requirements**.**
Financial Responsibility Information	
Dollars And Sense: Financial Responsibility Requirements For Underground Storage Tanks (July 1995)	Booklet summarizes the financial responsibility required of UST owners and operators.
List Of Known Insurance Providers For Underground Storage Tanks (January 2000)	Booklet provides UST owners and operators with a list of insurance providers who may be able to help them comply with financial responsibility requirements by providing suitable insurance mechanisms.
Financial Responsibility For Underground Storage Tanks: A Reference Manual (January 2000) ***Available through the EPA website**	This detailed, comprehensive manual provides UST inspectors with the restrictions, limitations, and requirements of each financial responsibility mechanism provided in the federal UST regulations.

Appendix B: Definitions

This appendix contains both definitions from the federal UST regulations at 40 C.F.R. Part 280 and definitions developed or gathered specifically for this model workbook and are not listed in the regulations.

Accidental Release means any sudden or non-sudden release of petroleum from an UST that results in a need for corrective action and/or compensation for bodily injury or property damage neither expected nor intended by the tank owner or operator.

Ancillary Equipment means any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an UST.

Beneath the surface of the ground means beneath the ground surface or otherwise covered with earthen materials.

Cathodic Protection is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

Cathodic Protection Tester means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.

CERCLA means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

Coating means a layer of dielectric material (a material that does not conduct direct electrical current) that is applied to the outside wall of steel tanks and piping.

Compatible means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the UST.

Compliance means that a facility meets the minimum requirements as stated in the regulations

Connected Piping means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them.

Corrective Action means activities associated with cleaning up a site where a release to the environment has occurred.

Corrosion means the degradation of a material due to a reaction with its environment. An example of corrosion is the rusting of steel.

Corrosion Expert means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

Dielectric Material means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system (e.g., tank from piping).

Empty means that all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue (including product, water, sludge, etc.), or 0.3 percent by weight of the total tank capacity of the UST system, remain in the system.

Existing Tank System means a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before December 22, 1988. Installation is considered to have commenced if:

(a) the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if,

(b) (1) either a continuous on-site physical construction or installation program has begun;

or,

(2) the owner or operator has entered into contractual obligations – which cannot be cancelled or modified without substantial loss – for physical construction at the site or installation of the tank system to be completed within a reasonable time.

Farm Tank is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. Farm includes fish hatcheries, rangeland and nurseries with growing operations.

Field Constructed Tank is a tank that was not constructed or built in a factory, but rather, constructed or built in the field (such as at the location where it was installed). For example, very large tanks may be field constructed.

Fill Pipe is the pipe that extends from the surface to the tank that is used for filling the tank with substances.

Financial Responsibility is the ability to pay for cleanup or third-party liability compensation.

Flow-Through Process Tank is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

Hazardous Substance UST System means an underground storage tank system that contains a hazardous substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under subtitle C) or any mixture of such substances and petroleum, and which is not a petroleum UST system.

Heating Oil means petroleum that is No. 1, No. 2, No. 4-light, No. 4-heavy, No. 5-light, No. 5-heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

Hydraulic Lift Tank means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

Maintenance means the normal operational upkeep to prevent an underground storage tank system from releasing product.

New Tank System means a tank system used to contain an accumulation of regulated substances and for which installation has commenced after December 22, 1988. (See also Existing Tank System.)

Noncommercial Purposes with respect to motor fuel means not for resale.

Non-corrodible material means a material that will not corrode or degrade in the environment where it is placed. For example, fiberglass material in the soil.

Non-marketing facility means a facility that does not sell or transfer petroleum to the public or any other facility that would sell the petroleum. Additionally, non-marketing facilities do not produce or refine petroleum. An example of a non-marketer is a bus terminal.

Occurrence means an accident, including continuous or repeated exposure to conditions, which results in a release from an UST.

On The Premises Where Stored with respect to heating oil means UST systems located on the same property where the stored heating oil is used.

Operator means any person in control of, or having responsibility for, the daily operation of the UST system.

Overfill Release is a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.

Owner means:

(a) in the case of an UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of regulated substances; and

(b) in the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned such UST immediately before the discontinuation of its use.

Petroleum UST System means an underground storage tank system that contains petroleum or a mixture of petroleum with *de minimis* quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

Pipe or **Piping** means a hollow cylinder or tubular conduit that is constructed of non-earthen materials.

Pipeline Facilities (Including Gathering Lines) are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.

Pressurized Delivery is a delivery where product is pumped from the delivery truck to the tank.

