State of Delaware
Department of Natural Resources and Environmental Control
Tank Management Section

Compliance Assistance Manual (CAM)

New Website address effective January 2012 www.dnrec.delaware.gov/Tanks/

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

Operation and Maintenance of UST Systems

The Tank Management Section (TMS) has developed this guidance manual to assist tank owners and operators in complying with Delaware's *Regulations Governing Underground Storage Tank Systems* (the UST Regulations). This document is a guide to compliance and in no way replaces or supersedes the UST Regulations.

This Compliance Assistance Manual contains information about USTs that store fuels used to operate motor engines and commercial heating fuel USTs, this includes gasoline, diesel, ethanol blended with gasoline, biodiesel, aviation fuels such as aviation gasoline and various grades of jet fuel, and kerosene; USTs used to store used oil and USTs of regulated size that are connected to oil-water separator (OWS) systems; USTs used store fuel to run emergency generators, which are commonly found at hospitals, nursing homes, and some office buildings (Note: although emergency generator USTs are regulated as petroleum USTs, the compliance requirements differ slightly from those for USTs storing motor fuel);and USTs used to run heating equipment such as boilers or furnaces for non-commercial purposes. Any time that an UST system is used for more than one purpose, it must meet the more stringent regulatory requirements for leak detection, spill and overfill protection, corrosion protection, and financial responsibility. If your UST system is used for more than one purpose, please call the TMS for guidance on which sections of the UST Regulations apply to your system.

Tank Registration (Applies to All USTs)

Owners and operators must pay an annual $50.00 per tank registration fee on or before February 1 of each calendar year; a $30.00 per tank late fee is assessed after that date.

You will receive a Registration Certificate for your UST Facility which you need to display on the premises at all times. You will receive a new Certificate if you submit a change in service, change in substance stored or change in ownership.

State of Delaware
Department of Natural Resources & Environmental Control
Division of Air & Waste Management, Tank Management Branch
Office (302) 395-2500 Fax (302) 395-2555

Underground Storage Tank Facility
Registration Certificate

Facility # 2-123456 Issue Date August 9999

This certifies that
Facility has been duly registered with the State of Delaware. This certificate will renew upon payment of annual tank registration fees. New Certificates will be issued only upon tank removal, installation, change in service, or change in facility name or ownership. **This Certificate MUST BE POSTED at the Facility.**

Facility Name & Address:
Sunshine Inc
1 Happy Lane
Anywhere DE 19000

Owner Name & Address:
Happy Operator
1 Luv2livat the Beach Rd
Sussex DE 19999

TankID	Capacity	Compartment / Substance	Status
1	10000	Gasoline	In Service
2	10000	Gasoline	In Service
3	10000	Gasoline	In Service

Stage I Permit # APC-2999/9106.01 Stage II Permit # APC-2999/9107.01
CARB Executive Order # G-70-150-AE

Alex Rittberg
Program Manager, Tank Management Branch

Fill Line Protection (Applies to All USTs)

All fill lines for USTs must be clearly marked to indicate the capacity of the tank and the type of product stored in the tank and must be clearly visible to the delivery driver. This helps prevent accidental filling of the wrong fuel to the wrong tank. Color coding should be on the cover and a second, non-removable portion of the fill. This will prevent accidental switching of covers.

Fill line protection must include:

- A permanent tag or sign at the fill indicating tank capacity and product, and
- A color-symbol system, found in the publication from the American Petroleum Institute (API), Recommended Practice 1637, to indicate product stored in the UST. Aviation fuel symbols are found in API 1542 (now produced by the Energy Institute, EI 1542)

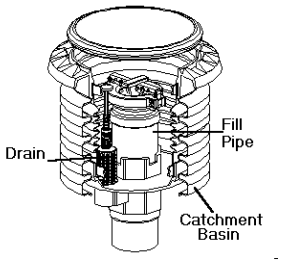
Note: The State Fire Marshal also requires the use of the API color code.

You should check that the fill line is clearly labeled before receiving deliveries.
This is especially important if the delivery driver is new to your facility.

High-grade unleaded gasoline	White Cross on Red Background	
Mid-grade unleaded gasoline	White Cross on Blue Background	
Low-grade unleaded gasoline	Black Cross on a White Background	
Kerosene	Brown	
Used Oil	Purple Square	

Diesel	Yellow(For high-sulfur add blue stripe)	
Diesel, Dyed	Red Cross on Yellow Background. Add "Dyed Diesel" for clarification.	Dyed Diesel
#1 Fuel Oil	Yellow Stripe on Purple Background	
#2 Fuel Oil	Green	
Vapor Recovery	Orange	

Spill Bucket (Applies to All USTs)



Spill bucket

USTs must be equipped with a liquid tight container (spill bucket) around the fill pipe to collect any spills that may occur during deliveries.

Keep your spill bucket empty of all liquids. The spill bucket is not designed to hold fuel for long periods of time and must be emptied and the contents disposed of properly.

- If fuel collects, drain it into the tank by pushing down the plunger valve to allow the fuel to drain into the UST.
    - You should never drain water from a spill bucket into a UST that stores an ethanol-gasoline blend such as E10 because it will cause the fuel to separate.

- If the spill bucket is not equipped with a drain valve or pump, then the fuel or water must be removed manually and disposed of properly. (Contact your fuel supplier or see **Waste reduction, disposal, and recycling service** in the phone book yellow pages for companies that provide this service.)

- If excessive water collects, consider installing a gasket to seal the spill bucket.

Spill buckets must be checked once during each calendar month, see **30 Day Routine Walk-Around Inspection Guidance** located in the Forms section for guidelines.

Spill buckets are required to be tested annually. See Annual **Spill Bucket Testing** located in the Forms section for testing procedures and a blank test report.

Note: Spill buckets at Stage I Vapor Recovery connections are not required to be tightness tested annually.

What's The Difference?

Spill Bucket:
A spill bucket is installed at the fill pipe to contain the drips and spills of fuel that can occur when the delivery hose is uncoupled from the fill pipe after delivery.

Overfill Protection:
Equipment is installed on the UST that is designed to stop product flow, reduce product flow, or alert the delivery person during delivery ***before*** *the tank overfills and begins releasing petroleum into the environment.*

Overfill Protection (Applies to All USTs except Used Oil)

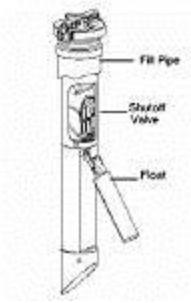
USTs must have equipment to prevent overfilling the tank. The delivery person should know what type of overfill protection is installed in the UST.

If the UST receives pressurized deliveries, a high level alarm or specifically designed flapper valve must be installed.

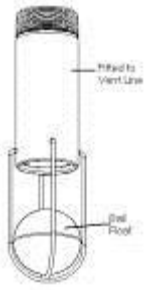
There are 3 options for Overfill Protection:

Automatic Shutoff (Flapper Valve)

- This automatic shutoff is a mechanical device installed in the drop tube within the fill pipe riser. When installed and maintained properly, the shutoff valve will shut off the flow of fuel to the UST at 95% of the tank's capacity.
- Once a year, check the automatic shutoff for obstructions and proper installation and operation.



Automatic Shutoff Valve



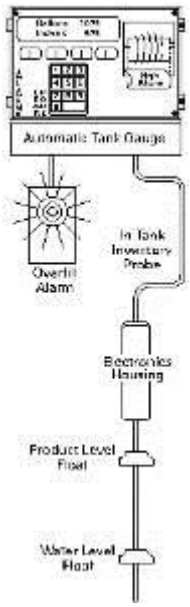
Ball Float (Float Vent Valve)

- The ball float valve must be set to no more than 90% of the UST's capacity to prevent accidental overfilling of the UST.
- Once a year, check the ball float to make sure that:
  - the ball cage is still intact.
  - the ball still moves freely in the cage.
  - the ball still seals tightly on the pipe.
  - the ball float is set at 90% of the tank capacity.

Ball Float valve

High Level Alarm (Electronic Overfill Alarm)

- The High Level Alarm must be located so that it can be seen and/or heard from the UST delivery location. It activates an audible and/or visual warning to delivery personnel when the tank is 90% full or is within one minute of being overfilled. It does not shut off flow; therefore, the fuel remaining in the delivery hose after the delivery has been stopped needs to flow into the tank.
- The delivery person must be in the vicinity of the delivery truck while filling the tank.
- Once a year, check the electronic overfill alarm to make sure that the:
  - alarm can be heard and/or seen from where the tank is fueled.
  - electronic device and probe are operating properly.



High Level Alarm

Overfill Prevention (Applies to Used Oil USTs only)

The TMS allows owners and operators of Used Oil USTs to use a written SOP in order to prevent overfills.

The written SOP must contain the following steps, at a minimum:

- First determine how many gallons (inches) of oil will fill the UST to 90% of its capacity. For example, if you have a 550-gallon UST, 495 gallons is the maximum amount of oil you may add to it before having it pumped out;
- The level of Used Oil must be measured each day that Used Oil is added to or removed from the UST;
- This level must be compared to the level that can be contained in the UST without exceeding 90% of its capacity;
- If the level in the UST is at 90% or if the 90% level would be exceeded by adding any used oil, no used oil may be added to the UST until used oil is removed and properly disposed;
- All pump-out receipts must be saved and must show the amount of Used Oil removed, the date, and the name and address of the company performing the pump-out.

See the Overfill Prevention & Daily Inventory Worksheet for Used Oil USTs form located in the Forms section for a sample form that can be used for overfill prevention.

Proper UST Filling Procedures (Applies to All USTs except Used Oil)

A few simple precautions can go a long way towards preventing spills and overfills while receiving a delivery.

BEFORE the delivery:

- Only order the quantity of product that will fit in the tank. (Tank should only be filled to 90%-95% of the tank's capacity based on the type of overfill protection present.)
- Pre-arrange fuel deliveries so that staff is present at the time of delivery, if possible.
- Keep all fill ports secured until the delivery person requests access.
- Make sure that the delivery person is aware of what type of overfill device is present and what to do if the overfill protection device is activated.
- The delivery driver should verify that the spill bucket is clear of debris and liquid and make sure that the drain valve is in the closed position.
- Have oil spill sorbent pads available at the time of fuel deliveries.

DURING the delivery:

- Only the delivery driver should make hose connections.
- For UST systems with vapor recovery installed, there must be one vapor hose connected for each gasoline product being delivered.
- The driver should stand by during the entire product delivery and be prepared to stop flow from the truck should any unusual conditions, leaks or spills be observed.
- Provide adequate lighting and safety barriers around the UST fill area.
- In the event of any spills or leaks, the driver will be responsible for stopping flow from the truck and the observer will notify the facility manager(s). If 25 gallons or more are released, DNREC must be notified within 24 hours by calling 1-800-662-8802.

AFTER the delivery:

- Verify the amount of product delivered using either manual methods (i.e., stick with water paste) or by checking your automatic tank gauge after delivery and checking against delivery receipt.
- Make sure fill ports are properly replaced and secured.
- Make sure that the spill bucket is free of product.

Tank Release Detection (Applies to All USTs)

Tank release detection is how you check to make sure your UST is not leaking. A release detection system, like any electronic or mechanical system, is subject to wear, tear, and failure. Routine maintenance of the equipment is necessary to make sure it is operating correctly.

Unless you can prove your tanks and piping are not leaking at least once every month, you are not doing release detection.

Release Detection Requirements

For all USTs except Used Oil, Emergency Generator and Heating Fuel: You must do inventory control and at least one of the following methods of release detection:

For Used Oil USTs you must do a modified inventory control method [Manual Tank Gauging may be substituted for inventory control for used oil tanks of 2,000 gallons or less, but it cannot be used for both the Inventory and Leak Detection requirements] and one of the following methods of release detection:

For Emergency Generator and Heating fuel USTs you must do at least one of the following methods of release detection (inventory control is not required):

- Automatic Tank Gauge (ATG) Tank Testing
- Secondary Containment with Interstitial Tank Monitoring
- Tank Tightness Testing **(Emergency Generator and Heating fuel only)**
- Manual Tank Gauging **(Used Oil 1,000 gallons or less only)**
- Alternative methods - SIR, etc.

Inventory Control (Applies to all USTs except Used Oil, Emergency Generator and Heating Fuel)

Basically, inventory control requires daily measurements (each day the UST has product added to or removed from it, or at least once a week) of the contents and math calculations that let you compare your "stick" inventory (what you've measured) to your "book" inventory (what your record keeping indicates you should have).

Simply measuring product and water levels is not enough. You must reconcile the measurements every month. Think of "reconciliation" as balancing your checkbook each month. At the end of each month, the losses or gains from each day's inventory must be reconciled. If the loss or gain for the month is greater than 1% of throughput plus 130 gallons, the TMS must be notified immediately at 302-395-2500.

Calibrated Dispensing Meters

Meters must be calibrated according to local standards for retail sales of motor fuels. Contact the Delaware Department of Agriculture, Weights and Measures at 302-739-4811 if you need more information concerning the standards. Accurate meters are critical for proper inventory.

Manifold Tanks

If you have manifolded tanks or dispensers that blend fuel consider these tanks as one tank system if they share a common inventory of stored fuel. You will need to combine your measurements and calculations for all the tanks manifolded into one system.

Daily Inventory Procedures

1. Measuring The Tank's Contents

See the Daily Inventory Worksheet, located in the Forms section, for a blank form you may use to record daily inventory.

- Each column represents one tank -consistently enter all information on that one tank in the same vertical column.

You can use a Measuring Stick or Automatic Tank Gauge (ATG)

Measuring Stick:

- The stick used to measure the depth of liquid in your UST must be marked or notched to 1/8 inch, starting with zero at the bottom end. Check your stick to be sure the end has not been worn or cut off and that the stick is not warped.

- The stick should be made of non-sparking material, such as wood, and varnished to minimize the creeping of fuel above the actual fuel level in the tank.

- **For manually sticking the UST use good sticking practices:** Slowly lower the gauge stick to the tank's bottom. Let the stick gently touch the bottom, and then quickly bring it back up. Read the depth of fuel indicated by the wet mark to the closest 1/8 inch division on the stick. Use of fuel finding paste will make your stick readings more accurate. Be sure to follow the directions on your fuel paste; some must sit in contact with product for several seconds or more before changing.

Tank Chart

- You will need a tank chart to convert the number of inches of liquid in the tank into the number of gallons.

- You need a tank chart that exactly matches your UST tank manufacturers provide charts for their tanks. If you have more than one tank, you will need a chart for each tank unless the tanks are identical. The tank chart must show conversion to gallons for each 1/8 inch stick reading.

- To convert inches into gallons, find your stick's reading to the nearest 1/8 inch on the tank chart, and then simply read across to the gallons column to find the number of gallons.

ATG:

- This in- tank monitor must be programmed to read the UST's product level to within an 1/8 inch and provide printouts of the information. Record the gallons of product directly from the ATG's printout. Your ATG may be programmed to print a daily inventory report at the same time every day. Check with a certified technician if you are not sure how your ATG is set up.

Write the number of gallons measured in the box labeled "End Stick Inventory (gallons)" for each tank.

2. Record the amount pumped

Today's Sum of Dispenser Totalizers

- Copy the numbers from each dispenser's totalizer onto the Daily Inventory Worksheet. Be careful that you write all the meter readings for a tank in the same column. You may have several dispensers and totalizers for one tank, so the worksheet provides boxes in which you can enter several readings in any order.

- Add up the totalizer meter readings in each column and write the result in the box labeled "Today's Sum of Totalizers."

- You may have an alternative to reading totalizers. If you have a self- service fueling operation where the cashier can authorize fuel sales from inside the facility, you can probably print out a daily report that gives you the total sales for each type of fuel.

- If you are using cash register reports to record the amount pumped, enter the amount of each type of fuel pumped in the box labeled "Amount Pumped Today" or staple the print- out to the worksheet.

- Find the last Daily Inventory Worksheet you completed. Copy "Today's Sum Of Totalizers" from that worksheet into the "Previous Day's Sum of Totalizers" box of the worksheet you are working on today.

- **On today's worksheet, subtract "Previous Day's Sum of Totalizers" from "Today's Sum of Totalizers" and write the result in the box labeled "Amount Pumped Today."**

3. Record Fuel Deliveries

If you use a measuring stick:

- Before the delivery begins stick the tank and measure the depth of the product to the nearest 1/8 inch.

- **Write your measurement in the box labeled "Inches of Fuel Before Delivery" for each tank you measured**.

- After the delivery, wait at least 5 minutes for the fuel level in the tank to stabilize, and then measure again as described above.

- **Record fuel level in the box labeled "Inches of Fuel After Delivery."**

- Using your tank chart, convert both delivery readings to the correct number of gallons. Write these numbers in the boxes labeled "**Gallons of Fuel Before Delivery**" and **"Gallons of Fuel After Delivery."**

If you are using an ATG:

- Print out the number of gallons in the UST prior to delivery and write in the box labeled **"Gallons of Fuel Before Delivery"**

- After the delivery, wait at least 5 minutes for the fuel level in the tank to stabilize, Print out the number of gallons in the UST and write in the "**Gallons of Fuel After Delivery."**

- Your ATG may be programmed to automatically print a delivery report with "before" and "after" readings.

Subtract "Gallons of Fuel Before Delivery" from "Gallons of Fuel After Delivery." Record the result in the box labeled "Gallons Delivered (Stick)."

Now look at the delivery receipt and find the volume of each type of product that was delivered. If two volumes are given, one labeled "net" and the other "gross", **use the gross gallons as the volume of product delivered.**

For each type of fuel delivered, copy the gross gallons delivered from the delivery receipt onto the worksheet in the box labeled "Gross Gallons Delivered (Receipt)."

4. Water Checks

- You must check for water in the bottom of the tank daily for USTs that store an ethanol-gasoline blend such as E10 because it will cause the fuel to separate, or at least once each week for other USTs.

- If you stick the UST manually, smear a water-finding paste along the bottom of the stick. The paste changes color when it comes in contact with water. Be sure to follow the directions on the water paste package.

- If the UST has an ATG, check the ATG printout for water levels.

- **Enter the number of inches or gallons of water in the tank on the** Daily Inventory Worksheet**. If there is no water present, enter a zero to indicate that you in fact checked for water but found none.**

- If you find water in the tank, you should arrange for its immediate removal, notify the product supplier, and conduct further tests to make sure that the tank is not leaking.

Monthly Inventory Procedures

1. Calculate Daily Changes in Inventory

For this part, you will copy information from the Daily Inventory Worksheet onto a Monthly Inventory form. See the Monthly Inventory Record, located in the Forms section, for a blank form you may use to record your monthly inventory. You need one for each tank that you have.

If this is the very first day of your inventory recordkeeping, enter the **"End Stick Inventory (gallons)"** from the Daily Inventory Worksheet on the Monthly Inventory Record under **"End Stick Inventory (gallons)"** for that starting date. This is all you can do today. Starting tomorrow, follow all of the instructions listed below.

Find the line in the left column on the Monthly Inventory Record with today's date listed. Copy the previous day's **"End Stick Inventory (gallons)"** number into the box for today's" **Start Stick Inventory (gallons)"**

Enter the amount of any fuel delivered from the Daily Inventory Worksheet. If you were NOT pumping fuel during the time when the delivery was taking place, then use the **"Gallons Delivered (Stick)" number**. **However,** if **you had** to **pump fuel while the delivery was taking place, then use the "Gross Gallons Delivered (Receipt)" number as your delivery amount.**

Copy the "**Amount Pumped Today**" number from the Daily Inventory Worksheet into the "**Gallons Pumped**" column of the Monthly Inventory Record.

