

OPERATING AND MAINTAINING UNDERGROUND STORAGE TANK SYSTEMS IN MICHIGAN

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Practical Help and Checklists



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DISCLAIMER

This document provides information on operating and maintaining underground storage tank (UST) systems. The document is not a substitute for the Michigan Underground Storage Tank Rules (MUSTR) nor is it a regulation itself — it does not impose legally binding requirements.

For regulatory requirements regarding UST systems, refer to the MUSTR and Parts 211 and 213 of Act 451 of the Michigan Public Acts of 1994, as amended.

How To Use This Booklet

Who should read this booklet?

This booklet is for owners and operators of underground storage tank systems (USTs).

You are responsible for making sure your USTs do not leak. This booklet can help you meet your UST responsibilities.

What can this booklet help you do?

- Identify and understand the operation and maintenance (O&M) procedures you need to follow routinely to make sure your USTs don't have leaks that damage the environment or endanger human health.
- Identify good O&M procedures you can use to avoid cleanup costs and liability concerns.
- Maintain useful records of your O&M.

Key Terms Used In This Booklet

An **UST** is an **underground storage tank and underground piping connected to the tank** that has at least 10 percent of its combined volume underground. The state and federal regulations apply only to USTs storing petroleum or certain hazardous substances.

O&M stands for **operation and maintenance procedures** that must be followed to keep USTs from causing leaks and creating costly cleanups.

Your UST system is “new” or “upgraded” — is that enough?

Being “new” or “upgraded” is not enough. New and upgraded USTs are made of a complex collection of mechanical and electronic devices that can fail under certain conditions. These failures can be prevented or quickly detected by following routine O&M procedures. Having a new or upgraded UST system is a good start, but the system must be properly operated and continuously maintained to ensure that leaks are avoided or quickly detected.

What should you do with each section of this booklet?

Read through each section carefully and use the checklists to help you establish clear O&M procedures.

By identifying and understanding the O&M tasks you need to perform routinely, you will ensure timely repair or replacement of components when problems are identified.



How can you use the following checklists effectively?

This booklet's is for your use. You can easily copy any of the checklists from this booklet, fill them out, and file the checklists for later reference if needed.

You can select the specific mix of checklists that matches your UST facility. Once you have your select group of checklists together, make several copies that you can fill out periodically over time.

In this way you can keep track of your O&M activities and know that you've done what was necessary to keep your UST site safe and clean, avoiding any threats to the environment or nearby people as a result of costly and dangerous UST releases.

Use this booklet often — effective O&M requires constant vigilance.

Note: This booklet describes quality O&M practices put together by a work group of State and Federal environmental regulators. This booklet is not a state or federal regulation nor legally binding, but it does provide useful information on effective O&M procedures. You should check with the Storage Tank Division of the Michigan DEQ on any additional or different O&M practices that may be required in Michigan. Call (517-373-8168) or visit our web page: <http://www.deq.state.mi.us/std/>.

Want to help improve this O&M Manual?

We want to continually improve this O&M Manual with your help!

Send us your feedback.

Let us know if you find any errors, think something needs to be added or deleted, or have suggestions on format or checklist changes.

- Send feedback by e-mail to: <http://www.deq.state.mi.us/std>
- Send feedback by regular mail to:
Storage Tank Division, TRU
333 S. Capitol, P.O. Box 30157
Lansing, MI 48909-7657
- Fax feedback to the TRU: 517-335-2245.

Section 1 — Identifying The Equipment At Your UST Facility

Determine what UST equipment you have at your facility by completing the checklist below. Note that each part of the checklist below refers you to the appropriate section of this O&M booklet for relevant information. After you have identified your equipment, proceed to the following sections to identify the O&M actions necessary for your specific UST system.

