

Department of Commerce

Division of State Fire Marshal

WHAT TO EXPECT WHEN BEING INSPECTED

BUREAU OF UNDERGROUND STORAGE TANK REGULATIONS

RELEASE PREVENTION SECTION

- Federal law requires the Division of State Fire Marshal, Bureau of Underground Storage Tank Regulations (BUSTR) to inspect your underground storage tank (UST) systems every three years.
- When BUSTR visits your site, we will ask you to provide records demonstrating that you are in compliance with the following requirements:



- A. USTs, piping, and containments are installed and operating correctly;
- B. Corrosion protection equipment is installed and operating correctly;
- C. Spill prevention equipment is installed and operating correctly;
- D. Overfill prevention equipment is installed and operating correctly;
- E. Release detection equipment is installed and operating correctly;
- F. Hazardous substance and sensitive area UST systems are installed and operating correctly;
- G. Administrative documents relating to registration, assurance, permits, and operator training are in proper order;
- H. Compliance Inspection





HOW TO STAY IN COMPLIANCE

This guidance is divided into sections that correspond to the requirements described above. BUSTR recommends that you review the guidance and make one of the following decisions:

Option 1: Comply with the requirements yourself by reviewing this guidance in detail several times and setting up a schedule to make sure that you comply with each of the requirements mentioned above; or

Option 2: Contact a Certified UST Installer or your service contractor and enter into an agreement with them to monitor your UST system to ensure that you comply with each of the requirements mentioned above.









What do I need to do to meet the compliance & operator training requirements?





Most UST systems are comprised of three underground structural components:

- 1 The underground storage tank (UST),
- 2 The underground piping, and
- 3 The containments.





These components can break down due to physical and chemical wear as well as from environmental conditions such as winter cold and summer heat.

A visual check should be performed once a year to look for signs of damage with these components.





- 1. The owner/operator or their authorized representative shall perform an a periodic visual inspection of all UST and piping components that are accessible:
 - a. UST and piping components shall be inspected at least once a year for signs of corrosion, pealing, cracking or excessive distortion; and
 - b. UST and piping components shall be inspected at least once a year for signs of degradation, including but not limited to, clogged filters or sludge buildup.





(A) UST'S AND PIPING





(A) UST'S AND PIPING





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- 2. The owner/operator or their authorized representative shall perform a periodic visual inspection of all containments, including tank top containments, dispenser containments and intermediate sumps:
 - Containments shall be inspected at least once a year for proper operation and for the presence of water, regulated substances and debris; and





- b. All water and debris shall be removed and properly disposed; and
- c. All regulated substances shall be properly removed and disposed.





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- 3. The owner/operator or their authorized representative shall perform tightness testing of containments every three years for the following:
 - All containments installed on new UST systems after March 1, 2005;
 - b. As of December 31, 2005, all containments associated with UST systems containing hazardous substances; and
 - c. As of December 31, 2005, all containments associated with UST systems that were installed in areas designated as sensitive areas (usually after September 1, 1992).







Warning – Electrical Connections submerged in water may pose an Electrical Shock Hazard! Only qualified persons should perform this testing.





4. Additional information relating to UST's, piping and containments:

a. UST's installed prior to May 16, 2011, and piping associated with UST's installed prior to March 1, 2005, may be single wall (except UST's containing hazardous substances and UST's installed in sensitive areas).

b. UST systems installed prior to March 1, 2005, are not required to have tank top containments and dispenser containments (except UST's containing hazardous substances and UST's installed in sensitive areas).



(B) CORROSION PROTECTION & COMPATIBILITY

Metal UST systems must have cathodic protection to help keep the systems from rusting.

Fiberglass and plastic UST systems must be monitored to ensure that they do not degrade and break down when exposed to fuel and hazardous substances.

UST systems need to undergo periodic checks to ensure that corrosion and compatibility problems are fixed in a timely manner.



(B) CORROSION PROTECTION & COMPATIBILITY

- 1. The owner/operator or their authorized representative shall perform periodic checks of corrosion protection systems:
 - a. Option #1: Factory or field installed sacrificial anodes (galvanic cathodic protection)
 - b. Option #2: Impressed current systems
 - c. Option #3: Internally lined UST's



(B) COMPATIBILITY

- 2. The owner/operator or their authorized representative shall perform periodic checks to inspect for compatibility problems:
 - a. Piping and Containments checked for abnormal appearance or operation such as:
 - i. Discoloration, delamination, swelling and disintegration.