Add the "**Start Stick Inventory (Gallons**)" and the "**Gallons Delivered**" columns; then subtract the "**Gallons Pumped**" column. Enter the result in the column labeled **"Book Inventory (Gallons)."**

Copy the **End Stick Inventory (Gallons)."** number from the Daily Inventory Worksheet into the column labeled **End Stick Inventory (Gallons)."** on the Monthly Inventory Record

Subtract the "**Book Inventory (Gallons)"** from the **"End Stick Inventory (Gallons)."**

Enter the difference into today's "**Daily Over Or Short**" box. This number will be a positive or negative number (only rarely will it be zero).

The TMS has a computer spreadsheet that may help you with your monthly inventory. If you have a computer with MS Excel or Open Office and would like a copy contact the TMS at 395-2500.

5. Calculate Monthly Changes in Inventory

At the end of each month, you need to check to see if the difference between "stick" and "book" inventory on the Monthly Inventory Record indicates a possible leak.

Add all of the month's "**Gallons Pumped**" numbers and write this total at the bottom of the column in the box labeled "**Total Gallons Pumped**."

Add all the month's **"Daily Over Or Short"** numbers: pay careful attention to positive and negative numbers to get an accurate total. For example, adding +4 and +3 and -2 should equal +5. **Enter the total at the bottom of the column in the box labeled "Total Gallons Over Or Short."**

Fill out the "**Leak Check**" line at the bottom of the Monthly Inventory Record as follows:

Take the "**Total Gallons Pumped**" number and drop the last two digits to get 1 % (for example: 6594 becomes 65).

Add 130 (for example: 65 + 130 = 195).

Enter the result of this calculation at the end of the "**Leak Check**" line. This number is the maximum change in inventory allowed by regulations (1% of throughput plus 130 gallons).

At the bottom of the Monthly Inventory Record , circle "YES" or "NO" to show whether your "**Total Gallons Over Or Short"** number is LARGER than the "LEAK CHECK" number you identified in the previous item. Even if your "**Total Gallons Over Or Short**" is a negative number, treat it as a positive number for the purpose of this comparison. For example, -74 would become +74.

If you circle "YES" for any month, you must notify the TMS, by calling 302-395-2500, within twenty-four (24) hours of discovery or by the next business day.

In addition to calling the TMS, the following steps should be started within 24 hours to help identify why your inventory shows a problem:

1. Check the daily and monthly inventory forms for mathematical errors.

2. Check all inventory for errors in measurement, product temperature changes or conversion from tank chart if manually sticking the USTs.

3. Check for discrepancy or accuracy of the fuel delivery measurements. To do so, compare the "hand-stuck" readings, the automatic tank gauging system (ATG), and fuel delivery ticket.

4. Inspect the accessible parts of the tank system for damage or leaks.

5. Check your other form of monthly release detection method records for signs of a leak.

6. Check the calibration of the ATG and the dispenser meter(s) in accordance with manufacturer's instructions.

7. If none of the above actions explain the discrepancy, and it cannot be the result of theft, the entire UST System might need to be tightness tested to make sure it is not leaking.

Steps to Take if Inventory Indicates a Loss or Gain of Water

A loss or gain of water may be an indication of a leak also. Some water may accumulate during normal tank activities, such as product deliveries or temperature changes. You should:

1. Have the water removed from the tank and disposed of properly.

2. Check for water in the tank 24 hours later, during which time no product will be added to the tank.

3. If another gain of water is observed during the next 24 hours, contact the TMS at 302-395-2500.

4. If no additional abnormal gain of water is observed, continue with routine inventory control and monitoring procedures.

5. All tanks 8000 gallons or less storing ethanol blends such as E-10 gasoline must have water removed within 7 days and properly disposed if **1 inch or more of water** accumulates in the tank. All tanks more than 8000 gallons storing ethanol blends such as E-10 gasoline must have water removed within 7 days and properly disposed if **2 inches or more of water** accumulates in the tank. You run the risk of ruining the fuel due to phase separation when water accumulates. In tanks storing fuels not blended with ethanol, such as diesel, the water must be removed within 7 days and properly disposed when 2 inches or more accumulates.

Notify the TMS at 302-395-2500 whenever you have an unexplained loss or gain of product or water.

The loss or gain may be due to mathematical error, improper calibration of product dispenser meters, theft of product from the tank, or a leaking pipe or tank.

Inventory- Used Oil USTs Only

Inventory control data for used oil USTs must be recorded and tracked but it is not required to be reconciled monthly because of the small capacity and throughput of most used oil USTs. Basically, inventory control requires daily measurements (each day the UST has product added to or removed from it, or at least once a week) of the contents and math calculations that let you compare your "stick" inventory (what you've measured) to your "book" inventory (what your record keeping indicates you should have).

Modified Inventory Control- Used Oil USTs Only

- It is not necessary to accurately measure the amount of used oil added to the UST at any specific day. However, operators will be required on their daily inventory to record the product level each day used oil is added or withdrawn, or at least once every 7 days.
- Weekly water check is also required.
- Any loss of product or gains in water must be reported to the TMS and appropriate leak investigation procedures followed.

Daily Inventory Procedures - Used Oil USTs Only

1. Measuring The Tank's Contents

See the Overfill Prevention & Daily Inventory Worksheet for Used Oil USTs & Modified Inventory Record- Used Oil USTs located in the Forms section, for blank forms you may use to record your inventory.

- Each column on the Overfill Prevention & Daily Inventory Worksheet for Used Oil USTs represents one day -consistently enter all information for each day in the same vertical column.
- Each row on the Modified Inventory Record- Used Oil USTs represents one day -consistently enter all information for each day in the same row.

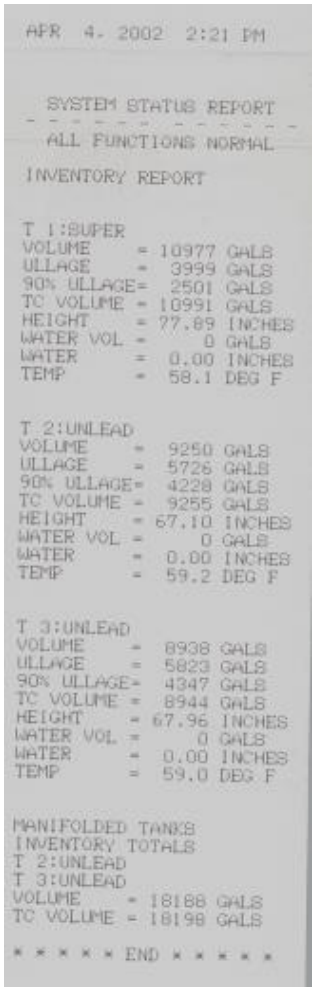
You can use a Measuring Stick or Automatic Tank Gauge (ATG)

Measuring Stick:

- The stick used to measure the depth of liquid in your UST must be marked or notched to 1/8 inch, starting with zero at the bottom end. Check your stick to be sure the end has not been worn or cut off and that the stick is not warped.
- The stick should be made of non-sparking material, such as wood, and varnished to minimize the creeping of fuel above the actual fuel level in the tank.
- **For Manually sticking the UST use good sticking practices:** Slowly lower the gauge stick to the tank's bottom. Let the stick gently touch the bottom, and then quickly bring it back up. Read the depth of fuel indicated by the wet mark to the closest 1/8 inch division on the stick. Use of fuel-finding paste will make your stick readings more accurate. Be sure to follow the directions for your fuel paste. Some need to sit in contact with product for several seconds or more before they will change color.

Tank Chart

- You will need a tank chart to convert the number of inches of liquid in the tank into the number of gallons.



- You need a tank chart that exactly matches your UST tank manufacturers provide charts for their tanks. If you have more than one tank, you will need a chart for each tank unless the tanks are identical. The tank chart must show conversion to gallons for each 1/8 inch stick reading.

- To convert inches into gallons, find your stick's reading to the nearest 1/8 inch on the tank chart, and then simply read across to the gallons column to find the number of gallons.

ATG:

- This in- tank monitor must be programmed to read the UST's product level to within an 1/8 inch and provide printouts of the information. Record the gallons of product directly from the ATG's printout. Your ATG may be programmed to print a daily inventory report at the same time every day. Check with a certified Technician if you are not sure how your ATG is set up.

Record the date and write the number of gallons measured in the box labeled "Start Stick Inventory (gallons)" on the Modified Inventory Record- Used Oil USTs.

2. Record the amounts added to the UST

On the Overfill Prevention & Daily Inventory Worksheet for Used Oil USTs **record the estimated number of gallons added throughout the day under the column for the day of the week.**

3. Record any pump-outs

If you use a measuring stick:

- Before the pump out begins stick the tank and measure the depth of the product to the nearest 1/8 inch.

- After the pump out, measure again as described above.

- **Using your tank chart determine the number of "Gallons Pumped Out" and record on the** Modified Inventory Record- Used Oil USTs**.**

If you are using an ATG:

- Print out the number of gallons in the UST prior to the pump out.

- After the pump out, print out the number of gallons in the UST

- **Determine the number of "Gallons Pumped Out" and record on the** Modified Inventory Record- Used Oil USTs.

Now look at the pump out receipt, find the volume pumped out, make sure they match your records.

4. Water Checks

- You must check for water in the bottom of the tank at least once each week.
- If you stick the UST manually, smear a water-finding paste along the bottom of the stick. The paste changes color when it comes in contact with water. Be sure to follow the directions on the water paste package to make sure that the paste changes color.
- If the UST has an ATG, check the ATG printout for water levels.
- **Enter the number of inches or gallons of water in the tank on the** Modified Inventory Record- Used Oil USTs.
- If there is no water present, enter a zero to indicate that you in fact checked for water.
- If you find more than 2 inches of water, you should arrange for its removal within 7 days, and contact the TMS (302-395-2500) for further tests to make sure that the tank is not leaking.

5. Calculate Daily Changes in inventory (at the end of the day or first thing in the morning)

For this part, you will copy information from the Overfill Prevention & Daily Inventory Worksheet for Used Oil USTs onto the Modified Inventory Record- Used Oil USTs.

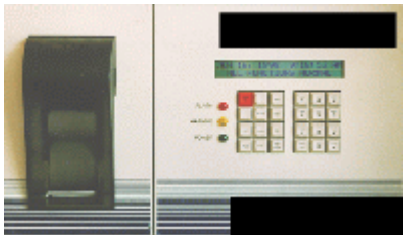
- **At the end of the day, add all the "estimated number of gallons added throughout the day" for today on the** Overfill Prevention & Daily Inventory Worksheet for Used Oil USTs **and record on the bottom of that form and on the** Modified Inventory Record- Used Oil USTs.
- **In the row with today's date, record the same number in the "Total Gallons Added From Daily/Weekly Sheet" box.**
- **Add the "Start Stick Inventory (Gallons)" and the "Total Gallons Added From Daily/Weekly Sheet"" boxes; then subtract the "Gallons Pumped Out" box. Enter the result in the box labeled "Book Inventory (Gallons)."**
- **Measure the number of gallons in the UST at the end of the day and write in the box labeled "Closing Stick Inventory (gallons)" on the** Modified Inventory Record- Used Oil USTs. **This will also be your** "**Start Stick Inventory (gallons)"for tomorrow.**
- Subtract the "**Book Inventory (Gallons)"** from the **"Closing Stick Inventory (Gallons)."**
- Enter the difference into today's "**Daily Over Or Short**" box. This number will be a positive or negative number (only rarely will it be zero).

Contact the TMS (302-395-2500 :

- **If there is an unexplainable consistent negative trend in any given month, or if the amount of Used Oil removed from the UST is less than the amount indicated by the modified inventory control**
- **Whenever you have an unexplained loss or gain of product or water**

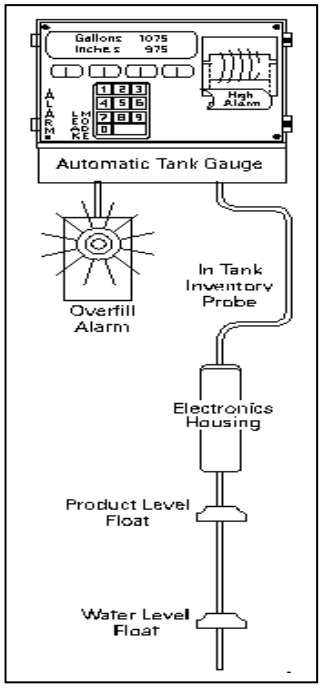
These may be due to mathematical error, improper calibration of ATG, theft or a leaking UST.

Automatic Tank Gauge (ATG) Tank Testing (Available to All USTs)
(Monthly Tank Release Detection)



Sample ATG Monitor

ATG systems are electronic monitors with probes permanently installed in the tank. These monitors provide information on product and water levels, temperature, and other data. The ATG automatically calculates changes in product volume that can indicate a leaking tank.

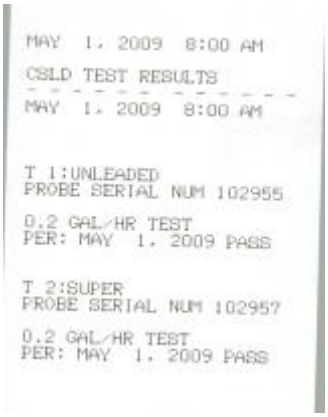


ATG

- Your ATG is capable of performing various functions, depending upon the model and how it is programmed. Refer to the ATG's instruction manual for an explanation of the system's full capabilities.

- An ATG tank test must be performed monthly (although more frequent testing is recommended), with a passing [0.2 gallon per hour (gph) for USTs installed before 1/8/2008 and 0.1gph for USTs installed after 1/8/2008] test result recorded in a permanent record. See the 30-Day Inspection Record for Monthly Tank Release Detection (RD) form located in the Forms section- it can be used to record your monthly ATG test results.

- For most ATGs to correctly perform the monthly test, no product should be delivered to the tank or withdrawn from it for at least 6 hours before the monthly test or during the test (which generally takes 1 to 6 hours).



MAY 1, 2009 8:00 AM
CSLD TEST RESULTS
MAY 1, 2009 8:00 AM

T 1:UNLEADED
PROBE SERIAL NUM 102955
0.2 GAL/HR TEST
PER: MAY 1, 2009 PASS

T 2:SUPER
PROBE SERIAL NUM 102957
0.2 GAL/HR TEST
PER: MAY 1, 2009 PASS

- If you are getting results other than "pass" for 30 days or more, including "low level" or "insufficient product" results, you should contact the TMS (302-395-2500).

- All passing monthly ATG printouts must be kept for the lifetime of the UST system.

- It is a good idea to manually stick the tanks periodically to verify ATG readings.

- Most ATGs have a "test" or "self-diagnosis mode". Read your manual, run the test, and periodically test if your ATG is functioning properly.

- **You must have all ATG equipment inspected by a certified technician once every twelve (12) months. During the inspection the technician must check the following**:
  - The ATG console for printer operation if so equipped;
  - The system setup values and battery backup;
  - The monthly test programming setup;
  - All warning and alarm indicator lights and audible alarms;
  - The probes and sensors in accordance with the manufacturer's specifications or as directed by the TMS to make sure they are working properly;

ATG Indicator Lights

  - The cables that are visible during normal operating conditions for any cracking or swelling.

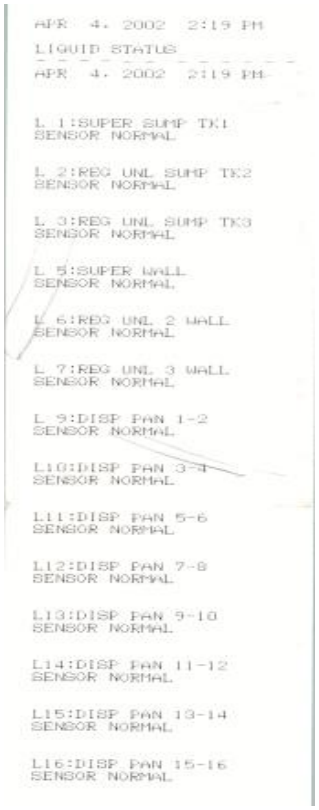
Secondary Containment with Interstitial Tank Monitoring (Available to All USTs) (Monthly Tank Release Detection)

Secondary containment with interstitial monitoring involves the use of a double-walled tank. Product leaked from the UST is contained within the interstitial space between the two walls of the tank to prevent it from leaking into the environment. Leaking product can then be detected when the interstitial space is checked.

- Interstitial monitoring methods range from a gauge stick to automated liquid sensors installed in the interstitial space and connected to an ATG.

- If your UST system was installed after January 11, 2008, interstitial monitoring is required as part of the secondary containment requirement, and may be done manually with a gauge stick or with continuous electronic sensors. However, since you have chosen to use interstitial monitoring as your method of release detection (not just to meet secondary containment requirements), the interstitial spaces must be continuously monitored using electronic sensors.

- The interstitial space must be checked monthly with the result recorded in a permanent record. See the 30-Day Inspection Record for Monthly Tank Release Detection (RD) form located in the Forms section –it can be used to record your monthly sensor status results.
    - Indicate "P", for "Pass", if there is no evidence of a release;
    - Indicate "F", for "Fail" and contact the TMS within 24 hours, or by the next business day;
    - Maintain all sensor printouts, if using an ATG.


APR 4, 2002 2:19 PM
LIQUID STATUS
APR 4, 2002 2:19 PM
L 1:SUPER SUMP TK1
SENSOR NORMAL
L 2:REG UNL SUMP TK2
SENSOR NORMAL
L 3:REG UNL SUMP TK3
SENSOR NORMAL
L 5:SUPER WALL
SENSOR NORMAL
L 6:REG UNL 2 WALL
SENSOR NORMAL
L 7:REG UNL 3 WALL
SENSOR NORMAL
L 9:DISP PAN 1-2
SENSOR NORMAL
L10:DISP PAN 3-4
SENSOR NORMAL
L11:DISP PAN 5-6
SENSOR NORMAL
L12:DISP PAN 7-8
SENSOR NORMAL
L13:DISP PAN 9-10
SENSOR NORMAL
L14:DISP PAN 11-12
SENSOR NORMAL
L15:DISP PAN 13-14
SENSOR NORMAL
L16:DISP PAN 15-16
SENSOR NORMAL

- If the ATG shows an alarm, or you manually detect product or water in the interstitial space, immediately call your service representative. You must also notify the TMS (302-395-2500) within 24 hours or by the next business day.

- You must have all ATG equipment inspected by a certified technician once every twelve (12) months. During the inspection the technician must check the following:
    - The ATG console for printer operation if so equipped;
    - The system setup values and battery backup;
    - The monthly test programming setup;
    - All warning and alarm indicator lights and audible alarms;
    - The probes and sensors in accordance with the manufacturer's specifications or as directed by the TMS to make sure they are working properly;
    - The cables that are visible during normal operating conditions for any cracking or swelling.

- The sump being monitored for monthly tank release detection purposes must be tested to make sure it is not leaking at least once every thirty-six (36) months. See the Sump (Tank Top and Dispenser) Test Procedures located in the Forms section for testing procedures and a blank test report.

Tank Release Detection – Tank Tightness Testing (Annual)

(Applies to Emergency Generator and Heating Fuel USTS only)

- This is a test conducted once every twelve (12) months by a tank tester who temporarily installs special equipment to test to make sure the tank is not leaking.

- The person conducting the test must be certified by the test equipment manufacturer and the test method must be approved by a third party.

- If the tank fails the tightness test, the tank must be taken out of service and emptied until the problem is found and repairs are made. You must also contact the TMS at 302-395-2500 within 24 hours.