General Facility Information (optional)				
Facility Name _____				
Facility ID # _____				
Release Detection (See Section 2 for information on release detection)				
A. Release Detection for Tanks				
Check at least one for each tank:	Tank #1	Tank #2	Tank #3	Tank #4
Automatic Tank Gauging (ATG) System				
Interstitial Monitoring (if doubled walled)				
Groundwater Monitoring				
Vapor Monitoring				
Inventory Control and Tank Tightness Testing (TTT)*				
Manual Tank Gauging Only **				
Manual Tank Gauging using a mass measurement gauge.***				
Other Release Detection Method, such as SIR (please specify)				
* Allowed only for 10 years after installing or upgrading tank with corrosion protection. TTT required every 5 years.				
** Allowed only for tanks of 550 gallon capacity or less.				
*** Allowed for tanks, of any size, that are not used for motor fueling only with a mass measurement type ATG.				
B. Release Detection for Pressurized Piping				
Check at least one from A and from B for each tank's piping:	Tank #1	Tank #2	Tank #3	Tank #4
A (Automatic Line Leak Detectors)	Automatic Flow Restrictor			
	Automatic Shutoff Device			
	Continuous Alarm			
B	Annual Line Tightness Test			
	Monthly Monitoring*			
* Monthly Monitoring for piping includes Interstitial Monitoring, Vapor Monitoring, Groundwater Monitoring, or other accepted methods (such as a state approved SIR and Electronic Line Leak Detectors.)				
C. Release Detection for Suction Piping				
Check at least one for each tank's piping:	Tank #1	Tank #2	Tank #3	Tank #4
Line Tightness Testing Every Three Years				
Monthly Monitoring*				
No Release Detection Required For "Safe Suction" **				
* Monthly Monitoring for piping includes Interstitial Monitoring, Vapor Monitoring, Groundwater Monitoring, and SIR				
** No release detection required if it can be verified that you have a "safe suction" piping system having the following characteristics:				
<ol style="list-style-type: none"> 1) Only one check valve per line located directly below the dispenser; 2) Piping sloping back to the tank; and 3) System operates under atmospheric pressure. 				

Spill and Overfill Protection (See Section 4 for more information)				
Check for each tank:	Tank #1	Tank #2	Tank #3	Tank #4
Spill Catchment Basin/ Spill Bucket				
Check at least one overfill device for each tank:				
Automatic Shutoff Device				
Overfill Alarm				
Ball Float Valve (on vent line)				
Corrosion Protection (See Section 5 for more information)				
A. Corrosion Protection for Tanks				
Check at least one for each tank:	Tank #1	Tank #2	Tank #3	Tank #4
Coated and Cathodically Protected Steel (such as STI-P3)				
Noncorrodible Material (such as Fiberglass Reinforced Plastic)				
Steel Jacketed or Clad with Noncorrodible Material (Composite)				
Cathodically Protected Steel (Impressed Current or Galvanic Field)				
Internally Lined Tank*				
Cathodically Protected Noncoated Steel and Internally Lined Tank*				
Other Method Used to Achieve Corrosion Protection (please specify):				
* These options may be used only for tanks installed before December 22, 1988.				
B. Corrosion Protection for Piping				
Check at least one for each:	Tank #1	Tank #2	Tank #3	Tank #4
Coated and Cathodically Protected Steel				
Noncorrodible Material (such as Fiberglass Reinforced Plastic or Flexible Plastic)				
Cathodically Protected Noncoated Metal*				
Other Method Used to Achieve Corrosion Protection (please specify):				
* This option may be used only for piping installed before December 22, 1988.				

Any problems filling out this checklist?

If you have trouble filling out this checklist or any following checklist, remember these sources of assistance you can contact:

- Your UST contractor, the vendor of your equipment, and the manufacturer of your UST equipment should be ready to help you. Look through your records for contact information. You may also want to use some of the industry contacts and other contact.
- The Storage Tank Division may be able to help you identify equipment or sources of information about your UST equipment. You should, in any event, make yourself aware of additional or different O&M procedures than those presented in this booklet.