Regulated Substance means

(a) any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under subtitle C), and

(b) petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

The term regulated substance includes but is not limited to petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil though processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

Release means any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from an UST into groundwater, surface water or subsurface soils.

Release Detection means determining whether a release of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

Repair means to restore a tank or UST system component that has caused a release of product from the UST system.

Residential Tank is a tank located on property used primarily for dwelling purposes.

Secondary Containment is an additional barrier between the part of the tank or piping that contains product and the outside environment. Examples of secondary containment are double-walled tanks and piping, tank bladders, tank jackets, and excavation liners.

Septic Tank is a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.

Stage I Vapor Recovery is a system that captures the vapors expelled from an underground storage tank as a result of being filled by a delivery truck. There are two primary types – coaxial and two point. Coaxial Stage I vapor recovery is two concentric channels, one inside of the other. The inner channel conveys product from the delivery truck to the tank while the outer channel conveys vapors from the tank to the delivery truck. Two point Stage I vapor recovery uses two separate connections, one to deliver product to the tank and the other to deliver vapors to the delivery truck.

Storm-Water Or Wastewater Collection System means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

Sump means an underground area such as a hole or pit that is used to house equipment. Sumps may or not be contained.

(a) in the case of a turbine sump, it is an area above the tank over which a cover is placed that houses the submersible turbine pump head, line leak detector, piping and other equipment.

(b) In the case of a dispenser sump, it is the area beneath a dispenser that houses piping and other equipment.

Tank is a stationary device designed to contain an accumulation of regulated substances and constructed of non-earthen materials (e.g., concrete, steel, plastic) that provide structural support.

Underground Storage Tank or **UST** means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:

(a) Septic tank;

(b) Pipeline facility (including gathering lines) regulated under:

(1) The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.), or

(2) The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or

(3) Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in paragraph (d)(1) or (d)(2) of this definition;

(c) Surface impoundment, pit, pond, or lagoon;

(d) Storm-water or wastewater collection system;

(e) Flow-through process tank;

(f) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or

(g) Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

The term underground storage tank or UST does not include any pipes connected to any tank which is described in paragraphs (a) through (f) of this definition.

Upgrade means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product.

UST System or **Tank System** means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

Wastewater Treatment Tank means a tank designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

Appendix C: Emergency Numbers List

Important Contact Information

	Contact Name	Phone #
State UST Agency:	DEQ – UST Section	(406) 444-5300
Report Suspected or Confirmed Releases	DEQ Remediation	1-800-457-0568
Fire Department:		
Ambulance:		
Police Department:		
Repair Contractor:		
Other Contacts:		
Class A Operator		
Class B Operator		

Release Response Checklist

Stop The Release: Take immediate action to prevent the release of more product. Turn off the power to the dispenser and wrap a plastic bag around the nozzle. Make sure you know where your emergency shutoff switch is located. Empty the tank, if necessary, without further contaminating the site.

Contain The Spill Or Overfill: Contain, absorb, and clean up any surface releases. Identify any fire, explosion, or vapor hazards and take action to neutralize these hazards.

Call For Help And Report Suspected Or Confirmed Releases: Contact your local fire or emergency response authority. Contact your state's underground storage tank regulatory authority within 24 hours.

Appendix D

Notification of Inactive Status*
for Underground Storage Tank Systems

UST Facility ID	

Number of UST Systems at the Facility	

Owners Name and Address:

Facility Name and Address:

Inactive Status Requirements:

- Notify the department that tanks are inactive and confirm that the UST system is empty. The UST system must be emptied to less than one (1) inch of residue. Release detection is not required when the UST system is empty.
- Maintain the corrosion protection system and records.
- Leave vent piping open.
- Cap and secure all piping (except the vent), pumps, manways, sumps, and ancillary equipment.:
- UST systems without a properly operated and maintained corrosion protection system, must be permanently closed. The closure must be performed in accordance with DEQ regulations and a permit issued by the department.

	Tag # :	Tag # :	Tag # :	Tag # :	Tag # :
Date of UST installation					
Capacity of UST					
Substance last stored in UST					
Date UST last used					
Date piping last used					
Date UST/piping capped & secured					
Date UST emptied (<1 inch residue)					
Date plan to remove (if applicable)					

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the that the submitted information is true, accurate, and complete.