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(B) COMPATIBILITY

ii. Clogged filters indicating fiberglass tank lining may be compromised.





(B) CORROSION PROTECTION & COMPATIBILITY

- 3. Additional information relating to corrosion protection and compatibility:
 - a. After May 16, 2012, the state fire marshal shall no longer grant approval for internal lining of UST's for corrosion protection purposes;
 - b. Internally lined UST's located in sensitive areas shall be taken out of service by May 16, 2014, unless traditional corrosion protection (e.g., galvanic or impressed current) is installed; and
 - c. Piping covered by earthen material shall be protected from corrosion. This requirement does not apply to piping immersed in water.



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(C) SPILL PREVENTION

When regulated substances are transferred from a tanker truck to an UST, some spillage may occur at the point where the delivery hose connects to the UST.

Regulations require the UST to have a spill prevention device (i.e., spill bucket or spill containment manhole) at the fill pipe to catch any spillage that may happen.

The spill prevention device is subject to traffic and extreme weather conditions and needs to be checked regularly to ensure that it is in working order.



(C) SPILL PREVENTION

- The owner/operator or their authorized representative shall perform periodic visual inspections of spill prevention devices:
 - a. New spill prevention devices shall have a capacity of at least 5 gallons;
 - b. The cover of the spill prevention device is in good condition and is not broken;
 - c. The spill prevention device has been visually inspected after each delivery and all water, regulated substances and/or debris are promptly removed;





(C) SPILL PREVENTION

- d. The spill prevention device has been checked annually for proper operation and evidence of deterioration such as cracking, holes and other damage that could lead to a release of product; and
- e. The drain mechanism and the spill prevention device is functioning properly.





(C) SPILL PREVENTION

2. Additional information relating to spill prevention:

 a. Existing UST systems installed prior to March 1, 2005, that were filled with transfers of no more than twenty-five gallons at one time are not required to be equipped with spill prevention equipment.





When regulated substances are transferred from a tanker truck to an UST, it is possible for the UST to be overfilled.

The regulations require the UST to have an overfill prevention device in the UST to shut off or restrict the flow of regulated substances into the UST or sound an alarm when the UST is full.

The overfill prevention device is subject to physical and chemical wear and needs to be checked annually to ensure that it is in working order.

1. The owner/operator or their authorized representative shall perform periodic visual inspections of overfill prevention devices:



a.Option #1: Flow shut-off devices (such as flapper valves in fill tubes)

- i. Shut-off devices are in place and are not damaged, bent or out of alignment;
- ii. Shut-off devices are not blocked or obstructed in the open position; and
- iii.Shut-off devices are removed from the fill riser on an annual basis and inspected to confirm the device is functional.





- b. Option #2: Vent restriction devices (such as ball cage / ball float valves / float vent valves)
 - i. Vent restriction devices shall not be allowed for on any type of suction systems or any other system where the device can be defeated; and
 - ii. Vent restriction devices shall be removed from the UST on an annual basis and inspected to confirm the device is functional.







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- c. Option #3: Overfill alarms
 - i. Overfill alarms shall be located in close proximity to where the delivery person stands during the delivery and be clearly labeled; and
 - ii.Overfill alarms shall be inspected and tested in-situ on an annual basis to confirm the device is functional.







- 2. Additional information relating to overfill prevention:
 - a. Existing UST systems installed prior to March 1, 2005, that were filled with transfers of no more than twenty-five gallons at one time are not required to be equipped with overfill prevention equipment.



The major components of an UST system (e.g., UST's, piping and containments) need to be equipped and monitored for releases on a monthly basis if not more frequently.

Release detection equipment can be damaged by a wide range of physical, chemical, and environmental forces and needs to be carefully calibrated and maintained on a regular basis.



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- The owner/operator or their authorized representative shall equip and monitor release detection devices associated with UST's and shall perform periodic checks of each device:
 - a. Option #1: Interstitial monitoring for secondarily contained tanks:
 - i. Interstitial monitoring is required for all UST's installed after May 16, 2011.

ii.Interstitial monitoring results recorded at least once every thirty days.



Sample Interstitial Monitoring Monthly Inspection Report							
Facility Name: Da		ate of Last Annual Evaluation:					
Record all Annual, Monthly Alarm Sensor Checks on this form.							
Record all Sensor Alarms on this form when they occur.							
Date	Your Name	Sensor I.D. or ALL SENSORS	Monthly Check YES/NO	Sensor Alarm YES/NO	Sensor Alarm Reported to Name.		