- A second tank tightness test may be done to confirm the results of a failed test. After two consecutive tank test failures, you will need to perform a site investigation to determine whether or not the tank has leaked.

- If a repair is necessary, another tank tightness test must be done after the repair, before placing the tank back in service.

- Test results must be kept for the life of the UST system.

Tank Release Detection- Manual Tank Gauging (MTG) (Weekly/ Monthly)

(Applies to Used Oil USTs only)

MTG involves taking the UST out of service for a specified amount of time (depending on the tank size) and checking for a change in product level to verify the UST is not leaking.

- MTG is an approved leak detection method for used oil tanks of 1,000 gallons or less.
- MTG may be substituted for inventory control for used oil tanks of 2,000 gallons or less, but it cannot be used for both the Inventory and Release Detection requirements.

Step 1-Find the Right Testing Period

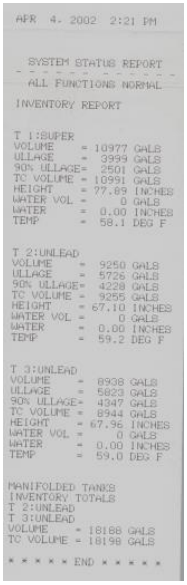
- Once each week you must take your tank out of service for a testing period. The length of the testing period depends on the size of your tank.
- **Circle your tank size and test duration in the table on the Manual Tank Gauging Record located in the Forms section so your records show which test is being completed.**
- The "Minimum Duration of Test" box next to the box that matches the size of your UST tells you how long the test must be.

Step 2-Measure the Initial Amount of Product in the UST

You can use a Measuring Stick or Automatic Tank Gauge (ATG)

Measuring Stick:

- The stick used to measure the depth of liquid in your UST must be marked or notched to 1/8 inch, starting with zero at the bottom end. Check your stick to be sure the end has not been worn or cut off and that the stick is not warped.
- The stick should be made of non-sparking material, such as wood, and varnished to minimize the creeping of fuel above the actual fuel level in the tank.
- **For Manually sticking the UST use good sticking practices:** Slowly lower the gauge stick to the tank's bottom. Let the stick gently touch the bottom, and then quickly bring it back up. Read the depth of fuel indicated by the wet mark to the closest 1/8 inch division on the stick. Use of fuel-finding paste will make your stick readings more accurate. Be sure to follow the directions for your fuel paste. Some need to sit in contact with product for several seconds or more before they will change color



Tank Chart

- You need a tank chart to convert the number of inches of liquid in the UST to gallons.
- The tank chart must exactly match your UST; manufacturers provide charts for their tanks. If you have more than one tank, you will need a chart for each tank unless the tanks are identical. The tank chart must show conversion to gallons for each 1/8 inch stick reading.
- To convert inches to gallons, find your stick's reading to the nearest 1/8 inch on the tank chart, and then simply read across to the gallons column to find the gallons.

ATG:

- This in- tank monitor must be programmed to read the UST's product level to within an 1/8 inch and provide printouts of the information. Record the gallons of product directly from the ATG's printout.

Take *2* product level readings (if using a measuring stick, convert to gallons) and record "First Initial Reading" and "Second Initial Reading" on the Manual Tank Gauging Record located in

the Forms section. If the two readings vary by more than a couple of gallons, a third reading should be taken.

- **Average the two initial readings (gallons). Enter the result in the " Average Initial Reading" box on the Manual Tank Gauging Record**.

Step 3 - Wait the number of hours listed under "Minimum Duration of Test" for the UST size. No product should be added to or removed for this time period.

Step 4 - Measure the End Amount of Product in the UST

Take *2* product level readings (if using a measuring stick, convert to gallons) and record "First End Reading" and "Second End Reading" on the Manual Tank Gauging Record located in the Forms section. If the two readings vary by more than a couple of gallons, a third reading should be taken.

- **Average the two end readings (gallons). Enter the result in the " Average End Reading" box on the Manual Tank Gauging Record**.

Step 5 - What Does It Mean?

The weekly and monthly test standards depend on tank size. To find your tank's weekly and monthly test standards, locate your tank on the table on the **Manual Tank Gauging Record**. You know which test standards apply to your tank by looking at the gallon numbers in the "Weekly Standard" and "Monthly Standard" boxes next to your tank size.

Circle the weekly and monthly test standards that apply to your tank so you will know which standards your tank must meet.

Weekly Check:

To interpret the results of the test for a given week, subtract the "Average Initial Reading" from the "Average End Reading" and record the result in the "Volume Change (gal) + or -" box on the Manual Tank Gauging Record

If your **"Volume Change (gal) + or -"** number is not larger than the weekly test standard, circle "YES" in the "Tank Passes Test" column.

If the **"Volume Change (gal) + or -"** is larger than the weekly standard, (listed in the table on the **Manual Tank Gauging Record**) circle "NO" - the UST failed for that week.

Monthly Check:

To interpret the results of the tests for a given month, add the previous four weekly "Volume Change (gal) + or -" results (positive and negative signs are maintained) **and the sum is divided by four.** Record the number in the **"Monthly Standard"** box on the **Manual Tank Gauging Record.**

If your **"Monthly Standard"** number is not larger than the monthly standard, circle YES in the "Tank Passes Monthly Test" box.

If your "**Monthly Standard"** is larger than the monthly standard, circle NO in the "Tank Passes Monthly Test" box; the UST failed for that month.

If you circle NO for the Weekly or Monthly Check , contact the TMS within 24 hours or by the next business day.

Alternative Tank Release Detection Methods

Any alternative method must receive written approval from the TMS before it can be used for release detection. Approval to use an alternative release detection method will be revoked if not properly performed. Contact the TMS (302-395-2500) for more information on alternative release detection methods.

Statistical Inventory Reconciliation (SIR)

(Available to all USTs except Used Oil, Emergency Generator and Heating Fuel)

(Monthly Tank Release Detection)

This alternative method of release detection mathematically evaluates a tank system for leaks using inventory control data. This data is analyzed by a trained professional using computer software.

SIR requires very accurate inventory records for it to be an effective release detection method. The SIR vendor must be approved by an independent third party. Contact the TMS for a list of approved SIR vendors or go to www.nwglde.org.

- At least once every thirty (30) calendar days you send your tank inventory data, measured to the closest eighth of an inch (1/8"), to your SIR provider. When you receive the SIR report you should review it, and the test date and results of the report should be recorded. See the 30-Day Inspection Record for Monthly Tank Release Detection (RD) form located in the Forms section- it can be used to record your monthly SIR results. You must keep records showing a passing test result for each tank each month.
    - Indicate "P" if the SIR report for the tank shows "Tight" or "Pass" for the [0.2 gallon per hour (gph) for existing USTs and 0.1 gph for new USTs]test.
    - Indicate "F" if the SIR report for the tank shows "Fail" for the [0.2 gallon per hour (gph) for existing USTs and 0.1 gph for new USTs] test, and contact the TMS (302-395-2500) within 24 hours, or by the next business day;
    - If SIR reports show "Inconclusive" or "Error" contact your SIR provider to have the discrepancy resolved immediately. Two (2) inconclusive results in a row must be treated as a failure and will result in mandatory tank tightness precision testing for each inconclusive tank.
- All SIR reports must be kept for the lifetime of the UST system.

Interpreting the results of SIR

The SIR report will indicate "Pass", "Fail" or "Inconclusive" for each UST in the UST system:

- **Pass**: The analyzed data indicates the UST is tight.
- **Fail**: The analyzed data indicates the UST experienced a loss of product or an influx of groundwater. However, a "Fail" may not necessarily indicate a release; miscalibrated dispensers, inaccurate metered deliveries or stolen product could also produce a failure. **Regardless of the reason the UST received a "Fail", you must notify the TMS within 24 hours, or by the next business day**. You must begin to investigate the possible cause of the failure within 24 hours of discovery of the Failure.
- **Inconclusive**: The analyzed data cannot determine the tightness of the tank. An "Inconclusive" result is often the direct outcome of inaccurate inventory records. If the SIR report shows "Inconclusive", the O/O must contact the SIR provider to have the discrepancy resolved immediately. Two (2) "Inconclusive" results in a row must be treated as a "Fail", must be reported to the TMS, and may result in mandatory tank tightness precision testing for each inconclusive tank.

Sump (Tank Top and Dispenser) and Sump Sensor Testing Requirements

Sumps installed before January 11, 2008:

- No testing is required if the sump does not contain sensors used for release detection.
- Sumps must be tested every thirty-six (36) months if they contain sensors used for release detection. (Double Wall Sumps do not have to be tested if they are continuously monitored)
- Sensors in the sump must be tested every 12 months if they are used as part of the release detection system.
- See the Sump (Tank Top and Dispenser) Test Procedures located in the Forms section for testing procedures and a blank test report.

Sumps installed after January 11, 2008:

- If your UST system was installed after January 11, 2008, interstitial monitoring is required as part of the secondary containment, therefore there must be a sump and sump sensor.
- Single Wall Sumps must be tested once every thirty-six (36) months.
- Double Wall Sumps do not have to be tested if they are continuously monitored.
- See the Sump (Tank Top and Dispenser) Test Procedures located in the Forms section for testing procedures and a blank test report.
- Sensors in the sump must be tested once every twelve (12) months.

Tank Top Sump

Dispenser Sump

Sump Sensors

Sump Sensors – UST systems installed after January 11, 2008 must have an audible and visual alert system that shuts down the UST System in the event of an alarm. You must inspect and test all sensors at a minimum of once every twelve (12) months in accordance with the manufacturer's specifications or as directed by the TMS to verify proper sensor operation. In addition, your tank top sumps must be kept dry at all times in order for the sensors to properly function.

Piping Release Detection (only applicable Sections)

Pressurized Piping Release Detection (Annual L ine Tightness Testing)

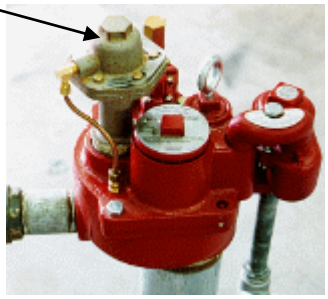
(Available to All USTs except Used Oil and Heating Fuel)

Pressurized piping uses a pump located in the tank to deliver product to the dispenser. In a pressurized system, product remains in the pipe at all times under pressure. Therefore, if there is a hole in the pipe, product will continually be released. Pressurized piping systems must be equipped with a line leak detector and perform a method of release detection.

Line leak detector (LLD) requirements (LLD)

The line leak detector must be designed to detect a leak at least as small as 3 gallons per hour at a line pressure of 10 pounds per square inch within 1 hour. One of the following types of line leak detectors must be used:

- Shut-Off Device - Electronic device that shuts off fuel at the tank if a drop in pressure is detected.
- Flow Restrictor - Mechanical or electronic device that slows down fuel flow if a drop in pressure is detected.



Sample LLD

The line leak detector must be tested once a year by a qualified UST contractor to make sure that it is working.

Release detection requirements

One of the following methods of release detection must be used:

- Annual Line Tightness Test
- Interstitial Monitoring (for double wall piping only)
- Alternative methods - SIR, etc.

Annual Line Tightness Test

- The person conducting the test must be certified by the appropriate test equipment manufacturer.
- If you receive a failed line tightness test, contact the TMS at 302-395-2500 and the DNREC 24 hour Release Reporting hotline at 1-800-662-8802 within 24 hours.
- A second line tightness test may be conducted to confirm the results of a failed test. After two consecutive line test failures, owners are required to carry out a preliminary site investigation to determine whether or not a release has occurred.
- If a repair is necessary, another line tightness test must be carried out prior to placing the piping back in service to make sure the system is not leaking.
- Test results must be kept for the lifetime of the UST system.

Pressurized Piping Release Detection (Interstitial Monitoring)

(Available to all USTs except Used Oil and Heating Fuel)

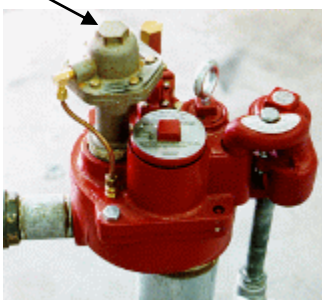
Pressurized piping uses a pump located in the tank to deliver product to the dispenser. In a pressurized system, product remains in the pipe at all times under pressure. Therefore, if there is a hole in the pipe, product will continually be released. Pressurized piping systems must be equipped with a line leak detector and perform a method of release detection.

Line leak detector (LLD) requirements

The line leak detector must be designed to detect a leak at least as small as 3 gallons per hour at a line pressure of 10 pounds per square inch within 1 hour. One of the following types of line leak detectors must be used:

- Shut-Off Device - Electronic device that shuts off fuel at the tank if a drop in pressure is detected.
- Flow Restrictor - Mechanical or electronic device that slows down fuel flow if a drop in pressure is detected.

The line leak detector must be tested once a year by a qualified UST contractor to make sure that it is working.



Sample LLD

Release detection requirements

One of the following methods of release detection must be used:

- Annual Line Tightness Test
- Interstitial Monitoring (for double wall piping only)
- Alternative methods - SIR, etc.

Interstitial Monitoring Piping Release Detection

- Interstitial monitoring methods range from a gauge stick to automated liquid sensors installed in the interstitial space and connected to an ATG.

- If your UST system was installed after January 11, 2008, interstitial monitoring is required as part of the secondary containment requirement, and may be done manually with a gauge stick or with continuous electronic sensors. However, since you have chosen to use interstitial monitoring as your method of release detection (not just to meet secondary containment requirements), the interstitial spaces must be continuously monitored using electronic sensors.

- The interstitial space must be checked monthly with the result recorded in a permanent record. See the 30-Day Inspection Record for Pressurized Piping Release Detection (RD) form located in the Forms section –it can be used to record your monthly sensor status results.

    - Indicate “P”, for “Pass”, if there is no evidence of a release and all interstitial monitoring equipment is working properly.

    - Indicate “F”, for “Fail”, and contact the TMS (302-395-2500) within 24 hours, or by the next business day;

- If the ATG shows an alarm, or you manually detect product or water in the interstitial space, immediately call your service representative. You must also notify the TMS (302-395-2500) within 24 hours or by the next business day.

- All monthly "sensor normal" reports must be kept for the lifetime of the UST system.

- The sump being monitored for monthly tank release detection purposes must be tested to make sure it is not leaking at least once every thirty-six (36) months. See the Sump (Tank Top and Dispenser) Test Procedures located in the Forms section for testing procedures and a blank test report.

- You must have all ATG equipment inspected by a certified technician once every twelve (12) months. During the inspection the technician must check the following:
    - The ATG console for printer operation if so equipped;
    - The system setup values and battery backup;
    - The monthly test programming setup;
    - All warning and alarm indicator lights and audible alarms;
    - The probes and sensors in accordance with the manufacturer's specifications or as directed by the TMS to make sure they are working properly;
    - The cables that are visible during normal operating conditions for any cracking or swelling.

Sump Sensors

Pressurized Piping Release Detection (Alternative Method-SIR)

(Available to all USTs except Used Oil, Emergency Generator and Heating Fuel)

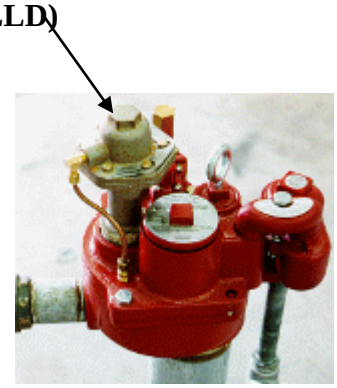
Pressurized piping uses a pump located in the tank to deliver product to the dispenser. In a pressurized system, product remains in the pipe at all times under pressure. Therefore, if there is a hole in the pipe, product will continually be released. Pressurized piping systems must be equipped with a line leak detector and perform a method of release detection.

Line leak detector requirements (LLD)

The line leak detector must be designed to detect a leak at least as small as 3 gallons per hour at a line pressure of 10 pounds per square inch within 1 hour. One of the following types of line leak detectors must be used:

- Shut-Off Device - Electronic device that shuts off fuel at the tank if a drop in pressure is detected.
- Flow Restrictor - Mechanical or electronic device that slows down fuel flow if a drop in pressure is detected.

The line leak detector must be tested once a year by a qualified UST contractor to make sure that it is working.



Sample LLD

Release detection requirements

One of the following methods of release detection must be used:

- Annual Line Tightness Test
- Interstitial Monitoring (for double wall piping only)
- Alternative methods - SIR, etc.

Alternative Method (SIR) Piping Release Detection

- Use of this method must be approved in advance by the TMS.
- At least once every thirty (30) calendar days you need to provide inventory data, measured to the closest eighth of an inch (1/8”), to your SIR provider. When you receive the SIR report you should review it, and the test date and results of the report should be recorded on the 30-Day Inspection Record for Pressurized Piping Release Detection (RD) located in the Forms section.
- Indicate “P” if the SIR report for the tank shows “Tight” or “Pass” for the 00.1 gal/hr test.
- Indicate “F” if the SIR report for the tank shows “Fail” for the 00.1 gal/hr test, and contact the TMS (302-395-2500) within 24 hours, or by the next business day;
- If SIR reports show “Inconclusive” or “Error” contact your SIR provider or the TMS to have the discrepancy resolved immediately. Two (2) inconclusive results in a row must be treated as a failure and will result in mandatory line tightness testing for each inconclusive product line.
- If compliance is maintained utilizing the SIR approved method, this system is exempt from annual line tightness testing requirement.
- All SIR reports must be kept for the lifetime of the UST system.

Suction Piping Release Detection (Exempt-Safe Suction)

(Available to all USTs except Used Oil)

Suction piping uses a pump located in the dispenser, boiler or furnace.

Release detection requirements

One of the following applies for suction piping tank systems:

- Exempt
- 3 Year Tightness Test
- Interstitial Monitoring (for double wall piping only)

You are exempt from line tightness testing if:

- You can verify that there is only one check valve and it is located near the suction pump inside the dispenser, or near the boiler or furnace, and

- The piping is sloped so that product will drain back to the tank.

Sample suction pump in dispenser

Suction Piping Release Detection (3 year test)

(Available to all USTs except Used Oil)

Suction piping uses a pump located in the dispenser, boiler or furnace.

Release detection requirements

One of the following applies:

- Exempt
- 3 Year Tightness Test
- Interstitial Monitoring (for double wall piping only)

3 Year Tightness Testing:

You must line tightness test once every three years or the pipe must be monitored monthly for releases if you have one of the following:

- Check valve located at the tank, or
- Check valve is located at the dispenser, furnace or boiler, but the piping does not slope back to the storage tank, or
- More than one check valve located on the suction line.
- Test results should be kept for the lifetime of the UST system.

Sample suction pump in dispenser

Suction Piping Release Detection (Interstitial Monitoring)

(Available to all USTs except Used Oil)

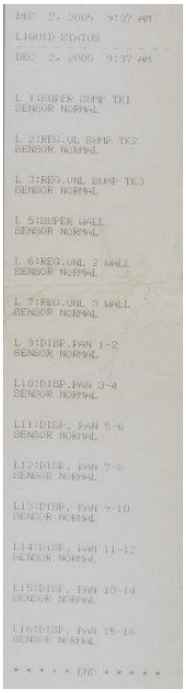
Suction piping uses a pump located in the dispenser, boiler or furnace.