Signature of Owner or Owner's Representative	**Title**	**Date**

*defined on reverse side

revised 02/2004

Appendix E: MONTANA CERTIFICATE OF FINANCIAL RESPONSIBILITY

The Certificate of Financial Responsibility below is required to be on file at your facility or place of business. Your compliance inspector is required to inspect it for proper record keeping.

Arm 17.56.823(2) (F) RECORDKEEPING – An owner or operator using an assurance mechanism specified in ARM17.56.807 through 17.56.816 must maintain an updated copy of a certificate of financial responsibility (complete additional certificates if more than one facility is under the same ownership).

I, _____, herby certify that facility name_____, Facility ID#___- _____ is in compliance with the requirements of sub-chapter 8, ARM 17.56 by claiming the financial assurance coverage below.

The financial assurance mechanism(s) used to demonstrate under sub-chapter 8, ARM 17.56 is (are) as follows:

Type of Mechanism: (Check one or more)

PTRCB Fund ☐ Valid Operating Permit ☐ YES ☐ NO

NOTE: If PTRCB is checked, you must choose an additional mechanism to cover $17,500.00 Co-payment requirement of the PTRCB fund.

Insurance ☐ Letter of Credit ☐ Trust Fund ☐ Stand-by Trust Fund ☐

Self Insurance ☐ Corporate Guarantee ☐ Surety Bond ☐

Name of Issuer: _____ _____

Mechanism number: _____ _____

Amount of coverage: _____ _____

Period of coverage: _____ _____

Does the mechanism cover?Taking corrective action ☐ Yes ☐ No

- Compensating 3rd parties for bodily injury and property damage caused by:
  - ✓ sudden accidental releases ☐ Yes ☐ No
  - ✓ non-sudden accidental releases ☐ Yes ☐ No
  - ✓ accidental releases ☐ Yes ☐ No

_____signature of owner

_____name of owner or operator

_____title _____date

_____signature of witness or notary

_____name of witness or notary

_____date

_____title (and rank)

_____date commission expires (seal, if any)

Appendix F - Notification of Underground Storage Tanks
Montana Department of Environmental Quality

State use only

Fac ID #:
a. Date Entered into Computer:
b. Data Entry Clerk Initials:

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than five tanks are owned at this location, staple continuation sheets to the form.

Type of Notification

☐ New Notification ☐ Amended ☐ Change of Ownership

☐ Number of Tanks ☐ # of continuation sheets attached

GENERAL INFORMATION

Notification is required by Federal and State law for all underground tanks that have been used to store regulated substances since January 1, 1974, and that are in the ground as of May 8, 1986, or that are bought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended, and by Title 17, Chapter 56, Subchapter 9, Administrative Rules of Montana (ARM).

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or in the absence of such records, your knowledge, belief or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, and Title 17, Chapter 56, Subchapter 9, ARM require that, unless exempted, owners of underground storage tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks.

Owner means-

a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for storage, use, or dispensing of regulated substances, and

b) in the case of any underground storage tank in use before November 8, 1984 or brought into use on that date, any person who owned such tank immediately before discontinuation of its use.

An UST, which is in the ground and not properly closed is deemed to be in use and is subject to notification requirements.

An owner of an underground storage tank system must amend the facility's current notification form whenever the facility has undergone any change, which results in a change to the facility information or status.

What tanks are included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances", and (2) whose volume is 10% or more beneath the ground and (3) aboveground tanks with underground piping. Some examples are underground tanks storing 1. gasoline, used oil, heating oil or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded?

1. septic tanks
2. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
3. surface impoundments, pits, ponds or lagoons;
4. storm water or waste water collection systems;
5. flow through process tanks;
6. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
7. storage tanks situated in an underground area, such as a basement, cellar, mine, drift, shaft, or tunnel, if the storage tank is situated upon or above the surface of the floor;
8. Underground tanks and underground piping attached to aboveground tanks of 1,100 gallons or less located at a farm or private residence and storing "noncommercial' motor fuel or heating oil if the tanks was installed **before** April 27, 1995.

"Noncommercial" means not used in the operation of a business other than the production of agricultural commodities.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in Section101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1989 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof, which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute.)

When To Notify?

1. Owners of underground storage tanks and piping that were in use May 8, 1986, or which were taken out of operation after January 1, 1974, but which were still in the ground on May 8, 1986, were required to notify on or before May 8, 1986.
2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days after bringing the tanks into use.
3. Any amendment to facility information or status, including change in ownership must be notified immediately.