• Sensor Alarms should be reported to a supervisor and the cause investigated immediately.



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 a. Option #2: <u>Automatic Tank Gauging (ATG):</u> Owners/Operators shall ensure that the ATG equipment performs one of the following:

- i. An in-tank leak test capable of detecting a two tenth
 (.2) of a gallon per hour leak rate from any portion of
 the tank at least once every thirty days; or
- ii. Continuous statistical leak detection capable of detecting a two tenth (.2) of a gallon per hour leak rate from any portion of the tank once every thirty days.



RELEASE DETECTION





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Option #3: <u>Alternative methods such as SIR</u> can be used if approved in writing by the state fire marshal.





- 2. The owner/operator or their authorized representative shall equip and monitor release detection devices associated with piping and shall perform periodic checks of each device:
 - a. <u>Underground product piping</u> that is part of a new UST system installed after March 1, 2005 shall be equipped with secondary containment with interstitial monitoring using one of the following release detection methods:
 - i. A sampling or testing method that can detect a two-tenth (.2) of a gallon per hour leak rate from any portion of the inner or outer wall of the piping; or
 - ii. The piping terminates or transitions in containments and the sampling or testing method can detect a release from any portion of the inner wall of the piping.



b. <u>Pressure piping</u> shall be equipped with an Automatic Line Leak Detector (ALLD) that shall be tested annually to confirm proper calibration and operation.



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- c. <u>Pressure piping</u> shall be tested periodically in the following manner:
 - i. Have and annual tightness test of the primary piping;
 - ii. Have a monthly 0.2 gallon per hour tightness test performed by the on-site electronic line testing unit at the facility; or
 - iii. Be a part of a secondarily contained piping system whereby the interstice of the piping is continuously monitored.





- d. <u>Suction piping</u> shall be regularly monitored for loss of vacuum and shall meet one of the following:
 - i. Suction piping shall have a tightness test conducted every thirty-six (36) month period; or
 - ii. Suction piping shall demonstrate compliance with safe suction requirements.





- 3. The owner/operator or their authorized representative shall equip and monitor release detection devices associated with containments and shall perform periodic checks of each device:
 - a. <u>Containments</u> that are a part of new UST systems installed after March 1, 2005, shall be installed with sump sensors that are capable of detecting a release before the release reaches the lowest penetration in the containment.





4. Release detection shall be evaluated annually by a qualified person to confirm proper calibration and operation in accordance with the manufacturer's requirements.

In most cases, this means that the qualified person needs to visit the site at least once a year and directly examine all probes and sensors.

5. A release is suspected and subject to reporting to BUSTR if any release detection device monitoring any UST, piping or containment goes into alarm.

A suspected release shall be reported to the state fire marshal and local fire department within 24 hours of discovery.

Owners and operators shall investigate alarms pursuant to rule 1301:7-9-13 of the Ohio Administrative Code "Petroleum UST Corrective Action."



6. Additional information relating to release detection:

- a. UST's installed prior to May 16, 2011, with a capacity of 550 gallons or less may use manual tank gauging as the sole method of release detection;
- b. New or used oil UST's installed prior to May 16, 2011, with a capacity from 551 to 2000 gallons may use manual tank gauging as a method of leak detection provided that a tank tightness test is performed every five years;
- c. New and existing UST systems containing motor or aviation petroleum fuels are no longer required to be monitored using daily product inventory control;
- d. Daily product inventory control may be used for short periods of time while an UST system is undergoing repair or in special low fuel level situations;
- e. Current regulations do not require new or existing suction piping or suction manifolds to be double wall (except suction piping containing hazardous substances); and
- f. UST systems installed prior to May 16, 2011, that store fuel for use by emergency power generators are not required to have release detection (including dual-use systems containing diesel fuel used for both emergency power and heating).



(F) HAZARDOUS SUBSTANCE AND SENSITIVE AREA UST SYSTEMS

UST systems containing hazardous substances and UST systems located in sensitive areas must have full secondary containment that includes double wall UST's, double wall piping and containments in critical locations. These UST systems must use interstitial monitoring as their method of release detection.

- 1. A list of hazardous substances may be found in rule 1301:7-9-03 of the Ohio Administrative Code.
- 2. A list of sensitive areas may be found in rule 1301:7-9-09 of the Ohio Administrative Code.
- 3. If an UST system was installed in an area prior to that area becoming sensitive (usually before September 1, 1992), then the UST system does not have to be secondarily contained.