Release detection requirements

One of the following applies:

- Exempt
- 3 Year Tightness Test
- Interstitial Monitoring (for double wall piping only)

Interstitial Monitoring Piping Release Detection



- Interstitial monitoring methods range from a gauge stick to automated liquid sensors installed in the interstitial space and connected to an ATG.
- The interstitial space must be checked monthly with the result recorded in a permanent record. See the 30-Day Inspection Record for Pressurized Piping Release Detection (RD) form located in the Forms section –it can be used to record your monthly sensor status results.
    - Indicate "P", for "Pass", if there is no evidence of a release and all interstitial monitoring equipment is working properly.
    - Indicate "F", for "Fail", and contact the TMS (302-395-2500) within 24 hours, or by the next business day;
- If the ATG shows an alarm, or you manually detect product or water in the interstitial space, immediately call your service representative. You must also notify the TMS (302-395-2500) within 24 hours or by the next business day.
- All monthly "sensor normal" reports must be kept for the lifetime of the UST system.
- The sump being monitored for monthly tank release detection purposes must be tested to make sure it is not leaking at least once every thirty-six (36) months. See the Sump (Tank Top and Dispenser) Test Procedures located in the Forms section for testing procedures and a blank test report.
- You must have all ATG equipment inspected by a certified technician once every twelve (12) months. During the inspection the technician must check the following:
    - The ATG console for printer operation if so equipped;
    - The system setup values and battery backup;
    - The monthly test programming setup;
    - All warning and alarm indicator lights and audible alarms;
    - The probes and sensors in accordance with the manufacturer's specifications or as directed by the TMS to make sure they are working properly;
    - The cables that are visible during normal operating conditions for any cracking or swelling.

Corrosion Protection (only where applicable)

Sacrificial Anode Cathodic Protection Systems

(Available to All USTs)

The UST system includes the tank, piping and equipment such as flexible connectors, fittings, and pumps. Unprotected metal UST components can corrode and leak.

Metallic UST components that are in direct contact with the ground need corrosion protection. Corrosion protection may be provided by cathodic protection (sacrificial anode or impressed current).

Cathodic Protection (CP)

There are two types of CP systems available for UST systems:

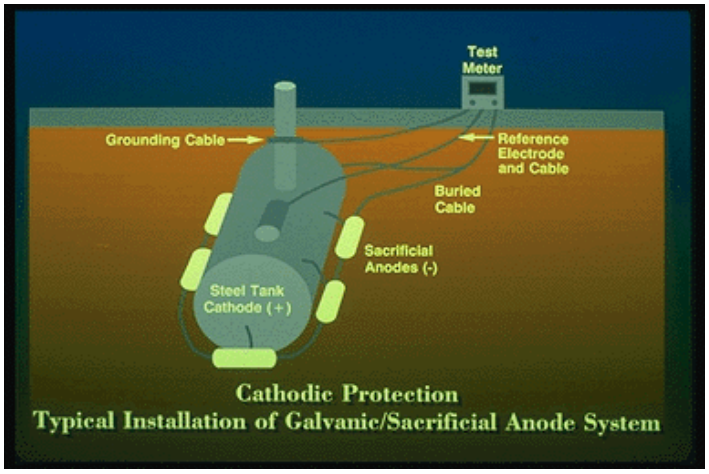
- Sacrificial Anode Systems
- Impressed Current Systems

Sacrificial Anode Cathodic Protection Systems

- A sacrificial anode cathodic protection system consists of bars of metal (anodes), typically magnesium or zinc, which are designed to corrode instead of the tank.

Cathodic Protection Test Station

Sacrificial anode system



- You need to have periodic tests conducted by a qualified corrosion tester to make sure your sacrificial anode cathodic protection system is adequately protecting your UST system. This test needs to be conducted:
    - Within 6 months of installation.
    - Every 12 months after the previous test.
    - Within 6 weeks after any underground work is performed at or near the facility and every 12 months thereafter.

- Make sure that the tester is CP certified and is qualified to perform the test. Contact the TMS (302-395-2500) for further information.

- If any test indicates that your tanks are not adequately protected, the TMS must be notified of the test failure within 48 hours.

- You need to have a corrosion expert examine your system within 60 days of the test failure. Contact the TMS for approval prior to making any repairs.

- The results of all Cathodic Protection tests must be kept for the lifetime of the UST system

Corrosion Protection (only where applicable)
Impressed Current Cathodic Protection Systems

(Available to USTs installed prior to 1/11/08 only)

The UST system includes the tank, piping and equipment such as flexible connectors, fittings, and pumps. Unprotected metal UST components can corrode and leak.

Metallic UST components that are in direct contact with the ground need corrosion protection. Corrosion protection may be provided by cathodic protection (sacrificial anode or impressed current).

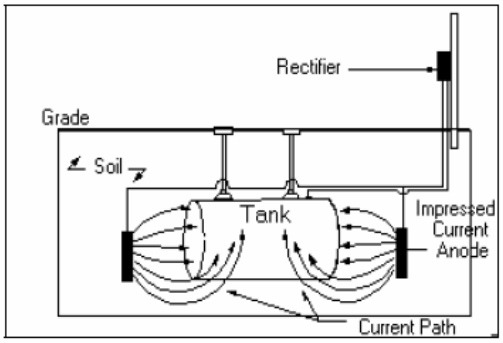
Cathodic Protection (CP)

There are two types of CP systems available for UST systems:

- Sacrificial Anode Systems
- Impressed Current Systems

Impressed Current Cathodic Protection Systems

Impressed Current system



An impressed current cathodic protection system consists of anodes installed around the UST system which are connected to a power source (rectifier) and are designed to corrode instead of the tank. You need to have a periodic test conducted by a qualified corrosion tester to make sure your cathodic protection system is adequately protecting your UST system.

This test needs to be conducted**:**

- Within 6 months of installation.
- Every 12 months after the previous test.
- Within 6 weeks after any underground work is performed at or near the facility and every 12 months thereafter.

Example Rectifier Meters

- At least once every thirty (30) calendar days you need to check your rectifier to make sure that it is operating within normal limits. This involves reading and recording the voltage and amperage readouts from the rectifier. See the 30-Day Inspection Results for Impressed Current Cathodic Protection Systems form located in the Forms section- it can be used to record the monthly readings.
    - Make sure that your monthly reading falls within the rectifier's acceptable operating levels.
    - If any rectifier reading indicates that your tanks are not adequately protected, the TMS must be notified of the test failure within 48 hours.

- You must annually have your impressed current system tested. Make sure that the technician is CP certified and is qualified to service your system. Contact the TMS (302-395-2500) for further information.
    - You need to have a corrosion expert repair your system within 60 days of a test failure.
    - You must notify the TMS within 48 hours of any test failure.
    - Contact the TMS for approval prior to making any repairs.

NEVER TURN OFF YOUR RECTIFIER!

Internal Lining

- Internal lining consists of a material applied to the inside of the tank to reduce the risk of a leak. As of January 11, 2008, an internal lining may not be installed on a steel tank in order to meet corrosion protection requirements. It may be installed in a tank that has a properly-operating cathodic protection system installed.

- A tank may have an internal lining installed only after an internal inspection is performed and the tank is found to be structurally sound. The tank must be found to be structurally sound, and the lining performing in accordance with the original design specifications.

- The tank must be tested for tightness after the lining is installed.

- For a tank that has an internal liner *and* cathodic protection system, there are no testing or inspection requirements for the liner as *long as the cathodic protection system is properly maintained.*

    - If your CP system fails and the internal lining has not been inspected, contact the TMS (302-395-2500) within 24 hours for further information.

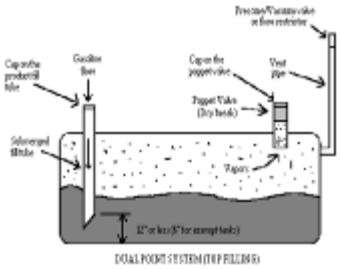
- For a tank that has an internal liner with no cathodic protection system, the lining is required to be internally inspected within 10 years of installation and every 5 years thereafter. This requires a visual inspection by a trained UST contractor.

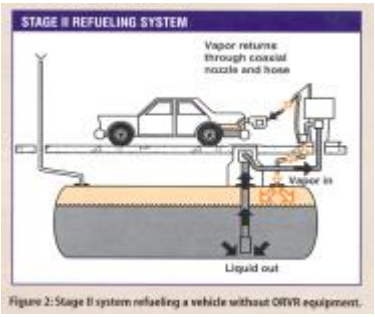
    - If your tank lining fails a visual internal inspection, contact the TMS (302-395-2500) within 24 hours for further information.

Vapor Recovery (VR) (Applies to permitted gasoline USTs only)

Vapor Recovery is a process used during gasoline delivery and fueling operations to improve air quality by preventing the release of volatile organic compounds into the atmosphere. There are two types of vapor recovery: Stage I and Stage II.

Stage I Vapor Recovery captures the vapors that would otherwise enter the air during deliveries. The vapors in the UST are returned to the delivery truck for transport back to the refinery, where they are recycled back into gasoline.





Stage II Vapor Recovery

Stage II Vapor Recovery captures the vapors that would otherwise enter the air during fueling of motor vehicles. The vapors in the vehicle's fuel tank are returned to the UST, where they are collected later by the delivery truck while it is connected to the Stage I VR System.

- There are 2 types of Stage II Vapor Recovery Systems –
  - Balance System
  - Vacuum Assist System

  Testing requirements are dependent upon the type of system.

Vapor Recovery Construction Permits

- The installation or modification of VR equipment requires a VR Construction Permit and the payment of a one-time construction permit fee.
- You must apply for these permits using the *Stage I* or *Stage II VR permit application*. Permit fees must be submitted with the permit application. Contact the TMS for copies of the applications, further information regarding the permit application process and required fees.

Vapor Recovery Operating Permits

- You must pay an annual fee to operate Stage I and Stage II VR systems. Payment of the annual fee automatically renews the operating permit and is billed along with your Tank Registration fees.
- Stage I and Stage II VR operating permits are required to be kept on site at all times and must be presented to any DNREC representative immediately upon request. Failure to have copies available may result in a fine. See the Sample Stage I Operating Permit and the Sample Stage II Operating Permit located in the Forms section.

*Any facility that has a Stage II VR system installed must conduct **daily** inspections of the system to ensure the operational integrity of the equipment.*

- **Daily Inspections of Stage II VR Systems**

    - You must inspect the Stage II VR equipment daily and complete a daily inspection log. See the Vapor Recovery Daily Inspection & Maintenance Record located in the Forms section or you can create your own form.

        - You must inspect nozzles, hoses, retractors, breakaways, pumps, and electronic safeguards.

        - The daily log must be kept on site and must be presented to any DNREC representative immediately upon request. Failure to have copies available may result in a fine.

        - Any equipment found to be defective must be taken out of service. An "out of order" sign must be posted and the equipment "bagged out" until the equipment is repaired or replaced. Defective equipment must be replaced with equipment approved in the Stage II VR Operating Permit.

        - The individual completing the daily log must have completed an acceptable training program. Proof of training for all employees conducting daily inspections must be kept at the facility. See the Example: Certificate of Training for Stage II Vapor Recovery Systems located in the Forms section. Any employee who has been trained to conduct VR inspections may train other employees at that facility or location.

Annual VR Testing

- You must notify the TMS ten (10) days prior to the test date using the Vapor Recovery Testing Notification Form located in the Forms section.

- Depending upon the type of system, the following tests are required annually:
    - Pressure Decay (required for all systems)
    - Dynamic Backpressure (required for Balance systems only)
    - Air to Liquid Volume Ratio (A/L) (required for Vacuum Assisted systems only)

VR Recordkeeping Requirements

The following records must be kept at the facility for at least 3 years and must be available immediately to any DNREC representative upon request:

- Permits and Applications
- Testing Results
- Daily Inspection Logs
- Maintenance Records
- Compliance Records
- Staff training certificates
- Violation notices issued by the TMS

Financial Responsibility (FR)

(applies to all USTs except Consumptive Use Heating Fuel)

Owners and operators must show they have the financial resources to clean up a site if a release occurs and to compensate third parties for damage to their property or for personal injury. If the owner and operator of a UST are separate entities, only one party is required to demonstrate FR. However, both parties may be fined if FR requirements are not met.

If you purchase an UST, you may not operate the tank until you have met the FR requirements. Financial responsibility is also required for Out-of-Service USTs and must be kept in place until the UST is removed or properly closed in place, cleanup is complete and the TMS has issued a No Further Action letter.

Required amounts of financial responsibility:

- Per Occurrence- amount of insurance coverage you need for each time an UST leaks
- Annual Aggregate- maximum amount of coverage you need to cover on an annual basis no matter how many releases occur.

Type of owner or operator	Per Occurrence Amount	Annual Aggregate Amount
Petroleum producers, refiners or marketers	**$ 1 million**	**$ 1 million** for 100 or fewer USTs Or **$ 2 million** for more than 100 USTs
Non-marketers	**$500,000** if throughput is 10,000 gallons or less **$1 million** if throughput is more than 10,000 gallons monthly	

There are several different options for meeting FR requirements. Most owners or operators use *Pollution Liability insurance.* However, any of the following options can be used (for additional information on these FR options, refer to Part F of the UST Regulations or contact the TMS): *Financial test of self-insurance, Corporate guarantee, Surety bond, Letter of Credit,* and *Trust fund.* Local governments have additional options tailored to their special characteristics: *Bond rating test, Financial test, Guarantee,* and *Dedicated fund.*
Additional information on all FR mechanisms can be found at: http://www.epa.gov/OUST/pubs/frustman.htm

Commercial Insurance coverage

You may buy pollution liability insurance from an insurer or a risk retention group to satisfy the FR requirements. A pollution liability insurance policy must provide "first dollar" coverage. That is, the insurance company is liable for the payment for any covered loss, and then they collect the deductible from you.

Proof of insurance must be submitted using the Form D- Certificate of Insurance form located in the Forms section, which must be certified and signed by the insurance provider. You must also complete a tank schedule listing individual tank details, see Form R- Tank Schedule for Financial Assurance form located in the Forms section.

If you are adding USTs to an existing policy, you must use the endorsement located in Form C- Insurance Endorsement form located in the Forms section. You must also complete a tank schedule listing individual tank details, see Form R- Tank Schedule for Financial Assurance form located in the Forms section.

Some questions to ask when choosing insurance:

- What is the insurance company's financial rating with A.M. Best, Standard & Poor's or Moody's? http://www.ambest.com http://www.standardandpoors.com; http://www.moodys.com
- Are they experienced in this type of coverage?
- Is the company "admitted" or "non-admitted" in Delaware?
- Does the agent or broker know the Delaware UST Regulations?
- For whom have they provided this type of policy and can names of satisfied clients be provided?
- Is this a "confirmed release" or "suspected release" policy?
- What are the exclusions in this policy?
- What are your reporting responsibilities should a release occur?

If your tanks are out of compliance, if you are not doing leak detection properly, or if you do not report a release when "you should have known there was a release", you run the risk of NOT being covered

Contact the TMS (302-395-2500) for a list of pollution liability providers.

To make sure that you purchase the correct UST insurance policy you must carefully read your policy. UST insurance differs in many ways from the CGL or auto policy you are familiar with. The following are terms you will find in an UST insurance policy:

Insurance Company: The insurance company writes insurance policies and assumes the financial risk and pays claims.

Broker: An Insurance Broker is a licensed insurance producer/agent who represents the insured, not the insurance company. The Broker is not restricted to placing business with any one insurer.
Agent/Producer: A person required to be licensed under the laws of a state to sell, solicit or negotiate insurance.

Claims-Made Policy: Virtually all UST pollution insurance policies are "claims-made" policies. A claims-made policy only pays for claims made or reported during the period covered by the policy. The policy will not cover incidents that occur during the policy period but are reported to the insurance company after the policy period expiration date.

Retroactive Date: Only losses that occur after the retroactive date in the insurance policy are covered. If a loss from an UST occurred before the retroactive date, the claim will not be paid. Some insurance companies will provide an earlier retroactive date for a fee. If a claims-made policy is renewed or replaced, the insured should require that the retroactive date is the same as, or earlier than, the retroactive date on the expired or terminated policy.

Extended Reporting Period (Tail coverage): An extended reporting period does not extend the policy period; it does extend the time in which claims may be reported to the insurance company. The loss from the UST System must still have occurred during the policy period, but will be covered if reported before the end of the extended reporting period. For UST insurance an extended reporting period is important because a loss from an UST that occurred during the policy period may not be discovered until after the policy period is over. The UST Regulations require that UST insurance policies include a minimum 6 month extended reporting period.

Exclusions: Describes specific circumstances in which no coverage will be provided.
Example: Some policies may specifically exclude from coverage any tank that is temporarily out-of-service. This would mean any tank that is temporarily closed for repair or upgrade would not be covered, so any contamination discovered during the repair is not covered. Such a policy would not meet the UST FR requirements.

First Dollar Coverage: The UST Regulations require that an UST pollution liability policy provide "first dollar" coverage. First dollar coverage requires that if the insurance policy has a deductible, the insurance company does not wait for you to pay the deductible amount, but begins remediation and then collects the deductible amount from you.

Confirmed Release Policy: Under this type of policy costs to investigate to confirm the existence of a release, such as tank testing and soil sampling, are not covered.

Suspected Release Policy: This type of policy does not have any language that excludes the costs to investigate and confirm whether a release has occurred.

While there are specific items that must be included in your policy to satisfy the UST Regulations, there are still many differences in UST insurance policies. Read your policy carefully and discuss it with your insurance agent to make sure you fully understand what you are purchasing and what your responsibilities are should you have a leak from your UST. All policies will require you to report the loss to the insurance company within a specified time period or the claim will be denied; some may require prior notice of tank activities such as tank removal; most will only cover claims if the tank was in full compliance with the UST Regulations.

Self Insurance

Owners and operators must show they have the financial resources to clean up a site if a release occurs and to compensate third parties for damage to their property or for personal injury. If the owner and operator of a UST are separate entities, only one party is required to demonstrate FR. However, both parties may be fined if FR requirements are not met.

If you purchase an UST, you may not operate the tank until you have met the FR requirements. Financial responsibility is also required for Out-of-Service USTs and must be kept in place until the UST is removed or properly closed in place, cleanup is complete and the TMS has issued a No Further Action letter.

Required amounts of financial responsibility:

- Per Occurrence- amount of insurance coverage you need for each time an UST leaks
- Annual Aggregate- maximum amount of coverage you need to cover on an annual basis no matter how many releases occur.

Type of owner or operator	Per Occurrence Amount	Annual Aggregate Amount
Petroleum producers, refiners or marketers	**$ 1 million**	**$ 1 million** for 100 or fewer USTs Or **$ 2 million** for more than 100 USTs
Non-marketers	**$500,000** if throughput is 10,000 gallons or less **$1 million** if throughput is more than 10,000 gallons monthly	

There are several different options for meeting FR requirements. Most owners or operators purchase *pollution liability insurance coverage.* However, any of the following options can be used (for additional information on these FR options, refer to Part F of the UST Regulations or contact the TMS): *Financial test of self-insurance, Corporate guarantee, Surety bond, Letter of credit,* and *Trust fund.* Local governments have four additional options tailored to their special characteristics: *Bond rating test, Financial test, Guarantee*, and *Dedicated fund.*
Additional information on all FR mechanisms can be found at: http://www.epa.gov/OUST/pubs/frustman.htm

Self- Insurance

Large companies may choose to "self-insure". Companies that use this option must demonstrate that they have sufficient financial strength to pay for cleanup and third-party damages from their own funds. To prove they have sufficient financial strength they must pass a financial test *every year*. The UST FR regulations allow a choice of two financial strength tests: Alternative I is a Net Worth Test; Alternative II is a Net Working Capital Test (Alt. II has 2 sub-choices). The chart below details the requirements that must be met. You must meet ALL the requirements of Alternative I or Alternative II Sub-A or Alternative II Sub-B.

