Kansas Department of Health and Environment

Tank Tightness Testing for Underground Storage Tank (UST) Systems

WHAT IS IT?

- A tank tightness test identifies breaches in a tank that may result in leaks.
- Tightness testing is also required to validate certain repairs or upgrades to UST systems
- A tightness testing is required to bring new tanks into service and temporarily closed tanks back into service.

THINGS TO CONSIDER

- Tank tightness tests must be performed by a KDHE-licensed service provider. Procedure and personnel, along with the equipment, are the most important factors in a successful tightness testing.
- Tank tightness testing is used primarily on tanks of 15,000 gallons capacity or less containing gasoline or diesel. If you are considering using tightness testing for larger tanks or other products, discuss the method's applicability with a KDHE-licensed tightness test service provider.

WHAT ARE THE REGULATORY REQUIREMENTS?

- A "tightness test" must evaluate any portion of the tank that routinely contains liquid and be able to detect a leak as small as 0.1 gallon per hour (gph) with a probability of detection of at least 95% and a probability of false alarm of no more than 5%.

WHEN IS IT REQUIRED?

A. Normal operation and non-emergency:

1. New UST systems following installation.
2. Existing UST systems that are coming back into service from temporary out service status.
3. After certain repairs or upgrades of the UST system.
4. If a UST's tank release detection was out of service or inoperable for more than 6 months.

B. If there is a suspected release:

1. Report it immediately to the UST call line at 1-877-221-0325 or (785) 296-1678.
2. UST owners and operators must report all suspected releases.
3. A tightness test may need to be conducted where there are no signs of environmental contamination.

4. Submit the results of the tank tightness testing along with any other documentation to the UST Program.

HOW DOES TANK TIGHTNESS TESTING WORK?

There are two categories of precision tank tightness tests: A) Volumetric, and B) Non-volumetric.

A. Volumetric

- A volumetric tank tightness test measures the change in the volume of fluid in the tank and attributes this change to a leak.
- A leak is defined in terms of flow rate in gph and can be positive or negative; that is, product can flow out of the tank or water can flow into the tank.
- The determination as to whether the tank is leaking or non-leaking is usually made by comparing the flow rate to a predetermined value called the threshold. If the flow rate exceeds the threshold, a leak is declared.
- Adequate waiting periods must be observed after any change in product level, whether such a change represents the initial product delivery or a subsequent adjustment (topping off the tank) prior to starting the test.

B. Non-Volumetric

- Non-volumetric methods typically use acoustics or chemical tracers to determine the presence of a breach in the tank.

REQUIRED DOCUMENTATION

- Show that a KDHE-licensed tank tester performed the tank tightness test and send a copy of the results to KDHE-UST program.
- Save the test results for yourself until after the next test.
- Need a list of the licensed service providers? Call 1(877) 221-0325 or (785) 296-1678 or check out our website at www.kdheks.gov/tanks/download.

FOR MORE INFORMATION CONTACT:

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