Where to notify? Send completed forms to:

Underground Storage Tank Section
Montana Department of Environmental Quality
PO Box 200901
Helena MT 59620-0901
Phone: 406-444-5300 Fax: 406-444-1374

Penalties: Any owner who fails to notify or submits false information is subject to a civil penalty of up to $10,000.00 per violation per day for each tank for which notification is not given or for which false information is submitted. Criminal penalties may also apply.

I. Ownership of Tanks	*II. Location of Tanks*
Owner Name(Corporation, Individual, Public Agency, or Other Entity)	Facility Name or Company Site Identifier, as applicable
Mailing Address	Street Address or Physical Location (PO BOX NOT ACCEPTABLE)
City State Zip	City State Zip
Phone Number Fax Number	Phone Number Fax Number

III. TYPE OF OWNER		IV. INDIAN LANDS	
☐ Federal Government	☐ Commercial	Tanks are located on land within an Indian Reservation or on other trust lands. ☐	Tribe or Nation:
☐ State Government	☐ Farmer/ Rancher	Tanks are owned by native American nation, tribe or individual. ☐	
☐ Local Government	☐ Residential		

V. TYPE OF FACILITY

Select the Appropriate Facility Description (check as many as apply)

☐ Gas Station	☐ Railroad	☐ Trucking/Transport
☐ Bulk Plant	☐ Federal Non-Military	☐ Utilities
☐ Petroleum Distributor	☐ Federal - Military	☐ Residential
☐ Air Taxi (Airline)	☐ Industrial	☐ Farm/Ranch
☐ Aircraft Owner	☐ Contractor	☐ Emergency Generator
☐ Auto Dealership	☐ School	☐ Other (explain)
☐ Church	☐ Medical	

VI. CONTACT PERSON IN CHARGE OF TANKS

Name	Job Title	Address	Phone Number (Include Area Code)

VII. FINANCIAL RESPONSIBILTY

I have met the financial responsibility requirements in accordance with 40 CFR 280, Subpart H and Title 17, Chapter 56, Subchapter 8, Administrative Rules of Montana (ARM) ☐ (If yes, please initial)

Check All that Apply

☐ ***Self Insurance***	☐ ***Guarantee***	☐ ***Montana Petroleum Tank Release Cleanup Fund***
☐ ***Commercial Insurance***	☐ ***Surety Bond***	☐ ***Trust Fund***
☐ ***Risk Retention Group***	☐ ***Letter of Credit***	☐ ***Other Method Allowed (Specify)***

VIII. CERTIFICATION (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

Name and official title of owner or owner's authorized representative **(Please print)**	Signature	Date Signed

EPA estimates public reporting burden for this form to average 30 minutes per response including time for reviewing instructions, gathering and maintaining the data needed and completing and reviewing the form. Send comments regarding this burden estimate to Chief Information Policy Branch PM-223, US Environmental Protection Agency, 401 M Street, Washington D.C. 20460, marked "Attention Desk Officer for EPA." This form amends the previous notification form as printed in 40 CFR Part 280, Appendix I. Previous editions of this notification form may be used while supplies last.

Facility Name:			Facility ID#:		
IX. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location)					
State ID (STATE USE)					
Tag Number					
Tank ID Number					
1.STATUS OF TANK (mark only one)					
Currently in Use	☐	☐	☐	☐	☐
Temporarily Out of Use	☐	☐	☐	☐	☐
Permanently Out of Use	☐	☐	☐	☐	☐
Amendment of Information	☐	☐	☐	☐	☐
2. DATE OF INSTALLATION (mo/year)	/	/	/	/	/
3. ESTIMATED TOTAL CAPACITY (gal)					
4. TANK MATERIAL (Mark all that apply)					
Aboveground	☐	☐	☐	☐	☐
Asphalt Coated or Bare Steel	☐	☐	☐	☐	☐
Cathodically Protected Steel	☐	☐	☐	☐	☐
Epoxy Coated Steel	☐	☐	☐	☐	☐
Composite (Steel with Fiberglass)	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Lined Interior	☐	☐	☐	☐	☐
Double Walled	☐	☐	☐	☐	☐
Polyethylene Tank Jacket	☐	☐	☐	☐	☐
Concrete	☐	☐	☐	☐	☐
Excavation Liner	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Multi-compartment tank	☐	☐	☐	☐	☐
Other, Please specify					
Has tank been repaired?	☐	☐	☐	☐	☐
5. PIPING MATERIAL (Mark all that apply)					