Proof of self-insurance must be submitted using the Form A *Financial Test of Self Insurance form and the worksheet for either Alternative I or Alternative II*, contact the TMS (302-395-2500) for these forms. You must also complete a tank schedule listing individual tank details, see Form R- Tank Schedule for Financial Assurance form located in the Forms section.

UST Self Insurance Financial Tests			
	Alternative I	Alternative II	
		Sub-alternative A	Sub-alternative B
Net Working Capital		≥ 6 times the sum of the annual aggregate amount of financial assurance required for Corrective Action and Third Party Liability[1], Plus amount of the other liability coverage using a financial test (RCRA C, SDWA & AST)	
Bond Rating			Current rating for most recent Bond Issuance: AAA, AA, A, or BBB by Standard and Poor's OR Aaa, Aa, A, or Baa by Moody's
Financial Strength Rating	4A or 5A by Dun and Bradstreet (needed only if financial statements are not filed annually with the SEC, the EIA, or the REA)[1]		
Tangible Net Worth (TNW)	≥ 10 times the sum of the annual aggregate amount of financial assurance required for Corrective Action and Third Party Liability[1], plus the sum of Corrective Action, current Closure and Post-Closure cost estimates, current plugging and abandonment cost estimates, plus the amount of liability covered by a financial test for any other State or Federal program AND ≥ $10 million	≥ 6 times the annual aggregate amount of financial assurance required for Corrective Action and Third Party Liability[1], Plus amount of the other liability coverage using a financial test (RCRA C, SDWA & AST) AND ≥ $10 million	≥ 6 times the annual aggregate amount of financial assurance required for Corrective Action and Third Party Liability[1] Plus amount of the other liability coverage using a financial test (RCRA C, SDWA & AST) AND ≥ $10 million
U.S. Assets		≥ 90% of Total Assets in the U.S. OR ≥ 6 times the annual aggregate amount of financial assurance required for Corrective Action and Third Party Liability[1], Plus amount of the other liability coverage using a financial test (RCRA C, SDWA & AST)	≥ 90% of Total Assets in the U.S. OR ≥ 6 times the annual aggregate amount of financial assurance required for Corrective Action and Third Party Liability[1] Plus amount of the other liability coverage using a financial test (RCRA C, SDWA & AST)

[1] This amount is $1 million for Owners or Operators of 1 to 100 petroleum USTs or $2 million for Owners or Operators of 101 or more petroleum USTs.

Letter of Credit

Owners and operators must show they have the financial resources to clean up a site if a release occurs and to compensate third parties for damage to their property or for personal injury. If the owner and operator of a UST are separate entities, only one party is required to demonstrate FR. However, both parties may be fined if FR requirements are not met.

If you purchase an UST, you may not operate the tank until you have met the FR requirements. Financial responsibility is also required for Out-of-Service USTs and must be kept in place until the UST is removed or properly closed in place, cleanup is complete and the TMS has issued a No Further Action letter.

Required amounts of financial responsibility:

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Additional information on all FR mechanisms can be found at: http://www.epa.gov/OUST/pubs/frustman.htm

Letter of Credit

Owners and Operators may chose to purchase an Irrevocable Standby Letter of Credit to satisfy the FR requirements. A Standby Letter of Credit names DNREC as the beneficiary, meaning that the DNREC can 'cash' the letter of credit. The letter of credit would only be cashed by DNREC if the tank owner and/or operator do not perform cleanup activities as required. In addition to the Letter of Credit the tank owner and/or operator must establish a Standby Trust Fund. If the Letter of Credit must be cashed the money would go into the Standby Trust Fund.

NOTE: Delaware will only accept Letters of Credit naming only Delaware as the beneficiary. Letters of Credit listing multiple states as beneficiary are not acceptable.

Proof of an irrevocable letter of credit must be submitted using the Form F, *Irrevocable Stand-by Letter of Credit* AND proof of establishment of a standby trust must be submitted using the Form H, *Standby Trust Agreement* located in the Forms section. You must also complete a tank schedule listing individual tank details, see Form R- Tank Schedule for Financial Assurance form located in the Forms section.

Operator Training (Applies to all USTs except Single Family Residential Heating Fuel)

It is a regulatory requirement that all facilities must have a trained Class A, Class B, and Class C Operator by August 8, 2012.
The DNREC-TMS has partnered with Delaware Technical & Community College (DTCC) to offer the required UST operator training classes. The main purpose of the program is to make sure UST operators know what equipment they have at their facilities and are trained to properly operate and maintain the equipment, stay in compliance with state regulations, and prevent future releases to the environment.

Types of Operators

- *"Class A Operator"* is the person responsible for the overall operation and maintenance of the UST System. In general, this person focuses on the regulatory requirements and standards necessary to operate and maintain the UST system.
- *"Class B Operator"* is the person responsible for the daily on-site operation and maintenance of the UST System. In general, this person operates the UST on a day to day basis complying with regulatory requirements.
- *"Class C Operator"* is the on-site person who addresses emergencies at the facility and responds to alarms or other indications of emergencies caused by spills and releases from UST systems. Not all employees of the facility need to be Class C operators.

What needs to be done?

- The owner of the facility has to assign and maintain a list of their Class A, B, and C operators. The list of Class A and B operators must also be submitted to the TMS for each facility. The list of Class C operators needs to be kept on site. See the Operator Training Certification Form in the forms section.
- An individual may be the Class A, B, and/or C Operator at a facility and may also be any of the Operators for more than one facility.
- You need to keep records that show your Class A, B, and C operators have been trained.

Training

- Class A and B Operators must complete a DNREC approved training program, which is currently offered at the Delaware Technical and Community College (DTCC) Stanton, Dover, and Georgetown campuses. Pre-Registration is required and must be made through DTCC.
  - DTCC Stanton campus: http://www.dtcc.edu/ccpsw/eyi901.html 302-454-3956
  - DTCC Dover campus: http://www.dtcc.edu/terry/ccp/ 302-857-1400
  - DTCC Georgetown campus: http://www.dtcc.edu/owens/ccp/ 302-855-5900

  This training will include:

  - Registration and Notification Requirements
  - Operation and maintenance of UST System components including spill buckets, overfill protection, tank and piping release detection, and where applicable: corrosion protection systems and vapor recovery equipment.
  - Emergency response procedures
  - Compatibility of Regulated Substances and UST Systems
  - Financial responsibility requirements

- Routine inspection requirements
- Release and suspected release reporting requirements
- Materials of UST Systems
- Change in Service and Retrofit requirements

- Class C Operators will be trained by the facility Class A or Class B Operator.
    - Training programs for Class C operators will not require approval however the written materials/procedures should be maintained at the facility. The TMS will develop a form for facilities to track their trained Class C operators.

  The training should include:

    - How to take action in response to emergencies (such as situations posing an immediate danger or threat to the public or to the environment and that require immediate action)
    - How to respond to alarms caused by spills or releases from an underground storage tank system.

Reciprocity with other States

- If you are a Class A or B Operator in another state you do not have to attend the TMS Operator training but you must pass a Delaware specific test, to show that you also have knowledge of Delaware's program. The reciprocity exam is offered through DTCC. See above for contact information.

Re-Training Requirements

Re-training is not required unless a compliance inspection by the TMS notes any of the following:

- Spill Buckets & Overfill Protection are not installed or functional;
- Tank or Piping Release Detection are not present or functional;
- Cathodic Protection systems (where applicable) are not properly maintained, operated or tested;
- Financial Responsibility is not current or does not meet regulatory requirements.

Change in Operator

- The TMS must be notified within ten (10) days of any change in the Class A or B operator;

- When you change the Class A or B operator after August 8, 2012, the new operator must complete the DNREC approved training, or for reciprocity- successfully complete a DNREC assessment test, within 45 days of becoming the new Class A or B operator.

Maintenance Schedules (Applies to all USTs)

The following is a list of actions or procedures used to make sure that your UST System is in proper condition and not releasing product into the environment. Sample forms or procedures which are underlined are available located in the Forms section. You should keep all the records and test results for the life of the UST system.

Daily Maintenance

- Daily Inventory Worksheet (all except Used Oil, Emergency Generator and Heating Fuel)
- Inventory Record (all)
- Daily/Weekly Inventory Worksheet for Used Oil USTs (Used Oil USTs only)
- Modified Inventory Record- Used Oil USTs (Used Oil USTs only)
- Vapor Recovery Daily Inspection & Maintenance Record (Permitted gas USTs only)

Weekly Maintenance

- Manual Tank Gauging (Used Oil USTs only)

Monthly Maintenance

- Monthly Inventory Record (All except Used Oil, Emergency Generator and Heating Fuel)
- Routine Walk-Around Inspection Guidance (All USTs)
- 30-Day Inspection Record for Monthly Tank Release Detection (RD) (All where applicable)
- 30-Day Inspection Record for Pressurized Piping Release Detection (RD) (where applicable-All except Used Oil and Heating Fuel)
- 30-Day Inspection Results for Impressed Current Cathodic Protection Systems (All where applicable)

Semi-Annual Maintenance (every 6 months)

- Change product line filters (All except Used Oil, Emergency Generator and Heating Fuel)
- Verify calibration of ATG probe with manual stick reading (where applicable-All USTs)

Annual Maintenance

- Spill Bucket Testing (All USTs)
- Tightness test pressurized product lines (where applicable-All USTs)
- Functional test of line leak detectors (where applicable-All USTs)
- Functional test of sump sensors (where applicable-All USTs)
- Functional test of ATG probes (where applicable-All USTs)
- Perform test of cathodic protection system (where applicable-All USTs))
- Vapor Recovery testing- Vapor Recovery Testing Notification Form (Permitted gas USTs only)
    - A/L test for vacuum-assisted vapor recovery systems
    - Dynamic Backpressure test for balanced vapor recovery systems
    - Pressure decay test for all vapor recovery systems
- Tank Tightness Testing (Emergency Generator and Heating Fuel USTs only)

Every 3 years

- Tightness test suction product lines (where applicable-All USTs except Used Oil)
- Sump (Tank Top and Dispenser) Test Procedures (where applicable-All USTs)

Recordkeeping (Applies to all USTs)

You should save all your records including receipts, warrantees, guarantees, pictures, videos, manuals and any other information about your UST.

You must keep all test results, performance claims, inspections, corrosion tests, repair records, closures and assessment reports and proof of financial responsibility for the life of the UST.

Keep your records on site or at a place easy to access when you must provide information to an inspector. Inform all staff members where records are kept so that they can provide the information to inspectors. All UST records requested by the TMS must be provided within ten days of the request.

Tip: For UST owners who lease the operation of their USTs it is important for you to address what happens to the records held by the operator when the lease expires.

UST owners should include provisions for the transfer of all records to the owner upon termination of the lease.

For UST operators ending a lease it is important to keep copies of all records for at least three years after the end of the lease.

UST Records include:

- State of Delaware UST Registration Certificate;
- Installation information (i.e. date, size and design of each tank, material of construction, layout of tank system);
- Daily inventory logs and monthly inventory reconciliation records for all tanks;
- Monthly leak detection for tanks and piping;
- Maintenance & equipment testing on tanks or piping,(annual tests, calibration, etc);
- Cathodic Protection (CP)(i.e. design drawings for the CP system, integrity assessment report completed before adding CP, rectifier manuals, and other operating information (where applicable);
- Proof of financial responsibility from 1995 to the present ;
- Dates and details of releases, release investigations and corrective action, including spills or other reportable incidents;
- All repairs, retrofits and upgrades ;
- Change in service or Closure of the UST system;
- Vapor Recovery System Permits, inspections and repairs (where applicable).

Keep records orderly and in a binder so that you know where they are

Testing and Records Retention Requirements

Type	Frequency	Record Retention
Daily Inventory	Daily	3 years
Vapor Recovery Equipment Inspection	Daily	3 years (recommended UST lifetime)
Monthly Inventory and Reconciliation	Monthly (30 days)	3 years (recommended UST lifetime)
Routine Walk Around Inspection	Monthly (30 days)	3 years
Impressed Current Cathodic Protection System Rectifier Inspection	Monthly (30 days)	Lifetime of the UST System
Tank Release Detection ATG, SIR,IM	Monthly (30 days)	Lifetime of the UST System
Pressurized Piping Release Detection ATG, SIR, IM	Monthly (30 days)	Lifetime of the UST System
Spill Bucket	Annually	Lifetime of the UST System
Line Leak Detector Function Test	Annually	Lifetime of the UST System
Pressurized Piping Release Detection - Line Tightness Test	Annually	Lifetime of the UST System
ATG, Sensor, Interstitial Monitoring Probes	Annually – Must be Tested by a Certified Technician	Lifetime of the UST System
Cathodic Protection System Test – Sacrificial Anode or Impressed Current	Annually – Must be Tested by a Certified Technician	Lifetime of the UST System
Vapor Recovery Testing	Annually	Lifetime of the UST System
Non-Safe Suction Piping	Once every 36 months	Lifetime of the UST System
Containment Sump Test	Once every 36 months	Lifetime of the UST System

Change in UST Ownership

- If you sell the UST System you need to tell the new owner the UST registration procedures:

  - Have the new owner complete and return to the TMS UST Registration & Notification Form located in the Forms section;

  - Contact the TMS for a *Transfer of Ownership Form*. Both you and the new owner have sections that you must complete and sign. Have the new owner return the form along with proof of Financial Responsibility, such as Insurance (see the FR section of this manual) and a copy of the bill of sale for the USTs within 30 days.

Attention new tank owners: If you purchase an existing system or become a new operator, make sure you get copies of all records

- If the facility has Stage I and Stage II Vapor Recovery permits contact the TMS for a copy of the *Vapor Recovery System Permit Transfer* form which must be completed and returned to the TMS.

- You also need to give the new owner all available documents and information that pertain to the UST System including all the records included in the Recordkeeping section.

Retrofit, Repair, Upgrade (Applies to all USTs)

"Retrofit" means to modify an UST System to meet standards contained in these Regulations.
"Repair" means to restore or replace an UST System component that is not functioning per manufacturer's specifications or TMS requirements.
"Upgrade" means the addition of a component to improve the ability of an UST System to prevent or detect the Release of Regulated Substances from the UST System.

Repairs

- TMS approval and Certified UST Contractor are **not** required;

- Repairs may include:
    - Changing filters
    - Replacement in kind of equipment (sump sensors, LLD, gaskets, product and vapor shear valves, submersible pumps, boots, ball floats, flapper valves, hanging hardware, dry breaks, swivel adaptors, PV valves)
    - If you have a double wall spill bucket and are replacing only the inner bucket-it is a repair

Retrofit or Upgrade

- You must notify (ten days prior to the retrofit/upgrade) the TMS using the UST Registration & Notification Form located in the Forms section.
- A Certified UST Contractor must be used. Contact the TMS for a list of Certified UST Contractors.
- You must notify the TMS within 48 hours prior to starting the work.
- If the retrofit/upgrade construction work has not begun within sixty (60) days, a new notification form must be submitted.
- Within thirty (30) days of completion of any retrofit/upgrade you need to submit the following:
    - Retrofit/upgrade completion documentation;
    - Sampling results (where applicable);
    - Test results as required by the TMS.
- Retrofits/upgrades Include:
    - Any underground work (backfill is exposed)
    - Any work not listed as a repair
    - Addition of equipment not previously installed whether it requires breaking of ground or not (Example: addition of sump sensors)

Note: If concrete is broken for a repair or retrofit/upgrade then soil sampling is required. See the Notification for UST System Retrofits, Repairs And Upgrades and Soil Sampling Requirements for specific requirements.

Tank Management During Non-Routine Events (Applies to all USTs)

While procedures and guidelines have been established for routine tank management, the facility should be prepared to make sure that tank system operations remain safe, effective, and operable during emergencies. Emergencies include inclement weather, power outages, natural disasters, or damage to the UST system and other unexpected events. For these events, additional maintenance may be required. The following guidelines are provided as a best management practice (BMP):

- Cones should be placed over raised fill port covers.
- Manholes and covers should be kept clear of obstructions.
- Warning signs and identification labels must be kept visible.
- Surfaces over USTs should be clear of obstructions.
- Surfaces adjacent to fuel islands should be kept clear of obstructions.
- Emergency equipment switches must be kept accessible.
- Fuel dispensing equipment and ATGs should be checked to make sure that they are operating properly; they may need to be reprogrammed if a power outage affects the software configuration.

If a vehicle damages a dispenser, do not use the dispenser until you have contacted the TMS at 302-395-2500 to determine what actions are required.

Release Notification and Spill Response (Applies to all USTs)

Release Reporting

DNREC 24-hour
Release Reporting line
1-800-662-8802
&
TMS 302-395-2500

You must report to the DNREC 24 hour Complaint Line and the TMS within 24 hours:

- Petroleum surface spills or overfills greater than 25 gallons;
- Any petroleum sheen on nearby surface water; The National Response Center (800-424-8802) shall be notified *immediately* of a release of any quantity of a petroleum substance that produces a visible sheen on surface waters.

Indicated Releases

If any of the following occur you must notify the TMS within 24 hours of discovery:

- Stained soils or soils that smell like petroleum, which are exposed during any UST activities;
- Water from supply wells, public or private, which has been analyzed and has petroleum in it;
- Petroleum odors in basements, sewers or other enclosed spaces;
- Petroleum sheen on a surface water body;
- Petroleum sheen in a supply well, monitoring well, or observation tube;
- Failure of a UST, product line or vapor recovery test;
- Abnormal operating conditions, which include, but are not limited to, the following:
    - The sudden loss of product from any portion of the UST System;
    - Inventory control discrepancies;
    - A signal from any Release Detection device or method that indicates a Release may have occurred;
    - Inconclusive statistical inventory reconciliation (SIR) results;
    - Equipment failure or malfunction;

- The unexplained presence of water in the UST System;
- Evidence of a release of a regulated substance noted during a 30 Day Routine Walk-Around Inspection;
- Leaking filters;
- Product in the sump.

Who is required to report?

- UST owner;
- UST operator;
- UST contractor or consultant; and
- Environmental consultants, real estate companies, utility companies, and other third-party organizations that may discover or be made aware of contamination or test failures.

The multiple reporting requirements are designed to make sure this communication takes place. When in doubt, report!

For spills and overfills:

- Take immediate action to prevent the release of more product;
- Locate the emergency shutoff switch and shut off power if necessary;
- Turn off the power to the dispenser and "bag out" the nozzle;
- Identify any fire, explosion or vapor hazards and take action to neutralize these hazards. Call the fire department if necessary;
- Immediately contain and clean up any spill or overfill;
- If cleanup cannot be accomplished within 24 hours, you must notify the TMS;
- Contact your supplier or distributor for assistance if necessary.

Spill Response Equipment

Spill response and emergency equipment should be stored on-site for use in containment and cleanup of petroleum or material spills and for first aid activities.

Spill response equipment may include:

- "Speedi-dri", clay, or similar absorbent material, such as kitty litter;
- Containment booms, dikes, pillows and sorbent pads;
- Spark-proof shovel;
- Storm drain mats;
- Buckets;
- Haz-waste bags;
- Caution tape;
- Traffic cones;
- Chemical splash goggles;
- Protective coveralls and aprons;
- Gloves;
- Vinyl over-boots;
- Fire extinguishers;
- Warning signs;
- Hazardous material labels;
- Intrinsically safe flash lights.