- Registration. Before June 30th of each year, owners and operators shall submit an annual registration to BUSTR. Non-government UST owners and operators shall submit an annual fee of \$50 per UST.
- **2. Assurance.** Before June 30th of each year, owners and operators shall submit an annual registration to the Petroleum Underground Storage Tank Release Compensation Board (PUSTRCB).
 - a. Non-federal government UST owners and operators shall submit an annual fee for each regulated UST.
 - b. In addition to demonstrating coverage with PUSTRCB, owners and operators shall maintain proof of coverage of a deductible mechanism associated with the PUSTRCB coverage.





- **3. Installation, Modification and Major Repair Records**. Owners and operators shall maintain records demonstrating that their UST systems are properly equipped and operated. Records shall be maintained pursuant to the following schedule:
 - a. All records shall be maintained for the operating life of the UST System and for two years after the closure of the UST System.



- **4. Release Detection Calibration and Release Detection Records.** Owners and operators shall maintain records demonstrating that their UST systems are properly equipped and operated. Records shall be maintained pursuant to the following schedule:
 - a. All written performance claims pertaining to any release detection system used shall be maintained for the life of the UST system and for two years after the closure of the UST system.
 - b. The results of any sampling, testing, or monitoring shall be maintained for two years.





4. Release Detection Cont'

- c. Written documentation of all calibration, maintenance, and repair of release detection equipment shall be retained for the life of the equipment and for two years thereafter.
- d. Owner and operators shall provide the state fire marshal access to all records within twenty four hours of a request.
- e. Within thirty days of the transfer of ownership of an UST system, the transferor shall provide the new owner with all records or equivalent copies identified in this section of the field guide.





5. Permits. Before performing work on an UST system or taking an UST system out-of-service, be sure to check to see if a permit is required. In most cases, a Certified UST Installer and a Certified UST Inspector is also required if you are performing UST work.

* A permit is required for any UST System that has been temporarily out-of-service for more than 90 days.



- 6. Operator training. Owners and operators are required to identify three classes of operators at their site and have these operators trained by August 8, 2012.
 - a. Operator Classes
 - i. Class A operators are traditionally the UST owner.
 - ii. Class B operators are traditionally the store manager or maintenance person.
 - iii. Class C operators are traditionally the store clerk.
 - b. Class A and B training is available through private trainers. A list of trainers may be found at <u>http://www.com.ohio.gov/fire/bustMain.aspx</u>.



- c. Class C operators may be trained by qualified owners and operators.
- d. Certificates are issued upon completion of training, and it is the responsibility of owners and operators to maintain certificates and make them available upon request of BUSTR.



Operator Training - Supplemental Information "Not in Guide"

1) How did operator training come about?

On August 8, 2005, the federal Energy Policy Act of 2005 was signed into law. This law mandated requirements for underground storage tank (UST) systems within the United States of America and its Territories. One of the many provisions in the Energy Policy Act mandated that operator training be conducted for owners and/or operators, designated owner representatives and station managers and/or clerks. On September 1, 2011, Ohio Administrative Code (OAC) rule 1301:7-9-19 *Underground Storage Tank Operator Training* became effective. This rule defines operator training requirements and procedures.

2) What UST sites are affected by this training?

Owners and operators of all UST sites must list Class A, Class B, and Class C operators for their sites and undergo appropriate training. There are no exceptions.

8) What does "attended UST site" and "unattended UST site" mean?

"Attended UST site" means an UST site that has an attendant on duty that authorizes the dispensing or transfer of regulated substance from the UST system (e.g. most retail gasoline stations and marinas).

At minimum, a Class "C" Operator must be on site during all hours while dispensing or transferring of regulated substance from the UST system is occurring.

"Unattended UST site" means an UST site that, by design, has no attendant on duty that authorizes the dispensing or transfer of regulated substance from the UST system (e.g. emergency generator tanks, card system dispensing operations, factory operations, most fleet vehicle operations, and aviation fuel dispensing locations).



