

Containment Testing for Underground Storage Tanks (USTs)

Since December 22, 1998, new and upgraded UST systems have been required to have spill prevention equipment to prevent spilling of fuel associated with product transfer. Amendments to the UST regulations that became effective November 10, 2007, require new and upgraded UST systems to have containment sumps under dispensers and at tank-top penetrations for piping connections that routinely contain and convey product. Spill prevention equipment, dispenser pans, and sumps on UST systems must be tested for liquid-tightness at installation, replacement, or repair. See 25 Pa. Code, §§ 245.421 and 245.422 (relating to performance standards for underground storage tank systems and upgrading of existing underground storage tank systems).

Beginning on December 22, 2018, spill prevention equipment must also be tested for liquid-tightness every three years. Additionally, containment sumps on UST systems used for interstitial monitoring (required on all UST systems installed after November 10, 2007) must be tested for liquid-tightness every three years. See 25 Pa. Code, § 245.437 (relating to periodic testing). Required testing of spill prevention equipment and containment sumps must be conducted by a Department of Environmental Protection (DEP)-certified individual holding UMX, UMI, UTT, or IUM certifications.

The following describes testing procedures that may be used to meet the containment testing requirements and the documentation to be maintained by owners and operators of USTs.

The UST regulations require spill prevention equipment and containment sumps to be tested by a method prescribed by the containment manufacturer or a nationally recognized association or independent testing laboratory. The test must be able to determine that the equipment is liquid-tight.

In general, the manufacturer of the spill prevention equipment or containment sump will recommend the best way to test their product to ensure that it is working properly. For example, one manufacturer recommends applying vacuum to their sumps with specialized testing apparatus. The equipment includes a vacuum pump, covers to seal the tank-top or dispenser sumps, and an electronic pressure sensor. The manufacturer recommends testing at four different times during the installation process to ensure any leak is found and repaired prior to backfilling.

Another manufacturer recommends filling the spill prevention equipment with water, marking the water level, and waiting at least one hour. If there is any change in the liquid-level, the test fails, and the installation should be repaired. The manufacturer recommends conducting this test at least twice — after initial placement and after the final tank-field cover is in place — and then again after any necessary repairs are completed.

Liquids used for testing may become contaminated and should be managed as waste and disposed of properly. For guidance and clarification on proper management of wastes, contact the Solid Waste Program at the appropriate DEP regional office.

Documentation of the last liquid-tightness test for each spill prevention equipment and containment sump must be maintained for a minimum of one year after the UST system is permanently closed. Required liquid tightness testing must be documented on DEP's "Underground Storage Tank Spill Prevention Equipment/Containment Sump Integrity Testing Form" (2630-FM-BECB0016).

For more information, visit www.dep.pa.gov, Businesses > Land > Storage Tanks.