Change in Substance or Service (Applies to all USTs)

Notification Requirements

The status of an UST has changed when the product stored in an UST is changed, when it is taken out of service, or when it is placed back into service. When the status of an UST is changed, you must notify the TMS using the UST Registration & Notification Form located in the Forms section.

Change in Substance Stored

When the product stored in an UST will be changed, you must:

- Complete and submit (ten days prior to the change) the UST Registration & Notification Form located in the Forms section.
- You will also need to perform a site assessment to determine whether there has been a release from the UST. The site assessment involves collecting soil samples around the UST and having them tested for the product most recently stored in the tank. Contact the TMS for the *Notification and Soil Sampling Requirements for Change in Substance Stored for Underground Storage Tanks* for the specific requirements.

Change In Service

Taking an UST out of service:

- Complete and submit UST Registration & Notification Form located in the Forms section.
- Continue performing release detection and inventory control as long as product is present. Alternatively, you may make sure that all product is removed (to 1 inch or less). The UST system is then considered empty and release detection and inventory control are no longer required.
- Secure and lock the fill and vapor recovery caps.
- Continue operation and maintenance of corrosion protection.
- Maintain Financial Responsibility until the tank is removed or properly abandoned and site clean-up is complete.

For UST systems out-of-service 3 months or more, you must continue to do all of the above, and:

- Leave vent lines open and functioning, and
- Cap and secure all other lines, pumps, manways, and ancillary equipment.

For UST systems out-of-service more than 12 months, you must:

- Remove or abandon in place USTs not protected from corrosion, or
- Remove all product (to 1 inch or less) and perform a site assessment within 30 days of emptying all USTs that will remain in the ground indefinitely. Contact the TMS for the *Notification and Soil Sampling Requirements-Change in Service for Underground Storage Tanks* for the specific requirements.

Placing an UST back into service

At the time an UST is placed back into service, you must:

- Complete and submit (within ten days) UST Registration & Notification Form located in the Forms section.
- Make sure the UST meets the standards for release detection, corrosion protection, and spill and overfill protection.
- Perform a site assessment if one has not previously been completed while the tank was out-of-service.
- Perform an UST system tightness test and any overdue vapor recovery tests (where applicable).

List of Forms

Testing and Records Retention Requirements

Type	Frequency	Record Retention
Daily Inventory	Daily	3 years
Vapor Recovery Equipment Inspection	Daily	3 years (recommended UST lifetime)
Monthly Inventory and Reconciliation	Monthly (30 days)	3 years (recommended UST lifetime)
30 Day Routine Walk Around Inspection	Monthly (30 days)	3 years
Impressed Current Cathodic Protection System Rectifier Inspection	Monthly (30 days)	Lifetime of the UST System
Tank Release Detection ATG, SIR,IM	Monthly (30 days)	Lifetime of the UST System
Pressurized Piping Release Detection ATG, SIR, IM	Monthly (30 days)	Lifetime of the UST System
Spill Bucket	Annually	Lifetime of the UST System
Line Leak Detector Function Test	Annually	Lifetime of the UST System
Pressurized Piping Release Detection - Line Tightness Test	Annually	Lifetime of the UST System
ATG, Sensor, Interstitial Monitoring Probes	Annually – Must be Tested by a Certified Technician	Lifetime of the UST System
Cathodic Protection System Test – Sacrificial Anode or Impressed Current	Annually – Must be Tested by a Certified Technician	Lifetime of the UST System
Vapor Recovery Testing	Annually	Lifetime of the UST System
Non-Safe Suction Piping	Once every 36 months	Lifetime of the UST System
Containment Sump Test	Once every 36 months	Lifetime of the UST System

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

Daily Inventory Worksheet (If Required)

FACILITY NAME: _____ DATE: _____

YOUR NAME: _____

Tank Identification					
Type of Fuel					
Tank Size in Gallons					
End Stick Inventory (gallons)					
Gallons Pumped					
Dispenser Totalizer Reading					
Dispenser Totalizer Reading					
Dispenser Totalizer Reading					
Dispenser Totalizer Reading					
Dispenser Totalizer Reading					
Dispenser Totalizer Reading					
Dispenser Totalizer Reading					
Dispenser Totalizer Reading					
Today's Sum Of Totalizers					
Yesterday's Sum of Totalizers					
Amount Pumped Today					
Delivery Record					
Gallons of Fuel Before Delivery (from tank chart)					
Gallons of Fuel After Delivery(from tank chart)					
Gallons Delivered (Stick) [Gallons "After"- Gallons "Before"]					
Gross Gallons Delivered (Receipt)					
Water (inches or gallons)					

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Monthly Inventory Record (All except Used oil, Emergency Generator and Heating Fuel)

MONTH/YEAR :_____/_____ TANK IDENTIFICATION & TYPE OF FUEL: _____

FACILITY NAME: _____

Date	Start Stick Inventory (Gallons)		Gallons Delivered		Gallons Pumped		Book Inventory (Gallons)	End Stick Inventory (Gallons)	DAILY OVER (+) OR SHORT (□) ["End" □ "Book"]	Daily Water Check Inches/gallons
1		+		-		=				
2		+		-		=				
3		+		-		=				
4		+		-		=				
5		+		-		=				
6		+		-		=				
7		+		-		=				
8		+		-		=				
9		+		-		=				
10		+		-		=				
11		+		-		=				
12		+		-		=				
13		+		-		=				
14		+		-		=				
15		+		-		=				
16		+		-		=				
17		+		-		=				
18		+		-		=				
19		+		-		=				
20		+		-		=				
21		+		-		=				
22		+		-		=				
23		+		-		=				
24		+		-		=				
25		+		-		=				
26		+		-		=				
27		+		-		=				
28		+		-		=				
29		+		-		=				
30		+		-		=				
31		+		-		=				
			Total Gallons Pumped >>				**Total Gallons Over or Short >>>**			

DROP THE LAST 2 DIGITS from the **TOTAL GALLONS PUMPED** number and enter on the **'LEAK CHECK'** line below

LEAK CHECK: (enter above number) _____ **+ 130 =** _____ **gallons**

Is the "TOTAL GALLONS OVER OR SHORT" **LARGER** than "LEAK CHECK" result? **YES NO** (circle one)

If your answer is "YES" for 1 MONTH **notify DNREC Tank Management Branch at 395-2500 immediately.**

KEEP THIS RECORD ON FILE FOR AT LEAST 3 YEARS, IT IS RECOMMENDED THAT YOU KEEP THEM PERMANENTLY

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Vapor Recovery Daily Inspection & Maintenance Record (Permitted gasoline USTs only)

Facility Name:_____ Month & Year:_____/_____

Date of Inspection /Test/ Maintenance	Name of Individual Conducting Inspection Maintenance or Test	Inspection/ Maintenance /Test Performed and Outcome	Repairs Made / Repair Date

Daily Inspection checks:

Hoses: no kinks, flat-spots or blockages; not on ground.
Vapor Guards: not loose or missing
Nozzle spout: not bent, loose or leaking
Pumps: not leaking
Tanks: no leaking caps, seals or adaptors
Vents: not leaking or missing
Boots: no triangular tears or splits
Nozzle shut off: no malfunction
Breakaways: not leaking or loose
Gauges: no malfunction
Spill Container: no damage or liquid
Sign: not clear or missing

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Overfill Prevention & Daily Inventory Worksheet for Used Oil USTs (Used Oil Only)

MONTH/YEAR : _____/_____

FACILITY NAME: _____

Number of Gallons =90% full
_____ Gallons
Do not fill above this amount!

	Date:_____	Date:_____	Date:_____	Date:_____	Date:_____	Date:_____
Start Stick Level (Gallons)						
Record the estimated gallons each time Used Oil is added to the UST (Make sure to change quarts into gallons before recording)						
Total Gallons Added Today						
Total Today Start (Gallons) + Total Gallons added today						
Gallons Pumped Out						
Does Total (Total today- Gallons pumped out) exceed 90% Full? Y or N						

Used oil overfill prevention:

- First determine how many gallons (inches) of oil will fill the UST 90%. For example, if you have a 550-gallon UST, 495 gallons is the maximum amount of oil you should add to it before having it pumped out.
- This level must be compared to the level that can be contained in the UST without exceeding 90% of its capacity;
- All pump-out receipts must be saved and must show the amount of Used Oil removed, the date, and the name and address of the company performing the pump-out.

Keep This Record On File For At Least 3 Years, It Is Recommended That You Keep Them Permanently

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Modified Inventory Record- Used Oil USTs (Used Oil only)

MONTH/YEAR :_______/______ FACILITY NAME: ____

Date	Start Stick Inventory (Gallons)		Total Gallons Added From Daily Sheet		Gallons Pumped Out		Book Inventory (Gallons)	Closing Stick Inventory (Gallons)	DAILY OVER (+) OR SHORT (□) ["End" □ "Book"]	Weekly Water Check Inches/gallons
		+		-		=				
		+		-		=				
		+		-		=				
		+		-		=				
		+		-		=				
		+		-		=				
		+		-		=				
		+		-		=				
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		+		-		=				
		+		-		=				
		+		-		=				
		+		-		=				
		+		-		=				

If there is an unexplainable consistent negative trend or if the amount of Used Oil removed from the UST is less than the amount indicated by the modified inventory control, Contact the TMS (302-395-2500) within 24 hours or by the next business day.

Keep This Record On File For At Least 3 Years, It Is Recommended That You Keep Them Permanently

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Manual Tank Gauging Record (Used Oil only)

Used Oil USTs 1,000 gallons or less

(Manual Tank Gauging- for used oil tanks of 2,000 gallons or less cannot be used for both Inventory and LD)

Month _____ Year _____

Facility Name_____ Tank Identification _____

Circle your tank size, test duration, and weekly/monthly standards in the table below:

Tank Size	Minimum Duration Of Test	Weekly Standard (1 test)	Monthly Standard (4-test average)
up to 550 gallons	36 hours	10 gallons	5 gallons
551-1,000 gallons (when tank diameter is 64")	44 hours	9 gallons	4 gallons
551-1,000 gallons (when tank diameter is 48")	58 hours	12 gallons	6 gallons
551-1,000 gallons (also requires 2nd Leak detection method)	36 hours	13 gallons	7 gallons
1,001-2,000 gallons (also requires 2nd Leak detection method)	36 hours	26 gallons	13 gallons

Compare your weekly readings and the monthly average of the 4 weekly readings with the standards shown in the table on the left.

If the calculated change exceeds the weekly standard, the UST may be leaking. Also, the monthly average of the 4 weekly test results must be compared to the monthly standard in the same way.

If either the weekly or monthly standards have been exceeded, the UST may be leaking. As soon as possible, call your implementing agency to report the suspected leak and get further instructions.

Start Test (month, day, and time)	First Initial Reading (gallons)	Second Initial Reading (gallons)	Average Initial Reading **[a]**	End Test (month, day, and time)	First End Reading (gallons)	Second End Reading (gallons)	Average End Reading **[b]**	Volume Change (gal) + or — **[a—b]**	Tank Passes Test (circle YES or NO)
Date: Time: AM/PM				Date: Time: AM/PM					Yes No
Date: Time: AM/PM				Date: Time: AM/PM					Yes No
Date: Time: AM/PM				Date: Time: AM/PM					Yes No
Date: Time: AM/PM				Date: Time: AM/PM					Yes No

Monthly Standard, divide the sum of the 4 weekly readings by 4 and enter result here

Tank Passes Monthly Test
YES or NO

- Measurements must be taken with a gauge stick that is marked to1/8 of an inch or an ATG.
- 4 measurements of the tank's level must be taken weekly, two at the beginning and two at the end of the test - nothing can be added or removed from the tank.
- The average of the two ending measurements is subtracted from the average of the two beginning measurements to indicate the change of product volume.
- Every week the calculated change in the tank volume is compared to the standards shown in the table above. If the change exceeds the weekly standard, the UST may be leaking- Contact the TMS.
- The monthly averages of the four weekly test results must be compared to the monthly standard in the same way (see table above).

This form must be kept on file for the life of the tank

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Routine Walk-Around Inspection Guidance

All routine inspection records must be kept for a minimum of three (3) years.

Facility Name: _____ Facility ID #:_____

Date	Dispenser Covers	Containment Sumps	Access Ports	Spill Bucket

The Department of Natural Resources and Environmental Control, Tank Management Section (TMS) has developed this guidance sheet to assist tank owners, operators and contractors in complying with the **UST Regulations Part B, Sections 1.31. and 2.32., Part C, Sections 1.28. and 2.29., and Part D, Section 1.29., Routine Inspection for UST Systems Storing Regulated Substance.**

Owners and operators must conduct an inspection once every 28 to 31 calendar days to monitor the condition of all dispensers, dispenser sumps, access ports and sumps. The routine inspection shall at a minimum include the following:

Remove dispenser covers and check: all fittings, couplings, filters and for indication of release of regulated substance; **and**

Remove containment sump covers and check for indication of release of regulated substance; **and**

Inspect all access ports to ensure that covers, caps and adaptors are tightly sealed; **and**

Remove all spill bucket covers and esnure all are empty and free of debris, water and regulated substance.

If a problem was noted during the Routine Walk-Around Inspection, document ALL problems & measures to correct the problem on the next page of this form.

If at any time during a routine inspection evidence of a release of regulated substance is discovered owners and operators must contact the Tank Management Section at (302) 395-2500

Problems Identified During 30-Day Walk-Around Inspection

Date	Equipment w/ Problem	Measures Taken

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

30 Day Inspection Record for Underground Storage Tank (UST) Release Detection (RD)

Facility Name:_____ **Year:**

Facility ID#:_____

Release Detection Method: _____

If individual tanks pass on separate days, indicate date, along with "P", in the tanks' column.

Month/ Day	Initials	UST System (Tank) (Enter "P" for PASS/ NO RELEASE DETECTED or "F" for a FAIL/ SUSPECTED OR CONFIRMED RELEASE, if "F" Describe Action Taken)				
		UST # Product: (P/F)	UST # Product: (P/F)	UST # Product: (P/F)	UST# Product: (P/F)	If "F"- Action Taken

Once every twelve (12) months all interstitial monitoring and ATG equipment must be tested by a certified technician.

This form and any associated release detection documents (ATG printouts, SIR records, equipment test results) must be kept on file for the life of the UST System.

If at any time a release is suspected or confirmed call the DNREC-TMS immediately, at: 1-302-395-2500. If the suspected or confirmed release occurs after DNREC-TMS operating hours call the DNREC Emergency Hotline, at: 1-800-662-8802.

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

30-Day Inspection Record for Pressurized Piping Release Detection (RD) (All)

(Also use for Double Walled Suction Piping RD)

YEAR:

Facility Name:_____

Facility ID#:_____

Release Detection Method: _____

If piping associated with individual tanks pass on separate days, indicate date, along with "P", in the tanks' column.

Month/ Day	Initials	UST System (Piping) (Enter "P" for PASS/ NO RELEASE DETECTED or "F" for a FAIL/ SUSPECTED OR CONFIRMED RELEASE, if "F" Describe Action Taken)				
		UST # Product: (P/F)	UST # Product: (P/F)	UST # Product: (P/F)	UST# Product: (P/F)	If "F"- Action Taken

The line leak detector and all interstitial monitoring equipment must be tested by a certified technician annually.

If at any time a release is suspected, call the TMS within 24 hours or by the next business day, at: 1-302-395-2500. If you confirm a release has occurred after TMS operating hours, call the DNREC Emergency Hotline, at: 1-800-662-8802.

This form and any associated release detection documents (ATG printouts, SIR records, equipment test results) must be kept on file for the life of the UST System.

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

30-Day Inspection Record for Impressed Current Cathodic Protection Systems

The Department of Natural Resources and Environmental Control, Tank Management Section (DNREC-TMS) has developed this inspection record to assist tank owners and operators (O/O) in complying with Delaware's *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) Parts B and C, Section 2.25.3., Impressed Current Cathodic Protection Operation and Maintenance Requirements.

Facility Name: _____ **YEAR:**

Facility ID#: _____

Amp Range Recommended: _____

Voltage Range Recommended: _____

Month/Day	Your Name	Voltage Reading	Amp Reading	Record Number of Hours Running	Is Your System Running Properly? (Yes/No)

If the rectifier voltage and/or amperage output(s) are outside the recommended operating levels, contact a cathodic protection professional to address the problem immediately and notify the DNREC-TMS, at 302-395-2500, within forty-eight (48) hours of the discovery of the failure.

NEVER TURN OFF YOUR RECTIFIER. Only certified individuals should adjust the rectifier.

THIS FORM MUST BE KEPT ON FILE FOR THE LIFE OF THE UST SYSTEM.

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

Annual Spill Containment Device (Spill Bucket) Test Procedures (All)

The Department of Natural Resources and Environmental Control, Tank Management Section (TMS) has developed this guidance document to assist tank owners, operators and contractors in complying with the requirements for spill bucket testing.

Testing may be performed by owners, operators, and tank or testing contractors. Alternative methods of testing, such electronic or vacuum methods, require prior approval by the TMS and must be performed by contractors or testers certified in their use.

Spill Bucket Hydrostatic Test Procedures:

Prior to conducting the test:

- Damaged spill buckets should not be tested; they must be reported to the TMS in accordance with the reporting requirements listed below.
- Trash or debris must be removed from the spill bucket;
- Any missing or damaged fill caps should be replaced;
- If the spill bucket contains a drain that cannot be sealed it must be repaired or replaced;

Conducting the test:

- Fill the spill bucket as close to the top as possible and mark the height;
- Replace the lid and allow it to sit undisturbed for one (1) hour.
- After an hour check the height of the water. If the water level dropped 1/8th of an inch or more the spill bucket fails and must be repaired and retested or replaced.

At the completion of the test the water may be re-used for testing purposes or must be disposed of properly. Contact your fuel supplier or see **Waste reduction, disposal, and recycling service** in the phone book yellow pages for list of companies.

Note:

All test records must be kept for the lifetime of the UST system.

Test failures must be reported to the TMS by faxing the spill bucket test report form to 302-395-2555 within twenty-four (24) hours of the failure.

The TMS must receive notification of repairs or replacements within thirty (30) days of the test failure. The work must be completed within ninety (90) days of the test failure.

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

Spill Containment Device (Spill Bucket) Test Report

Spill containment testing procedures must adhere to the DNREC-TMS's spill containment testing procedures or other manufacturer-approved testing procedures previously approved by the DNREC-TMS. All reports must contain the information on this form. If alternative procedures are used the procedures document and a letter of approval from the component manufacturer must be attached to the test results form.

Facility Information

ID # _____

Facility Name: _____

Address: _____

City, State, Zip: _____

Phone #: _____

Fax #: _____

Owner Information

Owner Contact: _____

Company Name: _____

Address: _____

City, State, Zip: _____

Phone #: _____

Fax #: _____

Tester's Information

Company: _____

Address: _____

City, State, Zip: _____

Phone #: _____

Fax #: _____

Test Results

Tank ID and Product	Manufacturer (if known)	Capacity of spill bucket	Pass/Fail

Certification

I certify, under penalty of law, that I have adhered to the proper test procedures and that the information presented here is true, accurate, and complete.

Tester's Signature:_____ Date:_____

Print or Typed Name and Title:_____

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

Containment Sump (Tank Top and Dispenser) Test Procedures (where applicable)

All regulated UST systems installed after January 11, 2008 are required to have sumps installed at the tank-top and under product dispensers. Sumps on new UST systems and those used for release detection on existing UST systems are required to be tested every 36 months.