Unattended Site – Signage Example



ABC CONSTRUCTION 111 EAST WEST STREET SOMETOWN, OHIO

IN CASE OF FIRE, SPILL OR RELEASE

1. USE EMERGENCY SHUTOFF (USE FLOOR DRY OR SPILL KIT TO CLEANUP MINOR SPILLS)

2. REPORT THE INCIDENT TO: DISPATCH: (XXX) XXX-XXXX

FIRE DEPARTMENT: 911

Ohio Class "C" Underground Storage Tank Operator Training
Instructional Material, Evaluation and Certificate Form

The purpose of this form is to document that employees designated as Class C operators have completed training required by Ohio Administrative Code Rule 1301:7-9-19. Class C operators are responsible for the initial response to alarms or other indications of emergencies at a facility. Class C operators shall complete the following questions:

1) Have you received training identifying the telephone number to call the fire department for this facility and is this number posted in a clearly visible location?

□Yes □No

2) Have you received training identifying the list of company people who should be notified in an emergency and is this list posted in a clearly visible location?

3) Have you received training identifying the actions to take concerning the Emergency Shut off Switch? ☐ Yes ☐ No

NOTE: The emergency stop switch shuts off power to all the dispensers and fuel pumps. The emergency stop switch is different from the "Stop" or "All Stop" button on the point-of-sale (POS) console. The emergency stop switch is required by national fire codes. Contact a qualified petroleum storage system service contractor if you cannot locate the emergency stop switch.

4) Have you received training identifying how to respond to various alarm messages that may appear on the display of the tank monitoring system?

🗖 Yes

6 🗖 No

Note: If you do not know how to read the display or what messages to expect if there is a problem with the storage system, look in the tank monitor manual to find this information or call a qualified petroleum system contractor and have him or her explain this information to you.



 5) Have you received training identifying how to locate and properly recognize the following items: dispenser, hose, nozzle, and breakaway coupling? ☐ Yes ☐ No 							
Class C operator name:							
Class C operator signature:	_ Date:						
Name of the Class A or B operator approving the Class C training:							
Name of party administering training:							
Name and address of the facilities where training is applicable:							
All Class C operators shall complete this form no later than August 8, 2012, or before assuming responsibilities as a Class C operator. Owners shall maintain this form and make it available to the state fire marshal upon request. Completing this form meets the requirements of paragraphs (D)(3)(e) through (g) of rule 1301:7-9-19 of the Administrative Code. No passing score is necessary to meet the requirements of rule 1301:7-9-19 of the Administrative Code.							
Bureau of Underground Storage Tank Regul	reau of Underground Storage Tank Regulations						
Reynoldsburg, OH 43068 U.S.A.	An Equal Opportunity Employer and Service Provider	Fax 614-752-7938 TTY/TDD 800-750-0750 www.com.ohio.gov					



Federal law requires BUSTR to inspect your UST system at least every three years. BUSTR recommends that you have the following information readily available in order that you may prepare for a compliance inspection:

1. BUSTR Registration

a. A current copy of the BUSTR registration certificate

2. PUSTRCB Certificate

a. A current copy of the PUSTRCB certificate of fund coverage



3. Financial Responsibility (Deductible Coverage)

a. A current copy of the \$11,000 or \$55,000 deductible mechanism proving that coverage if in place.

4. Permit Related Documents

a. Copies of Permits and Inspection Reports for any past and/or ongoing work being performed to the UST system components.

5. Out-of-Service Documents

a. Permits, Inspection Reports, Extension Approvals and other Documentation demonstrating that any out-of service UST system is being properly maintained.



6. Spill and Overfill Operation

a.Ensure that Spill Buckets are clean and free of debris.
 b.Document that Overfill Devices and been checked annually for proper operation.

7. UST/Piping/Containment Release Detection Operation

- a.Document that the UST Tank Top, all visible Piping have been inspected annually.
- b.Document that Containment Release Detection, if appropriate, has been checked by a qualified person for proper operation.

8. UST/Piping Corrosion Protection Operation

a.Document that Factory, Field Installed and Impressed Current Cathodic protection has been tested within the last 3 years.b.Document on a form that the Impressed Current System has been checked every sixty days and that the power is on and it is operating.





9. Containment Operation

a. Document that the Containment has been inspected annually for deterioration, cracking, deformation, compromised entry boots and other signs of failure.

10. Ancillary Equipment Operation

a. Document that piping fittings, flanges, valves and pumps used to distribute regulated substance have been checked annually to ensure that they are operating properly and have not failed and are not showing signs of impending failure.





Department of Commerce

Division of State Fire Marshal

Visit the BUSTR Web Site at: (http://www.com.ohio.gov/fire/default.aspx)



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