

TANKS: DOUBLE-WALLED with MANUAL MONITORING

Double-walled tanks are, in essence, a tank within a tank and designed to prevent releases into the environment by containing fuel leaking out from the inner tank in the “interstitial space” between the two walls of the tank. Double-walled tanks can be fashioned with both walls made of either steel or fiberglass or with an inner steel tank and an outer containment vessel constructed of fiberglass or polyethylene plastic, generally known as “jacketed” tanks.

NOTE: In some double-walled tanks (e.g., STI P3), both walls are constructed of steel, which is subject to corrosion. If you have such tanks, they will have cathodic protection to prevent corrosion. To learn how to operate this type of UST, see the *TankSmart* Cathodic Protection for Tanks & Piping module.

Double-walled tank technology is generally considered to be the most secure form of fuel storage. But a double-walled tank will not protect the environment by itself. To be effective, tank systems require a skilled operator. As a UST operator, you must know your leak-monitoring system, what it tells you, and how to respond.

Leak detection for double-walled tanks is known as interstitial monitoring. **Tanks installed after September 1991 must have continuous leak monitoring using sensors installed in the interstitial spaces. If your tank was installed before September 1991, it may not have continuous electronic monitoring, and you must manually monitor the interstitial space.** Check your Registration Certificate if you need to determine the installation date for your tank. (See the *TankSmart* Record Keeping module for more information about Registration Certificates.)

In addition to manual monitoring, **if fuel in the storage system is used in the marketing or distribution of oil (e.g., gasoline or diesel dispensed into vehicles or heating oil sold to off-site customers), you must also keep Daily Inventory records and submit Annual Statistical Inventory Analyses to the DEP** (See the *TankSmart* Daily Inventory & SIA module.)

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HOW DO YOU MANUALLY MONITOR THE INTERSTITIAL SPACE OF YOUR DOUBLE-WALLED TANK?

If you don't have electronic monitoring for your tank, you must visually check your tank's interstitial space every week for fuel or water.

If you don't have electronic monitoring for your tank, you must visually check your tank's interstitial space every week for fuel or water. To find your interstitial access, look for a round, flat metal cover, usually about a foot in diameter, located in the concrete pad over the top of your tank(s). The cover may be marked with a triangle (see photograph below), or it may have no identifying markings on it at all. Remove the metal cover and you will find a cap that seals the top of the pipe that leads down into the tank interstitial space.



Courtesy of Marcel Moreau Associates, Portland Maine

The bottom of the vertical pipe on the end of this double-walled steel tank connects to the interstitial space. By inserting a gauge stick to the bottom of the pipe after the tank is installed, water or fuel in the interstitial space can be detected.



Courtesy of Marcel Moreau Associates, Portland Maine

Access covers to tank interstitial spaces are usually flat metal plates about 8 to 12 inches in diameter. They may be marked with a triangle like this one or have no markings at all. Call your service technician if you need help locating your tank interstitial access covers.

Use the following steps to check the interstitial space for each of your tanks:

- ▶ Apply water-detecting paste to the bottom inch or so of one side of a CLEAN gauge stick.
- ▶ Apply fuel-detecting paste to the bottom inch or so of the opposite side of the stick on which you applied the water-detecting paste.
- ▶ Insert the gauge stick into the interstitial space until it touches the bottom of the tank.
- ▶ Leave the stick in the bottom of the tank for the amount of time recommended by the paste manufacturer (usually less than a minute).
- ▶ Remove the stick and check to see if either the water- or fuel-detecting pastes have changed color. A color change in either paste indicates the presence of liquid, which is evidence of a possible leak and must be reported to the DEP within 24 hours (see phone numbers below) and be investigated by a service technician.
- ▶ If neither paste has changed color, you may use this procedure to check any other tanks you have on-site without having to re-apply the water- and fuel-detecting pastes.
- ▶ When you have checked all of your tanks, wipe the water- and fuel-detecting pastes off the stick.
- ▶ Keep a log of your weekly monitoring results (see sample log on page 4). This log form is available on DEP's website at: www.maine.gov/dep/rwm/ust/formslists.htm. If you do not have Internet access, call the DEP at 207-287-2651 and ask to have copies mailed to you.

**Use these steps
to check the
interstitial space
for each of your
tanks.**

**Report evidence of a possible leak to
the DEP's Tanks Unit**

207-287-2651

or call the 24-hour Spill Hotline

1-800-482-0777

WEEKLY MONITORING LOG

Interstitial Monitoring Log for Doublewalled Systems

Facility Name _____ Tank Size _____

Location _____ Product (s) _____

Date	Fuel?	Water?	Initials of Person Sampling Sump
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Instructions: Use a clean stick, not one that has been used previously in an oil tank. At the very bottom of the stick, dab a small amount of gas paste one side and a small amount of water paste on the other side. Lower the stick to the bottom of the interstitial sump and raise it back up. If either gas paste or water paste has turned color, clean the stick and repeat the procedure. If either the gas paste or the water paste has again turned color then the Department should be promptly notified. Call 1-800-482-0777 as soon as possible and within 24 hours. If the paste has not changed color simply fill in the date in the left-hand column, enter "None" in the product and water columns above and put your initials in the right-hand column. Check weekly.

KEEP THIS COMPLETED FORM ON SITE FOR THREE YEARS

**Keep a log of
your weekly
monitoring
results.**