Testing may be performed by owners, operators, and tank or testing contractors. Alternative methods of testing, such electronic or vacuum methods, require prior approval by the TMS and must be performed by contractors or testers certified in their use.

Sump (Tank Top and Dispenser) Test Procedures:

Prior to conducting the test:

- Damaged sumps should not be tested, but should instead be noted on the results sheet and reported to the TMS in accordance with the reporting requirements listed below.
- Trash or debris must be removed from the spill bucket;
- Test boots and sealed entry fittings must be present and in good condition in order to perform the test. Any missing or damaged fittings must be repaired or replaced before testing.
- Any liquid sensors present should be removed before testing.

Conducting the test:

- Fill the sump as close to the top as possible and mark the height;
- Replace the lid and allow it to sit undisturbed for one (1) hour.
- After an hour check the height of the water. If the water level dropped $1/8^{th}$ of an inch or more the sump fails and must be repaired and retested or replaced.

At the completion of the test the water may be re-used for testing purposes or must be disposed of properly. Contact your fuel supplier or see **Waste reduction, disposal, and recycling service** in the phone book yellow pages for list of companies.

Note:

All test records must be kept for the lifetime of the UST system.

Test failures must be reported to the TMS by faxing the results form to 302-395-2555 within twenty-four (24) hours of the failure.

The TMS must receive notification of repairs or replacements within thirty (30) days of the test failure. The work must be completed within ninety (90) days of the test failure.

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

Containment Sump (Tank Top and Dispenser) Test Report

Containment sump testing procedures must adhere to the DNREC-TMS's containment sump testing procedures or other manufacturer approved testing procedures previously approved by the DNREC-TMS. All reports must contain the information on this form. If alternative procedures are used, the procedures document and a letter of approval from the component manufacturer must be attached to the test results form.

Facility Information

ID # _____

Facility Name: _____

Address: _____

City, State, Zip: _____

Phone #: _____

Fax #: _____

Owner Information

Owner Contact: _____

Company Name: _____

Address: _____

City, State, Zip: _____

Phone #: _____

Fax #: _____

Tester's Information

Company: _____

Address: _____

City, State, Zip: _____

Phone #: _____

Fax #: _____

Test Results

Tank ID or Dispenser Number	Manufacturer (if known)	Pass/Fail

Certification

I certify, under penalty of law, that I have adhered to the proper test procedures and that the information presented here is true, accurate, and complete.

Tester's Signature:_____Date:_____

Print or Typed Name and Title:_____

Sample Stage I Operating Permit (Permitted gasoline USTs only)

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL
DIVISION OF AIR & WASTE MANAGEMENT
391 LUKENS DRIVE
NEW CASTLE, DELAWARE 19720-2774

WASTE MANAGEMENT SECTION
TANK MANAGEMENT BRANCH

TELEPHONE: (302) 395-2500
FAX NO.: (302) 395-2555

August 27, 9999

Mr. Happy Operator
Sunshine Inc.
1 Happy Lane
Anywhere, DE 19000

RE: Sunshine Inc.
1 Happy Lane
Anywhere, DE 19000

Facility ID #: 2-1234567
Operating Permit #: APC-2999/9106.OI
File Code: 04A

Dear Mr. Operator:

Pursuant to 7 DE Admin. Code 1102, Section 2, State of Delaware Regulations Governing the Control of Volatile Organic Compound Emissions ("Vapor Recovery Regulations"), approval is hereby granted for the operation of a Dual Point Stage I Vapor Recovery System, at the above referenced facility as specified in the Construction Permit Application.

This permit is issued subject to the following conditions:

1. This facility shall be in compliance with all the requirements of 7 DE Admin. Code 1124, Section 26 of the Vapor Recovery Regulations.

2. This permit applies to the underground storage tank (UST) listed below for storing gasoline:

   a. Two (2) 10,000 gallon UST's for storing regular gasoline;
   b. One (1) 10,000 gallon UST for storing premium gasoline.

3. Representatives of the Department of Natural Resources and Environmental Control may, at any reasonable time, inspect this facility.

4. Emergency conditions that require venting of materials to the atmosphere or create a condition of air pollution shall be reported to the Tank Management Branch immediately.

5. During loading of the underground storage tanks, the gasoline vapors shall be returned by way of the vapor balance system, which returns no less than 90 percent by weight of the vapors to a vapor-tight delivery vessel.

6. This permit or a copy thereof shall be available on the premises at all times.

7. **Whenever more than one product is delivered at a time, to ensure that no vapors are discharged to the atmosphere, there must be a vapor return line for each product hose.**

Delaware's good nature depends on you!

8. All gaskets and seals in the vapor balance system shall be in place and in good condition so as to prevent gasoline vapors from being released when the vapor balance system is not in use.

9. Daily records must be maintained showing the quantity of all gasoline delivered to the site for at least five years and must be made available to the Department upon written or verbal request.

10. Failure to comply with the provisions of this permit may be grounds for suspension or revocation.

This Permit will automatically renew upon receipt of the annual operating fee of $75. The permit fee will be billed together with your annual tank registration fees.

If you have any questions on the above conditions, please contact our Engineer at (302) 395-2500.

Sincerely,

Alex Rittberg

Alex Rittberg
Program Manager
Tank Management Branch

Sample Stage II Operating Permit (Permitted gasoline USTs only)

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL
DIVISION OF AIR & WASTE MANAGEMENT
391 LUKENS DRIVE
NEW CASTLE, DELAWARE 19720-2774

WASTE MANAGEMENT SECTION
TANK MANAGEMENT BRANCH

TELEPHONE: (302) 395-2500
FAX NO.: (302) 395-2555

August 27, 9999

Ms. Happy Operator
Sunshine Inc.
1 Happy Lane
Anywhere, DE 19000

RE: Sunshine Inc.
1 Happy Lane
Anywhere, DE 19000

Facility I.D.#: 2-123456
Operating Permit #: APC-2999/9107.OII
File Code #: 04A

Dear Mr. Operator:

Pursuant to 7 DE Admin. Code 1102, Section 2, State of Delaware Regulations Governing the Control of Volatile Organic Compound Emissions ("Vapor Recovery Regulations") , approval is hereby granted for the operation of the Marconi Commerce Systems, Inc. Stage II Vapor Recovery System at the above referenced facility.

This Permit is issued subject to the following conditions:

1. This facility shall be in compliance with all the requirements of 7 DE Admin. Code 1124, Section 36 of the Vapor Recovery Regulations.

2. The project must have been constructed in accordance with CARB Executive Order # G-70-150-AE, i.e., Modification to the Certification of the Marconi Commerce Systems, Inc. (MCS) "Formerly Gilbarco" VaporVac Stage II Vapor Recovery System.

   If you desire to make any changes to the system in the future, you will have to reapply for a construction permit.

3. Representatives of the Department of Natural Resources and Environmental Control may, at any reasonable time, inspect the facility.

4. The maximum length of hose shall be fifteen (15) feet and the length of hose, which may be in contact with the island and/or ground when the nozzle is hung up on the dispenser, is limited to six inches.

5. The maximum dispensing rate for the VaporVac system shall be ten (10) gallons per minute.

6. The VaporVac system is equipped with electronic safeguards designed to ensure that no fuel is dispensed unless the VaporVac system is operating properly.

Delaware's good nature depends on you!

7. The VaporVac system shall be visually inspected on a daily basis for damage to hoses and nozzles and an inspection record maintained. The inspection records shall be kept on file for at least three years and be organized chronologically.

8. The following tests must be carried out at the prescribed frequencies.

   a) A pressure decay/leak test must be carried out every year from the date of your last pressure decay test in accordance with 7 DE Admin. Code 1124, Section 36 of the Vapor Recovery Regulations. Therefore, a pressure decay/leak test must be carried out by June of each year. A copy of the test results must be retained at the facility.

   b) An Air to Liquid Volume Ratio (A to L) Test shall be carried out annually in accordance with 7 DE Admin. Code 1124, Section 36 of the Vapor Recovery Regulations with the exception that you need test each nozzle only once. Should the nozzle fail the first test, then the average of three consecutive tests on each nozzle must comply with the above referenced test procedure. Therefore, you must perform an A to L test by June of each year. A copy of the test results must be retained at the facility.

   c) The Department shall receive written notification 10 working days prior to any test operation, unless permission is granted to the contrary. Test failures shall be reported to the Department within twenty-four hours of the failure.

   d) Attached to this permit please find forms, which describe how to conduct the above tests and provide space, which may be used to record the results. The results must be kept on file at the facility for at least three years.

9. **A conspicuous "Out of Order" sign must be posted on any nozzle associated with any part of the Stage II system that is found to be defective.**

10. At least one representative from the facility must have been trained to operate and maintain the Stage II VaporVac system in accordance with 7 DE Admin. Code 1124, Section 36 of the Vapor Recovery Regulations.

11. The following records shall be kept on file for at least three years and be organized chronologically:

    a) Inspection Records: A file shall be maintained of all daily and monthly self-inspections.

    b) Compliance Records: A file shall be maintained of all compliance records including warnings, notices of violations and other compliance records issued by the Department to the facility. The compliance file shall be maintained separate from the inspection file.

c) Training Certification: Proof of attendance and completion of a training program as specified in 7 DE Admin. Code 1124, Section 36 of the Vapor Recovery Regulations shall be maintained and filed in the compliance record file.

12. **A conspicuous sign with a clear description of how to correctly dispense gasoline must be posted at each fueling point.** The sign must include a warning that repeated attempts to continue dispensing gasoline, after the system has indicated that the vehicle fuel tank is full (by automatically shutting off), may result in spillage or re-circulation of gasoline.

13. **A conspicuous sign displaying "FOR ENVIRONMENTAL/REGULATORY COMPLAINTS CALL 1-800-662-8802" must be posted.**

14. A copy of this permit, along with the permit application, shall be available on the premises.

15. This Permit will be subject to revocation upon violation of any of the preceding conditions.

This permit will automatically renew upon receipt of payment of the yearly operating permit fee. The operating permit fee will be billed together with the annual tank registration fee. If you have any questions on the above conditions please feel free to call our Engineer at (302) 395-2500.

Sincerely,

Alex Rittberg

Alex Rittberg
Program Manager
Tank Management Branch

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

Example: Certificate of Training for Stage II Vapor Recovery Systems

(Permitted gasoline USTs only)

CERTIFICATE of TRAINING
STAGE II VAPOR RECOVERY SYSTEMS

To be completed by Attendee: Facility Representative: _____
Facility Name: _____ Facility I.D.# _____
Facility Address: _____ Facility Phone: _____
_____
Type of Vapor Recovery System: _____

To Be Completed by Instructor:
Instructor Name: _____ Instructor Company: _____
Instructor Signature: _____ Date: _____

This training includes the following:

____ Equipment Operation & Function
____ Maintenance Schedules & Requirements
____ Equipment Warranties
____ Equipment Manufacturer Contacts
____ Purposes & Effects of the Vapor Recovery Program
____ Other _____

Department of Natural Resources
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391 Lukens Drive
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302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

VAPOR RECOVERY TESTING NOTIFICATION

Pursuant to 7 DE Admin. Code 1124, Section 36, Subsection d.3, State of Delaware *Regulations Governing the Control of Volatile Organic Compound Emissions*, "the Department shall receive written notification ten (10) working days prior to any test operation, unless permission is granted to the contrary." Please use this form to provide the required notification.

Please print or type all information and fill out this Notification Form completely. Incomplete or illegible notifications will be returned.

NOTE: A two day verbal notice is required to confirm or adjust the test date. Call (302)-395-2500 two days prior to the test.

FACILITY INFORMATION

I.D. #: ____-_____ Permit #: APC _____-_____
(see registration certificate or operating permit) (see registration certificate or operating permit)
Name: _____ Phone #: (_____) _____-_____
Street: _____ City: _____ Zip: _____

TESTING CONTRACTOR INFORMATION

Company: _____ Phone #: (_____)_____-_____
Contact: _____ Fax #: (_____)_____-_____

TESTING INFORMATION

Test Date and Time: _____

Reason for Testing: ☐ Annual ☐ Post-construction
☐ Other (explain) _____

System Type and Tests: (Pick Assist or Balance and check any associated tests to be performed)
☐ **Assist:** ☐ Pressure Decay Test ☐ Air:Liquid Ratio Test ☐ Healy System Test ☐ Dynamic Backpressure Test (post construction only)

OR

☐ **Balance:** ☐ Pressure Decay Test ☐ Dynamic Backpressure Test

Signature: _____ Date: _____

Please indicate one: Contractor Operator Owner ☐ Other (explain) _____

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

Form D Certificate of Insurance (where applicable)

Facility ID #: _____ **FC: 76**

Name: _____
[*name of each covered location*]

Address: _____
[*address of each covered location*]

Policy Number: _____

Endorsement (if applicable): _____

Period of Coverage: [*current policy period*]_____

Name of [*Insurer or Risk Retention Group*]: _____

Address of [*Insurer or Risk Retention Group*]:_____

_____

Name of Insured: _____

Address of Insured: _____

_____

Certification:

1. _____ **[** ***Name of the Insurer or Risk Retention Group*****]**, the "insurer" or "Group," as identified above, hereby certifies that it has issued liability insurance covering the following Underground Storage Tank Systems:

Attach Appendix R, Tank Schedule, listing each UST System assured by this Insurance Policy.

For _____
[**insert: "*taking corrective action*" and/or "*compensating third parties for Bodily Injury and Property Damage*"]**
caused by Accidental Releases in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy (if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location) arising from operating the UST System(s) identified above.

The limits of liability are _____
[***insert the dollar amount of the "each Occurrence" and "Annual Aggregate"]***
limits of the Insurer's or Group's liability *(if the amount of coverage is different for different types of coverage or for different UST System(s) or locations, indicate the amount of coverage for each type of coverage and/or for each*

UST System or location), exclusive of Legal Defense Costs which are subject to separate limits under the policy. This coverage is provided under _____ **[*policy number]*.** The effective date of said policy is _____**[*date*].**

2. The _____ **[“*Insurer” or “Group*”]** further certifies the following with respect to the insurance described in Paragraph 1:

   a. Bankruptcy or insolvency of the insured shall not relieve the _____ **[“*Insurer” or “Group*”]** of its obligations under the policy to which this certificate applies.

   b. The _____ **[“*Insurer” or “Group*”]** is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the _____ **[“*Insurer” or “Group*”].** This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in Part F, §§2.2. through 20.12.

   c. Whenever requested by the Department, the _____ **[“*Insurer” or “Group*”]** agrees to furnish to the Department a signed duplicate original of the policy and all endorsements.

   d. Cancellation or any other Termination of the insurance by the _____ **[“*Insurer” or “Group*”]**, except for non-payment of premium or misrepresentation by the insured shall be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured.
   Cancellation for non-payment of premium or misrepresentation by the insured shall be effective only upon written notice and only after expiration of a minimum of 10 days after a copy of such written notice is received by the insured.

   e. Insert for claims-made policies:
   The insurance covers claims otherwise covered by the policy that are reported to the _____ **[“*Insurer” or “Group*”]** within six months of the effective date of the cancellation or non-renewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered Occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or Termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.

I hereby certify that the wording of this instrument is identical to the wording in Part F, §3.4. Form D of the Delaware *Regulations Governing Underground Storage Tank Systems* and that the _____ **[“*Insurer” or “Group*”]** is [***“licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.”]***

_____
[Date]

_____
[Signature of authorized representative of Insurer or Risk Retention Group]

_____
[Name of Person signing]

_____
[Title of Person signing]

_____
Authorized Representative of [name of Insurer or Risk Retention Group]

_____
[Address of Representative]

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

Form R- Tank Schedule for Financial Assurance (where applicable)

DNREC UST Facility ID# ____-_____ **FC: 76**

Type of Financial Assurance Mechanism _____

Is this mechanism being used in combination with any other FR mechanism? ☐ Yes* ☐ No
*If "Yes" note additional FR mechanism _____

Facility Name_____

Facility Street Address_____

Facility City _____Facility Zip_____

Owner Name_____

Owner Street Address_____

Owner City _____Owner State _____ Owner Zip_____

Tank ID# _____ (from UST registration form)

Tank capacity _____

Regulated substance stored _____

Tank ID# _____ (from UST registration form)

Tank capacity _____

Regulated substance stored _____

Tank ID# _____ (from UST registration form)

Tank capacity _____

Regulated substance stored _____

Tank ID# _____ (from UST registration form)

Tank capacity _____

Regulated substance stored _____

Department of Natural Resources
and Environmental Control
Tank Management Section
391 Lukens Drive
New Castle, DE 19720
302-395-2500 (phone)
302-395-2555 (fax)
www.dnrec.delaware.gov/Tanks/

Form C- Insurance Endorsement (where applicable)

Facility ID #: _____ **FC: 76**

Facility Name: _____
[*name of each covered location*]

Address: _____
[*address of each covered location*]

Policy Number: _____

Endorsement (if applicable): _____

Period of Coverage: [*current policy period*]_____

Name of [*Insurer or Risk Retention Group*]: _____

Address of [*Insurer or Risk Retention Group*]:_____

_____

Name of Insured: _____

Address of Insured: _____

_____

Endorsement:

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following Underground Storage Tank Systems:

Attach Appendix R, Tank Schedule, listing each UST System assured by this Endorsement.

For _____
[*insert: "taking corrective action" and/or "compensating third parties for Bodily Injury and Property Damage"]*
caused by Accidental Releases in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different UST Systems or locations, indicate the type of coverage applicable to each UST System or location] arising from operating the UST(s) System(s) identified above.

The limits of liability are _____ limits of the Insurer's
[insert the dollar amount of the "each Occurrence" and "Annual Aggregate"]
or Group's liability; if the amount of coverage is different for different types of coverage or for different UST Systems or locations, indicate the amount of coverage for each type of coverage and/or for each UST System or location], exclusive of Legal Defense Costs which are subject to a separate limit under the policy. This coverage is provided under _____. ***[Policy Number]***
The effective date of said policy is _____.
[Date]

2. The insurance afforded with respect to such Occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with subsections (a) through (e) of this Section 2 are hereby amended to conform with subsections (a) through (e):

   a. Bankruptcy or insolvency of the insured shall not relieve the_____ **[*Name of the Insurer or Risk Retention Group*]** of its obligations under the policy to which this endorsement is attached.

   b. The _____ **[*"Insurer" or "Group"*]** is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured from any such payment made by the _____ **[*"Insurer" or "Group"*]**. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in Part F, §§2.2. through 2.12. of the Delaware *Regulations Governing Underground Storage Tank Systems.*

   c. Whenever requested by the Department, the _____ **[*"Insurer" or "Group"*]** agrees to furnish to the Department a signed duplicate original of the policy and all endorsements.

   d. Cancellation or any other Termination of the insurance by the _____ **[*"Insurer" or "Group"*]**, except for non-payment of premium or misrepresentation by the insured, shall be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured shall be effective only upon written notice and only after expiration of a minimum of 10 days after a copy of such written notice is received by the insured.

   e. Insert for claims-made policies:
   The insurance covers claims otherwise covered by the policy that are reported to the _____ **[*"Insurer" or "Group"*]** within six months of the effective date of the cancellation or non-renewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered Occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or Termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.

I hereby certify that the wording of this instrument is identical to the wording in Part F, §3.3. Form C of the Delaware *Regulations Governing Underground Storage Tank Systems* and that the_____ **[*"Insurer" or "Group"*]** is

_____

[*"licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more States"*].

