

June, 2026 *Tankline Bulletin*

Oregon DEQ UST Compliance

Emergency generators and release detection

Do you work in a hospital, a government building, a telecommunications site or any other facility that requires uninterrupted power? If the answer is yes and you're reading this, then you probably have an underground storage tank that powers an emergency generator.

As of Oct. 1, 2020, all underground storage tanks (USTs) in Oregon that store fuel used by emergency generators (egens) must meet the same release detection requirements as every other regulated underground storage tank, including monthly monitoring of tanks, annual testing of release detection equipment (including line leak detectors) and line tightness testing, if applicable. USTs connected to egens must also meet the same requirements for monthly and annual walkthrough inspections and triennial testing of spill prevention and overfill equipment.

This requirement applies to *all* USTs that power egens. There is *no exemption*, even for systems that were not designed to include release detection.

Ask yourself these questions: "Do I have monthly tank release detection records that I could show a DEQ inspector?" "Am I 100% sure my piping has been certified as safe suction, or do I have monthly interstitial monitoring results or yearly line tightness and leak detector tests that I could show a DEQ inspector?" If the answers to these questions are "no," or worse, "what does that even mean?" then it's time for a crash course on release detection.

Tank release detection

All regulated USTs must use a release detection method that can detect a leak of 0.2 gallons per hour from the tank itself with 95% accuracy. Every UST permittee must monitor that release detection method and record the results monthly. When a DEQ inspector comes on site, these monthly records must be available for the inspector to review. For tanks larger than 1,000 gallons, either the automatic tank gauge performs a periodic test, or there is a sensor that lives in the tiny space between the walls of a double-walled tank and detects liquid. Either way, the automatic tank gauge prints out a report that is what you save to show the inspector. Of course, if the report says there is a leak, then you must immediately investigate to see what's gone wrong.

Suction piping

The piping that connects the tank to the generator must also be protected by a release detection system, unless that piping has been proven to be what is called "safe suction." Safe suction piping is called that because, if there is fuel being sucked into the piping, any hole that develops in the pipe will break the suction and let all the fuel drain back into the tank. This only happens if all the piping slopes back to the tank with no valleys to trap fuel, and if there are no check valves between the suction pump and the tank. Safe suction piping does not require leak detection, but you must prove that your piping meets the requirements if you plan to use this exemption.

If your system uses a suction pump but doesn't meet the requirements for safe suction, for example, if any of your system is lower than the tank itself, or if any part of your piping creates a valley that traps fuel, then

unsafe suction piping systems must be tested every 3 years for tightness. Those tests must be presented to the DEQ inspector.

Pressurized piping and leak detectors

If either the supply or return piping in your system is pressurized, where the fuel is forced through the piping using a turbine or other pressure pump, then you must install a line leak detector capable of detecting at least a 3-gallon per hour leak at 10 pounds per square inch pressure within one hour. This leak detector must be tested every year, and these tests must be available when a DEQ inspector is on site at your facility.

There are two kinds of leak detectors: mechanical and electronic. Most gas station piping systems use mechanical leak detectors; they are cheaper and simpler. Mechanical leak detectors alert operators by restricting the flow of fuel if they detect a leak. But for life-safety installations such as hospitals, prisons and nursing homes, **you must use electronic leak detectors**. Emergency generators used in life-safety applications cannot restrict the flow of fuel to the generator. Electronic leak detectors set off an alarm on the automatic tank gauge when they detect a leak.

There are limitations to the length and height of piping that leak detectors can monitor. If you have a very long piping run, one that goes up many stories in the building, or one that is otherwise complicated, you should have your system evaluated by an engineer to ensure it meets both UST and fire code requirements.

Line tightness tests and interstitial monitoring

Pressurized piping must either be tested yearly using a line tightness test or monitored using sensors that are attached to the automatic tank gauge. Any piping installed after 2008 must be double-walled and use this second method, which is called “interstitial monitoring.” Just as for tank release detection, interstitially monitored piping must have monthly sensor reports that are printed from the automated tank gauge and saved to show the DEQ inspector during a site visit. And, as with all leak detection systems, any alarms that indicate a potential leak must be investigated immediately.

What if none of this sounds familiar?

Some older emergency generator systems were designed without the capability for release detection, since it was not required before EPA changed the federal UST rules in 2015. So, coming into compliance with these requirements may force you to upgrade your system. The first step is to talk to a licensed UST Service Provider to make sure you’re doing all of the testing that is required for your UST system. [A list of UST testers](#) can be found on our website.

You must meet all federal and state regulatory requirements, including UST compliance rules DEQ recommends you consult a qualified engineering company that has experience evaluating all related rules and laws that are required to be met by your facility to confirm your adherence to these requirements.

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