	Product	Vent	Product	Vent	Product	Vent	Product	Vent	Product	Vent
Bare Steel	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Galvanized Steel	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
UL Listed Flex Pipe	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Copper	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cathodically Protected	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Double Walled	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Trench Liner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Secondary Containment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other, Please Specify										

Facility Name:				**Facility ID#:**	
State ID (STATE USE)					
Tag Number					
Tank ID Number					
6.PIPING(Type)(Mark all that apply)					
Suction: no valve at tank	☐	☐	☐	☐	☐
Suction: valve at tank	☐	☐	☐	☐	☐
Pressure	☐	☐	☐	☐	☐
Gravity Feed	☐	☐	☐	☐	☐
Has piping been repaired?	☐	☐	☐	☐	☐
7. SUBSTANCE CURRENTLY OR LAST STORED IN GREATEST QUANTITY BY VOLUME.					
Gasoline	☐	☐	☐	☐	☐
Diesel	☐	☐	☐	☐	☐
Gasohol	☐	☐	☐	☐	☐
Kerosene	☐	☐	☐	☐	☐
Heating Oil	☐	☐	☐	☐	☐
Used Oil	☐	☐	☐	☐	☐
Other, please specify	☐	☐	☐	☐	☐
Hazardous Substance CERCLA name and/or CAS Number					
Mixture of Substances Please specify	☐	☐	☐	☐	☐
X. TANKS OUT OF USE, OR CHANGE IN SERVICE					
-FOR STATE USE ONLY-					
1. Tank Closure					
a. removed or closed in place (mo/day/year)					
b. change in service					
2. Date Site Assessment Completed					
3. Evidence of a Leak Detected					
Comments:					
Location: *Initials of reviewer/date*					

Appendix G: Change of Ownership Notification Form

Montana Department of Environmental Quality

Notification for Underground Storage Tanks | **Facility ID Number:**

Contact the Department: (406) 444 -5300 or via the internet at ustprogram@mt.gov

INSTRUCTIONS

Please **type or print in ink** all items except "signature" in Section IV. This form must be completed for each location containing underground storage tanks

TYPE OF NOTIFICATION

☐	A. CHANGE OF OWNER	☐	B. AMENDED OWNER INFORMATION

GENERAL INFORMATION

Notification is required for all underground tanks that have been used to store regulated substances since January 1, 1974, and that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986.

Who Must Notify? Title 17, Chapter 56, Subchapter 9, Administrative Rules of Montana (ARM) require that, unless exempted, owners of underground tanks that store regulated substances must notify designated State and local agencies of the existence of their tanks.

Owner means -

(a) in the case of an underground storage tank in use on November 8, 1984 or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances and

(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use

An UST, which is in the ground and not properly closed is deemed to be in use and is subject to notification requirements.

An owner of an underground storage tank system must amend the facility's current notification form whenever the facility has undergone any change, which results in a change to the facility information or status.

Penalties: Any owner who fails to notify or submits false information is subject to a civil penalty of up to $10,000.00 per violation per day for each tank for which notification is not given for which false information is submitted. Criminal penalties may also apply.

I. OWNERSHIP OF TANKS

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

Mailing Address

PO Box

City | State | Zip Code

County

Federal Tax ID # | Phone Number

II. OPERATOR OF TANKS

Operator Name

Operator Address

City | State | Zip

Phone Number

III. LOCATION OF TANKS

Facility Name or Company site identifier, as applicable

Street address or physical location (PO Box not acceptable)

City | State | Zip

Legal Description:

Township	N, S Range	E, W Section	1/4	1/4 Lot	County	Phone Number

IV. CERTIFICATION

I certify under penalty of law that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's representative (PLEASE PRINT below)	SIGNATURE (below)

Date Signed

Questions About Completing The Workbook?

If you want more information or need help completing this workbook you can:

- Look in appendix B for definitions of technical words.

- Contact your UST contractor, vendor of your equipment, environmental compliance consultants, or the manufacturer of your UST equipment. Look through your records for information on how to contact them.

- Contact the Department of Environmental Quality. They may be able to help you identify equipment or sources of information about your UST equipment.

DEQ
Montana Department of Environmental Quality

UST Section
1520 East Sixth Ave.
Helena, MT 59620-0901
(406) 444-5300
ustprogram@mt.gov

- Read information from other resources such as state or EPA publications or Internet sites. You may also want to use industry Internet sites. See appendix A for these additional resources.

DEQ

Montana Department
of Environmental Quality

1520 East Sixth Ave.
PO Box 200901
Helena MT 59620-0901