_____
[Date]

_____
[Signature of authorized representative of Insurer or Risk Retention Group]

_____
[Name of Person signing]

_____
[Title of Person signing]

_____
Authorized Representative of [name of Insurer or Risk Retention Group]

Department of Natural Resources
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NOTE: New Soil Sampling Requirements became effective October 1, 2012. Please refer to the website for detailed guidance.

Notification for UST System Retrofits, Repairs And Upgrades and Soil Sampling Requirements

(Dispenser, Sump, or Spill Bucket- Installation, Repair, or Replacement, And CP Upgrades)

The Department of Natural Resources and Environmental Control, Tank Management Section (TMS) has developed this guidance sheet to assist tank owners, operators and contractors in complying with Delaware's *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) Part A, Section 4.7., Part B, Sections 1.28. and 2.29., Part C, Section 1.27. and 2.28., Part D, Section 1.28., and Part E, Section 1.2.

Notification

Notification forms must be received in the TMS office ten (10) days prior to work commencing on an UST system. If the forms are not received by the TMS 10 days prior, work **may not** commence as described in the UST Regulations, Part A, Section 4.7.1.

A "Confirmation of Scheduled Tank Work" form will be faxed to the contractor upon receipt of the notification form. A **site map** identifying all portions of the UST system in the work area must be submitted with the notification. The TMS will review this information and use it to determine the number of soil samples necessary to characterize the site.

General Requirements:

A State of Delaware certified contractor is required to perform any retrofit or upgrade of an UST system. The contractor must notify the TMS prior to beginning any work, and will subsequently receive a faxed confirmation form from the TMS. The TMS also requires a precision test be conducted prior to re-commissioning the UST system when any new product lines are installed, when concrete is broken, or when excavation occurs in the tank field. Results of the tank and/or line test must be forwarded to the TMS. Line or tank test failures must be reported immediately to the TMS by calling 1-800-662-8802. If excavation of soil, or removal of concrete, asphalt or other cover is required, a Site Assessment must be performed within ten (10) days of completion of the Retrofit or Upgrade.

Repairs do not require a certified contractor or prior notice to the DNREC-TMS. Repairs include replacement in kind of equipment that does not require excavation that exposes backfill or requires the breaking of concrete, such as changing filters, replacement of sump sensors, line leak detectors, ball floats, fill line restrictors, etc. Records of repairs must be maintained for the life of the UST System.

Corrosion Protection Repairs and Upgrades:

The UST must be assessed for upgrade or repair suitability and documentation of the assessment must be submitted with the upgrade or repair plan to the TMS for approval prior to work beginning. All submissions should be clearly marked Attention: Retrofit. The TMS may, at its discretion, require a tank integrity assessment to be performed prior to repair of an inoperative or failing UST cathodic protection (CP) system.

Assessment Method:

- For non-invasive ASTM G-158-98 methods such as Tank Environmental Profile or Mean Time to Corrosion Failure, the results of the evaluation, including results of the soil samples that were taken as part of the assessment, must be forwarded to the TMS.

- For invasive ASTM G-158-98 methods such as a video camera or ultrasonic robot, the results of the evaluation including a complete description of the internal condition of the UST(s) must be forwarded to the TMS.

- For tanks assessed for upgrade suitability via internal inspection, a report documenting the results of the inspection including the presence of any hole(s) in the tank must be forwarded to the TMS.

Design Requirements:
Sacrificial anode or impressed current systems must be designed by an individual certified as required in NACE RP0285, Section 10.1.5. A copy of the designed CP plan must be forwarded to the TMS**. Note: Impressed current CP systems cannot be utilized for sacrificial anode CP system repair.**

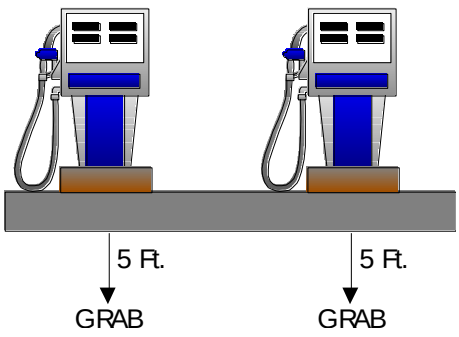
UST systems upgraded with internal lining must have an internal inspection of the tank. The inspection results must be submitted to the TMS, including the discovery of holes, repairs made, or groundwater entering the tank before or after sandblasting.

Any evidence of a release such as a hole in the tank or analytical results indicating a release must be reported to the TMS within 24-hours by calling 1-800-662-8802. Corrective action measures must be implemented and you must re-evaluate the suitability of your UST system for CP upgrade.

If you have any questions regarding this information, please contact the TMS at (302) 395-2500.

Soil Sampling Requirements

Dispenser Or Sump Retrofits:
If the retrofit includes replacement of the sump or dispensers, or replacement of piping to the dispenser, then one soil sample is required per dispenser.

One grab sample taken 5' below each dispenser is required	

Spill Bucket Installation or Replacement:
Soil samples must be collected when concrete is broken or backfill is exposed to install new spill bucket or replace existing spill bucket. One grab sample must be collected at the bottom of the excavation for the spill bucket and is required for each spill bucket device installed or replaced.

Tank-Top Sump Installation or Replacement:
Soil samples must be collected when concrete is broken or backfill is exposed to install or replace tank-top sumps. At least one composite sample is required to be collected from the excavated material. In the event that no material is required to be excavated in order to install the new sump, one composite sample must be collected from the walls of the excavation in the locations where contamination is visible or most likely to be present. Other tank-top work that exposes backfill and is not specifically mentioned here may require soil sampling at the discretion of the TMS.

Piping Run Sampling
For Piping ***installed prior to January 1, 1999*** where closure-in-place of a piping run is performed, sampling is required. For the purpose of this Guidance "closure-in-place of a piping run" includes any closure operations which involve pulling or lifting the piping out of an unexposed or unexcavated trench, or leaving the piping in place, as they do not allow for a thorough inspection and evaluation of the soil conditions in the vicinity of the piping. **You are required to contact the DNREC-TMS in advance and obtain approval for a piping sampling plan**.

For piping runs removed from the ground via trenching so that soil conditions beneath the piping can be evaluated, sampling will only be required from areas of the piping trench with observable staining or evidence of a release.

For Piping ***installed after January1, 1999*** sampling is not required unless there is observable staining or evidence of a release.

QA/QC Protocol

All samples **must** be collected in clean sealed glass containers and kept at $\leq 6^{o}C$ until delivered to the laboratory for analysis. The laboratory must receive samples within twenty-four (24) hours of collection. If sample delivery within twenty-four (24) hours is not possible (for example, samples are collected late on a Friday after the laboratory is closed) proper storage of the samples must be documented on the chain of custody form. A chain of custody form must be maintained at all times for all samples and submitted to the TMS.

To maintain sample integrity, a TMS Representative on-site may apply a custody seal to the sample container at the time of sample collection. If the seals are applied a separate chain-of-custody will be provided. This chain of custody must accompany the sample to the laboratory and a copy must be returned to the TMS along with the sample results. If a sample is received by the laboratory with a damaged custody seal the TMS may not accept the sample results and will request additional samples be collected.
Call the TMS for more specific information about sampling methods, methanol preservation and Encore® sampling, sampling of pea gravel, and proper procedures to assure QA/QC of samples and decontamination of tools.

Analytical Parameters

All soil samples from petroleum tanks must be analyzed according to the **DERBCAP Tier 0** table below:

Analyte	Tier 0 Action Level	Gasoline	Kerosene/ Jet Fuels	Diesel/ Heating Fuels	Used Oil[1,2]	Aviation Gas	Heavy Oils	Other
BTEX[5]	Benzene 230 ppb, Total BTEX 10 ppm	X	X		X	X		
GRO	100 ppm	X	X		X	X		
DRO	1000 ppm		X	X	X			
HRO	Site by Site						X	
Lead , EDB, EDC	400 ppm, 10 ppb, 400 ppb	X[4]			X	X		
MTBE[3]	130 ppb	X	X		X	X		
Other	Site by Site							X[6]

Footnotes:

1. Used oil as defined in the Delaware *Regulations Governing Underground Storage Tank Systems*, Part A, Section 2. and the Delaware *Regulations Governing Hazardous Waste*.
2. Used oil USTs may also be required to analyze for metals, volatiles, semi-volatiles or any other analyte as required on a site specific basis depending on the tank contents. Contact the DNREC-TMS for determination.
3. MTBE analysis is required, unless conclusive documentation is submitted and pre-approved by the DNREC-TMS that no portion of the tank system was in service after January 1, 1978.
4. For gasoline USTs only, Lead, EDB and EDC analysis is required, unless conclusive documentation is submitted and pre-approved by the DNREC-TMS documenting that all portions of the tank system were installed after January 1, 1996.
5. In addition to total BTEX, benzene must be reported separately.
6. If the tank system contained anything other than petroleum products or if the tank system contained Racing Fuel, contact the DNREC-TMS for information on sampling procedures and analytical requirements prior to any on site activities.
7. Samples collected for the analysis of volatile organic compounds must be preserved with methanol. Encore samplers are acceptable provided the preservative is methanol.
8. Ethanol analysis is required, unless conclusive documentation is submitted and pre-approved by the DNREC-TMS that no portion of the tank system was in service after April 1, 2006.

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UST Registration & Notification Form (All)

Facility ID Number: __ - __ __ __ __ __ __

☐ Registration	☐ New installation	☐ Retrofit notification	☐ Change in service	☐ Change in substance stored
FC: 01	FC: 02D	FC: 02C	FC: 02E	FC: 02F

Approval is required to install new or retrofit existing underground storage tanks (USTs). New installed, new retrofitted and existing tanks all must be maintained in accordance with the provisions of the Delaware's *Regulations Governing Underground Storage Tank Systems*. For all new tank installations, a detailed site plan must accompany this form.

Please fill out all applicable sections. For **Facility Information**, provide the actual physical location, not P.O. Box information. Assign each tank a number and maintain that number consistently throughout the form. Submit information for up to **four** (4) tanks on this form.

1. *FACILITY INFORMATION*
Name:_____
Street: _____
City:_____Zip:_____
County:_____
Phone: _____Fax:_____
Email:_____

2. *UST OWNER INFORMATION*
Name/Corporation:_____
Contact, if not named above:_____
Street:_____
City:_____Zip:_____
Phone:_____Fax:_____
Email:_____

3. *CONTRACTOR INFORMATION*
Co. Name:_____
Contact Name: _____
DE Certification #:_____
Street:_____
City:_____
State:_____Zip:_____
Phone: _____Fax:_____
Email:_____

4. *UST OPERATOR INFORMATION*
Name/Corporation:_____
Contact, if not named above:_____
Street:_____
City:_____Zip:_____
Phone:_____Fax:_____
Email:_____

5. *TYPE OF OWNERSHIP* Taxpayer ID/ Social Security #: _____
Business License:_____

☐ County	☐ District	☐ Federal	☐ Indian	☐ Municipal
☐ Other	☐ Private	☐ State	☐ Unknown	

6. *TYPE OF FACILITY SITE (Pick the best description of the facility where the USTs are located.)*

☐ Agricultural	☐ Building	☐ Defense Site	☐ Development	☐ Industrial
☐ Miscellaneous	☐ Park/ Golf	☐ Recycling	☐ Residential	☐ Retail (Gas Station)
☐ Transportation	☐ Waste	☐ Wastewater	☐ Water	☐ Wildlife

Facility ID Number: __- __ __ __ __ __ __

7. *FINANCIAL RESPONSIBILITY (One of the following must be completed, state owned tanks are exempt.)*

☐ I submit that I have met the financial responsibility requirements in accordance with Part F of Delaware's *Regulations Governing Underground Storage Tank Systems*, and submit proof thereof with a current tank schedule (Appendix R completed) in the form of:

☐ Self insurance (Form A completed) ☐ Insurance (Form D completed) ☐ Other (describe) _____

☐ I certify that I have met the financial responsibility requirements in accordance with Part F of Delaware's *Regulations Governing Underground Storage Tank Systems*. Documentation was previously forwarded to your office and there have been NO changes made since submittal.

☐ I will be submitting the proper documents prior to adding a regulated substance into the new UST system.

8. Tank ID #:				
9. Status of Tank	**(Check**	**one)**	**(Check**	**one)**
New Installation				
Currently In Use				
Out-of-Service, date taken out:				
Age/ Date Installed:				
10. Regulated Substance Stored	**(Check**	**one)**	**(Check**	**one)**
Diesel				
Gasoline				
Heating Fuel				
Kerosene				
Mixture (Submit description)				
Other (Submit description)				
Used Oil				
Hazardous Substance				
CERCLA name or CAS #:				
11. Is tank used as an Emergency Generator?				
12. Is tank of Dual use?				
13. Tank Capacity: (gallons)				
14. Tank Manufacturer:				
15. Tank Model name:				
16. Tank Material of construction	**(Check all**	**that apply)**	**(Check all**	**that apply)**
Fiberglass Reinforced Plastic (FRP)				
Steel, Cathodically Protected (CP) by anode				
Steel, CP by impressed current				
Steel, CP by FRP composite coating				
Steel, CP by Poly composite coating				
Steel, with lined interior (Date lined:)				
Steel, with Impressed current and Lined Interior (Date lined:)				
Steel, unprotected				
Other: (Submit description)				
17. Is the UST compartmentalized?				
If yes, how many compartments?				

Facility ID Number: __- __ __ __ __ __ __

8. Tank ID #:				
18. Is product delivered via remote fill pipe?				
If yes, list distance from tank to fill pipe:				
19. Mark tanks connected by product siphon line-				
20. Tank secondary containment description	**(Check**	**one)**	**(Check**	**one)**
Factory designed Double Walled (DW) construction				
Other: (Submit description)				
None				
21. Tank Release Detection	**(Check all**	**that apply)**	**(Check all**	**that apply)**
Inventory Control Records				
Automatic Tank Gauging				
Continuous Electronic Interstitial Monitoring				
Manual Tank Gauging				
Manual Interstitial Monitoring				
S.I.R. (provided by:)				
Groundwater Monitoring				
Tank Tightness Testing				
Vapor Monitoring				
Other Method: (Submit description/ approval may be required)				
22. Tank top sump description:				
Material of Construction:				
Manufacturer:				
Contain sensors: (Check if Yes)				
Secondary option: (DW, etc.)				
Interstitial Monitoring: (Check if Yes)				
23. Overfill Protection Device: (ball float, High Level Alarm, Deep fill w/ Whistle , other-submit approved description, etc)				
24. Product Spill Containment Device Installed?				
Spill containment capacity: (gallons)				
25. Product piping Manufacturer:				
26. Product piping Model Name:				
27. Product piping material of construction	**(Check all**	**that apply)**	**(Check all**	**that apply)**
Flexible plastic				
Fiberglass Reinforced Plastic (FRP)				
Steel, CP by coating and anode				
Steel, CP by wrap and anode				
Steel, CP by impressed current				
Bare or Galvanized Steel				
Copper, CP by coating and anode				
Copper, CP by wrap and anode				
Copper, CP by impressed current				
Bare Copper				
None (i.e. used oil USTs)				

Facility ID Number: __- __ __ __ __ __ __

8. Tank ID #:				
28. Piping Secondary Containment Description	**(Check**	**one)**	**(Check**	**one)**
Factory designed DW construction				
PVC/ Plastic as Sec. containment				
None				
Other: (Submit description)				
29. Piping Type	**(Check**	**one)**	**(Check**	**one)**
Pressurized				
Suction w/ Check Valve at Dispenser				
Suction w/ Check Valve at Tank				
Gravity				
30. Piping Release Detection	**(Check all**	**that apply)**	**(Check all**	**that apply)**
Mechanical In-Line Line Leak Detector				
Manufacturer & Model #:				
Electronic In-line Line Leak Detector				
Manufacturer & Model #:				
Electronic In-line Line Precision Tightness Testing				
Electronic Continuous Interstitial Space Sump Monitoring				
Annual Precision Line Tightness Testing				
Monthly Interstitial Space Sump Monitoring				
S.I.R. (provided by:)				
Other: (Submit description/ approval may be required)				
31. Dispenser sump description:				
Material of Construction:				
Manufacturer:				
Contain sensors: (Check if Yes)				
Secondary option: (DW, etc.)				
Interstitial Monitoring: (Check if Yes)				

Describe **all** of the **Existing UST system, not just equipment being retrofitted,** on pages one (**1**) through four (**4**) of this *UST Registration & Notification Form***.** Indicate planned retrofit work with a proposed date of retrofit of Existing UST System(s) on page five **(5)** of this form. Note there must be at least ten (10) days notification prior to retrofit work on UST systems. A *Confirmation of Scheduled Tank Work form* will be faxed to the contractor upon approval of the notification.

Facility ID Number: __- __ __ __ __ __ __

Ten Day Prior Notification for UST Retrofit

List planned changes and proposed date of retrofit below and include all Manufacturer's Specifications and cutouts for all UST equipment being retrofitted:

1. Tank ID #:				
2. Proposed Date of Retrofit:				
3. Reason for Retrofit work	**(Check all**	**that apply)**	**(Check all**	**that apply)**
Compliance				
Repair/ Component Failure: (submit description)				
4. Tank/ Release Detection Improvements	**(Check all**	**that apply)**	**(Check all**	**that apply)**
*Cathodic Protection with Anodes				
Adding Automatic Tank Gauging (ATG)				
ATG Manufacturer/ Model #:				
Adding Tank Top Sump				
Sump Material of Construction:				
Sump Manufacturer/ Model #:				
Install Sump Sensors				
Sensor Manufacturer/ Model #:				
Other: (submit description)				
5. Overfill Protection				
Retrofitting Overfill Protection Device				
Adding Overfill Protection Device				
6. Spill Containment Device				
Vapor Recovery Containment Device				
Product Fill Containment Device				
7. Product Piping Changes/ Improvements	**(Check all**	**that apply)**	**(Check all**	**that apply)**
Cathodic Protection with Anodes				
Factory designed DW construction				
PVC/ Plastic as Sec. containment				
Auto Line Leak Detector (LLD)				
LLD Manufacturer/ Model #:				
Adding Dispenser Bottom Sump				
Sump Material of Construction:				
Sump Manufacturer/ Model #:				
Install Sump Sensors?				
Other: (submit description)				

* Requires submission by an individual certified as required in NACE RP0285 Section 10.1.5 and statement of compliance with UST Regulations Parts B, C, and D Section 1.6.

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

UST Owner's Signature:_____Date:_____

Print or Typed Name and Title: _____

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OPERATOR TRAINING CERTIFICATION

Complete one form per Operator

Operator Name: _____
Please type or Print legibly

Address: _____

City: _____ **State:** _____ **Zip:**_____

Phone Number: **(** _____**)** _____ **Email:** _____

Operator Class: (check all that apply)

☐ **Class A** ____/_____/_____ Date training completed **OR** ____/____/____Date of reciprocity exam

☐ **Class B** ____/_____/_____ Date training completed **OR** ____/____/____Date of reciprocity exam

***It is the responsibility of the A or B Operator to ensure there is a trained C Operator for each facility. The names of the Class C Operators do not need to be submitted to the DNREC-TMS but must be available upon request.**

Name of Company: _____
Please type or Print legibly

Facilities:

List all Facilities (see back of form for additional spaces) for which you are a designated Operator and indicate the date you became the specified Operator for the facility. This is the date your company designated you as the Operator for this facility; this date may or may not be the same as the date you completed training.

Facility ID#	**Date assigned as Facility Class A Operator**	**Date assigned as Facility Class B Operator**
EXAMPLE: 3-000001	3/29/11	3/29/11

Facility ID#	Date assigned as Facility Class A Operator	Date assigned as Facility Class B Operator